Received: 13 August 2015 | Revised: 15 October 2017 | Accepted: 16 October 2017 | Published on: 26 February 2018

DOI: 10.1002/smj.2767

WILEY STRATEGIC MANAGEMENT JOURNAL

RESEARCH ARTICLE

Competing for government procurement contracts: The role of corporate social responsibility

Caroline Flammer

Strategy & Innovation Department, Questrom School of Business, Boston University, Boston, Massachusetts

Correspondence
Caroline Flammer, Questrom School of Business, Boston University, 595 Commonwealth Avenue, Office 634A, Boston, MA 02215.
Email: cflammer@bu.edu

Research Summary: This study examines whether corporate social responsibility (CSR) improves firms' competitiveness in the market for government procurement contracts. To obtain exogenous variation in firms' social engagement, I exploit a quasi-natural experiment provided by the enactment of state-level constituency statutes, which allow directors to consider stakeholders' interests when making business decisions. Using constituency statutes as instrumental variable (IV) for CSR, I find that companies with higher CSR receive more procurement contracts. The effect is stronger for more complex contracts and in the early years of the government-company relationship, suggesting that CSR helps mitigate information asymmetries by signaling trustworthiness. Moreover, the effect is stronger in competitive industries, indicating that CSR can serve as a differentiation strategy to compete against other bidders.

Managerial Summary: This study examines how companies can strategically improve their competitiveness in the market for government procurement contracts—a market of economic importance (15–20% of GDP). It shows that companies with higher social and environmental performance (CSR) receive more procurement contracts. This effect is stronger for more complex contracts, in the early years of the government–company relationship, and in more competitive industries. These findings indicate that firms' CSR can serve as a signaling and differentiation strategy that influences the purchasing decision of government agencies. Accordingly, managers operating in the business-to-government (B2G) sector could benefit from integrating social and environmental considerations into their strategic decision making.

 Copyright © 2018 John Wiley & Sons, Ltd.

KEYWORDS
corporate social responsibility, government procurement contracts, information asymmetry, non-market strategy, trust

1 | INTRODUCTION

Government procurement is big business: Every year, large sums of taxpayers' money are spent by governments on goods and services that are of importance to the economy and society at large. Government procurement of goods and services accounts for approximately 15–20% of the gross domestic product (GDP) in developed and developing countries, in many countries this percentage is much higher (World Trade Organization, 2014). This constitutes significant business opportunities for companies, not only nationally but also internationally. For example, the members of the Agreement on Government Procurement (GPA)—which includes Canada, Hong Kong, Israel, Japan, Singapore, Switzerland, USA, the European Union, and many others—have opened procurement activities worth an estimated $1.7 trillion annually to international competition from GPA member countries (World Trade Organization, 2014).

Despite the economic importance of this market, we know surprisingly little about firm-level strategies to obtain government procurement contracts. In fact, I was not able to find any articles within the management literature that theoretically or empirically explores the question of whether and how companies can improve their competitiveness in the market for government contracts. The extant literature in competitive strategy mainly focuses on the competitive positioning of companies in the business-to-consumer (B2C) and business-to-business (B2B) context (e.g., Dyer & Singh, 1998; Porter, 1980, 2008).

Yet, the market for government procurement contracts is fundamentally different from the B2C and B2B context in several dimensions. In particular, the purchasing decision of the government differs from the one of end consumers and businesses. Specifically, the process of awarding procurement contracts starts when an agency of the federal government identifies a need for the purchase of a good or service and posts a solicitation on the Federal Business Opportunities website. Public procurement projects include a broad range of projects such as the building of airports, schools, stadiums, and tunnels, the construction of military equipment, as well as investments in medical and technical innovations. Companies then submit their proposals. Agency personnel review and evaluate the alternative proposals and make the final decision. Where the government procurement process differs from the B2B and B2C context is that public procurement regulations put constraints on the contracts and award mechanisms that public procurement agencies can use (Tadelis, 2012). In particular, government purchases rely on agency directors. These directors often take into account economic as well as non-economic factors such as political pressure from special interest groups, sensitivity to congressional representatives in a firm's home district, and other political aspects (e.g., Rundquist, Lee, & Rhee, 1996; Shepsle & Weingast, 1981; Weingast, Shepsle, & Johnsen, 1981). The consideration of such non-economic criteria in the purchasing decision makes selling goods and services to the government a unique and different proposition for companies.

Most procurement contracts are variants of "cost-plus" and "fixed-price" contracts. In fixed-price contracts, the supplier is offered a pre-specified price. In cost-plus contracts, no price is pre-specified, but the supplier is reimbursed for the costs plus a fee. In general, cost-plus is the preferred type

for complex projects (Bajari & Tadelis, 2001). In contrast to goods and services provided to consumers and businesses, public procurement projects are typically of high complexity, large scale, and often span multiple years, requiring numerous rounds of project adaptations and contract renegotiations due to unforeseen changes after the contract is awarded and the project has started (Bajari, Houghton, & Tadelis, 2014). Reasons for project adaptations include design failures, unanticipated site and environmental conditions, unforeseen changes in regulatory requirements, etc.

While these changes are difficult to predict for both the government and contractor, the contractor is likely to have superior information about the costs and methods to implement changes (Bajari & Tadelis, 2001). As a result, procurement contracts entail a potentially severe agency problem—contractors have an incentive to exploit their informational advantage at the expense of the government (e.g., by overstating the costs of the project adaptations). The resulting agency costs are borne by the government, and hence the taxpayers.[1]

How can firms mitigate these challenges and to which extent can they influence the government's procurement decisions? Given the uniqueness of the government procurement process, the insights of the extant strategy literature do not provide sufficient guidance to answer these questions. In a first effort to fill this void, I theoretically and empirically examine how corporate strategy affects the allocation of government procurement contracts and, in particular, whether and to what extent companies' socially responsible behavior serves as a signaling and differentiation strategy to compete against other bidders.

2 | THEORY AND HYPOTHESES

2.1 | Corporate social responsibility as a signaling tool

A long-standing literature in economics, strategic management, and organization theory examines the role of trust—and conversely opportunistic behavior—in business relationships, and in particular how trust can mitigate issues of information asymmetries.[2]

At the core of organization economics is the concept of transaction costs, i.e., costs associated with conducting exchange (Coase, 1937). Such transaction costs arise from the difficulty to specify all contingencies in a contract, an issue known as "incomplete contracting" (Williamson, 1985). Incomplete contracts—which are more prevalent for complex projects, such as procurement projects—are prone to strategic behavior (Williamson, 1971, 2005), leading to increased costs of negotiations and renegotiations (Bajari et al., 2014). Limiting these costs is essential for the efficiency and performance of the exchange relationship.

Scholars have long argued that trust helps mitigate issues of information asymmetry, thus lowering transaction costs (e.g., Arrow, 1974; Jones, 1995; Ring & Van de Ven, 1992; Williamson, 1973, 1991; Zaheer et al., 1998). In particular, organizational trust reduces information asymmetries as information is more openly and honestly disclosed by the contracting parties (e.g., Dyer & Chu, 2003; Malmgren, 1961). Also, trust mitigates opportunistic behavior when unforeseen contingencies arise, resulting in decreased transaction costs of exchange (Bromiley & Cummings, 1995). Moreover, trust (and trustworthiness) among contracting parties can be beneficial and a source of

[1]This challenge with procurement contracts has received much attention in the economics literature (e.g., Anton & Yao, 1987, 1992; Bajari & Tadelis, 2001; Baron & Besanko, 1987; Holt Jr, 1980; Laffont & Tirole, 1993). This literature focuses on the optimal contract and auction design.

[2]Interorganizational trust is commonly defined as an organization's expectation that another organization will not act opportunistically (Bradach & Eccles, 1989; Bromiley & Cummings, 1995; Gulati & Nickerson, 2008; Zaheer, McEvily, & Perrone, 1998).

competitive advantage (Barney & Hansen, 1994; Dyer & Chu, 2003; Hill, 1990; Jones, 1995; McEvily, Perrone, & Zaheer, 2003; Obloj & Zemsky, 2015; Zaheer et al., 1998).[3] For instance, organizational trust plays an important role in mitigating issues of moral hazard (Holmstrom, 1979) and hold-up (Klein, Crawford, & Alchian, 1978), hereby improving the efficiency of the collaboration (Barney & Hansen, 1994; Hill, 1990). In sum, the above arguments suggest that trust plays an important role in mitigating information asymmetries in business relationships.

Similarly, in the specific context of government-supplier relationships, the government's trust in suppliers' non-opportunistic behavior is likely to be an important determinant of the purchasing decision. Arguably, the government's trust—and hence the firm's prospects of obtaining government contracts—is affected by a "bundle" of factors, e.g., a firm's pre-existing relationship with the government (that is, the firm's "reputation"), and other credible signals of the firm's trustworthiness.[4]

While closely related, trust and reputation are two different theoretical concepts. In this paper, "reputation" is defined in a game-theoretical sense (e.g., Cabral, 2005)—reputation emerges only when the agent (i.e., the supplier) has successfully completed transactions with the principal (i.e., the government) in the past. As such, reputation is solely based on the agent's track record in fulfilling government contracts.[5] In contrast, "trust" is the expectation that the contracting partner (i.e., the supplier) will not act opportunistically. This expectation is formed based on the agent's track record (i.e., the agent's "reputation") and other signals of trustworthiness.

Having an existing long-term relationship with the government is likely to be an important factor in the bundle of trust.[6] Trust develops over time. Having a track record of past successful transactions allows suppliers to establish a reputation for being non-opportunistic contracting partners. As the principle draws inferences about the agent's future contracting behavior based on past behavior, suppliers with a track record of non-opportunistic behavior are expected to behave the same way in the future. Since a firm's reputation entails significant investment, takes time to evolve, and represents a valuable intangible asset (Barney, 1991; Dasgupta, 2000; Hall, 1992), contracting partners are reluctant to jeopardize their reputation by acting opportunistically (Williamson, 1993). Hence, having contracted with the government in the past provides a direct signal of the supplier's trustworthiness and likely affects the government's trust in the supplier.

Besides a supplier's pre-existing contracting relationship with the government, other factors will likely contribute to earning the government's trust. For example, a supplier's reputation as a trustworthy contracting partner among *other* constituencies—such as buyers in the B2B market—may be another contributing factor in the bundle of trust. Its signal is only indirect, though, as the supplier does not establish a contracting history directly with the government.

In addition to its buyers, a firm has several other constituencies (e.g., employees, local communities, society-at-large, the natural environment) with whom it has relationships. For example, the firm may support local communities, donate to charities, engage with advocacy groups, or develop nonpolluting products to benefit the natural environment. It may provide equal opportunity

[3]While trust characterizes the relationship between contracting partners, trustworthiness is an attribute of the individual contracting partners, i.e., a contracting partner is trustworthy when she is worthy of the trust of others (see, e.g., Barney & Hansen, 1994).

[4]This is analogous to the governance literature that examines different bundles of corporate governance mechanisms (see, e.g., Aguilera, Desender, & Kabbach de Castro, 2012; García-Castro, Aguilera, & Ariño, 2013; Ward, Brown, & Rodriguez, 2009). According to this stream of research, effective firm governance might not need every practice in place as certain governance mechanisms may serve as substitutes for others. Conversely, certain governance mechanisms may complement each other.

[5]In this vein, the essence of reputation is Bayesian updating based on the agent's past interactions with the principal.

[6]Several studies in the B2B context are supportive of this argument. Specifically, they argue that suppliers may build trust through reputation (Banerjee & Duflo, 2000; Doney & Cannon, 1997; Ring & Van de Ven, 1992).

employment, advancement opportunities, and a healthy work-life-balance to its employees, place women and minority members on boards, stand up for human rights, or engage in other socially responsible practices that address the needs and demands of its stakeholders.[7] While the way and degree to which a firm engages with its various constituencies can differ, being known as a socially responsible firm allows firms to position themselves as "good citizens" and non-opportunistic business partners. In this vein, socially responsible companies are less likely to engage in opportunistic behavior such as corporate fraud (Harjoto, 2017), earnings management (Chih, Shen, & Kang, 2008; Hong & Andersen, 2011), and corruption (Luo, 2006). Moreover, due to the long-term nature of stakeholder engagement—e.g., the adoption of environmentally sustainable practices, the provision of training and career development opportunities, etc.—socially responsible companies tend to be more committed to the long run (Eccles, Ioannou, & Serafeim, 2014; Flammer & Bansal, 2017), suggesting that they are less likely to act opportunistically in the short run.

Taken together, these arguments suggest that the extent to which a firm shows responsibility and concern for its stakeholders is indicative of the firm's non-opportunistic behavior and long-term orientation. As such, CSR may serve as a signal of trustworthiness, and hence as a contributing factor in the bundle of trust. Accordingly, I posit that—all else being equal—companies with higher CSR are more likely to obtain government procurement contracts. This motivates the following hypothesis.

> **Hypothesis 1 (H1)** *Companies with higher CSR are more likely to obtain government procurement contracts.*

2.2 | Trust signaling capabilities over time

As discussed above, my main argument is that a firm's CSR is one factor in the bundle of trust that positively influences the award of government procurement contracts. In the following, I explore whether and how the signaling capabilities of CSR change over time as the supplier establishes a long-term relationship with the government.

Companies that have been awarded government contracts in the past can establish a track record with the government. In particular, long-term suppliers with a history of non-opportunistic behavior are expected to behave the same way in the future. Accordingly, suppliers that have been awarded contracts in the past and fulfilled them successfully can earn the government's trust, and likely have an advantage in future auctions over new suppliers.

While a long-term relationship allows the contracting partners to develop trust, establishing such long-term relationship necessitates time to develop. Hence, it is evident that only over time can a supplier establish a track record as a non-opportunistic supplier to the government. In contrast, at the beginning of the government–supplier relationship, new sellers—by definition—lack a contracting history with the government. In other words, time has not allowed for trust to develop through a long-term relationship. Accordingly, CSR as a signal of trustworthiness is likely more important for new suppliers compared to suppliers that have a long history with the government.[8]

In contrast to establishing a contracting history directly with the government, CSR and other factors in the bundle of trust only provide an indirect signal of a seller's trustworthiness. Accordingly, I

[7]An activity is considered to be socially responsible if it goes beyond the firm's maximization of its (single) bottom line and legal requirements and contributes to the social good (e.g., McWilliams & Siegel, 2001).

[8]This argument is in line with Elfenbein, Fisman, and McManus' (2012) finding that, in the B2C context, the trust signal from charitable donations is particularly important for new sellers.

expect the government's decision to be less sensitive to CSR for long-term suppliers. In other words, a new supplier that engages in CSR is likely less able to compete against a long-term supplier that has a long history of non-opportunistic behavior (even one without CSR). As such, the trust signaling capabilities of a long-term partner's track record of non-opportunistic behavior likely dominate those of a new supplier's CSR.

Moreover, as suppliers build a long-term relationship with the government, they are likely to expand their network and strengthen existing ties with, e.g., government officials and congressional representatives. In turn, this might further diminish the sensitivity of the government's procurement decisions to CSR (or other signals of trustworthiness).

Taken together, the above arguments suggest that CSR is part of a bundle of factors that affect trust and, to some extent, can compensate for the lack of a track record at the beginning of the government-supplier relationship. That is, CSR benefits new suppliers the most, whereas it is less beneficial (if at all) for companies that have a long history with the government. This leads to the following hypothesis:

> **Hypothesis 2 (H2)** *The positive relationship between CSR and the allocation of procurement contracts is stronger at the beginning of the government–supplier relationship.*

2.3 | Corporate social responsibility as differentiation strategy

The above arguments imply that CSR can serve as a signaling strategy. Accordingly, companies can use this signal to differentiate themselves from their competitors in bidding for government contracts.[9]

2.3.1 | Competition

This differentiation strategy is especially relevant in industries with multiple bidders, where firms need to differentiate themselves to increase the chances of being selected. Indeed, the need to differentiate (either through cost or quality) is higher in these industries in order to remain competitive and ensure firm survival. Moreover, competition may trigger companies to engage in unethical behavior, corrupt actions, and other forms of adverse behavior to keep the costs low (for a related argument, see Bennett, Pierce, Snyder, & Toffel, 2013). Accordingly, being able to credibly signal trustworthiness is especially valuable in more competitive industries. In addition, as CSR is more costly in competitive industries—since competitive pressures reduce profit margins and hence the budget that is available for CSR programs—it is likely to provide a more credible signal of trustworthiness.[10]

Accordingly, I expect that the trust signaling capabilities of CSR are stronger—and hence CSR as a differentiation strategy is especially valuable to firms—in competitive industries. This motivates the following hypothesis:

> **Hypothesis 3 (H3)** *The positive relationship between CSR and the allocation of procurement contracts is stronger in competitive industries.*

[9]In this vein, it has been shown that CSR can help companies differentiate themselves from their foreign and local competitors (Fernandez-Kranz & Santalo, 2010; Flammer, 2015b) and from other employers (Flammer & Luo, 2017).

[10]In a seminal article, Spence (1973) shows that costly signals are more credible, as they are harder (i.e., costlier) to mimic.

2.4 | Types of government contracts

2.4.1 | Project complexity

The need to signal trustworthiness—and the benefits from doing so—is likely to vary across different types of projects. Procurement projects come in various degrees of complexity, ranging from simple projects (e.g., the provision of office supplies) to complex projects (e.g., the development of new technologies). Complex projects—i.e., projects that are larger, multi-year, and cost-plus—often require numerous rounds of project adaptations and contract renegotiations due to unforeseen changes after the contract is awarded and the project has started (Bajari et al., 2014). As such, complex projects are more prone to opportunistic behavior—as suppliers may take advantage of their informational advantage to act strategically (e.g., by overstating costs when adjusting the contract). Consistent with this argument, Karpoff, Lee, and Vendrzyk (1999) highlight the non-trivial incidence of fraudulent behavior among complex government contracts.[11]

The first type of complex projects are *multi-year* projects. Arguably, projects that span multiple years are prone to a classic hold-up problem—once the project has started, contractors have more bargaining power and can "hold up" the government by renegotiating the contract terms to their advantage. Accordingly, given the higher potential for opportunistic behavior, I expect the signaling value of CSR to be higher for multi-year contracts. This motivates the following hypothesis:

> **Hypothesis 4a (H4a)** *The positive relationship between CSR and the allocation of procurement contracts is stronger for multi-year contracts.*

The second type of complex projects are *large-scale* projects. Due to their scale, it is harder to contract upon all potential contingencies and determine the costs ex ante. For this reason, large-scale contracts are more likely to entail adaptations and renegotiation, which suppliers may use to their advantage (Bajari & Tadelis, 2001; Tadelis, 2012). Since large-scale projects are more prone to opportunistic behavior, I expect the signaling value of CSR to be higher for these projects.

> **Hypothesis 4b (H4b)** *The positive relationship between CSR and the allocation of procurement contracts is stronger for large-scale contracts.*

Finally, the third type of complex projects are *cost-plus* projects. In cost-plus contracts (as opposed to fixed-price contracts), no price is pre-specified, but the supplier is reimbursed for the costs of executing the contract plus a fee. As such, contractors may behave opportunistically by overstating the costs ex post, or exerting too little cost-reducing efforts during the completion of the contract (Baron & Besanko, 1987; Loeb & Surysekar, 1998). Accordingly, I expect the trust signaling capability of CSR to be of higher value for cost-plus contracts.

> **Hypothesis 4c (H4c)** *The positive relationship between CSR and the allocation of procurement contracts is stronger for cost-plus contracts.*

2.4.2 | Defense contracts

The trust signaling capabilities of CSR may differ across government agencies. As previously highlighted, one key characteristic of the government procurement process is the role of agency

[11]Supplier behavior that triggered fraud investigation includes "falsifying accounting documents, falsifying test results, charging personal expenses to government contracts, submission of invoices that include false claims, bribery, defective pricing of proposals submitted to the government to obtain additional government contracts, fraudulent accounting classifications, intentional mischarging or misallocation of costs, and product substitution" (Karpoff et al., 1999, pp. 811–812).

directors. These directors often take into account economic as well as other factors such as political pressure from special interest groups, sensitivity to congressional representatives in a firm's home district, etc. The consideration of such political and other non-economic factors sets the government procurement process apart from other markets. In fact, the government agency's purchasing decision—particularly related to defense spending—may be fully determined by distributive politics (e.g., Rundquist et al., 1996; Shepsle & Weingast, 1981; Weingast et al., 1981) or be influenced by political connections (e.g., Goldman, Rocholl, & So, 2013), political contributions (Tripathi, 2000), or other political forces.[12] If this is the case, the agency's decision will be less responsive to any type of trustworthiness signals.[13]

Moreover, the trust signaling capabilities of CSR is likely lower for suppliers of controversial products such as alcohol, tobacco, adult entertainment, weapons, etc. While it is unlikely that the government procures from most of these industries, it is certainly a major buyer of military equipment and services (e.g., guns, missiles, military tanks, nuclear and chemical weapons, etc.). Several scholars emphasize the contradictory nature of CSR in the defense industry—e.g., Baker's (2005) "can companies that make products that kill be socially responsible?" (see also Byrne, 2007; Halpern & Snider, 2012). In this vein, CSR may be less of a credible signal in the defense industry.

Finally, companies in the defense industry may not face a need to differentiate themselves to compete for government contracts in the first place given the limited number of military contractors. Indeed, the weapon and ammunition industry typically ranks among the least competitive industries in the economy (e.g., Mahajan, 2006).

In sum, the above arguments suggest that CSR as a differentiation strategy is less valuable to government suppliers in the defense industry. This motivates the following hypothesis.

> **Hypothesis 5 (H5)** *The positive relationship between CSR and the allocation of procurement contracts is weaker for defense contracts.*

3 | DATA

3.1 | Sample selection

The sample used in this study is obtained by merging the KLD database with Standard & Poor's Compustat. The KLD database contains annual ratings of companies' social and environmental performance as of 1991; Compustat contains accounting information as well as additional firm-level information (e.g., industry classification, state of incorporation, etc.) for U.S. public companies. I exclude observations with missing accounting information, as well as companies that are incorporated outside of the U.S. Since lagged values of the KLD ratings are used in the analysis, the relevant sample starts in 1992 instead of 1991. These criteria lead to a final sample of 27,062 firm-year observations from 1992 to 2013.

[12]In this vein, Leitzel (1992) argues that many aspects of defense procurement—such as the tendency for contracts to be distributed among a stable group of leading defense suppliers—are consistent with the political capture argument. For instance, Chesshyre (1985, p. 40) argues that defense procurements are characterized by "[…] collusion between the 53,000 Pentagon officers and civilians charged with procurement responsibilities and the 170,000 suppliers." Ashford (1985, p. 35) further claims that "[…] the military-industrial complex creates political constituencies that make captives of congressmen, public officials, and labor unions." As another example, Smith (1989, p. 33) argues that defense procurements serve the interests of an "Iron Triangle" that consists of the Pentagon, defense contractors, and members of Congress with visible military spending in their districts. See also Karpoff et al. (1999) for a discussion of the political economy of defense contracts.

[13]I thank an anonymous reviewer for suggesting these arguments.

TABLE 1 Summary statistics

Variable	Mean	Std. Dev.	1	2	3	4	5	6	7	8
1 Procurement contracts ($ million)	39.17	675.01								
2 KLD-index	1.381	2.203	0.109							
3 Size	7.440	1.750	0.090	0.505						
4 Return on assets	0.112	0.124	0.005	0.108	0.080					
5 Tobin's Q	1.946	1.336	−0.015	−0.001	−0.326	0.148				
6 Leverage	0.215	0.196	0.002	0.061	0.266	−0.007	−0.194			
7 Cash holdings	0.166	0.197	−0.024	−0.087	−0.426	−0.286	0.466	−0.328		
8 Herfindahl	0.062	0.061	0.011	−0.019	−0.032	0.170	−0.018	0.030	−0.104	
9 Political contributions ($ 1,000)	14.175	69.532	0.166	0.286	0.317	0.039	−0.025	0.038	−0.073	0.049

Notes. This table reports means, standard deviations, and Pearson correlation coefficients. The sample includes all firm-year observations for companies in the merged KLD-Compustat sample from 1992 to 2013 (N = 27,062).

3.2 | Procurement contracts

The process of awarding procurement contracts begins when an agency of the federal government identifies a need for the purchase of a good or service. The agency posts a solicitation on the Federal Business Opportunities website, called a "request for proposal" (RFP). Companies then submit their proposals, which are reviewed by agency personnel who evaluate the alternative proposals and make the final decision (for more details, see Halchin, 2012).

Procurement contracts can be classified into two broad categories: "fixed-price" and "cost-plus" contracts (see FPDS-NG, 2014). In fixed-price contracts, the seller is offered a pre-specified price by the buyer for completing the project. In cost-plus contracts, no price is pre-specified, but the supplier is reimbursed for the costs plus a fee. In general, cost-plus contracts are preferred for projects that are more complex and whose costs are difficult to determine ex ante (Bajari & Tadelis, 2001). Once the contract is signed and the project has started, unforeseen changes may lead to renegotiations and modifications of the contract, resulting in substantial adaptation costs (Bajari et al., 2014).

The data on procurement contracts are obtained from the Federal Procurement Data System-Next Generation (FPDS-NG). The FPDS-NG lists all procurement contracts awarded by the U.S. government that exceed a minimal transaction value threshold.[14] Exceptions to this reporting requirement are the U.S. Postal Service as well as legislative and judicial branch organizations. For each contract, the FPDS-NG reports detailed information about the contractor, the type of project, and the pricing agreement (fixed-cost versus cost-plus).

I match procurement contracts to corporations in Compustat by company names. I then aggregate the dollar amount of procurement contracts for each firm and each year. The average company in my sample receives procurement contracts in the amount of $39 million per year (see Table 1). In auxiliary analyses, I distinguish between contracts that are (a) fixed-cost versus cost-plus, (b) multi-year versus single-year, and (c) large versus small (a contract is coded as large if the dollar amount is greater than the average across all contracts awarded in the same year). I further distinguish between contracts that are procured by the DoD (Department of Defense) as opposed to other government agencies.[15]

[14]Prior to 2004, the reporting threshold was $25,000 per transaction. As of 2004, any transaction that exceeds $2,500 is reported.

[15]The average company in my sample receives 98 procurement contracts a year worth $0.4 M each (i.e., a total of $39 million per year). The average duration of a contract is about 2.2 years. Multi-year contracts account for 29.6% of all contracts (but 51.7% of the dollar value); cost-plus contracts account for 8.3% of all contracts (but 18.2% of the dollar value); large contracts (i.e., contracts whose value is above the mean in a given year—which is on average $0.4 M across all years) account for 6.4% of all contracts (but

3.3 | Corporate social responsibility

The CSR data are obtained from the KLD database. KLD is an independent social choice investment advisory firm that compiles ratings of how companies address the needs of their stakeholders. For each stakeholder group, strengths and concerns are measured to evaluate positive and negative aspects of corporate actions toward stakeholders (see KLD, 2010). KLD ratings are widely used in CSR studies (e.g., Chatterji & Toffel, 2010; Flammer, 2015b).

I consider all CSR strengths with respect to employees, customers, the natural environment, and society at large (community and minorities). I then construct a composite KLD-index by adding up the number of CSR strengths along these dimensions.[16] In auxiliary analyses, I further consider sub-indices of the composite KLD-index.

3.4 | Control variables

In my baseline specification (see the methodology section), I control for a vector of firm- and industry-level characteristics that may affect the allocation of procurement contracts and companies' engagement in CSR. In the following, I briefly describe these variables.

3.4.1 | Accounting variables

The accounting data are obtained from Compustat. *Size* is the natural logarithm of the book value of total assets. *Return on assets* (ROA) is the ratio of operating income before depreciation to the book value of total assets. *Tobin's Q* is the ratio of the market value of total assets (obtained as the book value of total assets plus the market value of common stock minus the sum of the book value of common stock and balance sheet deferred taxes) to the book value of total assets. *Cash holdings* is the ratio of cash and short-term investments to the book value of total assets. *Leverage* is the ratio of debt (long-term debt plus debt in current liabilities) to the book value of total assets. To mitigate the impact of outliers, all ratios are winsorized at the 1st and 99th percentiles of their empirical distribution.

3.4.2 | Political contributions

To measure companies' political connections, I focus on donations from corporate Political Action Committees (PAC) to politicians' campaign committees (e.g., Cooper, Gulen, & Ovtchinnikov, 2010). PACs are organizations that raise and spend funds for political campaigns. A corporate PAC can give a maximum contribution to a candidate campaign committee of $10,000 per election, and these funds must be raised exclusively from the firm's executives, shareholders, and their families.[17] I obtain data on PACs from the Federal Election Commission (FEC). The FEC data cover all

59.4% of the dollar value). DoD contracts and contracts for medical innovation are on average larger (22.5% of all DoD contracts and 22.9% of all medical innovation contracts qualify as large based on the above metric). DoD contracts are identified by department name "Dept of Defense" in the FPDS-NG database; contracts for medical innovation are identified by PSC (product service code) identifiers whose first two digits are "AN" (R&D Medical).

[16]In addition to CSR strengths, the KLD database also contains a list of CSR weaknesses, labeled "concerns". Accordingly, an alternative approach is to construct a "net" KLD index by subtracting the number of concerns from the number of strengths. However, recent research suggests that this approach is methodologically questionable. Because KLD strengths and concerns lack convergent validity, using them in conjunction fails to provide a valid measure of CSR (e.g., Johnson-Cramer, 2004; Mattingly & Berman, 2006). Nevertheless, I show in robustness checks that my results are similar if I use this net KLD-index.

[17]Note that corporations themselves cannot contribute to candidate campaign committees directly, nor may they contribute funds to PACs aside from covering the administrative and fundraising costs of affiliated PACs. These constraints have been substantially relaxed by the Supreme Court's 2010 Citizens United ruling. For further details on regulations before Citizens United, see Ansolabehere, de Figueiredo, and Snyder Jr (2003) and Federal Election Commission (2007). For the regime after Citizens United, see Federal Election Commission (2011).

campaign contributions made by corporate PACs to each candidate as of 1979. I match corporate PACs to corporations in Compustat by company name. I then aggregate the dollar amount of all campaign contributions made by each firm in each year.

3.4.3 | Competition

To measure the degree of product market competition, I compute the Herfindahl–Hirschman index of industry concentration (henceforth "Herfindahl"). This index is calculated as the sum of squared market shares of all companies in a given 2-digit SIC industry and year. Market shares are computed from Compustat based on firms' sales. Note that higher values of the index represent lower competition.

3.5 | Summary statistics

Table 1 provides summary statistics for all variables described in this section, along with the correlation matrix. As can be seen, there is a positive correlation between the KLD-index and the value of procurement contracts (10.9%). This positive correlation is suggestive of Hypothesis 1, according to which companies with higher CSR are more likely to receive procurement contracts. Interestingly, the value of procurement contracts also correlates with size (9%) and political contributions (16.6%). The latter is in line with Goldman et al. (2013) who show that political connections are an important determinant of the allocation of procurement contracts.

4 | METHODOLOGY

4.1 | OLS regressions

To examine whether CSR affects the allocation of procurement contracts, I estimate the following regression:

$$\log(1+procurements_{it}) = \alpha_i + \alpha_t + \beta \times KLD\text{-}index_{it-1} + \boldsymbol{\gamma}' \mathbf{X_{it-1}} + \varepsilon_{it}, \quad (1)$$

where i indexes firms; t indexes years; α_i and α_t are firm and year fixed effects, respectively; *procurements* is the dollar amount of procurement contracts allocated to the company; *KLD-index* is the KLD-index of the company in the preceding year; $\mathbf{X}$ is the vector of control variables (size, ROA, Tobin's Q, leverage, cash holdings, the logarithm of one plus the dollar amount of political contributions made by the company, and the Herfindahl index) in the preceding year; ε is the error term. I cluster standard errors at the 2-digit SIC industry level (the results are similar if standard errors are clustered at the firm or state level). The coefficient of interest is β. Due to the logarithmic specification of the dependent variable, β measures the percentage change in the value of procurement contracts corresponding to an increase in the KLD-index by one index point.[18] Hypothesis 1 predicts that β should be positive and significant.

[18]I construct the dependent variable as log(1 + *procurements*)—as opposed to log(*procurements*)—to account for the fact that not all companies receive procurement contracts in all years (i.e., *procurements* = 0), Thus, by construction, the estimate of β captures the change in the allocation of procurement contracts at both the extensive margin (i.e., whether a company receives procurement contracts) *and* intensive margin (i.e., whether a company receives more procurement contracts). In auxiliary analyses (see Table A4 of the online appendix), I examine both margins separately. Specifically, I study the extensive margin by using as dependent variable a dummy variable that indicates whether the company receives procurement contracts in a given year. I then study the intensive margin by using as dependent variable log(*procurements*), restricting the sample to firm-year observations where *procurements* $\neq$ 0.

The inclusion of control variables mitigates the possibility that my findings are driven by omitted variables. For example, it could be that more profitable companies are more likely to receive procurement contracts (e.g., because they are more cost-efficient). At the same time, such companies may be more CSR-friendly (e.g., because they can more easily afford to finance CSR programs). Controlling for profitability (ROA) addresses this potential confound. Similarly, the other controls alleviate concerns that my results are confounded by size, investment opportunities (Tobin's Q), financing decisions (leverage, cash holdings), the company's political contributions, or competition (Herfindahl). In particular, controlling for political contributions addresses the possibility that firms that engage in CSR may have more extensive networks with government officials which helps in procuring contracts. Relatedly, the inclusion of firm fixed effects accounts for any time-invariant firm characteristics that may affect both CSR and the allocation of procurement contracts. Finally, the inclusion of year fixed effects accounts for economy-wide factors that could affect both variables.

While the controls and fixed effects help address potential confounds, they do not fully rule out the possibility that *unobservable* time-varying firm characteristics may drive a spurious relationship between the KLD-index and the allocation of procurement contracts. In other words, Equation (1) is subject to a classic endogeneity problem—CSR reflects a firm choice, and this choice may correlate with unobservable firm characteristics that also affect the allocation of procurement contracts. In such cases, the estimate of β would be inconsistent.

To obtain a consistent estimate of β, one would need an instrument for the KLD-index—i.e., a variable that triggers exogenous changes in the KLD-index. The specific source of exogenous variation I exploit in this paper is the enactment of state-level constituency statutes. I describe this approach in the next section.

4.2 | Instrumental variable (IV) regressions

4.2.1 | Constituency statutes

I instrument changes in the KLD-index using the enactment of constituency statutes as a quasi-natural experiment. Constituency statutes allow corporate officers and directors to take into account the interests of a variety of corporate stakeholders in carrying out their fiduciary duties to the corporation and, as such, trigger an exogenous shift in companies' ability to address their stakeholders' needs (e.g., Flammer & Kacperczyk, 2016; Orts, 1992). The online appendix (Appendix A in Appendix S1) describes the institutional background underlying these statutes.

A total of 35 states in the U.S. have adopted constituency statutes (see Karpoff & Wittry, 2017); five of them adopted the statutes during the sample period (1992–2013).[19] Because the enactment of the statutes does not reflect any firm's strategic decision, such "treatments" offer plausibly exogenous variation in a firm's orientation toward stakeholders.[20]

[19]These states are North Carolina (1993), North Dakota (1993), Vermont (1998), Maryland (1999), and Nebraska (2007). In her evaluation of the constituency statutes, Barzuza (2009) notes that the Maryland and North Carolina statutes are especially stringent. In robustness checks, I verify that my results hold if I only use these two treatments. Moreover, Texas also enacted a constituency statute in 2006. However, it has been argued that the Texas statute has less bite than other constituency statutes (e.g., Tyler, 2010). In robustness checks, I show that my results are similar if the Texas constituency statute is included.

[20]Consistent with this argument, Luoma and Goodstein (1999) show that companies incorporated in states that have enacted constituency statutes increased stakeholder representation on their board of directors.

4.2.2 | Two-stage least squares

To study the effect of the KLD-index—instrumented by the constituency statutes—on the allocation of procurement contracts, I use two-stage least squares (2SLS). In the first stage, I regress the KLD-index on the enactment of constituency statutes. Specifically, I estimate the following regression:

$$KLD\text{-}index_{it} = a_i + a_t + b \times constituency\ statute_{it} + \mathbf{c}'\mathbf{X_{it}} + e_{it}, \quad (2)$$

where constituency statute is the "treatment dummy," which is equal to one if firm i is incorporated in a state that has enacted a constituency statute by year t.[21] Effectively, Equation (2) is a difference-in-differences specification, i.e., the coefficient b measures the change in the KLD-index after the treatment (first difference) in the treatment versus control groups (second difference).

In their evaluation of the difference-in-differences methodology, Bertrand, Duflo, and Mullainathan (2004) recommend that standard errors be clustered at the dimension of the treatment. Accordingly, when estimating the first-stage regression, I cluster standard errors at the state of incorporation level. (The results are similar if standard errors are clustered at the 2-digit SIC level or at the firm level.)

The predicted values from Equation (2) provide the "instrumented" KLD-index—i.e., the exogenous component of the KLD-index. In the second stage, I then re-estimate Equation (1) using *KLD-index (instrumented)* in lieu of *KLD-index*:

$$\log(1 + procurements_{it}) = \alpha_i + \alpha_t + \beta^{IV} \times KLD\text{-}index\,(instrumented)_{it-1} + \boldsymbol{\gamma}'\mathbf{X_{it-1}} + \varepsilon_{it}. \quad (3)$$

The coefficient β^{IV} provides a consistent estimate of the effect of CSR on the allocation of procurement contracts.

5 | RESULTS

5.1 | Main results

The main results are presented in Table 2. Column (1) reports estimates from the OLS regression specified in Equation (1). As can be seen, the coefficient of the KLD-index is positive and highly significant ($t = 3.67$). The point estimate of 0.088 implies that an increase in the KLD-index by one index point is associated with an 8.8% increase in the dollar amount of procurement contracts allocated to the company. A look at the control variables provides additional insights into the determinants of the allocation of procurement contracts. In particular, larger and more profitable firms are more likely to receive procurement contracts. The same applies to companies that make larger political contributions, consistent with Goldman et al.'s (2013) findings that political connections matter for the allocation of procurement contracts.

In columns (2) and (3), I address the potential endogeneity of the KLD-index by using 2SLS. The first-stage regression is provided in column (2). As is shown, the enactment of constituency statutes leads to a significant increase in the KLD-index. The corresponding F-statistic is 17.2, which lies well above Staiger and Stock's (1997) threshold for "strong" instruments. In column (3), I estimate the second-stage regression. The coefficient of the (instrumented) KLD-index is 0.075, which is somewhat smaller than the OLS coefficient in column (1). Importantly, it remains

[21]The Nebraska statute—which was introduced before the start of the sample period—was repealed in 1995, and re-introduced in 2007 (see Tyler, 2010). Hence, for Nebraska the treatment dummy is set to 1 before 1995, switches to 0 as of 1995, and switches back to 1 as of 2007.

TABLE 2 Corporate social responsibility and the allocation of government contracts

		2SLS	
Dependent variable	**Log(1 + Procurement) OLS (1)**	**KLD-index First-stage (2)**	**Log(1 + Procurement) IV (3)**
KLD-index	0.088		
	(0.024)		
KLD-index (instrumented)			0.075
			(0.035)
Constituency statute		0.245	
		(0.059)	
Size	0.580	0.143	0.582
	(0.089)	(0.038)	(0.089)
Return on assets	0.191	0.041	0.191
	(0.353)	(0.209)	(0.354)
Tobin's Q	0.100	−0.024	0.099
	(0.036)	(0.016)	(0.036)
Leverage	0.736	0.250	0.739
	(0.253)	(0.114)	(0.253)
Cash holdings	−1.239	0.473	−1.233
	(0.287)	(0.114)	(0.287)
Log(1 + Political contributions)	0.037	−0.026	0.037
	(0.015)	(0.015)	(0.015)
Herfindahl	0.032	−0.117	0.031
	(1.462)	(1.283)	(1.456)
Year fixed effects	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes
R-squared	0.81	0.76	0.81
Observations	27,062	27,062	27,062

Notes. Standard errors are reported in parentheses. They are clustered at the industry level (except in column (2) where they are clustered at the state level).

statistically significant ($t = 2.14$), suggesting that the positive relationship between the KLD-index and the allocation of procurement contracts is not driven by the endogenous choice of CSR strategies. Overall, the results presented in Table 2 are supportive of Hypothesis 1 according to which companies with higher CSR are more likely to be awarded procurement contracts.

5.2 | Relationship length

In columns (1) and (2) of Table 3, I examine whether the effect of CSR at the intensive margin (i.e., in the subsample where *procurements* > 0) depends on past interactions between the government and the company—arguably, government agencies face lower information asymmetries with companies they have been interacting with for a long time. Such companies build up reputation through past interactions and hence are less likely to benefit from CSR as a signal of trustworthiness.

To examine this hypothesis, I interact the KLD-index with two dummy variables indicating whether "relationship length"—that is, the number of years since the company has been receiving

TABLE 3 Cross-sectional heterogeneity

	Log(1 + Procurement)			
	Length of the relationship		Product market competition	
Dependent variable	OLS (1)	IV (2)	OLS (3)	IV (4)
KLD-index × (Relationship length > Median)	0.023			
	(0.014)			
KLD-index × (Relationship length < Median)	0.084			
	(0.024)			
KLD-index (instr.) × (Relationship length > Median)		0.024		
		(0.020)		
KLD-index (instr.) × (Relationship length < Median)		0.099		
		(0.035)		
KLD-index × (Herfindahl > Median)			0.036	
			(0.052)	
KLD-index × (Herfindahl < Median)			0.094	
			(0.025)	
KLD-index (instr.) × (Herfindahl > Median)				0.050
				(0.069)
KLD-index (instr.) × (Herfindahl < Median)				0.074
				(0.036)
Size	0.441	0.434	0.616	0.622
	(0.071)	(0.071)	(0.091)	(0.092)
Return on assets	0.224	0.214	0.176	0.177
	(0.398)	(0.399)	(0.355)	(0.355)
Tobin's Q	0.040	0.040	0.101	0.100
	(0.026)	(0.026)	(0.036)	(0.036)
Leverage	0.286	0.279	0.740	0.745
	(0.214)	(0.214)	(0.252)	(0.252)
Cash holdings	−0.581	−0.585	−1.238	−1.225
	(0.254)	(0.255)	(0.287)	(0.287)
Log(1 + Political contributions)	0.033	0.033	0.038	0.038
	(0.010)	(0.010)	(0.015)	(0.015)
Herfindahl	−2.733	−2.795		
	(1.143)	(1.133)		
Relationship length > Median	0.042	0.059		
	(0.083)	(0.085)		
Herfindahl > Median			−0.225	−0.213
			(0.127)	(0.133)
Year fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
R-squared	0.83	0.83	0.81	0.81
Observations	8,887	8,887	27,062	27,062

Notes. Standard errors (reported in parentheses) are clustered at the industry level.

procurement contracts—is above and below, respectively, the median across all companies. As can be seen, the effect of CSR is large and highly significant for companies that are relatively new to government agencies. In contrast, the effect of CSR is small and insignificant for companies that have a long history with government agencies.[22] This evidence is consistent with Hypothesis 2.[23]

5.3 | Product market competition

Next, I examine whether the effect of CSR on the allocation of procurement contracts is larger in more competitive industries—i.e., in industries where companies have more of a need to differentiate themselves from their competitors (e.g., by signaling trustworthiness through CSR).

To examine this hypothesis, I interact the KLD-index with two dummy variables indicating whether the company operates in an industry whose Herfindahl index lies above or below the median across all industries.[24] As can be seen in columns (3)–(4) of Table 3, I find that the effect of CSR is large and significant in more competitive industries, while it is small and insignificant in less competitive industries.[25] This finding is supportive of Hypothesis 3.

5.4 | Types of procurement contracts

5.4.1 | Project complexity

The central tenet of my theory is that CSR helps mitigate information asymmetries by signaling trustworthiness to government agencies. To further assess this mechanism, I examine whether the effect of CSR is stronger for government contracts that are more prone to information asymmetries, such as (a) multi-year, (b) large-scale, and (c) cost-plus contracts.

To conduct this analysis, I re-estimate my baseline specifications using alternative dependent variables. For example, to study whether higher CSR affects the allocation of multi-year procurement contracts, I use as dependent variable log(1 + *multi-year contracts*), where *multi-year contracts* is the dollar amount of multi-year procurement contracts allocated to a given company in a given year. The results are presented in Table 4. As is shown in columns (1), (3), and (5) of both panels, CSR has a significant effect on the allocation of contracts that are multi-year, larger, and cost-plus, respectively. In contrast, the estimates in columns (2), (4), and (6) show that CSR has no significant effect on the allocation of other types of contracts. These results are supportive of Hypotheses 4a–4c.

[22]The difference between the two coefficients is statistically significant. The *p*-value of the *F*-test is 0.028 in column (1) and 0.036 in column (2).

[23]In Figure A1 of the online appendix, I provide a finer-grained characterization of the interaction between relationship length and CSR. Specifically, I plot the average procurement contracts split along two dimensions: the KLD-index (values of 0, 1, 2, 3, and 4+) and relationship length (< 1 years, 1–5 years, 6–10 years, and 10+ years). As is shown, CSR matters the most for new and recent relationships (< 1 year and 1–5 years, respectively), it somewhat matters for intermediate relationship lengths (6–10 years), and it is irrelevant for relationship lengths beyond 10 years. Looking at the level of the curves, it is interesting to note that companies with high CSR (KLD-index of 4+) and a shorter relationship length (< 1 year and 1–5 years) are roughly at par with companies with low CSR (KLD-index of 0) and intermediate relationship length (6–10 years), but remain at a disadvantage compared to companies with low CSR (KLD-index of 0) and a 10+ year relationship length. This is consistent with the argument that CSR is a less informative signal when trust is already established through a long-term partnership.

[24]Note that the Herfindahl index is a measure of concentration, and hence an inverse measure of competition.

[25]The difference between the two coefficients is significant in column (3) (*p*-value = 0.032) and marginally insignificant in column (4) (*p*-value = 0.141).

TABLE 4 Types of procurement contracts

	Duration		Scale		Pricing		Defense	
Dependent variable	**Log(1 + Multi-year) (1)**	**Log(1 + Single-year) (2)**	**Log(1 + Large) (3)**	**Log(1 + Small) (4)**	**Log(1 + Cost-plus) (5)**	**Log(1 + Fixed-price) (6)**	**Log(1 + Defense) (7)**	**Log(1 + Other) (8)**
Panel (A): OLS Regressions								
KLD-index	0.063	0.025	0.078	0.009	0.065	0.023	0.017	0.071
	(0.024)	(0.022)	(0.021)	(0.016)	(0.019)	(0.026)	(0.023)	(0.019)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.77	0.53	0.76	0.64	0.73	0.74	0.77	0.53
Observations	27,062	27,062	27,062	27,062	27,062	27,062	27,062	27,062
Panel (B): IV Regressions								
KLD-index (instr.)	0.069	0.006	0.091	−0.016	0.084	−0.009	0.013	0.061
	(0.033)	(0.032)	(0.032)	(0.023)	(0.027)	(0.037)	(0.033)	(0.026)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.77	0.53	0.76	0.64	0.72	0.74	0.77	0.53
Observations	27,062	27,062	27,062	27,062	27,062	27,062	27,062	27,062

Notes. Standard errors (reported in parentheses) are clustered at the industry level. The coefficients of the controls (size, ROA, Tobin's Q, leverage, cash holdings, log(1 + political contributions), and Herfindahl) are omitted for brevity.

5.4.2 | Defense contracts

In columns (7) and (8) of each panel, I further examine whether the effect of CSR differs depending on whether the government contract is procured by the DoD—for which the buying criteria are more likely to be subject to political forces (e.g., Tripathi, 2000)—as opposed to other government agencies. As is shown, the effect of CSR is small and insignificant for DoD contracts, while it is large and significant for other agencies. This lends support to Hypothesis 5.[26]

5.5 | Extensions and robustness

In the online appendix (Appendix B and Tables A1–A12 in Appendix S1), I provide several extensions and robustness checks. In particular, I provide evidence supporting the assumption that CSR helps signal trustworthiness. First, I document that the effect of CSR on the allocation of procurement contracts is stronger for CSR initiatives related to "institutional" stakeholders (i.e., the natural environment, local community, and society at large) as opposed to "technical" stakeholders (i.e., employees and customers) which is consistent with the trust signaling capability of CSR. Arguably, institutional CSR—because it provides less apparent benefits to a corporation—is likely to provide a stronger signal of trustworthiness than technical CSR (see Godfrey, Merrill, & Hansen, 2009).[27] Second, I show that the positive effect of CSR on the allocation of procurement contracts is muted if companies are involved in accounting scandals (which likely undermine a firm's trust signaling capabilities). Third, I show that higher CSR engagement is associated with (a) higher values of the long-term index of Flammer and Bansal (2017), and (b) a lower probability of engaging in fraudulent accounting, suggesting that CSR is indicative of a long-term orientation and non-opportunistic behavior, respectively.[28]

6 | DISCUSSION AND CONCLUSION

Does CSR influence the allocation of procurement contracts? My results indicate that the answer to this question is affirmative. Bridging the economics literature on incomplete contracting with the management literature on transaction cost economics and competitive strategy, I argue that CSR mitigates information asymmetries—which are inherent to government procurement—by signaling

[26]Note that the control variable *log(1 + political contributions)* has a coefficient of 0.031 ($t = 2.21$) for DoD contracts and a coefficient of 0.006 ($t = 0.46$) for contracts procured by other agencies in the regressions in Panel (A). (The coefficients and *t*-statistics are virtually identical in the regressions in Panel (B).) This further confirms that DoD contracts are more likely to be subject to political forces.

[27]I thank an anonymous reviewer for suggesting this analysis.

[28]In addition, the online appendix contains several robustness checks. In a nutshell, I show that my results are robust when I (i) consider separately the extensive margin (i.e., whether companies receive procurement contracts) and intensive margin (i.e., whether companies receive *more* procurement contracts); (ii) account for companies' political influence; (iii) exclude CSR-related procurement contracts (e.g., clean energy), which high-CSR companies might be better qualified to fulfill (for reasons unrelated to the trust signaling capabilities of CSR); (iv) examine the dynamics of the relation between CSR and the allocation of procurement contracts; (v) account for industry and regional trends; (vi) account for corporate governance and governance-related regulations; (vii) include (time-varying) state-level controls that capture the state's political leaning and pro-social values; (viii) estimate my baseline specifications without controls; (ix) use the "net" KLD-index that combines both KLD strengths and KLD concerns; (x) exclude the Nebraska constituency statute, include the Texas constituency statute, or restrict the set of treated states to the most stringent constituency statutes; (xi) conduct placebo tests that randomize the treated states; (xii) consider alternative functional forms; and (xiii) consider an alternative source of exogenous variation in CSR in the form of close call shareholder proposals (following Flammer, 2015a). Finally, the online appendix also assesses the representativeness of the treated states compared to other states that adopted a constituency statute prior to the beginning of the sample period.

trustworthiness. Accordingly, I posit that companies' social engagement helps improve their competitiveness in obtaining procurement contracts.

To examine this question empirically, I exploit a quasi-natural experiment provided by the staggered introduction of constituency statutes in five U.S. states between 1992 and 2013. These statutes allow corporate directors to take stakeholders' interests into consideration when making business decisions. Hence, they provide exogenous variation in the way U.S. companies address the needs of their stakeholders. Using an instrumental variable methodology—instrumenting CSR with the enactment of constituency statutes—I find that companies with higher CSR receive more procurement contracts. This finding indicates that CSR can serve as a strategic tool to obtain government contracts. Moreover, I find that the effect is stronger for more complex projects—such as multi-year, large-scale, and cost-plus projects—and in the early years of the government-company relationship, suggesting that CSR helps mitigate information asymmetries by signaling trustworthiness. Furthermore, I find that the effect is stronger in competitive industries, indicating that CSR can serve as a differentiation strategy to compete against other bidders. Finally, the effect is weaker for defense contracts, where the decision process is more likely to be influenced by political forces.

6.1 | Contributions

This study contributes to the existing literature in several ways. First, this study adds to the vast literature on competitive strategies (e.g., Porter, 2008). The limelight of this literature is on the competitive positioning of companies in the business-to-consumer (B2C) market. In contrast, the question of how companies can improve their competitiveness in the market for government contracts has remained largely unexplored. This is surprising given the economic importance of this market (15–20% of GDP). To the best of my knowledge, this paper is the first to examine how corporate strategy can affect the allocation of government contracts. By doing so, it represents a first step in exploring a firm's competitive strategy in the B2G context.

Second, this study sheds new light on the role of the government in the business-government relationship—it highlights the role of the government as a "customer" of the firm's products and services, as opposed to being merely the actor that sets the rules of the business environment. In particular, a vibrant literature examines how companies engage with the government and aim to influence the government's legislative and regulatory actions through their non-market strategies—e.g., through corporate political activities such as lobbying and campaign contributions (Bonardi, Holburn, & Vanden Bergh, 2006; Choi, Jia, & Lu, 2014; McDonnell & Werner, 2016; Richter & Werner, 2017; Schuler, 1996), corporate social responsibility (e.g., Lyon & Maxwell, 2004; Werner, 2015), as well as industry self-regulation and other forms of collective action (e.g., King & Lenox, 2000; Lenox, 2006). Taken together, this literature suggests that a firm's non-market strategies can influence the legislative and regulatory business environment. My study contributes to this body of work by exploring an additional avenue through which non-market strategies can benefit companies in their interactions with the government: non-market strategies—such as CSR practices—can help companies obtain government procurement contracts. Hence, the impact of a firm's non-market strategies on the government's decision-making might be broader than the previous literature suggests: non-market strategies influence not only (a) the legislative and regulatory business environment, but also (b) the firm's competitiveness in the B2G market.

Third, this study contributes to the literature that examines whether CSR provides a signal that influences consumers' purchasing decision (e.g., Du, Bhattacharya, & Sen, 2011; Elfenbein et al., 2012; Kotler, Hessekiel, & Lee, 2012; McWilliams & Siegel, 2001). This literature focuses on the

B2C market and, to a lesser extent, the B2B market.[29] Based on the insights from this literature, it is far from obvious whether CSR plays a role in the B2G context as well. Specifically, the extant literature suggests that purchasing decisions in the B2C market are more sensitive to companies' CSR engagement than in other markets (e.g., Corey, 1991; Lev et al., 2010). This reflects inherent differences in the purchasing decision-making process.[30] Moreover, given the political nature of the government procurement process for some agencies, the purchasing decision might be fully captured by political forces. Accordingly, one may expect the signaling capabilities of CSR to be limited in the B2G context. Yet, in contrast to these predictions, my results indicate that CSR plays an important role in obtaining government procurement contracts.

Fourth, and related to the previous point, my results suggest that the government as a "buyer" acts in a somewhat similar fashion compared to consumers and business buyers. In turn, this implies that existing theories on the competitive positioning of firms might—at least to some extent—generalize to the B2G market. For example, the literature on organizational trust and transaction cost economics highlights the role of trust in reducing information asymmetries in B2B relationships (e.g., Barney & Hansen, 1994; Bromiley & Cummings, 1995; Williamson, 1991; Zaheer et al., 1998) and B2C relationships (e.g., Elfenbein et al., 2012). My study casts these theories in a new light as it expands them to B2G relationships. As mentioned above, this is far from obvious given the inherent differences in the purchasing decision-making process and the political nature of the government procurement process. That being said, my finding that the allocation of defense contracts is less sensitive to CSR suggests that political forces do represent an important boundary condition when applying the above theories to the B2G context.

Fifth, this paper contributes to the large literature on CSR and financial performance (e.g., Flammer, 2013, 2015a; Flammer, Hong, & Minor, 2017; Margolis, Elfenbein, & Walsh, 2007; Margolis & Walsh, 2001, 2003; Orlitzky, Schmidt, & Rynes, 2003). Overall, this literature points toward a positive relationship between CSR and financial performance. Yet, the precise mechanisms through which CSR practices create value are not fully understood. One strand of the literature highlights benefits that originate from employees and customers. Studies in this vein emphasize the role of CSR in improving employee engagement (Flammer & Luo, 2017), fostering employees' innovation (Flammer & Kacperczyk, 2016), and establishing a unique customer base (Du et al., 2011), among others. Another strand of the literature highlights the role of CSR in gaining access to external markets (Cheng, Ioannou, & Serafeim, 2014; Zolotoy, O'Sullivan, & Klein, 2017). In particular, Cheng et al. (2014) argue that firms with better social practices have better access to external capital markets as CSR helps decrease agency costs and information asymmetry through enhanced stakeholder engagement and transparency. My study contributes to this line of work as it shows that CSR practices enhance firms' ability to access the market for government procurement contracts, and especially contracts that are more prone to information asymmetries. By doing so, I highlight a novel channel through which CSR may create value—improved access to public procurement contracts.

[29]Studying B2B procurements has proven difficult due to the lack of data on private procurements. Accordingly, the existing evidence is either qualitative (Homburg, Stierl, & Bornemann, 2013) or inferred by contrasting companies operating in SIC industries that are classified as being either B2B or B2C (Lev, Petrovits, & Radhakrishnan, 2010).

[30]More precisely, "[t]he purchasing decision of an individual consumer is affected not only by product attributes, but also by social group forces, psychological factors, and the consumer's situational forces. In contrast, in industrial purchasing, the decision-making process is highly formalized, using defined procurement procedures, and subject to economic (cost/value) analysis" (Lev et al., 2010, p. 186, adapted from Corey, 1991).

6.2 | Limitations and directions for future research

While this study makes several contributions to the literature, it also has limitations that call for future research.

First, this paper is among the first to examine the impact of a firm's strategy on its competitiveness in the B2G market—an economically sizable market that has received little attention in the strategy literature. As discussed above, my findings suggest that, to some extent, government buyers act in a similar fashion as individual consumers or business buyers. Moreover, they suggest that the signaling role of CSR fades over time as the supplier-government relationship matures, which highlights the importance of considering temporal aspects in competitive strategy research. These insights raise the question of whether, and under what conditions, the existing theories in competitive strategy generalize to the B2G context. In particular, they call for future research that (a) explores which existing theories in competitive strategy are applicable to the B2G context (along with their boundary conditions), and (b) develops new theories that are specific to the B2G context. Both are exciting avenues for future research.

Second, this study examines the effect of one specific type of non-market strategy—namely a firm's social engagement—on the firm's competitiveness in the B2G market. A firm's repertoire of non-market strategies includes other strategies such as corporate political activities, private politics, and collective actions, all of which may influence the allocation of government contracts. In this vein, future work could explore the impact of the full repertoire of non-market strategies on a firm's competitiveness in the B2G market, along with their role in the B2B and B2C markets. The interplay between the different strategies is not a priori obvious given that (a) firms are likely to operate in multiple markets, and (b) a firm's non-market strategies may act as substitutes or complements.[31] Accordingly, a fruitful avenue for future research is to consider non-market strategies as a whole and examine their effectiveness in the three different markets (i.e., B2C, B2B, and B2G).

Third, this study focuses on one channel through which the government is responsive to firms' CSR practices—the allocation of procurement contracts. Future research could build on this study and explore whether CSR practices help obtain other benefits from the government (e.g., tax benefits, subsidies) that create value for the firm. Another potentially fruitful direction is to explore the signaling capabilities of other firm-level strategies. While this study acknowledges the existence of other factors in the bundle of trust—besides a firm's CSR practices—it leaves the door open for future research to explore these factors in depth. In particular, future work could (a) identify the full set of factors that signal trustworthiness to the government, (b) examine whether the findings of this study are generalizable to other strategies that signal trustworthiness (e.g., non-corruptive behavior), and (c) whether the importance of such signaling strategies intensifies in less trustworthy business environments.[32] Relatedly, the results of this study suggest that the signaling capability of CSR is strongest at the beginning of the supplier-government relationship and fades as this relationship matures. In this context, a natural question is whether CSR is the most effective signal of trustworthiness compared to other signals. Future work could make ground on this question by studying the comparative effectiveness of the full set of factors that contribute to the bundle of trust, and explore how this comparative effectiveness changes as the supplier–government relationship matures.

[31]For example, political lobbying may help secure contracts in the B2G market. At the same time, it might signal opportunistic behavior and hence undermine the trust signaling capabilities of CSR, hurting the firm not only in the B2G, but also in the B2B and B2C markets.

[32]A case in point is the Indian tech company Infosys whose track record of non-corruptive behavior is often considered to be key to its ability of signaling trustworthiness and obtaining procurement contracts from governments and companies around the world (*Harvard Business Review*, 2011).

Fourth, this paper examines the role of trust across different types of contracts. The types of government procurement contracts considered in this study (e.g., cost-plus, fixed-price, multi-year) are also found in the private sector. Future work could study whether my findings generalize to private procurement contracts. An important caveat though is that it is difficult to obtain data on private procurements. This is in contrast to government procurement contracts that are compiled in the FPDS-NG registry on a systematic basis.

Finally, an important limitation of this study is that trustworthiness (and trust, respectively) is not directly measured, but merely inferred. While this caveat is common in the literature that infers trustworthiness from observable firm behavior (e.g., Cheng et al., 2014; Lev et al., 2010; Zolotoy et al., 2017), a challenging—but potentially fruitful—avenue for future research is to make ground on the measurement of trustworthiness.

6.3 | Managerial implications

Lastly, the findings of this study have relevant managerial implications. First, as mentioned above, the market for procurement contracts is sizeable: it represents 15–20% of GDP. Interestingly, the B2G market has received relatively little attention in strategy research, which focuses its attention on the B2C market, and to a lesser extent the B2B market. Part of the reason might be that governments are assumed to be insensitive to a firm's strategy. My findings suggest otherwise: firms' non-market strategies (such as their CSR engagement) can influence the purchasing decision of government agencies. The amounts at stake are far from trivial—the average firm in my sample receives government contracts worth $39 million.

Second, the fact that CSR influences the allocation of government procurement contracts implies that CSR can serve as a signaling and differentiation strategy to compete against other bidders, and ultimately achieve a competitive advantage. Accordingly, managers operating in the B2G sector—particularly those without a contracting history with the government—could benefit from integrating social and environmental considerations into their strategic decision making.[33]

Third, in auxiliary analyses, I find that the trust signaling capabilities of CSR differ across CSR initiatives. Specifically, my findings indicate that CSR initiatives related to "institutional" stakeholders (i.e., the natural environment, local communities, and society at large) provide a more effective signal of trustworthiness, and hence enhance the chances of obtaining procurement contracts more strongly (compared to CSR initiatives related to a firm's "technical" stakeholders such as employees and customers). Accordingly, managers operating in the B2G sector might want to focus their efforts on CSR initiatives related to their institutional stakeholders. This is especially important if the company faces resource constraints and cannot afford to engage with all stakeholder groups.

Finally, my results show that the effectiveness of CSR initiatives in obtaining procurement contracts is not uniform across government agencies. That is, other factors (such as political forces) might be the dominating force in the award process of specific agencies. For example, the DoD does not appear to be sensitive to a firm's CSR practices. Hence, firms competing for contracts awarded by the DoD might be better off investing in other forms of non-market strategies (e.g., political lobbying) to compete for defense contracts.

[33]These findings are likely to generalize to the B2B context as firms' purchasing behavior is less sensitive to political forces—that is, one would expect that CSR plays an even stronger role in obtaining procurement contracts in the B2B market. Hence, these managerial implications are likely to extend to procurement in general (i.e., B2G *and* B2B).

ACKNOWLEDGEMENTS

I thank Sea-Jin Chang (the editor), two anonymous reviewers, Pratima Bansal, Magali Delmas, Laurent Frésard, Sylvia Grewatsch, Olga Hawn, Glenn Hoetker, Bryan Hong, Yanfei Hu, Srividya Jandhyala, Dinah Koehler, Jiao Luo, Thomas Lyon, Alfred Marcus, Mary-Hunter McDonnell, Yongwook Paik, Sanjay Patnaik, Juan Santaló, Michael Toffel, Jakob Utgård, Dennis Yao, Yue Maggie Zhou, as well as seminar participants at the 2015 Annual Meeting of the Academy of Management, 2015 Atlanta Competitive Advantage Conference, 2015 Society for Institutional and Organizational Economics Conference, 2015 Alliance for Research on Corporate Sustainability Conference, and Ivey Business School for valuable comments and suggestions.

REFERENCES

Aguilera, R. V., Desender, K., & Kabbach de Castro, L. R. (2012). A bundle perspective to comparative corporate governance. In T. Clarke & D. Branson (Eds.), *The SAGE handbook of corporate governance* (pp. 379–405). New York, NY: Sage Publications.

Ansolabehere, S., de Figueiredo, J. M., & Snyder Jr., J. M. (2003). Why is there so little money in U.S. politics? *Journal of Economic Perspectives*, *17*(1), 105–130.

Anton, J. J., & Yao, D. A. (1987). Second sourcing and the experience curve: Price competition in defense procurement. *RAND Journal of Economics*, *18*(1), 57–76.

Anton, J. J., & Yao, D. A. (1992). Coordination in split award auctions. *Quarterly Journal of Economics*, *107*(2), 681–707.

Arrow, K. (1974). *The limits of organizations*. New York, NY: Norton.

Ashford, N. (1985). The Pentagon scandals. *World Press Review*, *32*(1), 35.

Bajari, P., Houghton, S., & Tadelis, S. (2014). Bidding for incomplete contracts: An empirical analysis of adaptation costs. *American Economic Review*, *104*(4), 1288–1319.

Bajari, P., & Tadelis, S. (2001). Incentives versus transaction costs: A theory of procurement contracts. *RAND Journal of Economics*, *32*(3), 387–407.

Baker, M. (2005, September 18). Can companies that make products that kill be socially responsible? *Business Respect* **86**.

Banerjee, A. V., & Duflo, E. (2000). Reputation effects and the limits of contracting: A study of the Indian software industry. *Quarterly Journal of Economics*, *115*(3), 989–1017.

Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *17*(1), 99–120.

Barney, J. B., & Hansen, M. H. (1994). Trustworthiness as a source of competitive advantage. *Strategic Management Journal*, *15*(Special Issue), 175–190.

Baron, D. P., & Besanko, D. (1987). Monitoring, moral hazard, asymmetric information, and risk sharing in procurement contracting. *RAND Journal of Economics*, *18*(4), 509–532.

Barzuza, M. (2009). The state of state antitakeover law. *Virginia Law Review*, *95*(8), 1973–2052.

Bennett, V. M., Pierce, L., Snyder, J. A., & Toffel, M. W. (2013). Customer-driven misconduct: How competition corrupts business practices. *Management Science*, *59*(8), 1725–1742.

Bertrand, M., Duflo, E., & Mullainathan, S. (2004). How much should we trust differences-in-differences estimates? *Quarterly Journal of Economics*, *119*(1), 249–275.

Bonardi, J. P., Holburn, G. L. F., & Vanden Bergh, R. G. (2006). Nonmarket strategy performance: Evidence from U.S. electric utilities. *Academy of Management Journal*, *49*(6), 1209–1228.

Bradach, J. L., & Eccles, R. G. (1989). Price, authority, and trust: From ideal types to plural forms. *Annual Review of Sociology*, *15*, 97–118.

Bromiley, P., & Cummings, L. L. (1995). Transaction costs in organizations with trust. In R. Bies, B. Sheppard, & R. Lewicki (Eds.), *Research on negotiations in organizations* (pp. 219–247). Greenwich, CT: JAI Press.

Byrne, E. F. (2007). Assessing arms makers' corporate social responsibility. *Journal of Business Ethics*, *74*(3), 201–217.

Cabral, L. M. B. (2005). *The economics of trust and reputation: A primer* (Working paper). New York University, New York, NY.

Chatterji, A. K., & Toffel, M. W. (2010). How firms respond to being rated. *Strategic Management Journal*, *31*(9), 917–945.

Cheng, B., Ioannou, I., & Serafeim, G. (2014). Corporate social responsibility and access to finance. *Strategic Management Journal*, *35*(1), 1–23.

Chesshyre, R. (1985). The Pentagon scandals. *World Press Review*, *32*(1), 40.

Chih, H. L., Shen, C. H., & Kang, F. C. (2008). Corporate social responsibility, investor protection, and earnings management: Some international evidence. *Journal of Business Ethics*, *79*(1–2), 179–198.

Choi, S. J., Jia, N., & Lu, J. (2014). The structure of political institutions and effectiveness of corporate political lobbying. *Organization Science*, *26*(1), 158–179.

Coase, R. H. (1937). The nature of the firm. *Economica*, *4*(16), 386–405.

Cooper, M. J., Gulen, H., & Ovtchinnikov, A. V. (2010). Corporate political contributions and stock returns. *Journal of Finance*, *65*(2), 687–724.

Corey, E. R. (1991). *Industrial marketing cases and concepts*. Englewood Cliffs, NJ: Prentice Hall.

Dasgupta, P. (2000). Trust as a commodity. In D. Gambetta (Ed.), *Trust: Making and breaking cooperative relations* (pp. 49–72). Oxford, England: University of Oxford Press.

Doney, P. M., & Cannon, J. P. (1997). An examination of the nature of trust in buyer-seller relationships. *Journal of Marketing*, *61*(2), 35–51.

Du, S., Bhattacharya, C. B., & Sen, S. (2011). Corporate social responsibility and competitive advantage: Overcoming the trust barrier. *Management Science*, *57*(9), 1528–1545.

Dyer, J. H., & Chu, W. (2003). The role of trustworthiness in reducing transaction costs and improving performance: Empirical evidence from the United States, Japan, and Korea. *Organization Science*, *14*(1), 57–68.

Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review*, *23*(4), 660–679.

Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The impact of corporate sustainability on organizational processes and performance. *Management Science*, *60*(11), 2835–2857.

Elfenbein, D. W., Fisman, R., & McManus, B. (2012). Charity as a substitute for reputation: Evidence from an online marketplace. *Review of Economic Studies*, *79*(4), 1441–1468.

Federal Election Commission (2007). *Campaign guide for corporations and labor organizations*. Washington, DC: Federal Election Commission.

Federal Election Commission (2011). *Campaign guide for congressional candidates and committees*. Washington, DC: Federal Election Commission.

Fernandez-Kranz, D., & Santalo, J. (2010). When necessity becomes a virtue: The effect of product market competition on corporate social responsibility. *Journal of Economics and Management Strategy*, *19*(2), 453–487.

Flammer, C. (2013). Corporate social responsibility and shareholder reaction: The environmental awareness of investors. *Academy of Management Journal*, *56*(3), 758–781.

Flammer, C. (2015a). Does corporate social responsibility lead to superior financial performance? A regression discontinuity approach. *Management Science*, *61*(11), 2549–2568.

Flammer, C. (2015b). Does product market competition foster corporate social responsibility? Evidence from trade liberalization. *Strategic Management Journal*, *36*(10), 1469–1485.

Flammer, C., & Bansal, P. (2017). Does a long-term orientation create value? Evidence from a regression discontinuity. *Strategic Management Journal*, *38*, 1827–1847.

Flammer, C., Hong, B., & Minor, D. (2017). *Corporate governance and the rise of integrating corporate social responsibility criteria in executive compensation: Effectiveness and implications for firm outcomes* (Working paper). Boston University, Boston, MA.

Flammer, C., & Kacperczyk, A. J. (2016). The impact of stakeholder orientation on innovation: Evidence from a natural experiment. *Management Science*, *62*(7), 1982–2001.

Flammer, C., & Luo, J. (2017). Corporate social responsibility as an employee governance tool: Evidence from a quasi-experiment. *Strategic Management Journal*, *38*(2), 163–183.

FPDS-NG (2014). *FPDS-NG Government user's manual: FPDS next generation. Version 1.4*. Washington, DC: FPDS-NG.

García-Castro, R., Aguilera, R. V., & Ariño, M. A. (2013). Bundles of firm corporate governance practices: A fuzzy set analysis. *Corporate Governance: An International Review*, *21*(4), 390–407.

Godfrey, P. C., Merrill, C. B., & Hansen, J. M. (2009). The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis. *Strategic Management Journal*, *30*(4), 425–445.

Goldman, E., Rocholl, J., & So, J. (2013). Politically connected boards of directors and the allocation of procurement contracts. *Review of Finance*, *17*(5), 1617–1648.

Gulati, R., & Nickerson, J. A. (2008). Interorganizational trust, governance choice, and exchange performance. *Organization Science*, *19*(5), 688–708.

Halchin, L. E. (2012). *Overview of the federal procurement process and resources*. Washington, DC: Congressional Research Service, Library of Congress.

Hall, R. (1992). Strategic analysis of intangible resources. *Strategic Management Journal*, *13*(2), 135–144.

Halpern, B. H., & Snider, K. F. (2012). Products that kill and corporate social responsibility: The case of U.S. defense firms. *Armed Forces & Society*, *38*(4), 604–624.

Harjoto, M. A. (2017). The impact of institutional and technical social responsibilities on the likelihood of corporate fraud. *Business and Professional Ethics Journal*, *36*(2), 197–228.

Harvard Business Review. (2011, November). Why don't we try to be India's most respected company? *Harvard Business Review*.

Hill, C. W. L. (1990). Cooperation, opportunism, and the invisible hand: Implications for transaction cost theory. *Academy of Management Review*, *15*(3), 500–513.

Holmstrom, B. (1979). Moral hazard and observability. *Bell Journal of Economics*, *10*(1), 74–91.

Holt Jr., C. A. (1980). Competitive bidding for contracts under alternative auction procedures. *Journal of Political Economy*, *88*(3), 433–445.

Homburg, C., Stierl, M., & Bornemann, T. (2013). Corporate social responsibility in business-to-business markets: How organizational customers account for supplier corporate social responsibility engagement. *Journal of Marketing*, *77*(6), 54–72.

Hong, Y., & Andersen, M. L. (2011). The relationship between corporate social responsibility and earnings management: An exploratory study. *Journal of Business Ethics*, *104*(4), 461–471.

Johnson-Cramer, M. E. (2004). Organization-level antecedents of stakeholder conflict: A comparative case study. *Academy of Management Proceedings*, *2004*, F1–F6.

Jones, T. M. (1995). Instrumental stakeholder theory: A synthesis of ethics and economics. *Academy of Management Review*, *20*(2), 404–437.

Karpoff, J. M., Lee, D. S., & Vendrzyk, V. (1999). Defense procurement fraud, penalties, and contractor influence. *Journal of Political Economy*, *107*(4), 809–842.

Karpoff, J. M., & Wittry, M. D. (2017). Institutional and legal context in natural experiments: The case of state antitakeover laws. *Journal of Finance*, forthcoming.

King, A. A., & Lenox, M. J. (2000). Industry self-regulation without sanctions: The chemical industry's responsible care program. *Academy of Management Journal*, *43*(4), 698–716.

KLD (2010). *How to use KLD stats & ESG ratings definitions*. RiskMetrics: Boston, MA.

Klein, B., Crawford, R. G., & Alchian, A. A. (1978). Vertical integration, appropriable rents, and the competitive contracting process. *Journal of Law and Economics*, *21*(2), 297–326.

Kotler, P., Hessekiel, D., & Lee, N. (2012). *GoodWorks!: Marketing and corporate initiatives that build a better world … and the bottom line*. Hoboken, NJ: Wiley.

Laffont, J. J., & Tirole, J. (1993). *A theory of incentives in procurement and regulation*. Cambridge, MA: MIT Press.

Leitzel, J. (1992). Competition in procurement. *Policy Sciences*, *25*(1), 43–56.

Lenox, M. J. (2006). The role of private decentralized institutions in sustaining industry self-regulation. *Organization Science*, *17*(6), 677–690.

Lev, B., Petrovits, C., & Radhakrishnan, S. (2010). Is doing good good for you? How corporate charitable contributions enhance revenue growth. *Strategic Management Journal*, *31*(2), 182–200.

Loeb, M. P., & Surysekar, K. (1998). Payment ceilings in cost-plus contracting. *Management Accounting Research*, *9*(3), 311–327.

Luo, Y. (2006). Political behavior, social responsibility, and perceived corruption: A structuration perspective. *Journal of International Business Studies*, *37*(6), 747–766.

Luoma, P., & Goodstein, J. (1999). Stakeholders and corporate boards: Institutional influences on board composition and structure. *Academy of Management Journal*, *42*(5), 553–563.

Lyon, T. P., & Maxwell, J. W. (2004). *Corporate environmentalism and public policy*. Cambridge, England: Cambridge University Press.

Mahajan, S. (2006). Concentration ratios for businesses by industry in 2004. *Economic Trends*, *635*, 25–47.

Malmgren, H. B. (1961). Information, expectations and the theory of the firm. *Quarterly Journal of Economics*, *75*(3), 399–421.

Margolis, J. D., Elfenbein, H. A., & Walsh, J. P.. (2007). *Does it pay to be good? A meta-analysis and redirection of research on the relationship between corporate social and financial performance* (Working paper). Harvard Business School, Boston, MA.

Margolis, J. D., & Walsh, J. P. (2001). *People and profits: The search for a link between a Company's social and financial performance*. Mahweh, NJ: Lawrence Erlbaum.

Margolis, J. D., & Walsh, J. P. (2003). Misery loves companies: Rethinking social initiatives by business. *Administrative Science Quarterly*, *48*(2), 268–305.

Mattingly, J. E., & Berman, S. L. (2006). Measurement of corporate social action: Discovering taxonomy in the Kinder Lydenburg Domini ratings data. *Business & Society*, *45*(1), 20–46.

McDonnell, M. H., & Werner, T. (2016). Blacklisted businesses: Social activists' challenges and the disruption of corporate political activity. *Administrative Science Quarterly*, *61*(4), 584–620.

McEvily, B., Perrone, V., & Zaheer, A. (2003). Trust as an organizing principle. *Organization Science*, *14*(1), 9–103.

McWilliams, A., & Siegel, D. (2001). Corporate social responsibility: A theory of the firm perspective. *Academy of Management Review*, *26*(1), 117–127.

Obloj, T., & Zemsky, P. (2015). Value creation and value capture under moral hazard: Exploring the micro-foundations of buyer-supplier relationships. *Strategic Management Journal*, *36*(8), 1146–1163.

Orlitzky, M., Schmidt, F. L., & Rynes, S. L. (2003). Corporate social and financial performance: A meta-analysis. *Organization Studies*, *24*(3), 403–441.

Orts, E. W. (1992). Beyond shareholders: Interpreting corporate constituency statutes. *George Washington Law Review*, *61*(1), 14–135.

Porter, M. E. (1980). *Competitive strategy*. New York, NY: Free Press.

Porter, M. E. (2008). *Competitive strategy: Creating and sustaining superior performance*. New York, NY: Simon and Schuster.

Richter, B. K., & Werner, T. (2017). Campaign contributions from corporate executives in lieu of political action committees. *Journal of Law, Economics, and Organization*, *33*, 443–474.

Ring, P. S., & Van de Ven, A. H. (1992). Structuring cooperative relationships between organizations. *Strategic Management Journal*, *13*(7), 483–498.

Rundquist, B., Lee, J. H., & Rhee, J. (1996). The distributive politics of cold war defense spending: Some state level evidence. *Legislative Studies Quarterly*, *21*(2), 265–281.

Schuler, D. A. (1996). Corporate political strategy and foreign competition: The case of the steel industry. *Academy of Management Journal*, *39*(3), 720–737.

Shepsle, K. A., & Weingast, B. R. (1981). Political preferences for the pork barrel: A generalization. *American Journal of Political Science*, *25*(1), 96–111.

Smith, H. (1989). *The power game: How Washington works*. Ballantine: New York, NY.

Spence, M. (1973). Job market signaling. *Quarterly Journal of Economics*, *87*(3), 355–374.

Staiger, D., & Stock, J. H. (1997). Instrumental variables regression with weak instruments. *Econometrica*, *65*(3), 557–586.

Tadelis, S. (2012). Public procurement design: Lessons from the private sector. *International Journal of Industrial Organization*, *30*(3), 297–302.

Tripathi, M. (2000). PAC contributions and defense contracting. *Business and Politics*, *2*(1), 53–73.

Tyler, J. (2010). Negating the problem of having 'two masters': A framework for L3C fiduciary duties and accountability. *Vermont Law Review*, *35*(1), 117–161.

Ward, A. J., Brown, J. A., & Rodriguez, D. (2009). Governance bundles, firm performance, and the substitutability and complementarity of governance mechanisms. *Corporate Governance: An International Review*, *17*(5), 646–660.

Weingast, B. R., Shepsle, K. A., & Johnsen, C. (1981). The political economy of benefits and costs: A neoclassical approach to distributive politics. *Journal of Political Economy*, *89*(4), 642–664.

Werner, T. (2015). Gaining access by doing good: The effect of sociopolitical reputation on firm participation in public policymaking. *Management Science*, *61*(8), 1989–2011.

Williamson, O. E. (1971). The vertical integration of production: Market failure considerations. *American Economic Review Papers and Proceedings*, *61*(2), 112–123.

Williamson, O. E. (1973). Markets and hierarchies. *American Economic Review Papers and Proceedings*, *63*(2), 316–325.

Williamson, O. E. (1985). *The economic institutions of capitalism*. New York, NY: The Free Press.

Williamson, O. E. (1991). Comparative economic organization: The analysis of discrete structural alternatives. *Administrative Science Quarterly*, *36*(2), 269–296.

Williamson, O. E. (1993). Calculativeness, trust, and economic organization. *Journal of Law and Economics*, *36*(1/2), 453–486.

Williamson, O. E. (2005). The economics of governance. *American Economic Review*, *95*(2), 1–18.

World Trade Organization. (2014, October 29). Montenegro and New Zealand to join the WTO's agreement government procurement. World Trade Organization.

Zaheer, A., McEvily, B., & Perrone, V. (1998). Does trust matter? Exploring the effects of interorganizational and interpersonal trust on performance. *Organization Science*, *9*(2), 141–159.

Zolotoy, L., O'Sullivan, D., & Klein, J. (2017). Character cues and contracting costs: The relationship between philanthropy and the cost of capital. *Journal of Business Ethics*, forthcoming.

SUPPORTING INFORMATION

Additional Supporting Information may be found online in the supporting information tab for this article.

How to cite this article: Flammer C. Competing for government procurement contracts: The role of corporate social responsibility. *Strat Mgmt J*. 2018;39:1299–1324. https://doi.org/10.1002/smj.2767

ONLINE APPENDIX FOR

COMPETING FOR GOVERNMENT PROCUREMENT CONTRACTS:

THE ROLE OF CORPORATE SOCIAL RESPONSIBILITY

CAROLINE FLAMMER*
Boston University
Questrom School of Business
cflammer@bu.edu

*Correspondence to: Caroline Flammer, Boston University, Questrom School of Business, 595 Commonwealth Avenue, Office 634A, Boston, MA 02215, U.S.A. E-mail: cflammer@bu.edu.

Appendix A: Constituency statutes

Constituency statutes allow corporate officers and directors to take into account the interests of a variety of corporate stakeholders in carrying out their fiduciary duties to the corporation. The statutes suggest that a corporation should, or at least may, be run in the interests of more groups than just shareholders. Hence, under these statutes, a corporation's officers and directors are allowed to consider the interests of employees, customers, suppliers, the environment, the local community, and any other potentially affected constituency (e.g., Orts, 1992). Prior to the enactment of stakeholder statutes, corporate directors were not explicitly permitted by written law to consider stakeholders' interests in their decision-making. Therefore, the enactment of constituency statutes sent a strong signal and provided corporate leaders with a mechanism for considering stakeholder interests without breaching their fiduciary duties. Proponents of those statutes sought to amend corporate law to reflect their belief that corporations are more than just investment vehicles for owners of financial capital (Bainbridge, 1992). For example, the Pennsylvania statute reads:

> "In discharging the duties of their respective positions, the board of directors, committees of the board and individual directors of a domestic corporation may, in considering the best interests of the corporation, consider the effects of any action upon employees, upon suppliers and customers of the corporation and upon communities in which offices or other establishments of the corporation are located, and all other pertinent factors." (15 Pa. Cons. Stat. § 516(a))

Though the language may be state-specific, the core content of the legislation remains the same: constituency statutes emphasize the importance of considering the interests of non-financial stakeholders and hence pursuing interests that are not restricted to the bottom line. In fact, most statutes give corporate leaders permission to consider stakeholder interests in any

circumstance, including any structural and operational decisions, or whenever corporate leaders wish to consider them.[1]

Appendix B: Extensions and robustness

Institutional versus technical CSR

In Table A1, I examine whether the trust signaling capability of CSR varies across different CSR initiatives. Specifically, I explore whether the effect of CSR on the allocation of procurement contracts is stronger for CSR initiatives related to "institutional" stakeholders (i.e., the natural environment, local communities, and society at large) as opposed to "technical" stakeholders (i.e., employees and customers). Arguably, institutional CSR—because it provides less apparent benefits to a corporation—is likely to provide a stronger signal of trustworthiness than technical CSR (Godfrey, Merrill, and Hansen, 2009). To conduct this analysis, I decompose the KLD-index into the "institutional" and "technical" subindices.[2] Consistent with the argument that the trust signaling capability of CSR is stronger for institutional CSR, I find that the coefficient of the institutional KLD-index (columns (1)-(2)) is large and significant (*t*-statistics of 3.08-4.68), while the coefficient of the technical KLD-index (columns (3)-(4)) is small and insignificant (*t*-statistics of 0.28-0.64).

Scandals

The results presented in this paper suggest that CSR helps signal trustworthiness to government agencies. That being said, CSR is an imperfect signal. Indeed, companies that engage in CSR are not immune to scandals. For example, Janney and Gove (2011) find evidence of stock option

[1] For more details on the constituency statutes and their institutional background, see Flammer and Kacperczyk (2016) as well as the law review articles by Bainbridge (1992), Barzuza (2009), and Tyler (2010).
[2] In keeping with Mattingly and Berman (2006) and Godfrey *et al.* (2009), I construct the technical KLD-index by adding up CSR strengths with respect to customers and employees, and the institutional KLD-index by adding up CSR strengths with respect to the environment and society at large (community and minorities).

backdating even among high-CSR companies. In this vein, the signaling role of CSR is likely weaker if companies are involved in scandals.

To examine this heterogeneity, I use data on accounting scandals from the General Accounting Office (GAO). The GAO compiles a list of companies that engage in "accounting irregularities resulting in material misstatements of financial results" (GAO, 2002: 2). The GAO data are available from January 1, 1997 until June 30, 2006. I merge the GAO data to my sample by ticker and company name, and construct an indicator variable ("accounting scandal") that is equal to one if the company engaged in accounting irregularities in a given year. I then re-estimate my baseline specifications interacting the KLD-index with this indicator variable. The results are presented in Table A2. As is shown, the effect of CSR is large and significant for companies that do not engage in fraudulent accounting, while it is small and insignificant for companies that do.[3] Moreover, accounting scandal as stand alone has a negative coefficient, suggesting that companies involved in accounting irregularities are less likely to receive government contracts. Overall, these findings confirm that trustworthiness plays an important role in the allocation of government contracts.

Long-term orientation and non-opportunistic behavior

The main assumption underlying my theory is that CSR is indicative of a long-term orientation and non-opportunistic behavior, and hence serves as a signal of trustworthiness. While this assumption is common in the CSR literature, little is known about the effectiveness of this signal.

To examine whether CSR is associated with a long-term orientation and non-opportunistic behavior, I re-estimate my baseline specifications using dependent variables that

[3] The difference between the two coefficients is statistically significant. The *p*-value of the *F*-test is 0.064 in column (1) and 0.097 in column (2).

capture both dimensions. To proxy for long-term orientation, I use the long-term index of Flammer and Bansal (2017).[4] To proxy for opportunistic behavior, I use the "accounting scandal" indicator introduced in the previous section. This indicator equals one if the company engages in fraudulent accounting. The results are presented in Table A3. As can be seen, higher CSR engagement is associated with significantly higher values of the long-term index (an increase in the KLD-index by one index point corresponds to an increase in the long-term index by 1.2-1.5 percentage points), which is indicative of a longer-term orientation. Moreover, higher CSR is associated with a significantly lower probability of engaging in fraudulent accounting (an increase in the KLD-index by one index point corresponds to a reduction in the propensity to engage in accounting irregularities by 0.8-0.9 percentage points). These results suggest that CSR is indeed indicative of a long-term orientation and non-opportunistic behavior.

Alternative interpretations and robustness

This section discusses alternative interpretations and presents various robustness checks. Unless indicated otherwise, the tests refer to the specifications used in Table 2 (henceforth "baseline specifications").

Intensive and extensive margins. The results presented in this paper suggest that CSR plays an important role for the allocation of procurement contracts. However, the analysis does not distinguish between the extensive margin (i.e., whether companies receive procurement contracts) and the intensive margin (i.e., whether companies receive more procurement

[4] The long-term index is obtained by conducting a textual analysis of the companies' annual reports. The rationale behind this index is that an organization's time orientation is reflected by its discourse (Slawinski and Bansal, 2012)—companies that use long-term keywords more frequently in their discourse are more likely to have a longer-term orientation. To construct this index, I perform a textual analysis of the firms' 10-K filings, which are obtained from the Securities and Exchange Commission's (SEC) EDGAR database, and count the number of keywords referring to the short term ("short run," "short-run," "short term," "short-term") and long term ("long run," "long-run," "long term," "long-term"), respectively. I then compute the long-term index as the ratio of the number of long-term keywords to the sum of long- and short-term keywords. Since the EDGAR database starts in 1994, the sample used for this analysis is restricted accordingly.

contracts).[5] In Table A4, I examine both margins separately. To study the extensive margin, I use as dependent variable a dummy that is equal to one if the company receives procurement contracts (and zero otherwise). The results are presented in columns (1) and (2). As is shown, the coefficient of the KLD-index is positive and significant in both the OLS and IV regressions. The point estimates of 0.005 and 0.006 imply that an increase in the KLD-index by one index point leads to a 0.5% to 0.6% increase in the probability of being awarded a procurement contract. In columns (3) and (4), I examine the intensive margin. To do so, I restrict the sample to all firm-year observations in which firms have procurement contracts. I then use as dependent variable log(*procurements*). As can be seen, the coefficient of the KLD-index is significantly positive in both the OLS and IV regressions. The estimates of 0.036 and 0.038 imply that an increase in the KLD-index by one index point leads to a 3.6% to 3.8% increase in the dollar amount of procurement contracts. Overall, these results indicate that CSR affects the allocation of procurement contracts at both the extensive and intensive margins.

Political influence. Given the political nature of the procurement process, and given the limits on corporate political involvement (most of the sample predates the Citizen United ruling of 2010), CSR may represent a "soft" mechanism for increasing corporate largesse toward communities—and hence politicians—of interest. As such, CSR may not signal trustworthiness, but rather it may prove an effective mechanism for winning political favor. To examine this alternative interpretation, I interact the KLD-index with political contributions—if companies use CSR as a way to supplement their political contributions, one would expect CSR to matter

[5] The fact that the estimate of β in Table 2 mixes both margins complicates the quantitative interpretation of the estimates. Indeed, if CSR matters at the extensive margin―that is, when *procurements* go from 0 to a positive number―the relative increase is not well defined. The log(1 + *procurements*) specification circumvents this issue, but the economic magnitudes need to be further qualified by exploring the two margins separately. An analogous issue arises in the innovation literature, when researchers study log(1 + *patents*) to jointly examine the extensive and intensive margins of patenting (see, e.g., Atanassov, 2013; Flammer and Kacperczyk, 2016).

more for companies that attempt to capture the procurement process through political contributions. This analysis is provided in Table A5. As is shown, the interaction term is small and insignificant. This suggests that CSR is unlikely to serve as a supplement to political contributions.

Preference for CSR. An alternative interpretation of my results is that agency personnel may allocate procurement contracts based on a personal preference for CSR—e.g., they use their influence to "improve society" or address an issue of particular personal concern. Nevertheless, the findings in Tables 3 and 4 help rule out this interpretation. Indeed, under this alternative scenario, the effect of CSR should not depend on i) the length of the government-supplier relationship and ii) the complexity of the contract.

CSR-related procurement contracts. Relatedly, it could be that many government contracts are CSR-related (e.g., clean energy), and hence high-CSR companies are better qualified to fulfill them. This specific expertise may be especially valuable for complex projects. Nevertheless, under this scenario, the effect of CSR should not depend on the length of the government-supplier relationship, which is again inconsistent with the findings in Table 3. Moreover, in columns (1) and (2) of Table A6, I show that my results are robust if I exclude CSR-related government contracts.[6]

Dynamics. In columns (3) and (4) of Table A6, I examine the dynamics of the relation between CSR (and the exogenous component of CSR, respectively) and the allocation of procurement contracts. If my results were driven by reverse causation—e.g., due to omitted

[6] I identify "CSR-related" procurement contracts by using the PSC (product service code) identifiers provided in the FPDS-NG database to describe each procurement contract. I classify the following categories as "CSR-related" procurement contracts: environment protection (PSC 423 and 425), waste disposal (454), water purification and sewage treatment (46), live animals (88), energy R&D (AG), environmental protection R&D (AH), natural resources R&D (AP), social services R&D (AQ), natural resource conservation services (F0), and environmental systems protection (F1).

variables that drive both the allocation of procurement contracts and CSR decisions (and the enactment of constituency statutes, respectively)—one should observe an "effect" of CSR before firms even increase it. Nevertheless, I find that the inclusion of controls for contemporaneous and forward values of the KLD-index (i.e., *KLD-index*$_t$ and *KLD-index*$_{t+1}$) does not attenuate the coefficient of *KLD-index*$_{t-1}$. In fact, the coefficients of *KLD-index*$_t$ and *KLD-index*$_{t+1}$ are economically small and statistically insignificant. This finding confirms that increases in (the exogenous component of) CSR lead to subsequent increases in the allocation of procurement contracts—not vice versa (nor contemporaneous)—thus mitigating the possibility of reverse causation and omitted variable bias.

Industry and regional trends. In columns (1) and (2) of Table A7, I re-estimate my baseline specifications including the full set of industry × year fixed effects (where industries are defined at the 2-digit SIC level) and state × year fixed effects.[7] This specification accounts for industry and regional trends that may drive a spurious relationship between the (exogenous component of the) KLD-index and the allocation of procurement contracts. As can be seen, my results are robust to including these additional fixed effects.

Corporate governance. In columns (3) and (4) of Table A7, I examine the potential confound with corporate governance. For example, it could be that managers are more entrenched following the enactment of constituency statutes (Surroca and Tribó, 2008). Moreover, the enactment of some of the constituency statutes coincides with the passage of state-level antitakeover legislations (Bertrand and Mullainathan, 2003; Karpoff and Wittry, 2017). To address these potential confounds, I re-estimate my baseline specifications, including as

[7] "State" refers to the state of location of the company's headquarters, as opposed to the state of incorporation (where the constituency statutes apply). Due to the lack of congruence between states of incorporation and states of location, I can run the IV regression while controlling for state × year fixed effects. Effectively, this specification compares companies that are located in the same state, but some are incorporated in a treated state (i.e., a state that passes a constituency statute) and others are not.

additional controls i) the governance index (G-index) of Gompers, Ishii, and Metrick (2003), and ii) a dummy variable equal to one if the state has introduced an antitakeover law.[8] As is shown, my results are robust to these inclusions.

State-level controls. One potential concern is that states may vary along dimensions that correlate with both the adoption of constituency statutes and the allocation of procurement contracts (e.g., political leaning, pro-social values). This concern is mitigated by the inclusion of firm fixed effects. Indeed, firm fixed effects subsume state fixed effects and hence absorb away any fixed characteristic at the state level (e.g., Democrat versus Republican). That being said, it could still be that *time-varying* characteristics (e.g., a change in the state's political leaning towards Democrat versus Republican) may affect the results. (Note that changes in political power at the federal level—e.g., a Democrat administration may differ from a Republican one in terms of spending priorities—are absorbed by the inclusion of year fixed effects.) To address this point, I re-estimate my baseline specifications including a set of state-year controls. Specifically, I include i) a set of three indicator variables for the state's political leaning (Democrat, Republican, split, where split is the base group in the regressions); ii) a control for income inequality (the top 10% income share) at the state level; and iii) a control for GDP growth at the state level. The data on states' political leaning are obtained from the National Conference of State Legislatures. The data on income inequality are obtained from the World Top Incomes Database. The data on GDP growth are obtained from the U.S. Bureau of Economic Analysis. This analysis is provided in columns (1)-(2) of Table A8. As can be seen, the results are robust to the inclusion of these controls.

[8] The list of antitakeover laws (business combination laws) is obtained from Karpoff and Wittry (2017). The G-index is obtained from RiskMetrics. It is available for the years 1990, 1993, 1995, 1998, 2000, 2002, 2004, and 2006. To fill in the missing years, I use the latest available value of the index. Since the G-index is not available for all firms in my sample, the sample used for this analysis is smaller than the baseline sample.

Specification without controls. In columns (3) and (4) of Table A8, I re-estimate my baseline regressions without including controls. The coefficient of the KLD-index is very similar to before (in both the OLS and IV regressions). This indicates that my results are not sensitive to the inclusion of controls.

KLD concerns. In my baseline specification, the KLD-index is constructed by summing up all CSR strengths. An alternative approach that is commonly used in the literature is to construct a "net" KLD-index by subtracting the number of CSR concerns from the number of CSR strengths. In columns (5) and (6) of Table A8, I show that my results are similar if I use this alternative definition of the KLD-index.

Excluding Nebraska's (2007) constituency statute. The Nebraska statute was adopted relatively late compared to other U.S. states. As Nebraska is a "laggard," it could be that the statute was anticipated. As such, it would be less exogenous compared to statutes that were passed in the 1980s and 1990s. In column (1) of Table A9, I show that my results are robust to excluding the Nebraska statute.

Including Texas' (2006) constituency statute. As discussed in the methodology section, Texas enacted a constituency statute in 2006. However, it has been argued that the Texas statute has less bite than other constituency statutes (e.g., Tyler, 2010). Nevertheless, in column (2) of Table A9, I show that my results are robust to the inclusion of the Texas statute.

Strength of the constituency statutes. Relatedly, in her evaluation of the constituency statutes, Barzuza (2009) notes that two of the constituency statutes (Maryland and North Carolina) used in my analysis are especially stringent. In column (3) of Table A9, I verify that my results are robust if I estimate the IV regression using only these two treatments.

Placebo tests. In columns (4)-(5) of Table A9, I further address the potential endogeneity of the constituency statutes by conducting placebo tests. In column (4), I randomize the treated states—i.e., I replace the 5 actual treated states by 5 random states which are drawn from the pool of the states that have not enacted a constituency statute by 2013 (e.g., the 1993 North Carolina treatment could be replaced by a placebo 1993 California treatment).[9] In column (5), I run a variant of this placebo test in which I further randomize the treated years (e.g., the 1993 North Carolina treatment could be replaced by a placebo 2003 California treatment). As can be seen, the "effect" of these placebo treatments is small and insignificant in both columns, which lends additional support to the validity of the identification strategy used in this study.

Functional form. In the baseline analysis, the dependent variable is *log(1 + procurements)*. Accordingly, the coefficient of the KLD-index represents the percentage change in dollar amount of procurement contracts if the KLD-index increases by one index point. In principle, one could also use *procurements* as dependent variable (i.e., the dollar amount). In this case, the coefficient of the KLD-index represents the increase in the dollar amount of procurement contracts if the KLD-index increases by one index point. This specification is used in columns (1)-(2) of Table A10. As is shown, the coefficient of the KLD-index lies in the range of 3.9-4.2, which indicates that an increase in the KLD-index by one index point corresponds to a $3.9-4.2M increase in the dollar amount of procurement contracts allocated to the company.[10] Relatedly, in columns (3)-(4) of Table A10, I re-estimate the baseline specification using *log(1 + KLD-index)* in lieu of *KLD-index*. In this specification, the coefficient of *log(1 + KLD-index)* is

[9] I generate 500 sets of placebo treatments and re-estimate the regression for each of them. The coefficients (and standard errors) provided in the table are averages across all 500 regressions.

[10] In the baseline specification, the coefficients of 0.075-0.088 imply that the dollar amount of procurement contracts increases by 7.5-8.8%. At a mean of $39.2M (see Table 1), this implies that the dollar amount of procurement contracts increases by $2.9-3.4M. This is in the ballpark (i.e., within one standard error) of the estimates in columns (1)-(2) of Table A10.

an elasticity—i.e., it indicates the percentage change in the dollar amount of procurement contracts for a 1% change in the KLD-index. As is shown, the coefficient of *log(1 + KLD-index)* lies between 0.09-0.11, which indicates that a 10% increase in the KLD-index corresponds to a 0.9-1.1% increase in the allocation of procurement contracts.

External validity. In the IV regressions, the exogenous variation in CSR is obtained from the five states that implemented a constituency statute during the sample period (1992-2013). Another 29 states adopted a constituency statute prior to 1992 (Karpoff and Wittry, 2017). Would my results generalize to these other 29 states? To assess this question, I examine whether the five treated states used in the analysis are representative of the other 29 states. Specifically, I compare companies incorporated in either set of states based on the covariates used in the regressions. This comparison is provided in Table A11. As can be seen, there is no significant difference between the two groups. Accordingly, it seems plausible that my results would be generalizable to the remaining 29 states.

Regression discontinuity design. Finally, in Table A12, I consider an alternative source of exogenous variation in CSR. Instead of exploiting the enactment of constituency statutes, I use Flammer's (2015) regression discontinuity design (RDD) based on the adoption of "close call" shareholder proposals on CSR—that is, CSR-related shareholder proposals that pass or fail by a narrow margin of votes at the shareholder meeting. The passage of such close call proposals is akin to a random assignment of CSR to companies. Intuitively, there is no reason to expect any systematic difference between a company for which a CSR proposal passes with 50.1% of the votes, and a company for which a similar proposal fails with 49.9% of the votes. Accordingly, close call CSR proposals provide a source of (quasi-)random variation in CSR which can be used to estimate the causal effect of adopting a CSR provision on the allocation of procurement

contracts. To conduct this analysis, I combine my dataset with Flammer's (2015) sample of 2,729 CSR proposals that came to a vote between 1997 and 2012.[11] For each proposal, I compute the percentage change in the dollar amount of procurement contracts received by the company in the year following the vote compared to the year preceding the vote—i.e., Δ *log(1 + procurement)*. I then regress Δ *log(1 + procurement)* on a dummy variable ("pass") that indicates whether the CSR proposal was approved. To ensure that the effect is measured at the discontinuity (i.e., just above and below the 50% majority threshold), I include a polynomial in the vote share on each side of the threshold (see Flammer, 2015). The results are presented in columns (1) and (2) of Table A12 (using a second- and third-order polynomial, respectively). As can be seen, the adoption of close call CSR proposals leads to a significant increase in the dollar amount of procurement contracts allocated to the company. The coefficients imply an increase in the dollar amount by 5.3-6.1%, which is in the ballpark of what I found in Table 2 with respect to a one-point increase in the KLD-index. In columns (3)-(4), I further repeat the interaction with the dummy variables indicating whether the relationship length is above versus below the median. The results are again consistent with my baseline results: the positive effect of CSR on the allocation of procurement contracts is large and significant at the beginning of the supplier-government relationship (relationship length < median), while it is small and insignificant for suppliers that have established a long-term relationship with the government (relationship length > median). This confirms that suppliers that have a long track record with the government have less of a need to signal trustworthiness through CSR.

[11] Out of those 2,729 CSR proposals, 61 received a vote share within the ±5% interval around the majority threshold, and 122 within the ±10% interval.

REFERENCES

Atanassov J. 2013. Do hostile takeovers stifle innovation? Evidence from antitakeover legislation and corporate patenting. *Journal of Finance* **68**(3): 1097–1131.

Bainbridge SM. 1992. Interpreting nonshareholder constituency statutes. *Pepperdine Law Review* **19**(3): 971–1025.

Barzuza M. 2009. The state of state antitakeover law. *Virginia Law Rev*iew **95**(8): 1973–2052.

Bertrand M, Mullainathan S. 2003. Enjoying the quiet life? Corporate governance and managerial preferences. *Journal of Political Economy* **111**(5): 1043–1075.

Flammer C. 2015. Does corporate social responsibility lead to superior financial performance? A regression discontinuity approach. *Management Science*, **61**(11): 2549–2568.

Flammer C, Bansal P. 2017. Does a long-term orientation create value? Evidence from a regression discontinuity. *Strategic Management Journal*, forthcoming.

Flammer C, Kacperczyk AJ. 2016. The impact of stakeholder orientation on innovation: Evidence from a natural experiment. *Management Science*, **62**(7): 1982–2001.

GAO. 2002. *Financial Statement Restatements.* General Accounting Office, report to the U.S. Senate: Washington, DC.

Godfrey PC, Merrill CB, Hansen JM. 2009. The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis. *Strategic Management Journal* **30**(4): 425–445.

Gompers P, Ishii J, Metrick A. 2003. Corporate governance and equity prices. *Quarterly Journal of Economics* **118**(1): 107–156.

Janney JN, Gove S. 2011. Reputation and corporate social responsibility aberrations, trends, and hypocrisy: Reactions to firm choices in the stock option backdating scandal. *Journal of Management Studies* **48**(7): 1562–1585.

Karpoff JM, Wittry MD. 2017. Institutional and legal context in natural experiments: The case of state antitakeover laws. *Journal of Finance*, forthcoming.

Mattingly JE, Berman SL. 2006. Measurement of corporate social action: Discovering taxonomy in the Kinder Lydenburg Domini ratings data. *Business & Society* **45**(1): 20–46.

Orts EW. 1992. Beyond shareholders: Interpreting corporate constituency statutes. *George Washington Law Review* **61**(1): 14–135.

Slawinski N, Bansal P. 2015. Short on time: Intertemporal tensions in business sustainability. *Organization Science* **26**(2): 531–549.

Surroca J, Tribó JA. 2008. Managerial entrenchment and corporate social performance. *Journal of Business Finance & Accounting* **35**(5–6): 748–789.

Tyler, J. 2010. Negating the problem of having 'two masters': A framework for L3C fiduciary duties and accountability. *Vermont Law Review* **35**(1): 117–161.

Figure A1. CSR and length of relationship

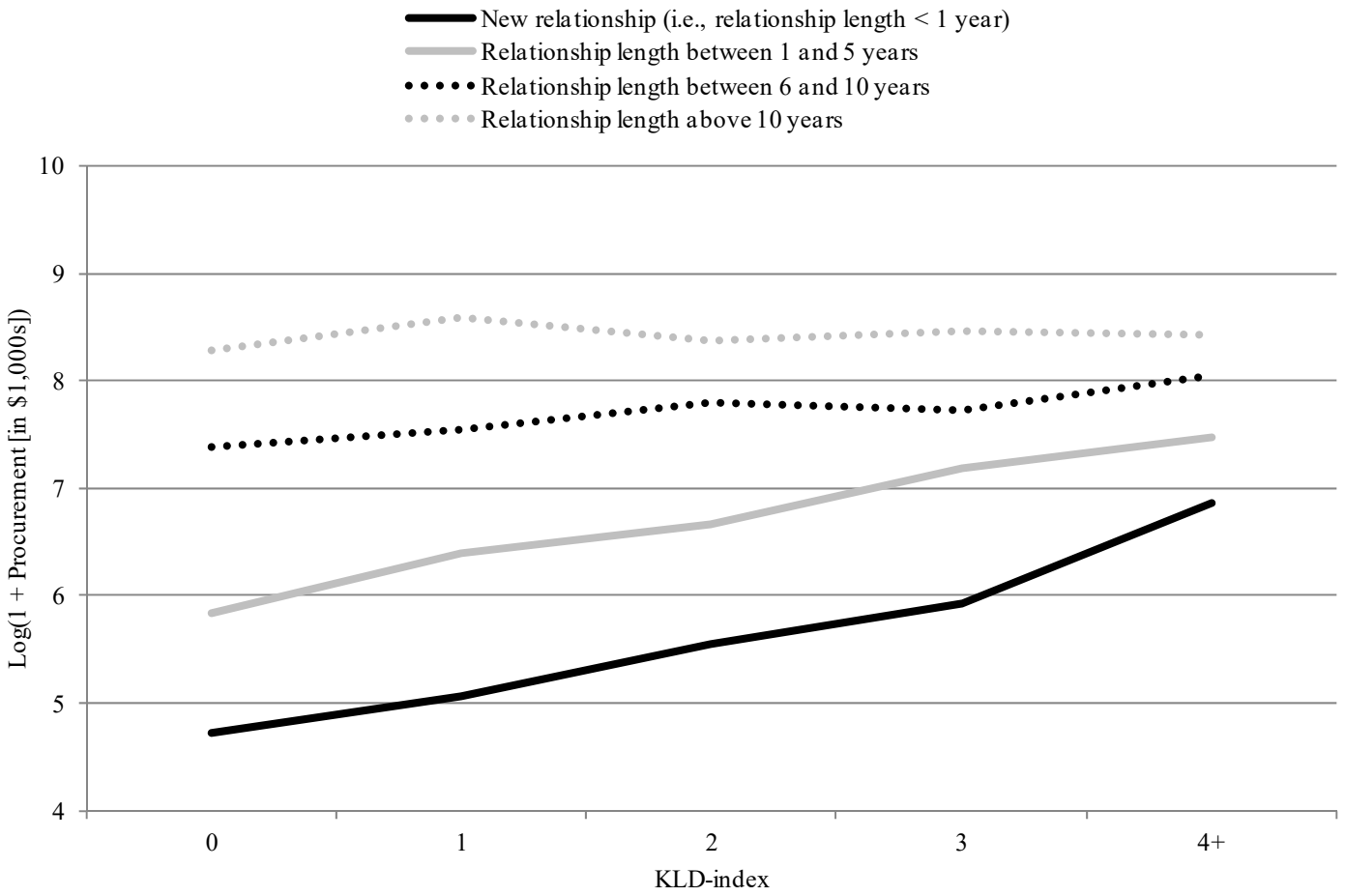

Table A1. Institutional versus technical CSR

Dependent variable	Log(1 + Procurement)			
	Institutional CSR		Technical CSR	
	OLS	IV	OLS	IV
	(1)	(2)	(3)	(4)
KLD-index (institutional)	0.145			
	(0.031)			
KLD-index (institutional, instr.)		0.148		
		(0.048)		
KLD-index (technical)			0.030	
			(0.047)	
KLD-index (technical, instr.)				0.019
				(0.068)
Size	0.582	0.579	0.593	0.599
	(0.089)	(0.090)	(0.089)	(0.089)
Return on assets	0.195	0.195	0.194	0.198
	(0.353)	(0.354)	(0.354)	(0.353)
Tobin's Q	0.101	0.102	0.097	0.097
	(0.036)	(0.036)	(0.036)	(0.036)
Leverage	0.715	0.703	0.757	0.753
	(0.253)	(0.252)	(0.252)	(0.252)
Cash holdings	-1.256	-1.272	-1.197	-1.191
	(0.287)	(0.287)	(0.287)	(0.287)
Log(1 + Political contributions)	0.039	0.039	0.035	0.035
	(0.015)	(0.015)	(0.015)	(0.015)
Herfindahl	0.071	0.083	0.024	0.044
	(1.463)	(1.458)	(1.452)	(1.450)
Year fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
R-squared	0.81	0.81	0.81	0.81
Observations	27,062	27,062	27,062	27,062

Notes. Standard errors (reported in parentheses) are clustered at the industry level.

Table A2. Accounting scandals

Dependent variable	Log(1 + Procurement)	
	OLS	IV
	(1)	(2)
KLD-index × No accounting scandal	0.105	
	(0.036)	
KLD-index × Accounting scandal	0.049	
	(0.042)	
KLD-index (instr.) × No accounting scandal		0.107
		(0.043)
KLD-index (instr.) × Accounting scandal		0.037
		(0.054)
Size	0.506	0.515
	(0.156)	(0.156)
Return on assets	0.313	0.295
	(0.838)	(0.838)
Tobin's Q	0.129	0.126
	(0.056)	(0.056)
Leverage	0.705	0.709
	(0.523)	(0.523)
Cash holdings	-0.652	-0.660
	(0.574)	(0.574)
Log(1 + Political contributions)	0.018	0.019
	(0.020)	(0.020)
Herfindahl	-1.860	-2.066
	(2.560)	(2.560)
Acconting scandal	-0.183	-0.132
	(0.056)	(0.065)
Year fixed effects	Yes	Yes
Firm fixed effects	Yes	Yes
R-squared	0.86	0.86
Observations	9,859	9,859

Notes. Standard errors (reported in parentheses) are clustered at the industry level.

Table A3. Long-term orientation and non-opportunistic behavior

Dependent variable	Long-term index		Accounting scandal	
	OLS	IV	OLS	IV
	(1)	(2)	(3)	(4)
KLD-index	0.012		-0.009	
	(0.001)		(0.003)	
KLD-index (instr.)		0.015		-0.008
		(0.002)		(0.004)
Size	0.001	0.002	0.012	0.012
	(0.004)	(0.004)	(0.011)	(0.011)
Return on assets	-0.004	-0.004	-0.040	-0.040
	(0.019)	(0.019)	(0.068)	(0.068)
Tobin's Q	0.011	0.011	-0.001	-0.001
	(0.002)	(0.002)	(0.004)	(0.004)
Leverage	-0.013	-0.012	0.052	0.052
	(0.012)	(0.012)	(0.035)	(0.035)
Cash holdings	-0.004	-0.002	-0.060	-0.060
	(0.015)	(0.015)	(0.037)	(0.038)
Log(1 + Political contributions)	0.000	0.001	0.000	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
Herfindahl	0.016	0.016	-0.007	-0.012
	(0.053)	(0.052)	(0.141)	(0.141)
Year fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
R-squared	0.61	0.61	0.32	0.32
Observations	26,316	26,316	9,859	9,859

Notes. Standard errors (reported in parentheses) are clustered at the industry level.

Table A4. Extensive and intensive margins

	Extensive margin		Intensive margin	
Dependent variable	Procurement (0/1)	Procurement (0/1)	Log(Procurement)	Log(Procurement)
	OLS	IV	OLS	IV
	(1)	(2)	(3)	(4)
KLD-index	0.006		0.036	
	(0.002)		(0.013)	
KLD-index (instrumented)		0.005		0.038
		(0.003)		(0.019)
Size	0.038	0.038	0.448	0.444
	(0.007)	(0.007)	(0.071)	(0.071)
Return on assets	0.021	0.021	0.205	0.195
	(0.030)	(0.030)	(0.397)	(0.396)
Tobin's Q	0.007	0.007	0.042	0.041
	(0.003)	(0.003)	(0.026)	(0.026)
Leverage	0.053	0.054	0.265	0.261
	(0.021)	(0.021)	(0.213)	(0.213)
Cash holdings	-0.087	-0.086	-0.574	-0.571
	(0.025)	(0.025)	(0.254)	(0.254)
Log(1 + Political contributions)	0.001	0.001	0.033	0.034
	(0.001)	(0.001)	(0.010)	(0.010)
Herfindahl	0.138	0.138	-2.731	-2.757
	(0.120)	(0.119)	(1.143)	(1.137)
Year fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
R-squared	0.75	0.75	0.83	0.83
Observations	27,062	27,062	8,887	8,887

Notes. Standard errors (reported in parentheses) are clustered at the industry level.

Table A5. Political influence

Dependent variable	Log(1 + Procurement)	
	OLS	IV
	(1)	(2)
KLD-index	0.087	
	(0.024)	
KLD-index × Log(1 + Political contributions)	0.002	
	(0.010)	
KLD-index (instr.)		0.072
		(0.036)
KLD-index (instr.) × Log(1 + Political contributions)		0.003
		(0.013)
Size	0.580	0.582
	(0.089)	(0.089)
Return on assets	0.190	0.191
	(0.353)	(0.354)
Tobin's Q	0.100	0.099
	(0.036)	(0.036)
Leverage	0.736	0.740
	(0.253)	(0.253)
Cash holdings	-1.238	-1.232
	(0.287)	(0.287)
Log(1 + Political contributions)	0.036	0.035
	(0.016)	(0.016)
Herfindahl	0.031	0.029
	(1.462)	(1.457)
Year fixed effects	Yes	Yes
Firm fixed effects	Yes	Yes
R-squared	0.81	0.81
Observations	27,062	27,062

Notes. Standard errors (reported in parentheses) are clustered at the industry level.

Table A6. Robustness

Dependent variable	Log(1 + Procurement)			
	Excluding CSR-related procurement contracts		Dynamics	
	OLS	IV	OLS	IV
	(1)	(2)	(3)	(4)
KLD-index	0.087			
	(0.023)			
KLD-index (instrumented)		0.074		
		(0.034)		
KLD-index ($t-1$)			0.095	
			(0.031)	
KLD-index (t)			0.018	
			(0.040)	
KLD-index ($t+1$)			0.003	
			(0.033)	
KLD-index ($t-1$, instrumented)				0.079
				(0.039)
KLD-index (t, instrumented)				0.011
				(0.057)
KLD-index ($t+1$, instrumented)				0.022
				(0.060)
Size	0.575	0.577	0.630	0.630
	(0.088)	(0.088)	(0.112)	(0.112)
Return on assets	0.197	0.197	0.198	0.208
	(0.350)	(0.351)	(0.438)	(0.438)
Tobin's Q	0.099	0.099	0.112	0.113
	(0.035)	(0.035)	(0.043)	(0.043)
Leverage	0.726	0.729	0.872	0.868
	(0.250)	(0.250)	(0.313)	(0.313)
Cash holdings	-1.226	-1.220	-1.820	-1.828
	(0.285)	(0.285)	(0.348)	(0.348)
Log(1 + Political contributions)	0.037	0.037	0.039	0.039
	(0.015)	(0.015)	(0.018)	(0.018)
Herfindahl	0.036	0.034	0.062	0.012
	(1.444)	(1.439)	(1.775)	(1.765)
Year fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
R-squared	0.81	0.81	0.81	0.81
Observations	27,062	27,062	19,260	19,260

Notes. Standard errors (reported in parentheses) are clustered at the industry level.

Table A7. Robustness (continued)

Dependent variable	Log(1 + Procurement)			
	Accounting for industry and regional trends		Accounting for corporate governance and antitakeover laws	
	OLS	IV	OLS	IV
	(1)	(2)	(3)	(4)
KLD-index	0.097		0.098	
	(0.019)		(0.025)	
KLD-index (instrumented)		0.091		0.072
		(0.027)		(0.037)
Size	0.494	0.495	0.809	0.815
	(0.070)	(0.070)	(0.109)	(0.110)
Return on assets	0.309	0.304	0.186	0.191
	(0.361)	(0.361)	(0.547)	(0.550)
Tobin's Q	0.128	0.128	0.100	0.096
	(0.031)	(0.031)	(0.054)	(0.054)
Leverage	0.830	0.824	0.677	0.696
	(0.250)	(0.250)	(0.372)	(0.373)
Cash holdings	-1.173	-1.173	-1.640	-1.628
	(0.283)	(0.283)	(0.394)	(0.393)
Log(1 + Political contributions)	0.041	0.041	0.048	0.047
	(0.011)	(0.011)	(0.016)	(0.017)
Herfindahl			-1.234	-1.248
			(1.611)	(1.603)
G-index			-0.080	-0.086
			(0.052)	(0.053)
Antitakeover laws			0.079	0.082
			(0.092)	(0.092)
Year fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
Industry × year fixed effects	Yes	Yes	No	No
State × year fixed effects	Yes	Yes	No	No
R-squared	0.84	0.84	0.79	0.79
Observations	27,062	27,062	16,707	16,707

Notes. Standard errors (reported in parentheses) are clustered at the industry level.

Table A8. Robustness (continued)

Dependent variable	Log(1 + Procurement)					
	Including state-level controls		No controls		KLD strengths minus KLD concerns	
	OLS	IV	OLS	IV	OLS	IV
	(1)	(2)	(3)	(4)	(5)	(6)
KLD-index	0.089		0.090		0.059	
	(0.024)		(0.024)		(0.018)	
KLD-index (instrumented)		0.077		0.079		0.073
		(0.035)		(0.035)		(0.033)
Size	0.582	0.584			0.592	0.592
	(0.089)	(0.089)			(0.090)	(0.090)
Return on assets	0.193	0.194			0.187	0.186
	(0.353)	(0.354)			(0.354)	(0.354)
Tobin's Q	0.100	0.099			0.098	0.099
	(0.036)	(0.036)			(0.036)	(0.036)
Leverage	0.730	0.733			0.742	0.738
	(0.252)	(0.252)			(0.253)	(0.253)
Cash holdings	-1.242	-1.237			-1.225	-1.231
	(0.286)	(0.286)			(0.287)	(0.287)
Log(1 + Political contributions)	0.037	0.037			0.037	0.038
	(0.015)	(0.015)			(0.015)	(0.015)
Herfindahl	0.002	0.006			0.083	0.097
	(1.463)	(1.457)			(1.457)	(1.455)
State-level controls						
Democrat leaning	-0.174	-0.167				
	(0.100)	(0.100)				
Republican leaning	-0.063	-0.069				
	(0.085)	(0.085)				
Income inequality	-0.000	0.000				
	(0.018)	(0.018)				
GDP growth	-1.604	-1.606				
	(1.264)	(1.268)				
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.81	0.81	0.81	0.81	0.81	0.81
Observations	27,062	27,062	27,062	27,062	27,062	27,062

Notes. Standard errors (reported in parentheses) are clustered at the industry level.

Table A9. Robustness—alternative instruments and placebo tests

Dependent variable	Log(1 + Procurement)				
				Placebo tests (500 bootstrap samples)	
	Excluding Nebraska's Constituency Statute	Including Texas' Constituency Statute	Strong Constituency Statutes	Random treatment states	Random treatment states and years
	IV	IV	IV	IV	IV
	(1)	(2)	(3)	(4)	(5)
KLD-index (instrumented)	0.073	0.069	0.075	-0.008	0.012
	(0.034)	(0.035)	(0.035)	(0.043)	(0.040)
Size	0.582	0.582	0.582	0.593	0.593
	(0.089)	(0.089)	(0.089)	(0.090)	(0.090)
Return on assets	0.191	0.191	0.191	0.194	0.194
	(0.354)	(0.354)	(0.354)	(0.354)	(0.354)
Tobin's Q	0.099	0.099	0.099	0.097	0.097
	(0.036)	(0.036)	(0.036)	(0.036)	(0.036)
Leverage	0.739	0.739	0.739	0.758	0.757
	(0.253)	(0.253)	(0.253)	(0.252)	(0.252)
Cash holdings	-1.233	-1.233	-1.233	-1.198	-1.197
	(0.287)	(0.287)	(0.287)	(0.287)	(0.287)
Log(1 + Political contributions)	0.037	0.037	0.037	0.035	0.035
	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)
Herfindahl	0.031	0.031	0.031	0.025	0.025
	(1.456)	(1.456)	(1.456)	(1.451)	(1.451)
Year fixed effects	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes	Yes
R-squared	0.81	0.81	0.81	0.81	0.81
Observations	27,062	27,062	27,062	27,062	27,062

Notes. Standard errors (reported in parentheses) are clustered at the industry level.

Table A10. Robustness—functional form

Dependent variable	Procurement ($ million)		Log(1 + Procurement)	
	OLS	IV	OLS	IV
	(1)	(2)	(3)	(4)
KLD-index	4.172			
	(1.336)			
KLD-index (instrumented)		3.916		
		(1.945)		
Log(1 + KLD-index)			0.113	
			(0.034)	
Log(1 + KLD-index) (instrumented)				0.090
				(0.044)
Size	-2.741	-2.960	0.579	0.582
	(2.010)	(2.099)	(0.089)	(0.090)
Return on assets	6.602	6.540	0.202	0.200
	(4.961)	(4.964)	(0.352)	(0.354)
Tobin's Q	1.713	1.751	0.096	0.097
	(0.579)	(0.595)	(0.036)	(0.036)
Leverage	-14.921	-15.302	0.742	0.746
	(6.955)	(7.118)	(0.252)	(0.252)
Cash holdings	-0.303	-1.033	-1.223	-1.218
	(4.084)	(4.280)	(0.286)	(0.286)
Log(1 + Political contributions)	0.257	0.298	0.036	0.036
	(0.769)	(0.787)	(0.015)	(0.015)
Herfindahl	-114.373	-114.227	0.044	0.040
	(45.046)	(45.073)	(1.457)	(1.453)
Year fixed effects	Yes	Yes	Yes	Yes
Firm fixed effects	Yes	Yes	Yes	Yes
R-squared	0.82	0.82	0.81	0.81
Observations	27,062	27,062	27,062	27,062

Notes. Standard errors (reported in parentheses) are clustered at the industry level.

Table A11. External validity

	Firms incorporated in states that enacted a Constituency Statute after 1991	Firms incorporated in states that enacted a Constituency Statute before 1991	*p* -value of difference-in-means
Size	7.725	7.594	0.503
Return on assets	0.109	0.122	0.259
Tobin's Q	1.727	1.748	0.895
Leverage	0.273	0.203	0.127
Cash holdings	0.110	0.116	0.710
Log(1 + Political contributions)	1.677	1.884	0.632
Herfindahl	0.070	0.061	0.413

Notes. The *p*-values of the difference-in-means test are computed based on standard errors clustered at the industry level.

Table A12. Alternative setup—close-call shareholder proposals on CSR

Dependent variable	Δ Log(1 + Procurement)			
	(1)	(2)	(3)	(4)
Pass	0.061	0.053		
	(0.023)	(0.026)		
Pass × (Relationship length > Median)			0.018	0.009
			(0.038)	(0.043)
Pass × (Relationship length < Median)			0.081	0.068
			(0.030)	(0.028)
Relationship length > Median			0.056	0.056
			(0.018)	(0.019)
Polynomial in vote share	Quadratic	Cubic	Quadratic	Cubic
R-squared	0.01	0.01	0.01	0.01
Observations	2,729	2,729	939	939

Notes. Standard errors (reported in parentheses) are clustered at the industry level.