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# The Color of Shareholders' Money: Institutional Shareholders' Political Values and Corporate Environmental Performance

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ABSTRACT

In this study, we investigate whether and to what extent institutional shareholders' political values influence their investees' environmental disclosure and performance. We find that weighted institutional shareholders' political ideology scores are negatively associated with issuing environmental reports. Such a negative effect is more pronounced for firms with institutional shareholders with long-term horizons, with high corporate Republican ideology scores, and without an environmental committee. We further find that institutional shareholders' Republican-oriented political values are negatively associated with their investee firms' environmental performance and green innovations. Overall, our results indicate that institutional shareholders' internal political polarization significantly alters corporate environmental policies.

Keywords: institutional shareholders; political ideology; environmental disclosure; environmental committee; green innovation.

JEL classification: G23

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## 1. Introduction

In his New York Times's article, Friedman (1970) pioneers the concept of corporate social responsibility (CSR) and stresses that corporate social activities are not easily justifiable under the shareholder-wealth-maximization framework. He also highlights the fact that management-led social commitments are often undertaken at the shareholders' expense. This is especially problematic when corporate social commitment does not stand out as being value relevant. As such, Friedman urges an active voice of shareholders to minimize agency problems in CSR decision-making. While extant CSR literature has shown the effect of corporate managers on CSR (e.g., Borghesi, Houston, and Naranjo, 2014), there is little known regarding the role of shareholders in shaping CSR policies.

Alongside traditional monitoring roles[1], much antecedent evidence has shown that institutional shareholders recently pay greater attention to corporate sustainability than ever and steer their investee firms to adopt sustainable business practices[2]. As of 2015, for instance, approximately 1,500 investment institutions have endorsed the United Nations Principles for Responsible Investments (UN PRI), representing USD 60 trillion.[3] A coalition of UK asset owners representing GBP 230 billion in assets filed shareholder resolutions to pressure the management to disclose more climate risks, while calling for the major mining companies to improve their climate change disclosure

[1]Institutional shareholders significantly influence the level of executive compensation (Hartzell and Starks 2003), M&A performance (Chen, Harford, and Li 2007), R&D spending (Bushee 1998), innovation (Aghion, Van Reenen, and Zingales 2013), earnings management (Chung, Firth, and Kim 2002; Kim, Miller, Wan, and Wang 2016), disclosure policy (Ajinkya, Bhojraj, and Sengupta 2005), and firm value (Gompers and Metrick 2001). Recently, a few studies further document that institutional investors actively engage in and press their investee firms to adopt sustainable business practices on a variety of ESG issues (Hong and Kostovetsky 2012; Dimson, Karakas, and Li 2015; Dyck, Lins, Roth, and Wagner 2015; Kim, Wan, Wang, and Yang 2019).

[2] We use "sustainability", "corporate social responsibility" (CSR), and "environmental, social and governance" (ESG) interchangeably throughout this paper because those three terms have been used to explain a firm's voluntary actions to manage its environmental and social issues.

[3] The two most widely used sustainability standards are the United Nations Global Compact Principles (UN GCP) and the United Nations Principles for Responsible Investments (UN PRI), consisting of six principles that guide investors in factoring environmental, social, and governance (ESG) considerations into their investment decisions and promoting their use more broadly in the industry.

in 2016.[4] In their survey, Hoepner et al. (2017) show that 18% of institutional investors responded that they communicated with management regarding environmental issues such as climate change. To date, while anecdotal evidence showing institutional shareholders' demand for CSR engagement is rapidly increasing, a question as to what drives institutional shareholders' CSR engagement still remains unanswered. In this paper, we aim to fill this gap in the literature.

In theory, there are mixed views on the value creation of CSR. First, the traditional principal-agent framework suggests that managers are incentivized to deviate from shareholder wealth maximization by pursuing personal benefits (e.g., Jensen and Meckling, 1976). As Friedman (1970) noted, managers may engage in CSR activities mainly to exploit personal benefits arising from social engagement (Borghesi et al., 2014). In this case, CSR is regarded as a mark of an agency problem that is not directly linked to the shareholder-wealth-maximization goal. On the contrary, stakeholder theory suggests that ESG plays a pivotal role in resolving conflicts among different types of stakeholders, and thus increasing long-term firm value (Waddock and Graves 1997; Deng, Kang, and Low 2013; Lins, Servaes, and Tamayo 2017)[5]. Jensen (2001) advocates that managers should incorporate all interests of stakeholders when they make decisions. Motivated by two well-established strands of literature, researchers continue to debate the role of CSR.

CSR activities are very different from other traditional investment projects. Many scholars have shown that CSR is building intangible assets, such as corporate reputation (Fombrun et al., 2000) and investors' trust (Spicer, 1978), that are expected to create value in the long run. Corresponding to CSR spending, economic value that firms earn is not easily measurable, at least at the initial stage of CSR, which makes it harder to apply the cost-benefit analysis. Therefore, we argue the decision-

[4] https://cib.bnpparibas.com/sustain/sustainability-the-new-driver-for-institutional-investors_a-3-97.html

[5] For example, Dimson, Karakas, and Li (2015) find that firms are more likely engaged in ESG activities if the asset manager and other socially conscious institutional investors hold a large ownership in the firm. Morgan and Tumlinson (2019) even theoretically show that when shareholders strongly voice their preferences concerning ESG issues, the firms abandon profit maximization in favor of more socially responsible choices.

making process regarding CSR involves not only economic considerations, but also human prejudice. Prior social science studies have shown that a psychological bias plays a role in an individual's economic decision-making as it often mirrors an individual's internal values, especially political beliefs[6]. By extending this line of inquiry, this investigation is concerned with the extent to which institutional shareholders' internal political values influence their investees' social responsibility.

More specifically, we study corporate environment policies in light of starkly different political ideology between Republicans and Democrats[7]. We refine our analyses to corporate environmental performance, since environmental protection is one of the most contrasting issues between the two political platforms. According to the recent poll conducted by Stanford University and the New York Times, 63 percent of Democrats said the issue of global warming was very or extremely important to them personally. However, only 40 percent of independents and 18 percent of Republicans said the same. In their experimental study, Gromet, Kunreuther, and Larrick (2012) demonstrate that politically conservative people are less likely to support energy-efficient technology. In a similar vein, McCright, Xiao, and Dunlap (2014) show that individuals who voted for the Republican Party are less likely to support government spending on environmental protection. Overall, political polarization on environmental issues has been tested; but there is little evidence on this matter at the corporate level.

[6] England (1967) develops a theoretical model to describe how personal belief affects a manager's decisions. Further studies have documented the effect of corporate stakeholders' political value on corporate policies. Hutton, Jiang, and Kumar (2014) find empirical evidence showing that Republican-leaning managers tend to run their business conservatively by having fewer debts or engaging in fewer investment. Francis, Hasan, Sun, and Wu (2016) find that Republican CEOs exhibit more tax avoidance than their Democratic peers. Di Giuli and Kostovetsky (2014) show that firms with Democratic-leaning founders, CEOs, and directors spent $20 million more on CSR issues than Republican ones did. Hong and Kostovetsky (2012) further find that Democratic-leaning investment managers are less likely to invest in socially irresponsible portfolios (e.g., tobacco, guns, or defense firms) than are Republican managers. Elnahas and Kim (2017) show that Republican-leaning CEOs are more conservative in undertaking mergers and acquisitions. Unsal, Hassan and Zirek (2016) demonstrate that Republican CEOs are more likely to engage in corporate lobbying.

[7] http://rachelegolden.com/2016/07/26/republican-vs-democratic-platforms-on-the-environment/

In firm-level analyses, we first investigate whether and to what extent institutional shareholders' internal political preference affects their investee firms' voluntary environmental disclosure[8]. Following Hong and Kostovetsky (2012) and Hutton, Jiang, and Kumar (2014), we measure institutional shareholders' political polarization based on their political donations made to electoral candidates. We first find that weighted institutional shareholders' political values (i.e., Republican-oriented shareholders) are negatively associated with issuing voluntary environmental reports. This finding is consistent with the notion emphasized by social science theories that individuals tend to take a position in a way that their group prefers (e.g., social comparison theory, Festinger 1954; self-categorization theory, Hogg, Turner, and Davidson 1990).

Moreover, we show that the presence of long-term (dedicated) versus short-term (transient) institutional investors have a differential effect on the association between institutional investors' political values and environmental reporting. Our findings show that such a negative association between institutional investors' political values and environmental reporting is only evident for long-term institutional investors. We further find that the negative effect of institutional investors' political values on environmental reporting is more pronounced for firms without an environmental committee and for firms with a Republican-leaning culture (Hutton, Jiang, and Kumar 2015), implying that other corporate environmental and political mechanisms matter.

Next, our main findings are robust to two alternative hypotheses. First, one may argue that our findings may be driven by the sample selection bias, which appears in portfolio composition of institutional shareholders. Differently put, some institutional shareholders might have a preference to select more or less socially responsible stocks, and thus, the reverse causality may exist. In particular,

[8] Extant studies highlight the growing importance of and various benefits associated with voluntary environmental reporting such as reducing information asymmetry between firms and investors to lower the cost of capital and increase firm value (Dhaliwal, Li, Tsang, and Yang 2011; Matsumura, Prakash, and Vera-Munoz 2014; Clarkson, Fang, Yue, and Gordon 2013), reshaping their public image to increase financial and economic performance (Martin and Moser 2016; Waddock and Graves 1997), and building social capital (Lins, Servaes, and Tamayo 2017).

Hong and Kostovetsky (2012) find Democrat-leaning mutual fund managers underweight socially irresponsible stocks to avoid litigation risk or scrutiny. To deal with the selection bias, we perform a propensity score matching (PSM) analysis. We retain firms held by Republican institutional shareholders and their equivalent peers based on industry membership and firm characteristics, and re-test the effect of Republican institutional shareholders on voluntary environmental disclosure. Our PSM results indicate the selection bias is not a concern in this study.

Further, a firm's environmental reporting and Republican institutional blockholders'[9] investment decisions may be endogenous (e.g., some unobservable factors may simultaneously influence environmental reporting and Republican institutional shareholders' investment decisions). Following He and Huang (2017), we use institutional blockholders' mergers and acquisitions (M&A) as an exogenous shock to perform difference-in-differences (DID) analyses. Firms that experience a loss of a single Republican institutional blockholder due to M&As are considered as the treatment group, and firms that don't as the control group. Using DID tests, we effectively examine the influential impact of Republican institutional blockholders on corporate environmental reporting between the treatment and the control group around the M&A events by controlling for covariates. We find that firms causally increase the frequency and page numbers of corporate voluntary environmental reporting relative to industry peers after the loss of Republican blockholders (i.e., after being acquired). In sum, those PSM and DID tests corroborate our main findings—institutional shareholders play an influential role in their investee firms' voluntary environmental reports.

Lastly, we probe whether institutional shareholders' individual political values are associated with corporate environmental performance, as prior studies document mixed evidence of the relation between environmental performance and environmental disclosure. To measure corporate

[9] To ensure the non-negligible effect of institutional shareholders, we limit our analysis to institutional blockholders, who hold more than 5% ownership.

environmental performance, we use two alternative proxies: 1) net KLD scores, defined as the difference between environmental strength scores and environmental weakness scores, since the KLD database has been widely used by researchers in sustainability performance (Di Giuli and Kostovetsky 2014); and 2) the number of patents associated with environmental protection such as air pollution control, recycling, solid waste control, water pollution, etc. (Carrión-Flores and Innes 2010; Amore and Bennedsen 2016). We document a significant negative association between the ownership held by Republican-oriented institutions and environmental performance, measured by net KLD scores and green technologies. Taken together, we conclude that institutional shareholders inject their personal political preference into corporate investment decisions related to environmental technologies.

The remainder of the paper is organized as follows. In Section 2, we review relevant literature. In Section 3, we describe our sample selection. In Section 4, we discuss our main results, robustness tests, and additional analyses on environmental performance. Section 5 concludes.

## 2. Literature Review

Overall, our paper contributes to the literature in at least four areas. First, we contribute to institutional shareholder literature by documenting the active role of institutional shareholders in corporate environmental disclosure. Extant literature shows that institutional shareholders play a decisive role in shaping corporate policies such as CEO pay structure, M&A decisions, disclosure policy, etc. By extending this line of research, we find that institutional shareholders' political preference significantly influences corporate environmental-related policies especially in voluntary disclosures. A voluminous number of studies has documented that voluntary environmental disclosure increases a firm's value or reduces its cost of capital. For instance, Griffin and Sun (2013) find a positive market reaction to green gas-emission announcements. While generating carbon emissions has a negative impact on firm value, this negative effect is mitigated by self-disclosing carbon emissions

(Matsumura, Prakash, and Vera-Munoz 2013). Dhaliwal, Li, Tsang, and Yang (2011) find that firms voluntarily disclosing CSR activities benefit from significantly lower cost of equity than non-disclosing firms do. Clarkson, Fang, Li, and Richardson (2013) find that transparent voluntary environmental disclosures combined with proactive environmental strategies enhance firm value. In a controlled laboratory experiment, Martin and Moser (2016) find that investors respond more positively when firms' disclosures focus on the social benefits associated with green investment (to reduce carbon emissions) rather than on the cost to the company. To sum up, extant literature has shown evidence of the role of voluntary environmental disclosures in value creation or cost reduction. Therefore, the shareholders' voice is imperative in environmental disclosure decisions.

Second, we find a determining role of major shareholders in CSR decisions. By extending recent studies on the role of CEOs' and boards' political ideologies in corporate social responsibility (Borghesi, Houston, and Naranjo, 2014; Di Giuli and Kostovetsky 2014; Chin, Hambrick, and Trevion 2013), we further document that (institutional) shareholders significantly influence corporate environmental policies. Extant literature has shown that institutional investors favor those of firms run by managers who exhibit similar political ideology in their investment decision (e.g., Wintoki and Xi, forthcoming). Moreover, Bolton et al. (2019) show that public pension funds on the left are more likely to support eco-friendly proposals. Stretching from prior studies, we contribute to growing literature supporting that institutional-investors-led corporate political culture determines the inclinations of corporate social commitment.

Third, this study contributes to the non-financial disclosure literature by showing a determinant of corporate voluntary disclosure: shareholders' internal political values. There are two distinct strands of thought on corporate disclosure policy. On the one hand, the optimal disclosure theory posits that a firm chooses its optimal disclosure level or timing based on financing needs (Frankel, McNichols, and Wilson 1995), R&D policy (Jones 2007), executive compensation

(Laksmana 2008), etc. On the other hand, corporate disclosure policy is mainly shaped by individual manager preference such as herding (Arya and Mittendort 2005) and heuristic manner (Fischer and Verrecchia 2004). Our study supports the viewpoints of the latter group, that is, that voluntary non-financial (environmental) reporting is affected by institutional shareholders' political values.

Fourth, this study contributes to the literature by linking internal political values to corporate environmental policies. Prior studies have shown that a psychological bias plays a role in an individual's economic decision-making as it often mirrors an individual's internal values, especially with political predisposition (Layman 1997; Barnea and Schwartz 1998; Feldman 2003). Traditionally, political parties in the United States have been built on distinct sets of moral foundations that generate differences in ethical values and norms[10]. For instance, people who support a Republican ideology emphasize free enterprise, efficient capital markets, limited governmental regulation, and the protection of individual economic interests. On the contrary, people who advocate a Democratic ideology stress governmental regulation to protect interests of the public and thus support strong labor rights, environmental protection, the social safety net, and corporate social responsibility. Our findings are broadly consistent with England's view (1967), who develops a theoretical model to describe how personal belief affects a manager's decisions.

## 3. Sample Selection

To test our hypothesis, we compile datasets from multiple sources. First, individual political donation information is obtained from the Federal Election Committee (FEC) website[11]. In accordance with the Federal Election Campaign Act of 1974, the FEC takes charge of electoral campaign finance issues including disclosing all political contributions made by individuals, companies,

[10] According to Jost (2006, 654), the left-right or liberal-conservative distinction "has been the single most useful and parsimonious way to classify political attributes for more than 200 years."
[11] http://classic.fec.gov/finance/disclosure/ftpdet.shtml

and other political committees. Since 1979, the FEC has collected contributors' names, addresses, occupations, the dates donations were made, and federal political action committees and party committees that receive donations, etc. To measure institutional shareholders' organizational culture, we collect all donations made by individuals who voluntarily disclosed their affiliation with institutional managers in political donation files (Hong and Kostovetsky 2012). To be more specific, we first gather a list of institutional managers reported in Form 13F. The Securities and Exchange Commission (SEC) requires filings of stock transactions and holdings for all institutional managers with $100 million or more in assets under management. We then merge the list of institutional managers with the political donation files by institutional managers' names and occupations. This procedure yields 199,371 matched observations from 1979 to 2010. Since corporate environmental reporting is available from 1999 to 2010, we retain only data from the corresponding period. In table 1, we summarize employees' political donations at the institution level. To illustrate our dataset, we also present a sample of political donations made by employees affiliated with Merrill Lynch in 2002, in Appendix 1[12].

First, we sum all political donations per year and split total donations by party. Based on table 1, we find two outstanding patterns in political donations. First, individuals working in institutional management donate more in even years than odd years. This is because the Presidential elections and most congressional elections occur in even years in the U.S. Second, during six election cycles (1999-2010), each party received greater donations during three years: the Republican Party in 2000, 2002, and 2010; and the Democratic Party in 2004, 2006, and 2008. The pattern shows that political donations are greater while the other political party takes the President's office.

********** Insert Table 1 here **********

[12] Approximately 30% of total donations were received from employees in Merrill Lynch's home state, New York.

In table 2, we aggregate the amount of political donations and rank institutional managers based on the total contributions for our sample period. Individuals working at Goldman Sachs made a total of $7,576,946, followed by Merrill Lynch and Lehman Brothers. A majority of employees at Goldman Sachs, Lehman, Cisco, Renaissance, Citi, and the Soros fund exhibit a Democratic-leaning political orientation, while people at Merrill Lynch, Federal Investment, Wells Fargo, and General Electric tend to exhibit a Republican-leaning political orientation. When we rank institutional shareholders based on political orientation, we can observe some extreme preferences in political donations across institutional shareholders in panels B and C. While most individuals working at Hancock J Freedom Reg. BK, Friess Associates, and First American Bank prefer to donate their money to the Republican Party, all employees at Entrust Capital, TPG Axon Capital, Boston Provident, Delphi Management, and Regis Management donated their money to the Democratic Party. Based on this, we clearly observe a political preference in financial institutions.

********** Insert Table 2 here **********

Based on PAC donation information, we first construct an institutional shareholder's political ideology measured as the difference between donations made to the Republican Party and the Democratic Party divided by total donations, which is bounded by -1 (extreme Democrat) and +1 (extreme Republican). We then developed two firm-level political ideology scores captured by institutional shareholders' political ideology: *InstPid* and $RepBlock^{DUM}$. *InstPid* is the weighted average institutional shareholders' political ideology score by ownership. A higher score represents that a firm is held by more Republican-flavored institutional shareholders. $RepBlock^{DUM}$ is an indicator variable

that takes the value of one if more than 75%[13] of employees' cumulative political contributions are made to the Republican Party and zero otherwise.

Next, to quantify corporate environmental disclosure, we use firm-level voluntary environmental disclosures following Dhaliwal et al. (2011) and Marshall et al. (2009). First, we hand-collected the data from corporate voluntary environmental disclosures published in a stand-alone report (frequently labeled as a corporate environmental report or a corporate sustainability report) by U.S. firms from CorporateRegister.com, Internet Search, and Company Website. Appendix 2 presents an example of corporate environmental reports. CorporateRegister.com is one of the leading organizations providing corporate responsibility reports and related statistics. As of December 2017, CorporateRegister.com offers 92,530 corporate responsibility reports. The corporate social responsibility report generally covers the following areas: Economic, Environment, Human Rights, Labor Standards, Product Stewardship, and Society (Chen and Bouvain 2009; Bouten, Everaert, Van Liedekerke, De Moor, and Christiaens 2011).[14] We measure corporate environmental reporting using 1) $Ln(DISC^{FREQ})$, the log of one plus the frequency of corporate voluntary environmental reports per fiscal year;[15] and 2) $Ln(DISC^{PAGE})$, the log of one plus the total page numbers in the corporate voluntary environmental reports per fiscal year. $Ln(DISC^{PAGE})$ is calculated as the log of one plus the sum of page numbers of all environmental reports per fiscal year if a firm issues more than one environmental report.

In table 3, we report summary statistics of the variables used in our analyses. The mean value of *InstPid* is 0.368, indicating that corporate political culture measured by institutional shareholders'

[13] We also define *RepBlock* based on 67% and 90% of total political contributions and find qualitatively similar results to those reported in this paper.

[14] Since Environment and Product Stewardship cover environmental topics on firms and their product, Environment is the #1 dimension in the report. Moreover, from the review of all disclosure files, most CSR reports directly cover the environmental dimension.

[15] Since environmental disclosure is voluntary, firms may issue such a report once or multiple times in a year.

political ideology is leaning Republican. Approximately 10.7% of a sample of our firms are held by Republican-leaning institutional shareholders, $RepBlock^{DUM}$. When we look at the frequency of environmental reporting, on average, 3% of our sample firms voluntarily issue the number of environmental reports each year, which is the equivalent of 0.138 pages. Average institutional ownership is close to 65.4%. The mean and median values of return on assets (ROA) are -0.021 and 0.035, respectively. The ratio of debts to assets is close to 20%. On average, the sample firms hold 20% of cash relative to their assets. Approximately 4.8% of the sample firms have an environmental committee on their boards. On average, firms have about 0.132 (= exp(0.124)-1) patents related to environmental protection.

********** Insert Table 3 here **********

## 4. Empirical Results

### 1) The Impact of Institutional Shareholders' Political Values on Corporate Environmental Reporting

We start our analyses by investigating the association between corporate political culture led by institutional shareholders and the quantity of environmental disclosure in corporate reports. To measure the quantity of corporate environmental reporting, we use two variables: the frequency and the page number of environment-related reporting (i.e., $DISC^{FREQ}$ and $DISC^{PAGE}$) following Dhaliwal et al. (2011). More specifically, we set up the baseline regression model below:

$$Environmental\ Disclosure_{i,t} = a + \beta\ InstPid\ (or\ RepBlock^{DUM})_{i,t} + \gamma X_{i,t} + e_{i,t} \quad (1)$$

Following extant literature, we include a set of control variables in equation (1) that address several important determinants of firms' voluntary environmental disclosures: firm size (Lang and Lundholm 1993; Li 2010), growth opportunity (Rogers and Stocken 2005), litigation risk (Francis, Philbrick, and

Schipper 1994; Matsumoto 2002), profitability, leverage (Leftwich, Watts, and Zimmerman 1981), industry concentration (Dye 1985), and globally-focused firms (Dhaliwal et al. 2011).

To be more specific, firm size, *Ln(Assets)*, is defined as the natural logarithm of the market value of a firm's common equity at the end of each year because firm size captures various factors, such as public pressure or financial resources, motivating firms to issue CSR reports (Lang and Lundholm 1993). *Litigation* is an indicator variable that equals 1 if a firm operates in a high-litigation industry SIC code–2833-2836, 3570-3577, 3600-3674, 5200-5961, and 7370; and 0 otherwise (Francis et al. 1994; Matsumoto 2002). As firms with better financial performance likely have more resources to practice CSR activities and produce CSR reports, we include return on assets (*ROA*), income before extraordinary items scaled by total assets at the end of each year. Dye (1985) suggests that proprietary costs arising from industry concentration can reduce disclosure incentives. Hence, we control for industry concentration, Herfindahl-Hirschman Index (*HHI*), which is the sum of the squared fractions of sales of the 50 largest firms in a given industry where an industry is defined as the same two-digit SIC code. We also include $HHI^2$, the squared term of *HHI*, to control for the nonlinear relation between industry dynamic and corporate environmental performance (Aghion, Bloom, Blundell, Griffith, and Howitt 2005).

Additionally, we control for growth opportunities (*BM*) because firms in an expansionary period are more financially constrained and have fewer resources for CSR activities and disclosure. However, growth firms also tend to have higher levels of information asymmetry, which could induce managers to make more disclosures to attract potential investors. We include the ratio of total debts divided by total assets *(Leverage)* in the model because debt holders may demand more disclosures (Leftwich et al. 1981). In addition, firms with a global focus may face greater pressure to commit to social performance and are more likely to provide CSR disclosures. *Global* is an indicator variable that equals 1 if a firm reports foreign income, and 0 otherwise. Further, managers may have incentives to

increase the liquidity of their firms' stocks in order to issue equities or sell shares of their firm obtained from options or other incentive compensation plans. One way to increase liquidity is to improve transparency and supply more information to investors. *Liquidity* is defined as the ratio of the number of shares traded in the year to the total shares outstanding at the year-end. In addition, we include ownership held by all institutional ownership (*InstOwn)* in equation (1).

Table 4 presents the results form regressions of corporate environmental reporting on *InstPid*. In column (1), we find the coefficient of *InstPid* is -0.011 and statistically significant at the one percent level, indicating that firms with a Republican-oriented culture led by institutional shareholders are less likely to report environmental CSR. To illustrate the economic significance, if institutional shareholders' weighted average political ideology score (i.e., *InstPid*) increases from 0 (1st quartile) to 0.742 (3rd quartile), the frequency of issuing environmental reports decreases by about 0.813%. In column (2), we regress the number of pages in environmental reporting on *InstPid* and other control variables. We find that *InstPid* is significantly and negatively associated with the page number of corporate environmental reporting. In columns (3) and (4), we use $RepBlock^{DUM}$ instead of *InstPid*, and find results in a similar pattern. For example, the presence of *RepBlock* will decrease the number of pages in corporate environmental reports by 5.7%. It is also worthwhile to note that coefficients of *InstOwn* are negative, indicating that institutional ownership is negatively associated with issuing environmental reports. Overall, firms held by institutional shareholders with Republican-leaning political values are less likely to issue standalone environmental reports beyond general institutional shareholder ownership.

Our findings are consistent with Dimson, Karakas, and Li (2015), in that institutional shareholders actively engage in corporate environmental policy decisions. In addition, firms voluntarily issuing environmental reports are larger (Lang and Lundholm 1993; Li 2010; Dhaliwal et al. 2011), have lower liquidity (Dhaliwal et al. 2011) and low industry concentration (Li 2010), and

exhibit higher growth opportunity (Frankel et al. 1995; Li 2010), than those not issuing environmental reports.

********** Insert Table 4 here **********

2) Institutional Shareholders' Investment Horizon and Corporate Environmental Reporting

Not all institutional shareholders have the same investment objective. Institutional shareholders have been differently influenced corporate decision making by their investment horizon. For instance, Chen, Harford and Li (2006) demonstrate that long-term independent institutional ownership is positively associated with post-takeover performance. Neubaum and Zahra (2006) show that long-term institutional investors such as pension funds are more likely to promote corporate social responsibility. Khurana and Moser (2013) find that institutional investors with long-term investment horizon reduce corporate tax avoidance. Motived by this line of research, we investigate how institutional shareholders' political value by their investment horizon differently affects corporate environmental reporting decision. Followed Bushee (2001) and Bushee and Noe (200), we divide all institutional shareholders into three groups; transient (short-term, *TRAPid*), quasi-indexer (long-term, *QIXPid*), and dedicated (long-term, *DEDPid*). According to the classification, we re-construct the weighted political ideology score and test if institutional shareholders' investment horizon play a role in determining environmental reporting.

In panel A of Table 5, we report the results of testing an association between institutional shareholders' political ideology and environmental reporting partitioned by investment horizon. We find that there is no significant relation between transient institutions' political value and environmental reporting while quasi-indexer or dedicated institutional investors significantly and negatively associated with environmental reporting. We also test the difference between the coefficients among different subgroups (i.e., *DEDPid – TRAPid*, *QIXPid– TRAPid*, *DEDPid –*

*QIXPid*). For example, *DEDPid* – *QIXPid* shows that the coefficient of *DEDpid* in column (3) is significantly different from *QIXpid* in column (2). In panel B, we repeated the test with Republican leaning institutional blockholders. We find that the negative association only appears between dedicated Republican leaning institutional blockholders (i.e., $RepDED^{DUM}$) and environmental reporting. Overall, the findings show that institutional shareholders' political value with long-term investment horizon only matter corporate environmental reporting decision.

********** Insert Table 5 here **********

3) The Impact of Environmental Committee on the Board and Corporate Political Culture on Corporate Environmental Reporting

In this section, we examine the association between institutional shareholders' political value and environmental disclosure conditioning on the impact of corporate environmental committees and firm-level political culture. Extant literature has documented an active role of an environmental committee in environmental issues (Lublin, 2008). An environmental committee oversees a firm's environmental policies from planning to reviewing environmental performance that enables the firm to effectively manage environmental matters originated from tightened environmental regulation, increased public pressure, and/or heightened demand for accountability. Along with this view, Liao, Luo, and Tang (2015) find that firms' having an environmental committee is positively associated with the level of greenhouse gas disclosure and carbon strategy development. While the number of firms with environmental committees is rapidly growing, the research on the effect of environmental committees is still limited. Therefore, it is important to test the role of an environmental committee in environmental reporting.

Table 6 presents the results regarding whether the negative association between *InstPid* and environmental disclosure is mitigated by an environmental committee. In panel A of table 6, we partition our sample into firms with and without an environmental committee. In column (1), we find

the effect of *InstPid* on environmental reporting is still negative and significant at the 1% level when a firm does not have an environmental committee on its board. In the next column, to the contrary, when a firm has an environmental committee on its board, the effect of *InstPid* on environmental reporting becomes statistically insignificant. These results suggest that an environmental committee on a corporate board understands the importance of environmental disclosure and effectively mitigates the negative impact of *InstPid* on environmental reporting. The t-statistic for the difference between these two coefficients in columns (1) and (2) is -2.31, indicating that the impact of *InstPid* on corporate environmental reporting decisions between firms with and without an environmental committee is significantly different. We find similar evidence with $RepDED^{DUM}$ as we report the results in columns (5) to (8).

In panel B of table 6, we examine the moderating effect of firm-level corporate political culture on the relationship between the ownership of *InstPid* and environmental reporting. Hutton, Jiang, and Kumar (2015) measure the firm-level political culture by including CEO, corporate political action committees (PACs), and employees. Taking Hutton et al.'s (2015) political culture index, we divide our final sample into firms with high and low Republican-leaning cultures based on the culture index's median value. We find that the significant and negative effect of institutional shareholders' political value on environmental reporting is more pronounced in firms with a high Republican-leaning corporate culture than in firms with a low Republican culture. Overall, our findings indicate that institutional shareholders' internal political values influence corporate environmental reporting by interacting with corporate culture.

********** Insert Table 6 here **********

4) Robustness Tests

In this section, we conduct a couple of robustness tests to show that our findings are not driven by the sample selection bias or the endogeneity issue. First, Hong and Kostovetsky (2012) provide evidence showing that mutual fund managers exhibit different preferences in stock holdings according to their political beliefs. Specifically, they find that Democratic-oriented mutual fund managers are less likely to hold "socially irresponsible" stocks such as those for alcohol, guns, and defense firms. Likewise, a portfolio composition by Republican institutional shareholders is not random. Therefore, one may argue that the distinction in portfolio composition between Republican- and Democratic-oriented mutual fund managers may potentially drive our main findings.

We focus our robustness tests on $RepBlock^{DUM}$ to ensure a significant impact of institutional shareholders on corporate policy. To address this sample selection bias, we conduct a propensity score matching (PSM) analysis. We employ the following procedures. In the first stage, we test what types of firm characteristics and industry membership affect the likelihood of holdings by *RepBlock*. Using a logistic regression, in column (1) of panel A in table 7, we find that firm size, a ratio of book-to-market value of equity, and several industry characteristics significantly differ in the holdings between Republican and non-Republican institutional shareholders. Since only 10% of our sample firms are held by Republican institutional investors, we select the nearest peers exhibiting similar observable characteristics from the firms that are not held by Republican institutional shareholders. In column (2) of panel A, we rerun the logistic regression using the matched sample only. We find none of the observable firm and industry characteristics yields a significant difference between the test group and the matched group. In panel B, we re-test our baseline regressions using both test and matched groups only and find a negative association between Republican-leaning institutional shareholders and corporate voluntary environmental disclosures. Overall, we conclude that the sample selection bias is not a concern in this study.

********** Insert Table 7 here **********

Next, one may argue that some unobservable factors may simultaneously influence corporate environmental reporting and Republican institutional shareholders' investment decisions. To address this endogeneity concern, we use institutional blockholders' M&A as a quasi-natural experiment and perform a differences-in-differences (DiD) test. We first manually identify institutional blockholders' M&A by comparing institutional blockholders' names in the 13F database and target firms' names in the SDC M&A database. To this end, we obtain 215 cases of institutional shareholders' M&A, of which 11 are applied to Republican institutional shareholders and cover 279 unique firms during 1999-2010. With institutional blockholders' M&A information, we are able to identify two groups, treatment vs. control group, to see how institutional blockholders' M&A events may affect our main findings differently. The treatment group is defined as if a firm has a single Republican-leaning blockholder and it is acquired by other institutional investors[16]. For the control group, we retain firms without Republican-leaning blockholders and link each treatment firm to three closest peers based on a firm's assets and the industry membership[17] in a given same M&A year. To be included in the control group, firms should have no Republican institutional shareholders during 1999-2010. This procedure generates 764 matching firms. Lastly, we extend a total of 1,043 (=279+764) firms to 1999 and 2010, yielding 7,463 firm-year observations. To compare the effect of Republican institutional shareholders on corporate voluntary environmental reporting, we construct the following three variables. *Treat* is an indicator variable which equals one if a firm's single Republican-leaning institutional blockholder is acquired (loss of Republican-leaning institutional blockholders) and 0 otherwise. *Post* equals one for years after (before) a firm's Republican-leaning institutional blockholder is acquired and zero

[16] We believe that the cases when a Republican-leaning blockholder is acquired by other institutional investors are an ideal quasi-natural experimental design as an exogenous shock to the corporate political culture led by institutional investors. In contrast, a dramatic increase in Republican-leaning blockholders could be driven by some unobservable firm characteristics, which is endogeneous. Therefore, we design this test using the cases when a single Republican-leaning blockholder is acquired by other institutional investors.

[17] For industry membership, we use Fama and French 48 industry classifications.

otherwise. *Post* × *Treat* is an interaction term of *Post* and *Treat*. Therefore, our DiD regression is presented as follows:

$$Environmental\ Disclosure_{i,t} = a + \beta_1 Treat_{i,t} + \beta_2 Post_{i,t} + \beta_3 Post \times Treat_{i,t} + \gamma X_{i,t} + e_{i,t} \quad (2)$$

The variable of primary interest is *Post* × *Treat* in equation (2). Since the negative relation between *RepBlock* and environmental reporting is found in previous tests, we expect the coefficient $\beta_3$ to be positive after a firm's single Republican-leaning blockholder is acquired (i.e., the loss of Republican institutional blockholders).

Table 8 presents DiD regression results. In columns (1) and (2), the coefficients of *Post* × *Treat* are significant and positive (0.014 and 0.067), indicating that the loss of Republican institutional blockholders *causally* increases a firm's environmental reporting. Overall, our finding suggests that Republican institutional blockholders actively influence a firm's environmental reporting decisions after controlling for unobserved confounding factors.

********** Insert Table 8 here **********

5) Additional Analyses on Environmental Performance

As a final set of tests, we use alternative corporate environmental performance measures and re-test our baseline regressions. The first alternative variable is corporate environmental score, which is measured as environmental strengths minus environmental concerns using MSCI ESG STATS (formerly known as KLD) data.[18] We use KLD environmental performance measures because they cover a large number of U.S. firms over a long period of time compared to other sustainability data (e.g., Thomson Reuters ASSET4) with shorter time-series and over fewer firms. Another advantage of using KLD data is that it uses a standardized format for each specific issue instead of the presence

[18] KLD is an external and independent investment research firm providing authoritative sustainability research and indexes, indicating the perception of corporate social responsibility reputation.

or absence of disclosure (for example, ASSET4 or Bloomberg). MSCI analysts evaluate firm CSR performance using binary scores across a variety of CSR issues such as community, diversity, environment, products, employee relations, and human rights. In this study, we use environmental performance scores only.

In panel A of table 9, we report the result regressing environmental net scores (i.e., *KLDEnvScore*) on *InstiPid* (or $RepBlock^{DUM}$) and other control variables. The variable of interest is *KLDEnvScore,* defined as the difference between KLD environmental strengths and concerns scores. We find a significant negative relation between *InstPid* and *KLDEnvScore*, indicating that Republican-oriented institutional shareholders have a negative influence on environmental performance. Therefore, this is consistent with our main finding, which is that institutional blockholders inject their individual political preference into their investee firms' environmental disclosure. That also shows that our results are less likely to be subject to measurement errors on corporate environmental performance variables.

As a second alternative variable of environmental performance, we use corporate green innovation activities. Environmental economic literature has tested the determinants of corporate green technologies. For example, a series of studies have tested whether strict environmental regulations spur corporate innovation, eventually bringing competitive advantage in the global market (Porter 1990). Recent empirical studies provide evidence that strong environmental regulations stimulate firms to undertake innovations (Jaffe and Plamer 1997), especially those related to low carbon emission (Calel and Dechezlepretre 2016). Amore and Bennedsen (2016) show that the quality of corporate governance is positively associated with green innovation. Chen, Lai, and Wen (2006) conclude that green product innovation places firms in a more competitive position than industry peers. Barber, Morse, and Yasuda (2017) find that venture capital or growth equity funds exhibit better performance by pursuing both financial returns and social responsibility than those with a sole

objective of maximizing financial returns. In short, extant literature indicates that corporate environmental engagement is value relevant, and therefore, it is imperative to study determinants of corporate environmental performance.

To obtain the firm-level green innovation information, we employ Patent Network Dataverse managed by the Harvard Business School[19]. Following Carrión-Flores and Innes (2010) and Amore and Bennedsen (2016), we use the patent utility code and classify corporate green innovations by counting the number of patents associated with environmental protection such as air pollution control, recycling, solid waste control, water pollution, etc.

To examine the impact of the ownership of Republican institutional investors on green innovation outputs, we run the OLS regression as follows:

$$Ln(GreenPat)_{i,,t+N} = a + \beta\, InstPid_{i,t} + \gamma X_{i,t} + e_{i,t} \quad (N=1,2, \text{ and } 3) \qquad (3)$$

The dependent variable in equation (3) is firm-level green innovation outputs, *Ln(GreenPat)*, which is defined as the natural log of one plus the number of environment-related patents based on the primary classifications (Carrión-Flores and Innes 2010). Since undertaking innovation requires long laboratory time, we also include long-term effects of *InstPid* on green innovations in year *t+2* and *t+3* besides year *t+1*. We control for several important determinants of firm green innovations based on prior literature (He and Tian 2013; Chang, Chen, Wang, K. Zhang, and W. Zhang 2017): firm size, firm age, profitability, R&D expenditure, asset tangibility, leverage, capital expenditure, and cash. Moreover, we add the Herfindahl-Hirschman Index (Industry concentration) as well as its squared term to control for the dynamic relationships among industry peers (Aghion, Bloom, Blundell, Griffith, and Howitt 2005).

[19] https://dataverse.harvard.edu/dataset.xhtml?persistentId=hdl:1902.1/15705

Panel B of table 9 presents OLS regression results on the relationship between *InstPid* and green innovation. In columns (1) – (3), we find that institutional shareholders' political values are consistently negatively associated with green innovations. We also find similar evidence with $RepBlock^{DUM}$. For example, the presence of *RepBlock* reduces corporate green innovations by 8.6% in the first year and about 6.9% (5.9%) in the second (third) year. We conclude that Republican institutional shareholders have a negative influence not only on environmental disclosure, but also on green-technology innovations. The coefficients on control variables are consistent with prior studies (e.g., Hirshleifer, Low, and Teoh 2012; He and Tian 2013; Chang et al. 2017). The coefficients on firm size, firm age, and R&D expenditure are significantly positive in both regressions (with $p$-value < 0.05), consistent with the view that larger, older, and more R&D-input firms have higher green-technology innovations. *BM* and *Leverage* are significantly negative in both regressions (with $p$-value < 0.01), consistent with the notion that firms with a higher book-to-market ratio and higher financial leverage have fewer green-technology innovations.

********** Insert Table 9 here **********

## 5. Conclusion

In this study, we examine whether and how institutional shareholders' political polarization influences corporate engagement in environmental-related activities. In particular, the main purpose of this study is to investigate whether and to what extent institutional investors inject their political values into their investees' voluntary environmental disclosures. We find that firms held by Republican-oriented institutional investors are less likely to issue environmental reporting. Such a negative effect is more pronounced for firms without an environmental committee than for those with an environmental committee, indicating the governance role of an environmental committee in corporate policymaking. We also compare this negative impact between firms with high and low

company-level Republican ideologies. We find that firms with a high company-level Republican ideology are less likely to report environmental issues relative to firms with a low company-level Republican ideology, indicating that organizational political values play an important monitoring role in environmental reporting decisions. In addition, we find the negative impact of political values on environmental reporting appears for long-term institutional investors, but not for short-term investors.

Further, to investigate the robustness of our main results, we perform the PSM analysis and DiD tests. First, we find little evidence for sample selection bias using the PSM analysis. Next, we conduct the DiD tests using institutional blockholders' mergers and acquisitions (M&A) as exogenous shocks to mitigate the endogeneity concern. In a nutshell, these robustness tests provide consistent results indicating firms held by Republican institutional blockholders are less likely to voluntarily disclose environmental reports. These results corroborate our main findings, a negative relation between institutional Republican-oriented values and voluntary environmental reporting.

Besides environmental reporting, we investigate whether and how institutional blockholders can affect their investee firms' environmental performance, captured by net KLD scores and green technology innovations. We find that firms held by Republican-oriented institutional investors are negatively associated with net KLD scores, indicating a negative impact of Republican-leaning institutional backorders on their investee firms' CSR performance. We further show that firms held by Republican-oriented institutional investors are less likely to engage in green innovations, indicating that institutional blockholders may hinder their investees firms' environmental-related technology innovations as well as voluntary disclosures.

Taken together, this study provides important and new evidence that institutional shareholders' internal political polarization significantly alters corporate environmental policies in terms of disclosure, performance, and investment decision making. Our analyses document the effects of and

mechanisms through which institutional blockholders' individual political values on environmental disclosure and performance, supporting the "active shareholder" theory.

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Table 1
Annual Contributions to Political Action Committees

This table presents annual political contributions made by financial institutions' employees. #*Donat* is the number of political contributions made by financial institutions' employees in a given year. $*Donat* is the total dollar amount of political contributions made by financial institutions' employees in a given year. $*Donat_Rep* (or $*Donat_Dem*) is the total amount of political contributions made to the Republican Party (or the Democratic Party) in a given year.

| Year | *#Donat* | *$Donat* | *$Donat_Rep* | *$Donat_Dem* | *U.S. President* |
|---|---|---|---|---|---|
| 1999 | 4,887 | 4,405,298 | 2,273,094 | 2,132,204 | Bill Clinton |
| 2000 | 5,310 | 5,530,886 | 3,287,573 | 2,243,313 | Bill Clinton |
| 2001 | 1,623 | 1,587,283 | 690,229 | 897,054 | George W. Bush |
| 2002 | 2,812 | 2,692,102 | 1,557,029 | 1,135,073 | George W. Bush |
| 2003 | 4,116 | 6,761,253 | 3,518,541 | 3,242,712 | George W. Bush |
| 2004 | 6,932 | 11,025,208 | 4,939,402 | 6,085,806 | George W. Bush |
| 2005 | 1,942 | 3,248,147 | 1,341,492 | 1,906,655 | George W. Bush |
| 2006 | 3,500 | 4,927,393 | 1,807,550 | 3,119,843 | George W. Bush |
| 2007 | 3,382 | 5,547,120 | 2,319,155 | 3,227,965 | George W. Bush |
| 2008 | 5,717 | 5,454,541 | 2,168,278 | 3,286,263 | George W. Bush |
| 2009 | 3,474 | 5,526,101 | 2,202,730 | 3,323,371 | Barack Obama |
| 2010 | 6,753 | 9,231,454 | 5,562,033 | 3,669,421 | Barack Obama |
| Total | 50,448 | 65,936,786 | 31,667,106 | 34,269,680 | |

Table 2
Top 10 Institutions

This table presents the top 10 institutional investment managers filed with the SEC Form 13F whose employees made political contributions to electoral candidates. Panel A presents the top 10 institutions based on the total dollar amount of political contributions for the period from 1999 to 2010. Panel B (Panel C) presents the top 10 institutions based on the institution's political ideology leaning toward the Republican Party (the Democratic Party). *InstPid* is the weighted average institutional shareholders' political ideology score by ownership, where an institution's political ideology score measured as the difference on donations made to the Republican Party and the Democratic Party divided by total donations.

Panel A: Top 10 Institution

| Rank | Institution Name | *$Donat* | *InstPid* |
|---|---|---|---|
| 1 | GOLDMAN SACHS & CO | 7,576,946 | -0.178 |
| 2 | MERRILL LYNCH & CO INC | 5,876,777 | 0.247 |
| 3 | LEHMAN ARK MGMT CO | 4,252,434 | -0.329 |
| 4 | CISCO SYSTEMS INC. | 2,268,084 | -0.376 |
| 5 | RENAISSANCE TECHNOLOGIES | 1,596,181 | -0.752 |
| 6 | CITIGROUP INC | 1,488,244 | -0.336 |
| 7 | FEDERATED INVESTMENT MGMT CO | 1,392,877 | 0.815 |
| 8 | WELLS FARGO & COMPANY | 1,314,920 | 0.134 |
| 9 | GENERAL ELECTRIC COMPANY | 1,112,909 | 0.058 |
| 10 | SOROS FUND MANAGEMENT CO | 1,100,353 | -0.925 |

Panel B: Top 10 Rep. Institution

| Rank | Institution Name | *$Donat* | *InstPid* |
|---|---|---|---|
| 1 | HANCOCK J FREEDOM REG BK | 300,450 | 1.000 |
| 2 | FRIESS ASSOCIATES INC | 238,050 | 0.998 |
| 3 | FIRST AMERICAN BANK | 345,500 | 0.977 |
| 4 | PRESIDIO MANAGEMENT | 100,200 | 0.960 |
| 5 | CINCINNATI FINANCIAL CORP | 159,167 | 0.948 |
| 6 | DEVON ENERGY CORP | 189,646 | 0.944 |
| 7 | GILDER GAGNON HOWE & CO LLC | 248,550 | 0.940 |
| 8 | KOCH INDUSTRIES INC | 793,246 | 0.939 |
| 9 | BRIDGER MANAGEMENT | 167,675 | 0.914 |
| 10 | AQR CAPITAL MANAGEMENT, LLC | 197,301 | 0.875 |

Panel C: Top 10 Dem Institution

| Rank | Institution Name | *$Donat* | *InstPid* |
|---|---|---|---|
| 1 | ENTRUST CAPITAL INC | 210,883 | -1.000 |
| 2 | TPG AXON CAPITAL | 203,150 | -1.000 |
| 3 | BOSTON PROVIDENT, L.P. | 140,000 | -1.000 |
| 4 | DELPHI MANAGEMENT INC. | 113,250 | -1.000 |
| 5 | REGIS MANAGEMENT COMPANY, LLC | 110,300 | -1.000 |
| 6 | SCHOONER CAPITAL LLC | 410,300 | -0.992 |
| 7 | WESTERN INVESTMENT LLC | 382,415 | -0.991 |
| 8 | CLINTON GROUP, INC. | 241,150 | -0.985 |
| 9 | SHUFRO - ROSE & EHRMAN | 236,500 | -0.983 |
| 10 | QUADRANGLE GROUP LLC | 184,108 | -0.946 |

Table 3
Descriptive Statistics

This table presents descriptive statistics for the sample of 25,124 firm-year observations. *InstPid* is the weighted average institutional shareholders' political ideology score by ownership, where an institution's political ideology score is measured as the difference on donations made to the Republican Party and the Democratic Party divided by total donations. $RepBlock^{DUM}$ is an indicator variable that equals to 1 if a firm is held by Republican-oriented institutional blockholders (or *RepBlock*), where *RepBlock* is defined as more than 75% of employees' cumulative political contributions are made to the Republican Party, and 0 otherwise. $Ln(DISC^{FREQ})$ is the natural log of the frequency of voluntary environmental reports. $Ln(DISC^{PAGE})$ is the natural log of the total page number of voluntary environmental reports. *InstOwn* is total non-Republican institutional blockholders' ownership. *Ln(Assets)* is the book value of assets. *Litigation* is an indicator variable that equals to 1 if a firm operates its business in an industry with high litigation risk and 0 otherwise. *ROA* is income before extraordinary items divided by assets. *BM* is a ratio of the book value of equity to its market value. *Leverage* is total debts divided by assets. *Global* is an indicator variable that equals 1 if a firm reports non-zero foreign income (i.e., PIFO) and 0 otherwise. *Liquidity* is the number of trading shares divided by total shares outstanding. *HHI* is the Herfindahl index based on the firm's sales relative to the industry, where the industry is defined as the four-digit standard industrial classification (SIC) code. *R&D* is research and development expense divided by assets. *CAPX* is capital expenditure divided by assets. *Ln(Firmage)* is a year count since a firm is listed in CRSP. *Cash* is cash divided by assets. *EnvCom* is an indicator variable that equals 1 if a firm has an environment-related committee on its board and 0 otherwise. *RepCul* is the index that measures corporate political culture leaning toward Republican ideology. All continuous variables are winsorized at the top 1% and the bottom 99% percentile. The detailed definitions of variables are listed in Appendix 3.

| | Mean | P25 | Med. | P75 | Std. |
|---|---|---|---|---|---|
| *InstPid* | 0.368 | 0.000 | 0.741 | 0.742 | 0.650 |
| *TRAPid* | -0.035 | 0.000 | 0.000 | 0.000 | 0.399 |
| *QIXPid* | 0.406 | 0.000 | 0.650 | 0.741 | 0.474 |
| *DEDPid* | -0.002 | 0.000 | 0.000 | 0.000 | 0.015 |
| $RepBlock^{DUM}$ | 0.107 | 0.000 | 0.000 | 0.000 | 0.309 |
| $RepTRA^{DUM}$ | 0.024 | 0.000 | 0.000 | 0.000 | 0.154 |
| $RepQIX^{DUM}$ | 0.078 | 0.000 | 0.000 | 0.000 | 0.268 |
| $RepDED^{DUM}$ | 0.007 | 0.000 | 0.000 | 0.000 | 0.086 |
| $DISC^{FREQ}$ | 0.029 | 0.000 | 0.000 | 0.000 | 0.138 |
| $DISC^{PAGE}$ | 0.134 | 0.000 | 0.000 | 0.000 | 0.670 |
| Control Variables | | | | | |
| *InstOwn* | 0.654 | 0.386 | 0.704 | 0.912 | 0.343 |
| *Ln(Assets)* | 6.213 | 4.833 | 6.181 | 7.536 | 1.955 |
| *Litigation* | 0.277 | 0.000 | 0.000 | 1.000 | 0.447 |
| *ROA* | -0.021 | -0.024 | 0.035 | 0.078 | 0.232 |
| *BM* | 0.540 | 0.257 | 0.448 | 0.711 | 0.595 |
| *Leverage* | 0.203 | 0.006 | 0.160 | 0.322 | 0.213 |
| *Global* | 0.458 | 0.000 | 0.000 | 1.000 | 0.498 |
| *Liquidity* | 0.947 | 0.933 | 1.000 | 1.000 | 0.096 |
| *HHI* | 0.231 | 0.109 | 0.173 | 0.290 | 0.182 |
| $HHI^2$ | 0.086 | 0.012 | 0.030 | 0.084 | 0.147 |
| *R&D* | 0.052 | 0.000 | 0.003 | 0.064 | 0.102 |
| *CAPX* | 0.050 | 0.016 | 0.032 | 0.061 | 0.057 |
| *Ln(FirmAge)* | 2.619 | 2.079 | 2.639 | 3.258 | 0.864 |
| *Cash* | 0.209 | 0.034 | 0.121 | 0.316 | 0.223 |
| *EnvCom* | 0.048 | 0.000 | 0.000 | 0.000 | 0.214 |
| *RepCul* | 4.256 | 0.000 | 5.303 | 8.390 | 4.364 |
| *KLDEnvScore* | -0.069 | 0.000 | 0.000 | 0.000 | 0.766 |
| *Ln(GreenPat)* | 0.124 | 0.000 | 0.000 | 0.000 | 0.478 |

Table 4
Environmental Disclosure

This table presents results from OLS regressions where dependent variables are environmental disclosures. *Ln(DISC$^{FREQ}$)* is the natural log of the total number of voluntary environmental reports. *Ln(DISC$^{PAGE}$)* is the natural log of total page number of voluntary environmental reports in a given year. *InstPid* is the weighted average institutional shareholders' political ideology score by ownership. *RepBlock$^{DUM}$* is an indicator variable that equals to 1 if a firm has *RepBlock* in a given year. *RepBlock* is defined as more than 75% of employees' cumulative political contributions are made to the Republican Party, and 0 otherwise. The detailed definitions of other variables are listed in Appendix 3. All the regressions include year and industry fixed effects, but coefficients are omitted. Numbers in parentheses are t-statistics that are computed using standard errors clustered at the firm level. ***, ** and * denote significance at the 1%, 5%, and 10% levels, respectively.

| | *(1)* *Ln(DISC$^{FREQ}$)* | *(2)* *Ln(DISC$^{PAGE}$)* | *(3)* *Ln(DISC$^{FREQ}$)* | *(4)* *Ln(DISC$^{PAGE}$)* |
|---|---|---|---|---|
| *InstPid* | -0.011*** | -0.049*** | | |
| | (-5.76) | (-5.64) | | |
| *RepBlock$^{DUM}$* | | | -0.012*** | -0.057*** |
| | | | (-3.25) | (-3.15) |
| *InstOwn* | -0.001*** | -0.004*** | -0.001*** | -0.004*** |
| | (-8.49) | (-8.31) | (-8.65) | (-8.42) |
| *Ln(Assets)* | 0.035*** | 0.160*** | 0.035*** | 0.159*** |
| | (13.80) | (13.12) | (13.73) | (13.06) |
| *Litigation* | -0.003 | -0.007 | -0.003 | -0.007 |
| | (-0.55) | (-0.27) | (-0.55) | (-0.26) |
| *ROA* | -0.023*** | -0.111*** | -0.024*** | -0.115*** |
| | (-5.40) | (-5.48) | (-5.59) | (-5.66) |
| *BM* | -0.015*** | -0.068*** | -0.015*** | -0.064*** |
| | (-7.99) | (-7.67) | (-7.69) | (-7.38) |
| *Leverage* | -0.052*** | -0.233*** | -0.050*** | -0.225*** |
| | (-6.54) | (-6.37) | (-6.36) | (-6.21) |
| *Global* | 0.001 | 0.003 | 0.001 | 0.003 |
| | (0.39) | (0.20) | (0.41) | (0.22) |
| *Liquidity* | -0.064*** | -0.245** | -0.066*** | -0.252** |
| | (-3.00) | (-2.42) | (-3.07) | (-2.48) |
| *HHI* | -0.046 | -0.203 | -0.048 | -0.213 |
| | (-1.39) | (-1.30) | (-1.45) | (-1.36) |
| *HHI$^2$* | 0.064 | 0.296 | 0.066 | 0.307 |
| | (1.58) | (1.54) | (1.64) | (1.60) |
| Constant | -0.035 | -0.221** | -0.034 | -0.214* |
| | (-1.51) | (-1.98) | (-1.44) | (-1.91) |
| Industry FE | YES | YES | YES | YES |
| Year FE | YES | YES | YES | YES |
| Observations | 25,124 | 25,124 | 25,124 | 25,124 |
| Adj. $R^2$ | 0.156 | 0.149 | 0.155 | 0.147 |

Table 5
Environmental Disclosure by Institutional Investors' Investment Horizon

This table presents results from OLS regressions where the independent variable is the political ideology score by institutional investors' investment horizon. Panel A present the results based on the entire institutional investors. *TRAPid*, *QIXPid* and *DEDPid* are weighted average political ideology scores of transient, quasi-indexer, and dedicated institutional investors, respectively. Panel A presents the results based on the Republican-oriented institutional blockholders. $RepTRA^{DUM}$ ($RepQIX^{DUM}$ or $RepDED^{DUM}$) is an indicator that takes the value of one if a firm is held by transient (quasi-indexer or dedicated) Republican-oriented institutional blockholders and zero otherwise. The detailed definitions of other variables are listed in Appendix 3. All the regressions include control variables, year and industry fixed effects, but coefficients are omitted. Numbers in parentheses are t-statistics that are computed using standard errors clustered at the firm level. ***, ** and * denote significance at the 1%, 5%, and 10% levels, respectively.

Panel A. Institution's Political Ideology

| | *(1)* *Ln(DISC$^{FREQ}$)* | *(2)* *Ln(DISC$^{FREQ}$)* | *(3)* *Ln(DISC$^{FREQ}$)* | *(4)* *Ln(DISC$^{PAGE}$)* | *(5)* *Ln(DISC$^{PAGE}$)* | *(6)* *Ln(DISC$^{PAGE}$)* |
|---|---|---|---|---|---|---|
| *TRAPid* | 0.004 | | | 0.021 | | |
| | (1.57) | | | (1.63) | | |
| *QIXPid* | | -0.024*** | | | -0.108*** | |
| | | (-7.71) | | | (-7.35) | |
| *DEDPid* | | | -0.086*** | | | -0.463** |
| | | | (-2.63) | | | (-2.52) |
| *DEDPid – TRAPid* | | -0.090*** (-2.82) | | | -0.484*** (-2.71) | |
| *QIXPid – TRAPid* | | -0.028*** (-7.17) | | | -0.129*** (-6.75) | |
| *DEDPid – QIXPid* | | -0.062* (-1.94) | | | -0.355** (-1.99) | |
| Controls | YES | YES | YES | YES | YES | YES |
| Industry FE | YES | YES | YES | YES | YES | YES |
| Year FE | YES | YES | YES | YES | YES | YES |
| Observations | 25,124 | 25,124 | 25,124 | 25,124 | 25,124 | 25,124 |
| Adj. $R^2$ | 0.149 | 0.155 | 0.144 | 0.141 | 0.148 | 0.149 |

Panel B. Republican-oriented Blockholders

| | *(1)* *Ln(DISC$^{FREQ}$)* | *(2)* *Ln(DISC$^{FREQ}$)* | *(3)* *Ln(DISC$^{FREQ}$)* | *(4)* *Ln(DISC$^{PAGE}$)* | *(5)* *Ln(DISC$^{PAGE}$)* | *(6)* *Ln(DISC$^{PAGE}$)* |
|---|---|---|---|---|---|---|
| *RepTRA$^{DUM}$* | 0.002 | | | -0.004 | | |
| | (0.34) | | | (-0.17) | | |
| *RepQIX$^{DUM}$* | | -0.002 | | | -0.005 | |
| | | (-0.46) | | | (-0.25) | |
| *RepDED$^{DUM}$* | | | -0.034*** | | | -0.155** |
| | | | (-3.00) | | | (-2.54) |
| *RepDED$^{DUM}$ – RepTRA$^{DUM}$* | | -0.036*** (-2.99) | | | -0.151*** (-2.56) | |
| *RepQIX$^{DUM}$ – RepTRA$^{DUM}$* | | -0.004 (-0.62) | | | -0.001 (-0.02) | |
| *RepDED$^{DUM}$ – RepQIX$^{DUM}$* | | -0.032*** (-2.74) | | | -0.150** (-2.51) | |
| Controls | YES | YES | YES | YES | YES | YES |
| Industry FE | YES | YES | YES | YES | YES | YES |
| Year FE | YES | YES | YES | YES | YES | YES |
| Observations | 25,124 | 25,124 | 25,124 | 25,124 | 25,124 | 25,124 |
| Adj. $R^2$ | 0.148 | 0.150 | 0.144 | 0.141 | 0.143 | 0.137 |

Table 6
Subsample Analyses

This table presents results from subsample analyses. Panel A reports the effect of institutions' political ideology on corporate environmental disclosure without (or with) an environment-related committee on its board. Panel B reports the effect of institutions' political ideology on environmental disclosures partitioned by corporate political culture. Corporate political culture index is a mix of political ideology of top managers, corporate political action committee, and local residents (Hutton, Jiang, and Kumar, 2015). All the regressions include control variables, year and industry fixed effects, but coefficients are omitted. Numbers in parentheses are t-statistics that are computed using standard errors clustered at the firm level. ***, ** and * denote significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Environmental Committee in Board

| | (1) No | (2) Yes | (3) No | (4) Yes | (5) No | (6) Yes | (7) No | (8) Yes |
|---|---|---|---|---|---|---|---|---|
| | *Ln(DISC$^{FREQ}$)* | *Ln(DISC$^{FREQ}$)* | *Ln(DISC$^{PAGE}$)* | *Ln(DISC$^{PAGE}$)* | *Ln(DISC$^{FREQ}$)* | *Ln(DISC$^{FREQ}$)* | *Ln(DISC$^{PAGE}$)* | *Ln(DISC$^{PAGE}$)* |
| *InstPid* | -0.010*** | 0.002 | -0.048*** | 0.007 | | | | |
| | (-6.12) | (0.18) | (-5.80) | (0.12) | | | | |
| *RepBlock$^{DUM}$* | | | | | -0.014*** | 0.020 | -0.059*** | 0.058 |
| | | | | | (-3.98) | (0.58) | (-3.48) | (0.40) |
| | $H_0$: β(1)=β(2) | | $H_0$: β(3)=β(4) | | $H_0$: β(5)=β(6) | | $H_0$: β(7)=β(8) | |
| | (-2.31) | | (-2.23) | | (-1.68) | | (-1.98) | |
| Controls | YES | YES | YES | YES | YES | YES | YES | YES |
| Industry FE | YES | YES | YES | YES | YES | YES | YES | YES |
| Year FE | YES | YES | YES | YES | YES | YES | YES | YES |
| Observations | 23,968 | 1,211 | 23,968 | 1,211 | 23,968 | 1,211 | 23,968 | 1,211 |
| Adj. $R^2$ | 0.142 | 0.152 | 0.135 | 0.204 | 0.142 | 0.208 | 0.135 | 0.204 |

Panel B: Corporate Political Culture

| | (1) Low Rep | (2) High Rep | (3) Low Rep | (4) High Rep | (5) Low Rep | (6) High Rep | (7) Low Rep | (8) High Rep |
|---|---|---|---|---|---|---|---|---|
| | *Ln(DISC$^{FREQ}$)* | *Ln(DISC$^{FREQ}$)* | *Ln(DISC$^{PAGE}$)* | *Ln(DISC$^{PAGE}$)* | *Ln(DISC$^{FREQ}$)* | *Ln(DISC$^{FREQ}$)* | *Ln(DISC$^{PAGE}$)* | *Ln(DISC$^{PAGE}$)* |
| *InstPid* | -0.007* | -0.014*** | -0.026 | -0.053*** | | | | |
| | (-1.90) | (-4.53) | (-1.55) | (-3.62) | | | | |
| *RepBlock$^{DUM}$* | | | | | -0.002 | -0.018** | -0.011 | -0.084** |
| | | | | | (-0.27) | (-2.07) | (-0.33) | (-1.97) |
| Difference | $H_0$: β(1)=β(2) | | $H_0$: β(3)=β(4) | | $H_0$: β(5)=β(6) | | $H_0$: β(7)=β(8) | |
| | (-1.92) | | (-1.70) | | (-2.53) | | (-2.43) | |
| Controls | YES | YES | YES | YES | YES | YES | YES | YES |
| Industry FE | YES | YES | YES | YES | YES | YES | YES | YES |
| Year FE | YES | YES | YES | YES | YES | YES | YES | YES |
| Observations | 6,457 | 6,457 | 6,457 | 6,457 | 6,457 | 6,457 | 6,457 | 6,457 |
| Adj. $R^2$ | 0.205 | 0.165 | 0.177 | 0.162 | 0.162 | 0.202 | 0.161 | 0.189 |

Table 7
Propensity Score Matching (PSM) Analysis

This table presents results from the propensity score matching analysis. Panel A reports results from logistic regressions where the dependent variable is *Prob(RepBlock)*, which is an indicator variable that equals to 1 if a firm is held by Republican-oriented institutional blockholders (or *RepBlock*), where *RepBlock* is defined as more than 75% of employees' cumulative political contributions are made to the Republican Party, and 0 otherwise. Column (1) uses all sample firms. Column (2) uses only matched sample firms, firms with *RepInst* and their closest equivalent firms that are not held by *RepBlock*. Control variables are *Ln(Assets)*, *ROA*, *BM*, *Leverage*, *Litigation*, *Global*, and a set of industry classifications followed by Fama and French 12 industry classification (http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/Data_Library/det_12_ind_port.html). Panel B reports results from OLS regressions only with propensity score matched sample firms. All variables are listed in Table 3. Numbers in parentheses are t-statistics that are computed using standard errors clustered at the firm level. ***,** and * denote significance at the 1%, 5%, and 10% levels, respectively.

Panel A. The First Stage Regression

| | (1) Before Match | (2) After Match |
|---|---|---|
| | *Prob(RepBlock$^{DUM}$)* | |
| *Ln(Assets)* | 0.134*** | -0.019 |
| | (7.01) | (-0.68) |
| *ROA* | 0.181 | 0.123 |
| | (1.18) | (0.63) |
| *BM* | 0.230*** | -0.001 |
| | (4.72) | (-0.01) |
| *Leverage* | 0.127 | 0.212 |
| | (0.73) | (0.97) |
| *Litigation* | -0.033 | 0.087 |
| | (-0.36) | (0.80) |
| *Global* | 0.036 | -0.021 |
| | (0.47) | (-0.23) |
| *NonDurbl Consumer* | 0.116 | 0.003 |
| | (0.66) | (0.01) |
| *Durbl Consumer* | 0.569** | 0.388 |
| | (2.52) | (1.48) |
| *Manuf* | -0.200 | -0.130 |
| | (-1.36) | (-0.78) |
| *Energy* | -0.131 | 0.019 |
| | (-0.66) | (0.08) |
| *Chems* | -0.503** | 0.099 |
| | (-2.19) | (0.36) |
| *BusEq* | -0.015 | 0.015 |
| | (-0.12) | (0.10) |
| *Telcm* | 0.003 | -0.080 |
| | (0.01) | (-0.30) |
| *Utils* | -0.808*** | 0.062 |
| | (-3.47) | (0.23) |
| *Shop* | 0.259* | -0.028 |
| | (1.87) | (-0.18) |
| *Hlth* | -0.180 | 0.053 |
| | (-1.27) | (0.32) |
| Finance | -0.146 | -0.082 |
| | (-0.51) | (-0.26) |
| Constant | -4.578*** | 0.743 |
| | (-6.43) | (0.60) |
| Year FE | YES | YES |
| Observations | 25,179 | 5,368 |
| Pseudo $R^2$ | 0.022 | 0.003 |

Panel B. The Second Stage Regression

| | $Ln(DISC^{FREQ})$ | $Ln(DISC^{PAGE})$ |
|---|---|---|
| $RepBlock^{DUM}$ | -0.009* | -0.042* |
| | (-1.79) | (-1.79) |
| *InstOwn* | -0.057*** | -0.266*** |
| | (-4.31) | (-4.26) |
| *Ln(Assets)* | 0.032*** | 0.148*** |
| | (8.28) | (7.96) |
| *Litigation* | -0.003 | -0.006 |
| | (-0.40) | (-0.17) |
| *ROA* | -0.023*** | -0.102*** |
| | (-2.63) | (-2.65) |
| *BM* | -0.014*** | -0.061*** |
| | (-4.42) | (-4.44) |
| *Leverage* | -0.043*** | -0.197*** |
| | (-3.12) | (-3.15) |
| *Global* | -0.004 | -0.013 |
| | (-0.93) | (-0.56) |
| *Liquidity* | -0.061* | -0.239 |
| | (-1.71) | (-1.45) |
| *HHI* | -0.043 | -0.170 |
| | (-0.90) | (-0.77) |
| $HHI^2$ | 0.055 | 0.213 |
| | (0.98) | (0.84) |
| Constant | -0.081 | -0.511* |
| | (-1.28) | (-1.87) |
| Industry FE | YES | YES |
| Year FE | YES | YES |
| Observations | 5,368 | 5,368 |
| Adj. R-squared | 0.134 | 0.125 |

Table 8
Quasi-Natural Experiment

This table presents results from the difference-in-differences (DID) regression, where the dependent variables are log-transformed $DISC^{FREQ}$ and $DISC^{PAGE}$. *Treat* is a dummy variable that is equal to 1 if a firm's Republican-leaning institutional blockholder is acquired and 0 otherwise. *Post* is equal to 1 (0) for years after (before) a firm's Republican-leaning institutional blockholder is acquired. *Post x Treat* is the interaction term of *Post* and *Treat*. The detailed definitions of other variables are listed in Appendix 3.

| | (1) | (2) |
|---|---|---|
| | *Ln(DISC$^{FREQ}$)* | *Ln(DISC$^{PAGE}$)* |
| *Post* | 0.017*** | 0.079*** |
| | (3.35) | (3.24) |
| *Treat* | 0.004 | 0.016 |
| | (0.88) | (0.82) |
| *Post x Treat* | 0.014** | 0.067** |
| | (2.00) | (1.96) |
| *InstOwn* | -0.001*** | -0.003*** |
| | (-8.98) | (-9.12) |
| *Ln(Assets)* | 0.029*** | 0.140*** |
| | (14.40) | (14.18) |
| *Litigation* | 0.020*** | 0.056** |
| | (3.22) | (2.06) |
| *ROA* | -0.005 | -0.032 |
| | (-1.07) | (-1.31) |
| *BM* | -0.007*** | -0.031*** |
| | (-3.96) | (-3.92) |
| *Leverage* | -0.042*** | -0.198*** |
| | (-6.29) | (-5.96) |
| *Global* | -0.001 | -0.008 |
| | (-0.26) | (-0.65) |
| *Liquidity* | 0.017 | 0.094 |
| | (1.09) | (1.34) |
| *HHI* | 0.015 | -0.018 |
| | (1.57) | (-0.44) |
| *HHI$^2$* | -0.015 | -0.096 |
| | (-1.24) | (-1.63) |
| Constant | -0.167*** | -0.736*** |
| | (-8.63) | (-8.26) |
| Industry FE | YES | YES |
| Year FE | YES | YES |
| Observations | 7,463 | 7,463 |
| Adj. R-squared | 0.153 | 0.158 |

Table 9
Alternative Corporate Environmental Performance

This table presents results with alternative corporate environmental performances. Panel A presents the results that uses *KLDEnvScore* as a dependent variable, where *KLDEnvScore* is the environmental performance score measured as strength minus weakness from the KLD database. Panel B presents results from OLS regressions where dependent variables are environmental patent applications. *Ln(GreenPat)* is the natural log of the total number of environmental patent applications based on their primary classifications at year t+N (N=1, 2, and 3) (Carrión-Flores and Innes 2010). *InstPid* is the weighted average institutional shareholders' political ideology score by ownership. $RepBlock^{DUM}$ is an indicator variable that equals to 1 if a firm has *RepBlock* in a given year.

Panel A. KLD Environmental Score

| | *(1)* | *(2)* |
|---|---|---|
| | *KLDEnvScore* | |
| *InstPid* | -0.067*** | |
| | (-4.33) | |
| $RepBlock^{DUM}$ | | -0.052** |
| | | (-2.01) |
| *InstOwn* | 0.001*** | 0.001*** |
| | (2.78) | (2.82) |
| *Ln(Assets)* | -0.036** | -0.036** |
| | (-2.31) | (-2.29) |
| *Litigation* | 0.067 | 0.066 |
| | (1.46) | (1.45) |
| *ROA* | 0.087** | 0.085** |
| | (2.18) | (2.13) |
| *BM* | -0.050** | -0.046** |
| | (-2.23) | (-2.06) |
| *Leverage* | 0.027 | 0.034 |
| | (0.45) | (0.56) |
| *Global* | 0.035 | 0.035 |
| | (1.51) | (1.52) |
| *Liquidity* | -0.022 | -0.036 |
| | (-0.14) | (-0.22) |
| *HHI* | -0.033 | -0.040 |
| | (-0.12) | (-0.14) |
| $HHI^2$ | 0.082 | 0.088 |
| | (0.22) | (0.23) |
| Constant | 0.493*** | 0.478*** |
| | (2.78) | (2.68) |
| Year FE | YES | YES |
| Industry FE | YES | YES |
| Observations | 25,179 | 25,179 |
| Adj. $R^2$ | 0.178 | 0.161 |

Panel B. Green Innovations

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| | *Dependent variable: Ln(GreenPat)$_{t+N}$* | | | | | |
| | N=1 | N=2 | N=3 | N=1 | N=2 | N=3 |
| *InstPid* | -0.152** | -0.119** | -0.110** | | | |
| | (-2.33) | (-2.11) | (-2.24) | | | |
| *RepBlock$^{DUM}$* | | | | -0.086*** | -0.069*** | -0.059*** |
| | | | | (-7.60) | (-7.21) | (-7.32) |
| *InstOwn* | -0.357*** | -0.322*** | -0.284*** | -0.231*** | -0.218*** | -0.196*** |
| | (-5.38) | (-5.61) | (-5.78) | (-4.66) | (-5.07) | (-5.32) |
| *Ln(Assets)* | 0.094*** | 0.078*** | 0.063*** | 0.087*** | 0.072*** | 0.058*** |
| | (9.79) | (9.49) | (9.14) | (10.87) | (10.50) | (10.11) |
| *R&D* | 0.308*** | 0.256*** | 0.181*** | 0.288*** | 0.235*** | 0.164*** |
| | (4.12) | (3.94) | (3.37) | (4.41) | (4.17) | (3.53) |
| *Ln(FirmAge)* | 0.032*** | 0.029*** | 0.024*** | 0.020** | 0.018** | 0.015** |
| | (3.15) | (3.19) | (3.17) | (2.41) | (2.47) | (2.41) |
| *ROA* | 0.001 | 0.002 | -0.004 | 0.010 | 0.009 | 0.003 |
| | (0.04) | (0.09) | (-0.26) | (0.58) | (0.62) | (0.21) |
| *PPE* | 0.036* | 0.023 | 0.012 | 0.032* | 0.020 | 0.011 |
| | (1.68) | (1.27) | (0.79) | (1.66) | (1.25) | (0.78) |
| *Leverage* | -0.107*** | -0.086*** | -0.062** | -0.100*** | -0.080*** | -0.058*** |
| | (-3.04) | (-2.81) | (-2.36) | (-3.37) | (-3.08) | (-2.59) |
| *BM* | -0.029*** | -0.025*** | -0.022*** | -0.026*** | -0.022*** | -0.020*** |
| | (-4.54) | (-4.45) | (-4.55) | (-4.80) | (-4.63) | (-4.78) |
| *CAPEX* | 0.143 | 0.144 | 0.144* | 0.131 | 0.131 | 0.126* |
| | (1.29) | (1.46) | (1.66) | (1.35) | (1.53) | (1.71) |
| *HHI* | 0.115 | 0.115 | 0.116 | 0.081 | 0.083 | 0.089 |
| | (0.71) | (0.80) | (0.95) | (0.61) | (0.72) | (0.91) |
| *HHI$^2$* | 0.029 | 0.008 | -0.014 | 0.041 | 0.020 | -0.004 |
| | (0.14) | (0.05) | (-0.09) | (0.24) | (0.14) | (-0.03) |
| *Cash* | 0.022 | 0.009 | 0.007 | 0.024 | 0.012 | 0.009 |
| | (0.64) | (0.31) | (0.25) | (0.78) | (0.45) | (0.40) |
| Constant | -0.632*** | -0.524*** | -0.419*** | -0.508*** | -0.420*** | -0.333*** |
| | (-8.41) | (-8.03) | (-7.58) | (-9.14) | (-8.77) | (-8.26) |
| Year FE | YES | YES | YES | YES | YES | YES |
| Industry FE | YES | YES | YES | YES | YES | YES |
| Observations | 25,124 | 25,124 | 25,124 | 25,124 | 25,124 | 25,124 |
| Adj. $R^2$ | 0.176 | 0.168 | 0.160 | 0.179 | 0.171 | 0.163 |

APPENDIX 1
Political Contributions Made by Employees at Merrill Lynch

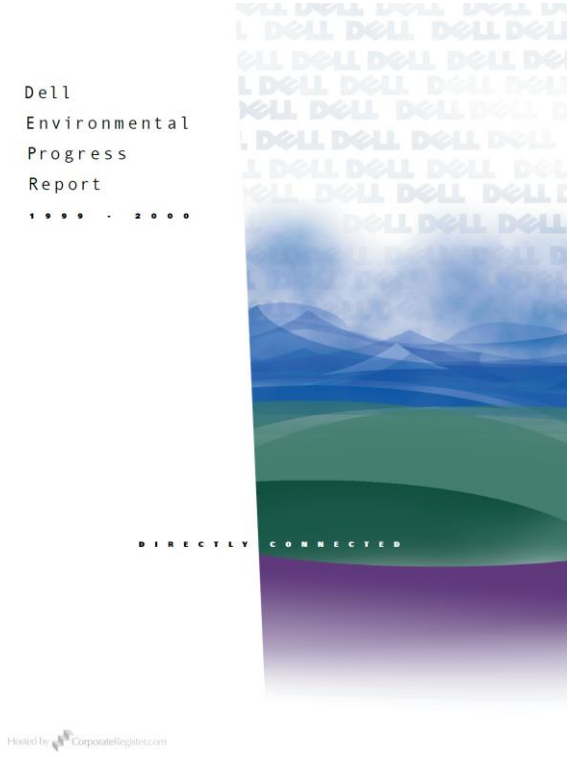
This table presents an example of employees' political donations at Merrill Lynch during 2001-2002. *Mgrno* is the unique number assigned to Merrill Lynch listed in the F13 dataset. *Occupation* is the self-reported workplace affiliated with a political donor. *Amount* is the amount of political donations. ID is the unique number assigned to a political donor. *City* and *State* is the address where a political donor resides. *Date* is the date that a political donation is made. *CanID* is the unique number assigned to an electoral candidate. *Party* is an electoral candidate's political party. During the 2001-2002 election cycle, a total of $571,095 in political donations was made by employees affiliated with Merrill Lynch.

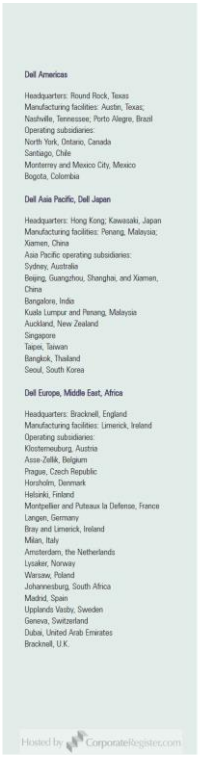
| Mgrno | Occupation | Amount | ID | City | State | Date | CandID | Party |
|---|---|---|---|---|---|---|---|---|
| 56780 | MERRILL LYNCH/ADMIN ASS | 1000 | 958360 | Naples | LA | 6/21/2002 | H0CT04104 | DEM |
| 56780 | MERRILL LYNCH/ADMIN ASS | 1000 | 958358 | Greenwich | CT | 6/24/2002 | H0CT04104 | DEM |
| 56780 | MERRILL LYNCH/ADMIN ASS | 1000 | 958359 | Stamford | CT | 6/28/2002 | H0CT04104 | DEM |
| 56780 | MERRILL LYNCH/ASST VICE | 1000 | 724850 | Hollywood | FL | 6/17/2002 | H8NC07044 | DEM |
| 56780 | MERRILL LYNCH/ASST VICE | 1000 | 724852 | Ocean Isle Beac | NC | 6/22/2002 | H8NC07044 | DEM |
| 56780 | MERRILL LYNCH/ASST VICE | 1000 | 724851 | New York | NY | 6/22/2002 | H8NC07044 | DEM |
| 56780 | MERRILL LYNCH/ATTORNEY | 500 | 821322 | Portland | ME | 12/10/2001 | H6ME01157 | DEM |
| 56780 | MERRILL LYNCH/ATTORNEY | 500 | 821323 | Portland | ME | 12/13/2001 | H6ME01157 | DEM |
| 56780 | MERRILL LYNCH/ATTORNEY | 500 | 821324 | Washington | DC | 12/28/2001 | H6ME01157 | DEM |
| 56780 | MERRILL LYNCH/BANKER | 1000 | 945005 | Jacksonville | FL | 5/1/2001 | H0FL04066 | REP |
| 56780 | MERRILL LYNCH/BANKER | 1000 | 945004 | Ponte Vedra Bea | FL | 5/7/2001 | H0FL04066 | REP |
| 56780 | MERRILL LYNCH/BANKER | 1000 | 945006 | Jacksonville | FL | 6/19/2001 | H0FL04066 | REP |
| 56780 | MERRILL LYNCH/CONSULTAN | 500 | 541980 | Monarch Beach | CA | 7/20/2001 | H8CA40057 | REP |
| 56780 | MERRILL LYNCH/CONSULTAN | 500 | 541981 | San Francisco | CA | 7/20/2001 | H8CA40057 | REP |
| 56780 | MERRILL LYNCH/CONSULTAN | 500 | 541982 | San Francisco | CA | 7/20/2001 | H8CA40057 | REP |
| 56780 | MERRILL LYNCH/CONSULTAN | 300 | 542168 | Balboa | CA | 2/27/2002 | H8CA40057 | REP |
| 56780 | MERRILL LYNCH/DIRECTOR | 1000 | 945100 | Jacksonville | FL | 6/19/2001 | H0FL04066 | REP |
| 56780 | MERRILL LYNCH/DIRECTOR | 1000 | 372875 | Darien | CT | 5/10/2002 | H0LA03018 | REP |
| 56780 | MERRILL LYNCH/DIRECTOR | 1000 | 372873 | New York | NY | 5/10/2002 | H0LA03018 | REP |
| 56780 | MERRILL LYNCH/DIRECTOR | 1000 | 372874 | Richmond | VA | 5/10/2002 | H0LA03018 | REP |

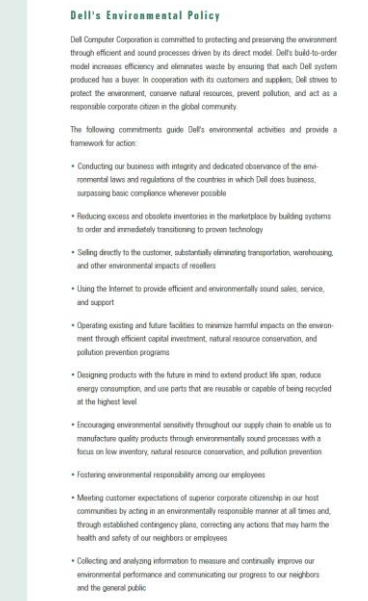
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 56780 | MERRILL LYNCH/EXECUTIVE | 500 | 531774 | Greenwich | CT | 1/9/2001 | H8CT04057 | REP |
| 56780 | MERRILL LYNCH/EXECUTIVE | 1000 | 531878 | Greenwich | CT | 1/17/2001 | H8CT04057 | REP |
| 56780 | MERRILL LYNCH/EXECUTIVE | 1000 | 531879 | East Norwalk | CT | 1/17/2001 | H8CT04057 | REP |
| 56780 | MERRILL LYNCH/VP FINANC | 250 | 434288 | Houston | TX | 6/25/2001 | H6TX24057 | DEM |
| 56780 | MERRILL LYNCH/VP FINANC | 250 | 434851 | Houston | TX | 4/22/2002 | H6TX24057 | DEM |
| 56780 | MERRILL LYNCH/VP FINANC | 250 | 434852 | Houston | TX | 6/6/2002 | H6TX24057 | DEM |
| 56780 | MERRILL LYNCH/VP FINANC | 250 | 434853 | Dallas | TX | 6/12/2002 | H6TX24057 | DEM |
| 56780 | MERRILL LYNCH/EXECUTIVE | 1000 | 531880 | East Norwalk | CT | 1/17/2001 | H8CT04057 | REP |
| 56780 | MERRILL LYNCH/MANAGER | 250 | 396564 | Tucson | AZ | 5/17/2002 | H2AZ02014 | REP |
| 56780 | MERRILL LYNCH/MANAGER | 250 | 396563 | Tucson | AZ | 6/18/2002 | H2AZ02014 | REP |
| 56780 | MERRILL LYNCH/MANAGER | 1000 | 600434 | New Hope | PA | 8/9/2002 | H2PA08037 | REP |
| 56780 | MERRILL LYNCH/MANAGER | 1000 | 600436 | Revere | PA | 8/28/2002 | H2PA08037 | REP |
| 56780 | MERRILL LYNCH/MANAGING | 1000 | 624984 | Madison | NJ | 3/14/2001 | H2NJ13075 | DEM |
| 56780 | MERRILL LYNCH/MANAGING | 1000 | 623652 | Madison | NJ | 2/28/2002 | H2NJ13075 | DEM |
| 56780 | MERRILL LYNCH/MANAGING | 1000 | 623651 | New Rochelle | NY | 3/25/2002 | H2NJ13075 | DEM |
| 56780 | MERRILL LYNCH/MONEY MAN | 250 | 841790 | San Jacinto | CA | 3/4/2002 | H8CA44034 | REP |
| 56780 | MERRILL LYNCH/MONEY MAN | 250 | 841789 | Pacific Palisad | CA | 3/27/2002 | H8CA44034 | REP |
| 56780 | MERRILL LYNCH/MONEY MAN | 250 | 841791 | Palm Springs | CA | 3/27/2002 | H8CA44034 | REP |
| 56780 | MERRILL LYNCH/PORTFOLIO | 1000 | 559664 | Jersey City | NJ | 2/11/2002 | H8NY19058 | DEM |
| 56780 | MERRILL LYNCH/PORTFOLIO | 1000 | 559665 | Floral Park | NY | 2/11/2002 | H8NY19058 | DEM |
| 56780 | MERRILL LYNCH/PRIVATE B | 500 | 1032909 | Randolph | MA | 8/7/2001 | H2MA09064 | DEM |
| 56780 | MERRILL LYNCH/PRIVATE B | 500 | 1032907 | Needham | MA | 8/22/2001 | H2MA09064 | DEM |
| 56780 | MERRILL LYNCH/STRATEGIC | 250 | 759859 | Princeton | NJ | 7/2/2002 | H6NJ12144 | DEM |
| 56780 | MERRILL LYNCH/STRATEGIC | 250 | 759860 | Princeton | NJ | 9/23/2002 | H6NJ12144 | DEM |
| 56780 | MERRILL LYNCH/V.P. | 250 | 793358 | Cleveland | OH | 11/4/2002 | H6OH23033 | DEM |
| 56780 | MERRILL LYNCH/V.P. | 250 | 793359 | Cleveland | OH | 11/4/2002 | H6OH23033 | DEM |
| 56780 | MERRILL LYNCH/VICE PRES | 250 | 507475 | Pasadena | CA | 2/28/2001 | H6CA39020 | REP |
| 56780 | MERRILL LYNCH/VICE PRES | 250 | 507476 | Fullerton | CA | 2/28/2001 | H6CA39020 | REP |
| 56780 | MERRILL LYNCH/VICE PRES | 1000 | 651234 | Dublin | OH | 4/2/2001 | H4OH02032 | REP |

APPENDIX 2
Example of Corporate Environmental Reports

1) Dell Inc 1999 Environmental Report




2) General Electric Co. 2004 Environmental Report


APPENDIX 3
Definitions of Variables

| Variables | Definitions |
|---|---|
| *InstPid* | The weighted average institutional shareholders' political ideology score by ownership, where an institution's political ideology score is measured as the difference on donations made to the Republican Party and the Democratic Party divided by total donations. |
| *TRAPid (QIXPid or DEDPid)* | Transient (Quasi-indexer or Dedicated) institution's political ideology score measured as the difference between donations made to the Republican Party and the Democratic Party divided by total donations. Institutional investors' investment horizon is available at Professor Brian Bushee's website (http://acct.wharton.upenn.edu/faculty/bushee/IIclass.html) |
| $RepBlock^{DUM}$ | An indicator variable that equals 1 if a firm has institutional investors which contribute more than 75% to the Republican party and at least 5% ownership in a given year and 0 otherwise. |
| $RepTRA^{DUM}$ ($RepQIX^{DUM}$ or $RepDED^{DUM}$) | An indicator variable that equals 1 if a firm has transient- (quasi-indexer or dedicated) based institutional investors which contribute more than 75% to the Republican party and at least 5% ownership in a given year and 0 otherwise. |
| $Ln(DISC^{FREQ})$ | The frequency of voluntary environmental reports in a given year and log-transformed value by adding one. |
| $Ln(DISC^{PAGE})$ | The total page number of voluntary environmental reports in a given year and log-transformed value by adding one. |
| *Ln(GreenPat)* | The natural log of the total number of environment-related patents based on the primary patent classification. The following patent class numbers indicate classification as an environmental patent; Wind energy (242, 073, 180, 440, 340, 343, 422, 280, 104, 374), Solid waste prevention (137, 435, 165, 119, 210, 205, 405, 065), Water pollution (405, 203, 210), Recycling (264, 201, 229, 460, 526, 106, 205, 425, 060, 075, 099, 100, 162, 164, 198, 210, 216, 266, 422, 431, 432, 502, 523, 525, 902), Alternative energy (204, 062, 228, 248, 425, 049, 428, 242, 222, 708, 976), Alternative energy sources (062, 425, 222), Geothermal energy (060, 436), Air pollution control (123, 060, 110, 422, 015, 044, 423), Solid waste disposal (241, 239, 523, 588, 137, 122, 976, 405), and Solid waste control (060, 137, 976, 239, 165, 241, 075, 422, 266, 118, 119, 435, 210, 405, 034, 122, 423, 205, 209, 065, 099, 162, 106, 203, 431) (Carrion-Flores and Innes, 2010) |
| *InstOwn* | Ownership held by institutional investors. |
| *Ln(Assets)* | Natural logarithm of the market value of equity at the end of year. |
| *Litigation* | Indicator variable that equals 1 if the firm operates in a high-litigation industry (SIC codes of 2833–2836, 3570–3577, 3600–3674, 5200–5961, and 7370) and 0 otherwise. |
| *ROA* | Return on assets measured as the ratio of income before extraordinary items, divided by total assets. |
| *BM* | Book-To-Market ratio, calculated as the book value of equity divided by the market value of equity. |
| *Leverage* | Leverage ratio, defined as the ratio of total debts divided by total assets. |
| *Global* | An indicator variable that equals 1 if a firm reports non-zero foreign income, PIFO, and 0 otherwise. |
| *Liquidity* | Ratio of the number of shares traded at the beginning of year to the total shares outstanding at the end of year. |

| | |
|---|---|
| *HHI* | Herfindahl index based on sales of four-digit standard industrial classification (SIC) industry where a firm belongs, measured at the end of year. |
| $HHI^2$ | HHI * HHI |
| *R&D* | Research and development (R&D) expenditure divided by total assets at the end of year and zero if missing. |
| *Ln(FirmAge)* | The natural log of the number of years listed on the CRSP. |
| *CAPX* | Capital expenditure scaled by total assets at the end of year. |
| *Cash* | Cash and cash equivalents divided by total assets at the end of year. |
| *EnvCom* | An indicator variable that equals 1 if a firm has an environment-related committee on the board and 0 otherwise. |
| *RepCul* | The index that measures corporate political culture leaning toward Republican ideology following Hutton, Jiang, and Kumar (2015). |
| *KLDEnvScore* | Total strengths (STR) minus total concerns (CON) of environment score. |