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#### **RESEARCH ARTICLE**

## Corporate Lobbying and ESG Reports: Patterns among US Companies, 1999–2017

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#### Abstract

To lobby legislators, it is important for interest groups to signal their ability to help legislators win elections and provide them with policy-relevant information. We explore for-profit companies' use of environmental, social, and governance (ESG) reports as a signaling device to promote their reputation to legislators and convey their ability to provide electoral and policymaking support, which is valuable for lobbying. To this end, we create a panel dataset by combining ESG reports issued by US companies and the same companies' lobbying and campaign contribution records from 1999 to 2017. We expect companies to issue more ESG reports, as well as reports containing more quantitative content, when they lobby. The data conform to our expectations. We also reason that lobbying may be more strongly related to ESG reporting when it is coupled with campaign contributions made by affiliated corporate political action committees, but the data do not support this expectation.

Keywords: ESG reports; non-financial disclosure; lobbying; corporate political activity

What's in it for me? This is the essential question that politicians ask when interest groups lobby them on policy. Correspondingly, as Bertram Levine put it, lobbying groups must know the factors that bear heavily on officials' "potential receptivity to lobbyists' requests for support."<sup>1</sup> Driven by the need to continue their political careers, politicians look to their electoral and policymaking needs and consider whether groups can help meet them if they comply with the groups' wishes through official actions. To help politicians win elections, groups can make campaign contributions or finance political speech like campaign ads. To help them make policy, groups can provide useful information like statutory language to include in draft bills, policy analysis, and materials for congressional testimonies.<sup>2</sup>

By subjecting themselves to groups' lobbying input, therefore, politicians give and take: they let groups influence their official actions in exchange for electoral and policymaking aid. At least, this is politicians' hope. A difficulty for politicians lies in determining whether groups will in fact help them electorally and whether their policy input is high quality before acting on that input. Preferably, politicians can make these determinations before spending scarce time and staff resources evaluating group input. This is fundamentally a problem of mistrust—on the part of politicians—of groups' competence, if not intentions. Groups' competition for politicians' attention creates a state of information overload in government and requires politicians to distinguish helpful input from harmful input.<sup>3</sup>

<sup>&</sup>lt;sup>1</sup>Levine (2009, p. 17).

<sup>&</sup>lt;sup>2</sup>Bauer, Pool, and Dexter (1963); Hall and Deardorff (2006).

<sup>&</sup>lt;sup>3</sup>Jones and Baumgartner (2005).

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We examine a signaling device that companies, as a type of interest groups, can use to stand out: environment, social, and governance (ESG) reports. More and more over the last two decades, US companies issue ESG reports to advertise their performance in nonfinancial areas like environmental protection, employee development, and community service. The primary impetus for ESG reporting is financial: ESG demonstrably attracts investments, particularly from institutional investors. Money tracks ESG because investors believe that nonfinancial performance is good for companies' sustainable growth and valuation in the long term through a variety of mechanisms.<sup>4</sup> We propose an additional mechanism: ESG reporting may aid companies' lobbying efforts by promoting their reputation and by signaling their ability to give electoral support and policy-relevant information to politicians that they want to lobby.

This theory leads us to expect more ESG reporting activity when companies lobby and to expect companies to issue ESG reports containing more quantitative information when they lobby. We test these expectations using panel data combining companies' ESG reporting, lobbying, and campaign contributions from 1999 to 2017. We find that companies are significantly more likely to issue ESG reports when they lobby than when they do not; the average likelihood of issuing ESG reports in a year is 33 percent for non-lobbying companies and 42 percent for lobbying companies. We further find that companies systematically include more numerical content in their reports when they lobby. On average, lobbying is expected to add 0.04 percentage points in numerical content to ESG reports (for context, 4.6 percent of the average report consists of numerical content). These are "within-company" effects: companies adjust their ESG reporting activity in correspondence with their own lobbying activity at different points in time.

These results, however, are associations and not causal because the observational nature of our data does not allow causal inference; we discuss some alternative explanations for the empirical patterns presented. Nonetheless, we conduct several types of supplemental analysis to describe the patterns in the data in greater detail. Taken together, our study presents new evidence for the political use of nonfinancial disclosure offered by primarily access-seeking rather than policy-seeking organizations, for which a key intended audience is politicians. We not only show that companies often engage in both ESG reporting and political activity, affirming existing research,<sup>5</sup> but also uncover a remarkable deftness with which companies adjust their ESG reporting over time to their own fluctuating political needs. By showing that the content of ESG reports as well as companies' decisions to issue them at all vary systematically with lobbying, our study responds to a call for research to use text analysis to examine ESG reports<sup>6</sup> and adds to the research on the textual features of company disclosures.<sup>7</sup>

#### ESG reports as an instrument for lobbying

A growing number of companies in the United States issue ESG reports to advertise their past success and project future endeavors in non-financial areas, categorized into environmental, social, and governance issues. ESG reporting is a relatively recent phenomenon in the United States and remains voluntary.<sup>8</sup> At its core, the reason for its growing popularity is money: investors believe that strong performance on ESG issues is important for companies' long-term financial success.<sup>9</sup>

But how? Existing research points to the indirect value of ESG performance. Primarily, it helps companies strengthen support among key stakeholders, including by helping them improve

<sup>9</sup>Dhaliwal et al. (2012); Lys, Naughton, and Wang (2015).

<sup>&</sup>lt;sup>4</sup>E.g., Dhaliwal et al. (2012); Lys, Naughton, and Wang (2015); Egginton and McBrayer (2019); Dunham, Obonyo, and Wei (2021).

<sup>&</sup>lt;sup>5</sup>E.g., Lin (2021); Slob and Weyzig (2010).

<sup>&</sup>lt;sup>6</sup>Ballou et al. (2012).

<sup>&</sup>lt;sup>7</sup>E.g., Dyer, Lang, and Stice-Lawrence (2017).

<sup>&</sup>lt;sup>8</sup>This may change soon. The Securities and Exchange Commission proposed rules in 2022 to regulate companies' climate disclosures. Under these new rules, public companies must enhance and standardize climate-related disclosures to address investor needs (US Securities and Exchange Commission 2022). Additional climate risk disclosures, such as the impact of severe weather events and the governance of risk management processes, are required as well.

community relations, attract and retain talented employees, and foster customer loyalty.<sup>10</sup> These forms of stakeholder support then translate into sustainable competitive advantages, improved financial, investment and economic performance, higher employee productivity, and easy access to financial resources.<sup>11</sup> Gregory, Tharyan and Whittaker, for instance, argue that companies with strong ESG profiles are more competitive than their peers and can use this advantage to generate abnormal returns, ultimately leading to larger profits and dividends for shareholders.<sup>12</sup> Non-financial reputation becomes monetized as financial success.

We aim to demonstrate that another pathway for ESG reporting to contribute to company value and success is likely through helping companies engage in effective political lobbying. This positive effect of ESG reporting on lobbying consists of two main mechanisms, rooted in the existing literature. We argue that, first, ESG reports help companies maintain good reputations—not only as strong performers on ESG issues specifically but as conscientious corporate citizens in general. A company's good reputation leads politicians to believe that associating with it in politics—and doing so on the public record—does no harm and may be beneficial. Second, we argue that ESG reports help companies demonstrate to politicians that they can provide electoral and policymaking support by signaling their financial ability and information-gathering capacity. We elaborate on these mechanisms later.

To test these political explanations for the value of ESG reporting, we adopt an empirical strategy that uses companies' decisions to infer their beliefs about non-financial strategy. Specifically, we ask, are companies more likely to issue ESG reports, or to do so more intensely in some fashion, when they also lobby? If we indeed observe that ESG reporting behavior systematically relates to lobbying, this observation constitutes suggestive evidence for companies' *belief* that ESG reporting helps them lobby. It would certainly be valuable to go one step further and examine whether ESG reporting is associated with realized lobbying success, as Werner does by studying the influence of reputation on companies' ability to get access to Congress.<sup>13</sup> But the very quest for lobbying success, as evidenced by the decision to lobby, is an important behavior deserving analysis in its own right.

#### A resource for reputation maintenance

ESG reports are not the most obvious place to look for an aid to lobbying. For one thing, companies use them to discuss ESG issues, while lobbying comprises myriad policy areas. Even lobbying done by companies, a subset of all lobbying, may not concern ESG issues. It is entirely reasonable, for example, to expect ESG-reporting companies to nonetheless lobby a great deal on what interest groups in general focus most of their attention on: government appropriations.<sup>14</sup> Likely very little of appropriations lobbying has to do with spending on explicitly ESG-related issues.

Nevertheless, our expectation that ESG reports can be useful for lobbying is first informed by a growing body of research showing that companies' reputation is important for their political welfare and that ESG performance is a critical component of their reputation. Companies understand that the trust of key political actors, like stakeholders in civil society, is a crucial asset, making the management of this asset a key part of their nonmarket strategy.<sup>15</sup> A strong record of ESG activities helps companies cultivate trust among politicians by fostering this sense of moral legitimacy.<sup>16</sup> ESG-induced moral legitimacy helps companies play defense against nonmarket risks, including by reducing the threat of government regulation<sup>17</sup> and, more generally, adverse activity by policy-makers or nongovernmental organizations.<sup>18</sup> By fostering legitimacy, ESG also helps companies play offense in politics: Werner argues that strong "sociopolitical reputations" maintained by ESG

<sup>&</sup>lt;sup>10</sup>Eberle, Berens, and Li (2013); Dunham, Obonyo, and Wei (2021); Lo, Lam, and Wei (2022).

<sup>&</sup>lt;sup>11</sup>Wong and Zhang (2022).

<sup>&</sup>lt;sup>12</sup>Gregory, Tharyan, and Whittaker (2014).

<sup>&</sup>lt;sup>13</sup>Werner (2015).

<sup>&</sup>lt;sup>14</sup>See https://www.opensecrets.org/federal-lobbying/top-issues?cycle=a.

<sup>&</sup>lt;sup>15</sup>Bernhagen, Kollman, and Patsiurko (2022).

<sup>&</sup>lt;sup>16</sup>Bernhagen, Kollman, and Patsiurko (2022); Lock and Seele (2018).

<sup>&</sup>lt;sup>17</sup>Werner (2012).

<sup>&</sup>lt;sup>18</sup>Lim and Tsutsui (2012).

activities lead policymakers to view companies more positively, resulting in the ability to gain more access to Congress.<sup>19</sup>

The reputational function of ESG performance is distinct from signaling companies' ability to help politicians in elections and in policymaking—the core messages that groups need to get across. Logically, it precedes those signals. Companies need a good reputation so that politicians will want to associate with them in politics—and to do so on the public record.<sup>20</sup> Companies need to assuage politicians' apprehension about observable ties with disreputable corporate actors,<sup>21</sup> a need that is likely more critical for companies than for traditional nonprofit interest groups. With overtly political or policy goals that their very existence hinges on, traditional interest groups generally do not have a moral reputation to maintain that is separate from their political profile. In contrast, companies need to both shore up reputation and signal political capacity.

The research reviewed here, however, tends to focus on the reputational effect of ESG activities or perceptions rather than ESG *reports*, as does much of the literature reviewed earlier on ESG's effect on company well-being.<sup>22</sup> For example, Werner measures company reputation using authoritative ratings provided by the KLD STATS dataset.<sup>23</sup> In important ways, the use of ESG activities or activity-based rating agencies are likely to be more objective than companies' self-advertising. At the same time, ESG reports constitute the main avenue for companies to publicly advertise their non-financial performance and provide an opportunity to enhance their reputation by talking it up. If reputation is politically important, as the main form of reputational self-advertisement, ESG reports should be examined as a plausible companion to political activity. Analyzing reputational self-advertisement adds to studying earned—or perceived—reputation. Put more explicitly, besides whether a reputation of social responsibility helps companies politically, it is also important to ask whether companies systematically talk up their social responsibility when they participate in politics.

An important insight from the existing work on the value of ESG performance informs our focus on ESG reports, however: a shared basic orientation among scholars to view ESG activities as potentially good for companies in domains that extend well beyond ESG issues, like access to capital, employee retention, and protection from crises.<sup>24</sup> The reputational utility of ESG, in particular, offers a compelling explanation for this generalizing effect: by forging an aura of moral legitimacy and social responsibility, ESG activities allow companies to accumulate societal goodwill and apply it toward other endeavors. For our purpose, by fostering positive opinion about a company among politicians, ESG performance and reporting can help companies lobby effectively even on non-ESG matters.

#### Do ESG reports contain meaningful signals?

Studying companies' self-advertising of good deeds conjures up credibility concerns that must be addressed. This is because companies have substantial freedom to exaggerate or even grossly misrepresent their ESG performance, at least in theory, due to the lack of consequences. Not only is ESG reporting voluntary (notwithstanding the aforementioned impending SEC regulations), it is also largely unregulated.<sup>25</sup> This allows managers substantial latitude to use the reports strategically or opportunistically.<sup>26</sup> There are not well-defined legal consequences for misrepresentations of company

<sup>21</sup>Werner (2015).

<sup>23</sup>Werner (2015).

<sup>&</sup>lt;sup>19</sup>Werner (2015).

<sup>&</sup>lt;sup>20</sup>Lobbying is subject to federal disclosure requirements under the Lobbying Disclosure Act of 1995 and the Honest Leadership and Open Government Act of 2007. Congress charges the Senate Office of Public Records with collecting and publicizing lobbying reports.

<sup>&</sup>lt;sup>22</sup>E.g., Dunham, Obonyo, and Wei (2021); Lo, Lam, and Wei (2022).

<sup>&</sup>lt;sup>24</sup>Eberle, Berens, and Li (2013); Dunham, Obonyo, and Wei (2021); Lo, Lam, and Wei (2022); Gregory, Tharyan, and Whittaker (2014); Lim and Tsutsui (2012); Hooghiemstra (2000).

<sup>&</sup>lt;sup>25</sup>Chen et al. (2016).

<sup>&</sup>lt;sup>26</sup>Holder-Webb et al. (2009); Simnett, Vanstraelen, and Chua (2009).

facts and goals, whether intentionally or unintentionally.<sup>27</sup> The opportunistic incentives of managers to positively skew corporate information may drive them to manipulate reports, including by choosing which topics to discuss and setting the frequency of reporting,<sup>28</sup> hampering the reports' credibility.<sup>29</sup>

But laws and regulations are not the only constraint on companies' ESG reporting behavior; there are reasons to expect truthful reporting. Professional services that companies can hire to audit and assure ESG reports, often accounting and consulting firms, help institute standards and promote accuracy to guard their own reputations. Like issuing ESG reports in the first place, third-party assurance is at companies' discretion,<sup>30</sup> but it can lend credibility and reliability to ESG reports by alleviating concerns that managers manipulate ESG reports opportunistically.<sup>31</sup> Concurrent with the rising tide of ESG assurance is the adoption of ESG reporting frameworks, such as those advanced by CDP, the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board, and the Task Force on Climate-Related Financial Disclosures.<sup>32</sup> These frameworks serve a unifying purpose: making the reported ESG metrics trustworthy through standardization.

Ultimately, the credibility of ESG reports stems from the coupling of ESG-related claims and companies' reputation. When companies make claims about past, current, and future actions on ESG, they subject themselves to verification by audiences against facts that they can access independently, especially when the claims are highly concrete. Bingler et al. explicitly equate precise climate commitments in ESG reports with credible signals.<sup>33</sup> Companies that commit egregious misrepresentation or exaggeration do so at their own peril by tarnishing the credibility of their claims on ESG and other issues. Empirically, the research noted earlier shows that financial markets treat ESG reports as meaningful, casting a vote of confidence for their credibility with money.<sup>34</sup> Financial analysts systematically guide their decisions using signals from ESG reports.<sup>35</sup>

Overall, then, despite the possible abuse of ESG reporting by managers via careless preparation and deliberate untruths, credible information can and usually does get transmitted through an optional and largely unregulated medium. Nevertheless, the predominant credibility of ESG reports—whether due to professional assurance, driven by the need to safeguard reputation, or evidenced by market responses —does not preclude managers' ability to tailor them to suit a political agenda. Some argue that politically motivated companies deliberately misuse ESG reporting to disguise less advertised political activity to the contrary.<sup>36</sup> Arguably more benign is discretion in deciding whether to report political activity itself.<sup>37</sup> Slob and Weyzig argue that reform is needed that drives companies to align their ESG activity with lobbying.<sup>38</sup> While we do not ascertain the veracity of ESG reports, the adjustment of ESG reports for political purpose heightens the value of examining whether ESG reporting systematically accompanies lobbying.

#### A signaling device for political capacity

It is not enough, however, for ESG reports to help companies cultivate a reputation and elicit warmer perceptions by politicians. Being "virtuous" enough for politicians to associate with is necessary, but

<sup>&</sup>lt;sup>27</sup>When they arise, claims relating to a company's ESG disclosure are generally brought under Section 11 of the Securities Act of 1933, which covers material misstatements and omissions in securities offering documents, and under Section 10(b) of the Securities Exchange Act of 1934 and Rule 10b-5, the principal antifraud provisions in the law. To date, claims brought under these two provisions have been largely unsuccessful (Kuratek, Hall, and Huber 2020).

<sup>&</sup>lt;sup>28</sup>Hemingway and Maclagan (2004); KPMG (2007).

<sup>&</sup>lt;sup>29</sup>Ramanna (2013); Mishra and Modi (2013).

<sup>&</sup>lt;sup>30</sup>Bagnoli and Watts (2017).

<sup>&</sup>lt;sup>31</sup>E.g., Pflugrath, Roebuck, and Simnett (2011).

<sup>&</sup>lt;sup>32</sup>Gipper, Ross, and Shi (2022).

<sup>&</sup>lt;sup>33</sup>Bingler et al. (2022).

<sup>&</sup>lt;sup>34</sup>Dhaliwal et al. (2012); Lys, Naughton, and Wang (2015).

<sup>&</sup>lt;sup>35</sup>For example, Egginton and McBrayer (2019) find that for companies, having more publicly available ESG indicators is associated with lower bid-ask spreads and greater market liquidity. Dhaliwal et al. (2012) find that ESG disclosure is associated with smaller analyst forecast errors and dispersion.

<sup>&</sup>lt;sup>36</sup>Lock and Seele (2016).

<sup>&</sup>lt;sup>37</sup>Goh, Liu, and Tsang (2020).

<sup>&</sup>lt;sup>38</sup>Slob and Weyzig (2010).

the chance to lobby them requires more: companies must demonstrate that they have the institutional wherewithal and technical know-how to provide politicians with electoral and policymaking support. Well-crafted ESG reports accomplish this additional goal by signaling that companies have the necessary tangible and intangible resources to participate in politics. In the framework of signaling theory, companies use the salient signal of ESG reports to induce politicians' belief in their political capacity—private information held by companies.<sup>39</sup>

The first resource that ESG reports signal is money—specifically, funds to influence elections, either through political action committee (PAC) contributions or through corporate speech. Even among organized interests, large companies are especially potent sources of campaign funds. Prohibited from contributing money directly to political candidates, corporations can set up PACs to raise money and contribute it to candidates. Furthermore, corporate giving can take the form of individual contributions: wealthy executives can directly contribute to candidates like other citizens.<sup>40</sup> Executives and employees give more money to candidates preferred by company-affiliated PACs, suggesting that companies channel campaign contributions to their preferred candidates.<sup>41</sup> Besides corporate contributions to candidates, corporate money in campaign finance involves purchased political speech, a form of participation emboldened by the US Supreme Court's ruling in *Citizens United v. Federal Election Commission* in 2010. Carefully prepared ESG reports help a company signal to audiences that its officers, employees, and shareholders have money to spend to influence elections.<sup>42</sup> For companies that plan to lobby elected officials, it is valuable to demonstrate the ability to spend money to help allies in government win elections.

But ESG reports require more than money to prepare: they require expertise in ESG issues as well as data collection and fact-finding about company performance to create the content of the reports. This, too, is a valuable message contained in ESG reports. Congress is tasked with making technically complicated laws, but its members—ultimately generalists more than specialists—often lack the specialized knowledge necessary to produce them. The legislative capacity of Congress has experienced a notable decline in recent years as Congress has become more polarized.<sup>43</sup> Needing specialized information, lawmakers seek out information from interest groups.<sup>44</sup> ESG reports can also facilitate lobbying efforts by conveying companies' informational capacity. To issue ESG reports at all already constitutes a display of this capacity. To further study this function of ESG reports, however, we go beyond companies' mere decisions to report and analyze the content of reports. Specifically, we measure the degree to which ESG reports signal companies' information-gathering capability with the percentage of report text that comprises numbers. The research on ESG reports reviewed here supports this approach.

#### The numerical content of ESG reports

Like other technical writing, ESG reports often consist of a mix of qualitative and quantitative information. While qualitative content is indispensable for readability, quantitative information has some unique advantages. It is auditable ex ante and verifiable ex post by outsiders,<sup>45</sup> and consequently it conveys the precision of managers' beliefs and a company's confidence in staking its reputation on factual claims.<sup>46</sup> The availability of abundant quantitative information reflects standard company practices and resources devoted to recording it—and managers' anticipation of the need to advertise

<sup>&</sup>lt;sup>39</sup>See Connelly et al. (2011) for a synthesis of signaling theory. Zhang and Wiersema (2009) apply it to companies' financial statements.

<sup>&</sup>lt;sup>40</sup>Richter and Werner (2017).

<sup>&</sup>lt;sup>41</sup>Stuckatz (2022).

<sup>&</sup>lt;sup>42</sup>A 2022 survey finds that the average company spends \$677,000 per year on climate disclosure (Segal 2022).

<sup>&</sup>lt;sup>43</sup>LaPira, Drutman, and Kosar (2020); Crosson et al. (2021).

<sup>&</sup>lt;sup>44</sup>As early as the 1960s, Bauer, Pool and Dexter (1963) characterized lobbyists as informational aids to friendly legislators as "adjuncts" in legislation. More recent literature formalizes lobbyists' function to inform, such as the theory of lobbying as legislative subsidy (Hall and Deardorff 2006).

<sup>&</sup>lt;sup>45</sup>Lundholm, Rogo, and Zhang (2014).

<sup>&</sup>lt;sup>46</sup>Hughes and Pae 2004.

this.<sup>47</sup> In line with signaling theory, the quality of ESG reporting affects its ability to adequately signal political capacity; specifically, numerical content enhances its "fit"—how accurately it aligns with this unobserved quality—to aid lobbying.<sup>48</sup>

The market understands the value of numbers over words and appears to think that "measuring is believing." Investors and other audiences of company reports treat quantitative information as more credible and weigh it more strongly.<sup>49</sup> Huang, Nekrasov, and Teoh find that investors react more when earnings press releases include numbers in their title since quantification increases concreteness which leads to higher processing fluency and computational ease.<sup>50</sup> Petersen and Engelberg find that investors respond more quickly and strongly to quantitative information because it is more objective, more easily comparable, and more easily processed than qualitative information.<sup>51</sup> In an experimental study, Elliott, Rennekamp, and White find that subjects tend to invest more when information is described in concrete—often quantitative—language.<sup>52</sup>

Thus, a high-quality ESG report should contain both qualitative descriptions to reflect overall strategy and quantitative information about details of ESG performance, according to one of the Big Four accounting firms.<sup>53</sup> Yet quantitative content is relatively uncommon in ESG reports. Clarkson et al. and Bouten et al. observe that only half the companies that disclose qualitatively on ESG also disclose quantitatively by reporting one or more performance indicators.<sup>54</sup> In a much more recent study, the median ESG report issued by sampled companies contains no quantitative metric of ESG performance.<sup>55</sup>

The rarity of quantitative information is partially explained by its own superior verifiability: qualitative discussions can be more easily manipulated to suit managers' needs to exaggerate and misrepresent performance, which is convenient when quantitative performance metrics would reveal poor performance. Indeed, "greenwashing" is a common criticism of insufficiently quantitative environmental disclosure.<sup>56</sup> Quantitative information also requires established structures and budgets within companies for monitoring ESG efforts, and the very decision to disseminate it conveys a company's confidence that it will withstand scrutiny. Thus, quantitative ESG information conveys to politicians a company's reliability as a potential policymaking partner by offering a preview of the quality policyrelevant information to come once admitted into the political arena.

#### Campaign contributions, direct lobbying, and ESG reports

Lobbying is multifaceted.<sup>57</sup> Owing to the complexities of lobbying, we aim to do more than just show that companies alter their ESG reporting behavior when they "lobby," broadly construed. Instead, we cast a sharper focus on one type of lobbying: direct contact with members of Congress. Both of the mechanisms through which we posit ESG reports help companies lobby effectively—by promoting reputation and signaling political capacity—center on politicians' perceptions of companies. And politician perceptions are most critical when companies seek direct contact with politicians, in contrast with, for example, writing comments on agency rulemaking or financing policy research. Thus, we expect direct contact—as a subset of lobbying—to correspond especially strongly with ESG reporting decisions.

<sup>&</sup>lt;sup>47</sup>To illustrate quantitative ESG discussions, a report by Tesla (2021) stated that "in 2021, the global fleet of Tesla vehicles, energy storage and solar panels enabled our customers to avoid emitting 8.4 million metric tons of CO2e." (CO2e, or "carbon dioxide equivalent," is a term describing different greenhouse gases in a common unit.) As another example, Microsoft (2021) reported that "employees gave \$214 million (with company match) to nonprofits around the world. 22,000+ US employees volunteered over 590,000 hours to causes they care about, including more than 9,000 hours of free legal aid."

<sup>&</sup>lt;sup>48</sup>Connelly et al. (2011).

<sup>&</sup>lt;sup>49</sup>Teoh and Wong (1993).

<sup>&</sup>lt;sup>50</sup>Huang, Nekrasov, and Teoh (2013).

<sup>&</sup>lt;sup>51</sup>Petersen (2004); Engelberg (2008).

<sup>&</sup>lt;sup>52</sup>Elliott, Rennekamp, and White (2015).

<sup>&</sup>lt;sup>53</sup>KMPG (2008).

<sup>&</sup>lt;sup>54</sup>Clarkson et al. (2008); Bouten et al. (2011).

<sup>&</sup>lt;sup>55</sup>M. Liu (2022).

<sup>&</sup>lt;sup>56</sup>Freundlieb and Teuteberg (2013); Yu, Van Luu, and Chen (2020).

<sup>&</sup>lt;sup>57</sup>E.g., Kollman (1998); Walker (2013); Holyoke (2003).

Unfortunately, whether lobbying consists of direct contact cannot be determined based on the lobbying data; lobbying disclosure law does not require lobbying firms and lobbyists to disclose whether they engaged in direct contact—or, for that matter, any other type of lobbying.<sup>58</sup> Even when lobbyists list policy issues and legislative bills in lobbying disclosure, that does not preclude a strategy that involves simply monitoring legislation at a distance.<sup>59</sup> To separate direct contact from other kinds of lobbying to some degree, we came up with a solution that is decidedly incomplete but also plausible and well-supported by existing research: we pay special attention to companies' disclosed lobbying activity when it is coupled with campaign contributions. The basic rationale for this strategy is that, if coupled with preceding campaign contributions, a company's lobbying activity is much more likely to consist of direct contact with elected officials.<sup>60</sup>

Research suggests that campaign contributions by interest groups have an access-seeking purpose. First, organized interests show that a strong preference for incumbents over challengers when contributing<sup>61</sup> gives incumbents a significant fundraising advantage.<sup>62</sup> Second, organized interests contribute more to powerful legislators like committee chairs, party leaders, and pivotal legislators when allocating contributions.<sup>63</sup> Correspondingly, legislators attract more interest group contributions upon joining substantive committees or acquiring procedural power,<sup>64</sup> and groups decrease contributions to members who are removed from key committees and direct resources toward new members.<sup>65</sup> Third, lobbyists who contribute are more likely to explicitly ask for—and get—access to members of Congress when representing foreign interests.<sup>66</sup> These empirical patterns suggest that, when coupled with campaign contributions to elected officials, a group's lobbying activity is much more likely to consist of direct contact with them rather than indirect efforts.

In this article, therefore, beyond studying how lobbying as a mixture of disparate activities relates to companies' ESG reporting behavior, we also examine whether the co-occurrence of campaign contributions augments that relationship—an interaction effect, in regression terms. To this end, we compare the likelihood that companies issue ESG reports (1) when they neither lobby nor make campaign contributions; (2) when they lobby without making campaign contributions; and (3) when they both lobby and make campaign contributions. We expect these scenarios to correspond to progressively higher likelihood of ESG reporting. But because independent, additive positive effects of lobbying and contributions alone with no interaction can produce such a gradation of predicted likelihood, we use regressions to examine whether they have a significant interaction effect. We follow the same approach to examine whether the co-occurrence of lobbying and campaign contributions is associated with more numerical content in the ESG reports issued.

#### A company-year panel dataset

Testing our expectations requires several sets of data: ESG reports, lobbying activity, campaign contributions. With these and several control variables, we compile a company-year panel data set.

#### ESG reports

We appreciate the provision of ESG reports by the *Corporate Register* (CR), a global leading data pioneer in ESG disclosure. CR provides the world's largest online directory of ESG reports issued by companies, and it is our main data source. To make the sample of ESG reports more comprehensive, based

<sup>&</sup>lt;sup>58</sup>LaPira and Thomas (2020); Straus (2015).

<sup>&</sup>lt;sup>59</sup>Gray and Lowery (2000).

<sup>&</sup>lt;sup>60</sup>This approach is inconclusive because it is ultimately highly probabilistic: lobbying without coupled campaign contributions may entail direct contact, and lobbying with concurrent contributions may not.

<sup>&</sup>lt;sup>61</sup>Fouirnaies and Hall (2014).

<sup>&</sup>lt;sup>62</sup>Jacobson and Carson (2019).

<sup>&</sup>lt;sup>63</sup>Ansolabehere, Snyder, and Tripathi (2002).

<sup>&</sup>lt;sup>64</sup>Fouirnaies and Hall (2018).

<sup>&</sup>lt;sup>65</sup>Powell and Grimmer (2016).

<sup>&</sup>lt;sup>66</sup>H. Liu (2022).

on any discrepancy between the CR and the GRI database, we consulted company websites and manually collected additional ESG reports. Our sample includes a total of 5,289 ESG reports issued by 760 unique publicly traded US companies from 1999 to 2017.<sup>67</sup> The count of reports dwindled rapidly after 2017, suggesting that the collection is likely incomplete. As a result, we truncate our sample at 2017 (inclusive).

More uncertain to us, however, is whether companies that never issued an ESG report during this period—according to the CR with our manual adjustment—in fact never did. Examining the share of companies within the universe of companies included by Compustat, an authoritative database of financial data that we use for the control variables, warrants this suspicion. Of the full membership of approximately 26,000 US-based public companies included in Compustat, our set of 760 companies with at least one ESG report make up just 3 percent. Of course, in theory, one can conclusively determine whether the other companies truly did not issue ESG reports or simply stayed off the CR's radar. But owing to the number of companies involved and the basic difficulty of discovering ESG reports issued years ago, we instead set our sample to these 760 companies that issued one or more reports from 1999 to 2017.<sup>68</sup>

With the ESG reports in hand, we used automation to perform optical character recognition to extract text from all the available ESG reports. This technique allowed us to capture both text preserved as such in the reports (essentially, text that can be directly selected in a PDF viewer) and text within images that is readable by humans but has lost its textual form during the report preparation process.

#### Lobbying activity

The main independent variable in our study is companies' lobbying activity, for which we use the lobbying data made available under the Lobbying Disclosure Act of 1995. Specifically, we mainly use the lobbying data prepared for bulk download by the Center for Responsive Politics.<sup>69</sup> We link the lobbying data to ESG reporting, as well as variables in Compustat, using the company identifiers added by In Song Kim's LobbyView data team.<sup>70</sup> The lobbying data tell us whether each company lobbied in each year. In our sample of 760 companies, as many as 539 (71 percent) of them never lobbied from 1999 to 2017. The companies that lobbied at any time during this period, however, often lobbied all the time, affirming the often-noted "stickiness" of lobbying: once a company starts lobbying, it tends to keep lobbying year after year, partly because lobbyists can make the case that it should keep investing in this service.<sup>71</sup>

#### Campaign contributions

For data on campaign contributions, we mainly look to Federal Election Commission (FEC) records compiled by Adam Bonica in the Database on Ideology, Money in Politics, and Elections (DIME).<sup>72</sup> We match corporate PAC contributions in DIME with companies.<sup>73</sup> The latest DIME database

<sup>&</sup>lt;sup>67</sup>In Appendix A, we show the yearly number of companies in our sample by business sector.

<sup>&</sup>lt;sup>68</sup>We acknowledge that this sampling decision selects on the dependent variable; although examining within-company variation in ESG reporting over time lets us compare instances in which it is done and instances in which it is not, we still just examine companies that do so with some nonzero frequency. To directly address this issue, in a robustness check shown in Appendix B.1, we adopt an alternative sample made up of the cumulative membership of the S&P 500, made up of companies that made that list at any time from 1999 to 2017 (n = 723), and perform the same analysis. For these highly prominent companies, we are much more certain that no report collected means no report issued. A data cost incurred by using the S&P 500 sample is that we must leave many ESG reports available out of the analysis; 358 (or just under half) of these companies issued ESG reports in any year, compared to the 760 companies in the CR sample. The S&P 500 robustness check largely corroborates the findings we show using the CR sample, but the control variables make the main lobbying effect insignificant.

<sup>&</sup>lt;sup>69</sup>See https://www.opensecrets.org/bulk-data/downloads.

<sup>&</sup>lt;sup>70</sup>Kim (2018).

<sup>&</sup>lt;sup>71</sup>Drutman (2015).

<sup>&</sup>lt;sup>72</sup>Bonica (2019).

<sup>&</sup>lt;sup>73</sup>As mentioned earlier, companies' executives, shareholders, and employees can contribute to candidates directly as individuals. We try to gather those records as well to supplement our data on company contributions by leveraging the fact that individual donors are asked to disclose their employers. Using this self-reported information, we link employees' contributions to their companies as a supplementary piece of information for analysis. Because corporate PAC contributions are much

contains contribution records up to the 2014 election cycle, so we complete the data over the period covered by processing FEC records directly (prepared for bulk download by the Center for Responsive Politics, like the lobbying data).

#### Control variables

In regression analysis, we control for several company and industry characteristics: companies' market value and number of employees, as well as the prevalence of ESG reporting in companies' business sectors and whether each company issued an ESG report in the previous year. It is easy to see that these factors are likely related to the company decisions we study. All else being equal, more valuable companies can be expected to have more money to spend on these resource-demanding activities. We use the number of employees to account for the possible influence of human resources and the attendant technical and analytic advantage on ESG reporting.

Controlling for companies' previous-year ESG reporting activity helps capture institutional inertia —or autocorrelation—as a factor underlying the decision; all else being equal, a company should be much more likely to issue ESG reports if it is already in the habit of doing so, in part because of the diminishing costs of report preparation given experience. Finally, the sector-wide prevalence of ESG reporting helps capture the peer pressure that can drive companies to issue ESG reports,<sup>74</sup> as well as rising investor expectations for ESG reporting. We measure sector-wide prevalence with the percentage of companies within the sector (identified by two-digit NAICS codes—the "sector" level) that issued ESG reports in the previous year. As time-variant characteristics, these company and industry controls can operate in regressions alongside company-specific fixed effects, which we explain later.

#### Results

The data present fairly strong evidence for our expectations regarding the relationship between companies' lobbying activity and ESG reporting behavior, but not regarding the role of campaign contributions. We first discuss the descriptive relationships among the key variables. As we expect, the data show that the decision to issue ESG reports is positively related to both companies' lobbying activity and their campaign contributions, especially when the two political activities occur simultaneously. Furthermore, lobbying and campaign contributions are both positively related to the amount of numerical content in companies' ESG reports.

We then use regression analysis to examine whether these patterns are driven purely by differences among companies or—in line with our expectations—at least partially by companies adjusting their ESG reporting behavior according to lobbying over time (the descriptive results cannot show this). We use company-specific (as well as year-specific) fixed effects to examine such "within-company" relations, and the regressions show that the correspondence between companies' behavior in lobbying and ESG reporting over time is key to the patterns. Specifically, companies are expected to issue more ESG reports when they lobby. In terms of the numerical content in ESG reports, a second set of regressions shows that companies issue more quantitative ESG reports when they lobby.

#### Descriptive results

The decision to issue ESG reports. Companies are more likely to issue ESG reports when they lobby, make PAC campaign contributions, or both. In the panel data that we assemble by combining these company activities, each company-year combination may correspond to an instance of any or all of the activities. This allows us to examine how the three activities relate to one another at the company-year

more tied to companies' organizational behavior than are employees' individual contributions, we exclusively adopt PAC contributions for our main analysis. Nonetheless, in Appendix B.2, we conduct additional analysis that considers individual contributions both as a separate variable and as a component of total company contributions. This analysis shows that the choice of which contributions to capture does not matter for the main findings.

<sup>&</sup>lt;sup>74</sup>Priddy (2017); Gipper, Ross, and Shi (2022).

Lobbying	Campaign contributions	Companies	Company-year observations	ESG report issued	Percentage
No	No	675	9,032	2,799	31.0%
Yes	No	201	1,802	714	39.0%
No	Yes	230	1,454	688	47.3%
Yes	Yes	85	559	274	49.0%

Table 1. Companies' political activity and ESG reporting, 1999–2017.

level. In Table 1, we tabulate how many company-year observations (and the underlying number of unique companies they encompass) have a company issuing an ESG report, conditional on any lobbying or campaign contributions by that company.

On their own, then, lobbying and PAC contributions are both positively related to companies' likelihood to issue ESG reports.<sup>75</sup> Of our interest, too, is whether the positive links between both activities and ESG reporting compound each other. As discussed earlier, we expect ESG reports to be most strongly geared toward the direct contact type of lobbying, which, in turn, is more likely accompanied by campaign contributions.<sup>76</sup> The descriptive patterns, however, do not support this expectation. Companies that do not contribute are much more likely to issue ESG reports when they lobby than when they do not (39 percent versus 31 percent), but this difference is incremental for companies that do contribute (49 percent versus 47 percent). Thus, campaign contributions are associated with a smaller, not larger, effect of lobbying on ESG reporting. We test this more systematically in regression analysis by interacting lobbying with campaign contributions.

Figures 1 and 2 show that the positive relationship between each political activity and ESG reporting endures over time. In Figure 1, we show the percentage of lobbying and non-lobbying companies that issued ESG reports by year while leaving out campaign contributions for simplicity. The upward shape of both trends reaffirms that ESG reporting became more common during these years. A substantial gap in the likelihood to issue ESG reports persisted between lobbying and non-lobbying companies, though this gap appears to have shrunk somewhat in the second half of the period.<sup>77</sup>

Bringing campaign contributions back into the analysis, Figure 2 shows that the probabilities for companies to issue ESG reports by political participation by and large maintained a specific rank order. Generally, companies that both lobbied and contributed money were most likely to issue ESG reports, followed by companies that contributed but did not lobby, then by those that lobbied but did not contribute, and lastly by those that did neither. These individual trends, however, show that the two sets of companies that lobbied—those that did not contribute money and those that did—switched rankings over time. Until 2003, companies that lobbied without contributing were more likely to issue ESG reports, but this comparison then reversed. In the last three years of the data, companies that both lobbied and contributed somehow became much less likely to issue ESG reports, whether compared to this group's own previous level or compared to the less politically active companies.

<sup>&</sup>lt;sup>75</sup>In these descriptive results, the difference in companies' likelihood to issue ESG reports by political activity contains a mixture of within-company (e.g., "when a company lobbies, it becomes more likely to report") and between-company (e.g., "companies that lobby are more likely to report than companies that do not lobby") components. The same applies to the differences between groups of companies visualized in Figures 1 and 2. We use regressions with company-specific fixed effects to examine within-company effects, which are predicted by our theory.

<sup>&</sup>lt;sup>76</sup>Ansolabehere, Snyder, and Tripathi (2002); Powell and Grimmer (2016); H. Liu (2022).

<sup>&</sup>lt;sup>77</sup>Alternatively, the near-parallel trends depicted can simply mean that ESG reporting became more likely over time for companies regardless of lobbying—that is, the persistent gap between lobbying companies and nonlobbying companies may be explained merely by the rising trend in ESG reporting, accompanied by a similar trend in lobbying. We account for this possibility by controlling for a linear time trend in regressions instead of year-specific fixed effects in Appendix B.3 and show that the within-company association between lobbying and ESG reporting is robust to the trended nature of ESG reporting.

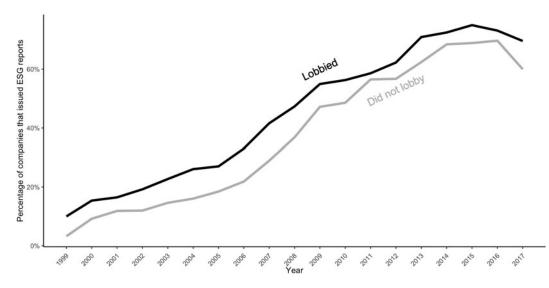


Figure 1. Companies' lobbying activity and ESG reporting by year.

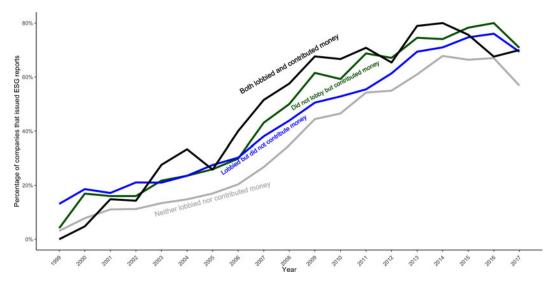
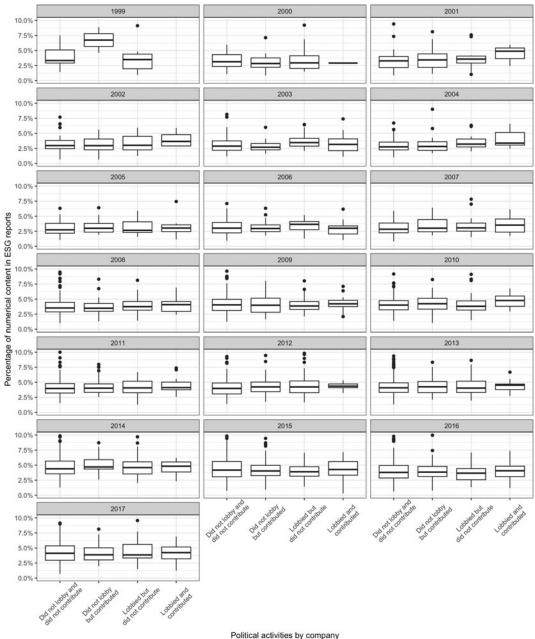


Figure 2. Companies' lobbying activity, PAC campaign contributions, and ESG reporting by year.

The informational content of ESG reports. Beyond whether to issue ESG reports at all, we also analyze the content of reports. Earlier, we laid out reasons why highly quantitative ESG reports can convey to politicians a company's ability to provide policy input more effectively than entirely qualitative reports. We measure the amount of numerical content in ESG reports with the percentage of their text that consists of numbers.<sup>78</sup> The average ESG report is about 18,000 words long, 4.6 percent of which are numbers.

On the amount of numerical content within ESG reports, companies that lobby and those that do not lobby overlap substantially. In Figure 3, we show groups of boxplots by year to summarize the percentage of ESG report content composed of numbers. We again categorize companies based their

<sup>&</sup>lt;sup>78</sup>As explained in more detail later, in Appendix B.4, we model a different measure of ESG report content—the Gunning FOG readability index.



Political activities by company

Figure 3. Lobbying, campaign contributions, and numerical content in ESG reports by year.

political activity: whether they lobbied, contributed, or did both. Featuring lines representing the 25th, 50th (median), and 75th percentiles and dots locating outliers, the boxplots visualize both the central tendency and variance in the numerical content of reports across companies.

The grouped boxplots show that the median proportion of numerical content in ESG reports issued by companies that engaged in some political activity generally exceeded that in reports issued by nonparticipating companies. More starkly, companies that both lobbied and contributed tended to issue more highly numerical reports than those that did either one. These comparisons result in a more or less positive "slope" formed by the median lines from left to right. This pattern conforms to our expectation that lobbying is positively related to the amount of quantitative information in ESG reports and suggests an apparent effect of contributions. To test whether these effects are statistically significant with a within-company component, along with whether the two political activities interact to explain report content, we turn to regression analysis.

#### **Regression analysis**

In regression analysis, we first predict whether companies choose to issue ESG reports each year using their lobbying activity and PAC campaign contributions, and then move on to modeling the numerical content of the issued ESG reports. We show the first analysis in Table 2, which contains three equations. Observed at the company-year level in the panel data, the dependent variable is companies' decision to issue ESG reports (1 if a company issued a report in a given year and 0 if not).<sup>79</sup> All equations control for fixed effects for each company and year, making them two-way fixed effects models, often used to estimate within-unit effects between time-variant predictors and outcomes of interest. To account for non-independence between observations, we cluster standard errors by company as well as by year.

In Model 1 in Table 2, other than company- and year-specific fixed effects, we only include whether each company lobbied in each year as the lone predictor for ESG reporting. The coefficient for the lobbying variable is positive and significant: on average, companies are more likely to issue ESG reports during years when they also lobby. In Model 2, we add campaign contributions at the company-year level—a binary indicator of whether each company contributed to federal candidates—and its interaction with lobbying as additional predictors.<sup>80</sup> The main effect of lobbying remains positive and significant, as is the main effect of campaign contributions. This shows that for non-lobbying companies contributing is associated with a greater likelihood to issue ESG reports. The interaction effect between lobbying and campaign contributions, however, is insignificant. Again, contrary to our expectations, this finding shows that the decision to contribute does not compound the bivariate association between lobbying and ESG reporting; lobbying is no more strongly associated with ESG reporting when it is coupled with contributions. If anything, the opposite is the case, consistent with the descriptive patterns in Table 1.

Several possibilities may explain the insignificant interaction between lobbying and campaign contributions though we can only speculate here. First, direct contact with government officials may be no more related to ESG reporting than other types of lobbying, contrary to our expectation. Second, the method of using campaign contributions to infer direct lobbying contact may be too imprecise if the correlation between contributions and contact is weak. Third, to some degree and for some companies, campaign contributions may serve as a substitute for ESG reports as a signal of moral legitimacy and political capacity, in a similar fashion with interest groups' use of contributions as a signal of shared ideology and preferences.<sup>81</sup>

Based on Model 2, in Model 3 we add in companies' decision to issue ESG reports in the previous year, market value and number of employees, as well as the prevalence of ESG reporting in their business sector in each year, to control for plausible effects between these factors and the decision to issue

<sup>&</sup>lt;sup>79</sup>Almost always, in a given year, companies issued one ESG report, if any. In the rare cases in which a company issued more than one report within a year (as many as four, as AT&T did in 2007), typically each of these reports dealt with a different subset of ESG issues. In these cases, we combine the individual reports and treat them as one report; this is mostly relevant to our analysis of the numerical content of ESG reports, where we measure the content of the all-inclusive combined report.

<sup>&</sup>lt;sup>80</sup>In our main regressions, we use binary indicators of lobbying and campaign contributions; we believe that the primary decision facing companies is whether or not to engage in these political activities at all. To help capture the intensity of these political activities, however, in Appendix B.5, we use continuous measures of these activities instead. Specifically, we measure lobbying with the number of lobbying firms hired or the amount of money spent on lobbying, and measure campaign contributions with the total amount contributed. The number of firms hired is a consistently significant predictor of ESG reporting, but not lobbying spending. The amount of campaign contributions is significant in the absence of controls but insignificant otherwise, similar to the main analysis.

<sup>&</sup>lt;sup>81</sup>Kalla and Broockman (2016).

Table 2. Logit models of lobbying, campaign contributions, and ESG reporting.

		Dependent variable:		
		Decision to issue ESG report		
	(1)	(2)	(3)	
Issued ESG report in previous year			0.57***	
			(0.15)	
Lobby	0.47**	0.49**	0.34*	
	(0.19)	(0.20)	(0.18)	
Campaign contributions		0.34**	0.13	
		(0.16)	(0.16)	
Lobby * Campaign contributions		-0.12	0.004	
		(0.34)	(0.36)	
Market value			0.01**	
			(0.003)	
Number of employees			0.01**	
			(0.002)	
ESG prevalence in sector			0.26	
			(0.39)	
Constant	-6.52***	-6.51***	-4.75***	
	(0.40)	(0.40)	(0.24)	
Company FE	Yes	Yes	Yes	
Year FE	Yes	Yes	Yes	
Observations	12,847	12,847	10,714	
Log likelihood	-4,358.19	-4,354.99	-3,724.93	
AIC	10,274.38	10,271.98	8,949.86	

*Note:* Standard errors clustered by company and year. \* p < .1; \*\* p < .05; \*\*\* p < .01.

ESG reports. These controls have the expected positive signs, and all except sector-wide prevalence are significant. These controls make the main effect of contributions insignificant, however, and the main lobbying effect marginally so (p < .1). The drop in the number of observations is due to missing data in these controls, for which we use listwise deletion. Together, these two-way fixed effects models show that companies are more likely to issue ESG reports when they lobby, but there is no systematic compounding effect of campaign contributions.

Turning to the numerical content of ESG reports, regression analysis shows that there are strong positive within-company relations between companies' political activity and this subsequent outcome

of interest. We show panel regressions that model numerical content with lobbying and campaign contributions in Table 3, again featuring two-way fixed effects.

The variables in these equations mirror those in Table 2. In Model 1, the only predictor is lobbying activity. Its coefficient estimate is positive and marginally significant (p < .1). This indicates that companies put significantly more numerical content in the reports when they also lobby. The magnitude of the effect indicates that, on average, companies include 0.04 percentage points more numerical content in their ESG reports when they lobby than when they do not. To contextualize this effect size, recall the average amount of numerical content is 4.6 percent, making an average increase by 0.04 percentage point a small but—we think—nontrivial one. Another frame of reference for the effect size of 0.04

		Dependent variable:			
	Percentag	Percentage of ESG report composed of numbers			
	(1)	(2)	(3)		
Lobby	0.04*	0.04*	0.02**		
	(0.02)	(0.02)	(0.01)		
Campaign contributions		0.14	0.16		
		(0.20)	(0.23)		
Lobby * Campaign contributions		0.02	0.02		
		(0.03)	(0.04)		
Market value			0.001		
			(0.001)		
Number of employees			-0.002		
			(0.001)		
ESG prevalence in sector			0.74		
			(1.04)		
Constant	2.56***	2.58***	1.33**		
	(0.24)	(0.24)	(0.29)		
Company FE	Yes	Yes	Yes		
Year FE	Yes	Yes	Yes		
Observations	4,475	4,475	4,103		
R <sup>2</sup>	0.40	0.40	0.41		
Adjusted R <sup>2</sup>	0.27	0.27	0.28		
χ <sup>2</sup>	2,270.23***	2,270.60***	2,145.18**		

Table 3. Linear regressions of lobbying, campaign contributions, and technicality of ESG reports.

*Note:* Standard errors clustered by company and year. \* p < .1; \*\* p < .05; \*\*\* p < .01.

percent is the amount of fluctuation each company exhibits in the amount of numerical content ESG reports from *its own* average across time. On average, this fluctuation is approximately 0.7 percentage points around company mean levels.

Model 2 adds the binary indicator of companies' campaign contributions and its interaction with lobbying. The lobbying variable remains positive and marginally significant, its size unchanged. Campaign contributions, either on its own or in interaction with lobbying, add little to the model, the additional terms insignificant predictors.<sup>82</sup> Finally, in Model 3, we add our usual set of controls. These controls halve the effect size of lobbying but otherwise do not meaningfully alter the main coefficients of interest.

In addition to the several types of supplementary analysis referenced so far, we perform two addition sets of analysis to further analyze the associations between lobbying, campaign contributions, and ESG reporting.

**Heckman selection.** In one, we employ a Heckman selection model to examine the proportion of numerical content in ESG reports as a function of companies' political activity. The rationale for this analysis is that we can only observe the proportion of numerical content in ESG reports if companies choose to issue them in the first place. And because our earlier analysis shows that lobbying and, to a lesser extent, campaign contributions are significant predictors of companies' likelihood to issue ESG reports, companies demonstrably engage in nonrandom selection into the sample that we use to analyze report content. Heckman selection provides us with a tool to correct for this kind of selection bias econometrically by explicitly modeling the sampling probability of each observation (whether a company chooses to issue ESG reports in a year—the selection equation) together with the conditional expectation of the outcome (the percentage of numbers in reports, which is observable only for reports that are issued).<sup>83</sup> We discuss results of the Heckman selection model in Appendix B.6.

**Modeling the FOG index of ESG reports.** We also set the dependent variable to an alternative measure of the informational technicality of ESG reports—the FOG index of readability created by textbook publisher Robert Gunning. It measures the linguistic complexity of text as a function of syllables per word and words per sentence and purports to denote how many years of education are needed to understand it.<sup>84</sup> It has been applied to analyzing ESG reports.<sup>85</sup> FOG can potentially ameliorate some measurement error in the proportion of numbers due to the inclusion of extraneous numbers that do not pertain to ESG discussions, but there has also been controversy and concern about its construct validity. We expand on these concerns and present regressions that model the FOG index of ESG reports in Appendix B.4.

#### Alternative explanations

As discussed earlier, we cannot determine whether lobbying in fact drives companies to issue ESG reports or to include more numerical content in them. Some plausible alternative explanations distinct from this causal story may be at play to at least partially account for the observed patterns. In this study, fundamentally we can neither confirm nor rule out these alternative mechanisms, which we leave for future research. In addition to these mechanisms still, ESG reports and their informational content may be a product of the information-gathering companies conduct in order to lobby. In this scenario, lobbying is still a causal factor of ESG reports are incidental to lobbying and not deliberately in service of it.

One set of explanations involves omitted variables: some unobserved variable may influence both lobbying and ESG reporting and causes them to be related to each other. For example, a public

<sup>&</sup>lt;sup>82</sup>Conceivably, past campaign contributions can be intended to facilitate present lobbying contact. To account for this possibility, in Appendix B.2, we conduct supplementary analysis that constructs the contribution variable to include contributions made during both the present and previous election cycles. This analysis yields similar results.

<sup>&</sup>lt;sup>83</sup>Heckman (1976, 1979).

 $<sup>^{84}</sup>$ FOG = 0.4 \* (average number of words per sentence + percentage of complex words). Complex words contain three or more syllables.

<sup>&</sup>lt;sup>85</sup>E.g., Li (2008).

relations incident can motivate companies to both do damage control via ESG reports and engage in lobbying. Moreover, public relations emergencies can conceivably motivate companies to issue more quantitative—and thus more credible<sup>86</sup>—ESG reports. Alternatively, exogenous growth in a company's informational-gathering capacity can enable it both to lobby government (because it thinks it now has more to offer to politicians) and to elevate its ESG reporting (because it now has more nonfinancial facts to report).

Another set of explanations has to do with simultaneity: rather than being caused by lobbying, as we theorize, ESG reporting behavior may actually drive lobbying in addition to or instead of the other way around. This causal direction can be in effect if ESG reporting motivates or somehow enables companies to lobby. In one scenario, lobbying is part of a company's social responsibility campaign and subservient to ESG reporting. One specific form of this decision sequence is that companies may lobby because they wish to discuss lobbying in ESG reports. Notwithstanding research arguing that companies discuss too little political activity rather than too much, or do so too selectively in their ESG reports,<sup>87</sup> this motive for lobbying is consistent with lobbying for organizational maintenance: through lobbying, interest groups communicate their preferences not only to government officials but also to their own member bases to inform or mobilize.<sup>88</sup> Another scenario that has ESG reports causing lobbying again works through information but differently than theorized: ESG reporting equips companies with information on policy issues, which then powers their lobbying effort. Here, ESG reporting does not merely demonstrate information or informational capacity but produces them in the first place. This explanation may comport especially well with the observed relationship between the numerical content of ESG reports and lobbying. At the same time, however, it is unclear how ESG-related information gathering, or developing the technology and capacity to this end, can contribute to lobbying on non-ESG issues.

In another scenario distinct from all these, lobbying does not motivate companies to signal their information-gathering capacity by issuing ESG reports but produces the data for reports to include. This mechanism is clearly distinguishable from our theory if companies lobby on ESG policy issues. In this case, information that companies gather to support their lobbying efforts can be conveniently placed in ESG reports if it also advertises accompanies' ESG achievement and vision to readers. Put differently, it is the action of lobbying and the preparatory data collection it entails, and not the very intent to lobby (which our theory implies to be fundamental), that causally affect both the decision to issue ESG reports and report content. ESG reporting becomes a low-cost by-product of lobby-ing rather than a deliberate aid to it. This mechanism necessarily veers close to ours in essence, however, when considering lobbying on non-ESG issues, which likely comprises most lobbying. If a company lobbies on taxes (and therefore collects necessary data related to the tax code), for example, for what lobbying-related reason would it want to collect data on ESG performance to showcase in ESG reports, if not to promote its social reputation and informational capacity to targeted politicians? If lobbying does not help with ESG reporting in passing, then ESG reporting can scarcely be a reasonable by-product of lobbying.

#### Conclusion

For a company, success in business does not readily translate into success in lobbying. The latter requires knowing what politicians need to maintain their political careers, and then convincingly communicating the ability to help meet those needs. Thriving companies may possess abundant financial resources. To be successful in lobbying, however, they need to strategically spend money sending the right messages to an audience that wants very different things from their customers or clients. Issuing ESG reports may be one way to do this. By broadcasting companies' performance in non-financial areas, the increasingly widespread issuance of ESG reports provides a rare avenue for companies to showcase their social responsibility while keeping their aim on long-term company value. We explain

<sup>&</sup>lt;sup>86</sup>E.g., Hughes and Pae (2004).

<sup>&</sup>lt;sup>87</sup>Goh, Liu, and Tsang (2020); Slob and Weyzig (2010).

<sup>&</sup>lt;sup>88</sup>Browne (1977); Ainsworth and Sened (1993).

why ESG reports can help companies maintain a reputation and signal the ability to provide politicians with electoral support and policy-relevant information—reasons for politicians to receive and not resist companies' lobbying input. Reputation maintenance gives politicians license to engage and capacity signaling tells them why they should. Effective ESG reporting kills two birds with one stone.

Using data on 760 companies over 19 years, we present suggestive evidence that companies believe ESG reports to serve such a signaling purpose. We find that companies are more likely to issue ESG reports, and to issue reports containing more numerical content, when they lobby. It bears repeating, however, that our findings are not causal; fundamentally, we cannot rule out alternative mechanisms that empirically link ESG reporting and lobbying.

Adding to the literature on the political use of ESG activities,<sup>89</sup> our study highlights the value of studying legislators—distinct from regulatory agencies—as users of ESG reports. For regulators, their legislative mandates imply that companies mainly exist as targets of oversight, investigation, and even litigation. Despite concerns of regulatory capture by industry,<sup>90</sup> regulators consume company disclosure with a fundamentally adversarial posture, like the SEC with companies' financial filings.<sup>91</sup> In contrast, legislators generally want a much more congenial and mutually cooperative relationship with these resource-rich organizational constituents (as do bureaucrats interested in crafting policy).<sup>92</sup> ESG reports can help companies meet politicians halfway by alleviating their misgivings about how political exchange will play out in the public eye and whether it will bring sufficient value—as a signal of these hard-to-observe qualities.<sup>93</sup>

Related, our study offers a suggestive view about the proper place of political discussions in companies' non-financial disclosure. Some observers are concerned about the lack of appropriate political disclosure in ESG reports. They reason that ESG reports ought to place more emphasis on companies' political activities like lobbying and campaign contributions because any political participation is an integral part of companies' nonmarket strategy.<sup>94</sup> Other critics contend that when companies do voluntarily disclose political activities, they do so only to advance policy goals that suit their needs rather than to dutifully inform stakeholders.<sup>95</sup> While we empathize with arguments for more expansive and specific regulations on political disclosure in ESG reports, our study shows how ESG reporting can be politically instrumental without directly talking about politics; that is, as an important section of ESG reports' targeted audience, politicians may not consume them for any explicitly political content.

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<sup>&</sup>lt;sup>89</sup>Werner (2012, 2015); Lyon et al. (2018); Bernhagen, Kollman, and Patsiurko (2022).

<sup>&</sup>lt;sup>90</sup>Etzioni (2009).

<sup>&</sup>lt;sup>91</sup>E.g., Files (2012); Correia (2014).

<sup>&</sup>lt;sup>92</sup>E.g., Overman and Simanton (1986); Peterson (1993).

<sup>&</sup>lt;sup>93</sup>Connelly et al. (2011).

<sup>&</sup>lt;sup>94</sup>Lyon et al. (2018); Slob and Weyzig (2010).

<sup>&</sup>lt;sup>95</sup>Lock and Seele (2018).

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