Using the Threat of Scrutiny to Make Weak Voluntary Programs a Clearer Signal

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Stakeholders are increasingly holding companies accountable for the working conditions and environmental management of their supply chains. To meet stakeholders' expectations some companies have sought to rely on suppliers that voluntarily joined social and environmental programs to help them manage these issues. We study a class of programs that require participants to commit to both the program's principles and to being transparent about their impacts related to those principles. Using data on the United Nations Global Compact we examine the conditions under which companies are able to use participation in these types programs as a useful signal of suppliers' intentions to be forthcoming. We examine organizational and institutional factors that allow stakeholders to scrutinize the authenticity of participants' commitments and therefore inhibit companies from joining symbolically. We find that on average companies with reporting capabilities and those that disclose meaningful and not misleading information are more likely to join. We find evidence that companies that are not likely committed to the program are especially deterred from joining when they are less visible to stakeholders prior to joining and when they are headquartered in countries with strong norms of corporate transparency.

INTRODUCTION

Stakeholders are increasingly holding companies accountable for the working conditions and environmental management of their supply chains. Suppliers mismanaging these issues pose substantial reputational and financial risks on their buyers (e.g., Kleindorfer and Saad, 2005; Roberts, 2003). To mitigate these risks some companies have sought to rely on suppliers that voluntarily joined programs to help suppliers manage their working conditions and environmental impacts (e.g., King, Lenox, and Terlaak, 2005). However, because social and environmental management practices are difficult to observe companies may find it challenging to distinguish suppliers that are truly committed to a program's goals (i.e. low risk suppliers) from those that joined merely symbolically.

Voluntary social and environmental programs vary widely in their initial and ongoing participation requirements. They vary in whether and how participants are monitored and the consequences (if any) that befall those who fail to meet the program's requirements. Prior research has indicated that programs with lax entry requirements and weak enforcement are unlikely to prevent companies that have poor records from joining (e.g., Darnall and Carmin, 2005; Lenox and Nash, 2000). Researchers have also found that participants in weak programs fail to improve a greater rate than non-participants (e.g., King and Lenox, 2000; Rivera and de Leon, 2004), suggesting that participation in weaker programs might not serve as a useful signal of a participant's commitment to meeting the program's goals. Programs that fail to differentiate performance of their participants from non-members

may be unsuccessful due to the inability to prevent "free riders," companies that join symbolically without any intention of meeting the program's goals (Darnall and Carmin, 2005). Free riders diminish any measurement of aggregate program effectiveness because their lack of progress dilutes any improvements made by legitimate participants. [1]

Despite these results, weak voluntary programs persist and have attracted many participants. In this article, we examine commit-and-report programs, a common type of weak program that only requires organizations to make a public commitment to abide by the program's ideals prior to becoming a participant. One of these commitments includes being transparent regarding the practices governed by the program. After joining, participants are later required to submit periodic reports detailing progress made toward meeting the program's goals. The intention of commit-and-report programs is that this requirement for transparency will encourage stakeholder scrutiny and pressure (Rasche, 2009), because scrutiny that accompanies transparency has been shown to induce companies to make improvements (e.g., Jin and Leslie, 2003).

To encourage stakeholder scrutiny commit-and-report programs publish the names of participants. If stakeholders can identify companies that joined to free ride they can withhold benefits and potentially criticize them. This scrutiny reduces the incentive for companies to join with the intent to free ride. We empirically identify several factors that will help stakeholders scrutinize the authenticity of a participant's commitment. Understanding these conditions can enable companies to know when they can use participation in commit-and-report programs as a useful signal of suppliers' intentions to abide by the program's ideals.

We hypothesize that three organizational attributes and two institutional attributes will help stakeholders identify potential free riders and reduce their propensity to participate in commit-and-report programs. Stakeholders attempting to discern which participants are truly committed to the program's goals can gain insight from the participant's existing capabilities to meet the program's future reporting requirements. Companies that already possess reporting capabilities will find it less costly to meet the program's requirements (Delmas and Keller, 2005). Because failing to submit a comprehensive progress report may be an indication that the participant joined symbolically they are less likely to be criticized for free-riding. Thus, we hypothesize that companies lacking previous reporting capabilities will be less likely to participate. Stakeholders can also gain insights from the company's commitment to transparency. Companies that are transparent are more likely to make improvements in the areas described in their disclosures (e.g. Jin and Leslie, 2003), thus, participants that are not truly committed to the program's transparency goals are also presumably less likely to be committed to meeting the program's

[1] Lyon and Maxwell (2007) suggest that prior evaluations may fail to find that participants improve more so than non-participants because non-participants may also benefit from information disseminated by the program.

improvement goals. This is why some programs have opted to expel companies failing to meet the reporting requirements.[2] We hypothesize that companies that have disclosed misleading information will be less likely to participate, since stakeholder scrutiny that accompanies participation risks revealing these practices and calling into question the company's commitment to transparency and therefore their commitment to the program.

We argue that the extent to which stakeholder criticism deters potential free riders depends on one the company's visibility to its stakeholders and the institutional and cultural environment in which these companies are headquartered. We hypothesize that less visible companies that released past misleading disclosure will be especially unwilling to participate. More visible companies face greater scrutiny regardless of participation in a voluntary program and thus face less risk of substantial additional scrutiny after they begin participating, whereas companies that had been less visible are at greater risk of facing substantially increased scrutiny after they begin participating. We argue that companies headquartered in countries with many activists face a greater risk that their prior misleading disclosure will be revealed, which will make free riders in these contexts especially unwilling to participate. Also, the revelation of companies' misleading disclosures is more likely to result in sanctions on those companies when they are headquartered in countries with stronger norms of corporate transparency.

We test these hypotheses in the context of the United Nations Global Compact, a renowned commit-and-report voluntary program that has attracted nearly 7,700 business participants from 130 countries.[3] We find evidence that all three predicted organizational attributes (lack of reporting capabilities, misleading disclosure, and visibility) and one of the two hypothesized institutional attributes (strong corporate transparency norms) deter free ridership in the Global Compact. We conclude by discussing several managerial and policy implications of these findings.

RELATED LITERATURE

Our research builds on literature that examines how companies manage risks associated with poor working conditions and environmental impacts in their supply chains, and on literature that explores why organizations adopt voluntary programs.

[2] For example, the United Nations Global Compact expels companies that fail to meet the progress report requirement for the following reason: "Since the Global Compact's emphasis is on learning, dialogue and partnerships, it wishes to engage only those businesses that have a genuine interest in continuous improvement… The Global Compact firmly believes that increased transparency and public accountability promoted through the COP helps to drive improved performance on environmental, social and governance issues." Source: http://www.unglobalcompact.org/AboutTheGC/IntegrityMeasures/Integrity_Measures_FAQs.html (last accessed October, 2013).

[3] Source: http://www.unglobalcompact.org/aboutthegc/ (last accessed November, 2013).

Management of labor and environmental impacts in the supply chain

Stakeholders such as local communities, the media, activists, and end-customers have induced companies to improve their management of labor and environmental issues in their operations (e.g., Albuquerque, Bronnenberg, and Corbett, 2007; Bansal and Roth, 2000; Eesley and Lenox, 2006; Greening and Gray, 1994; Kassinis and Vafeas, 2006). Stakeholders are also pressuring companies to manage these issues in their supply chains (e.g., Christmann and Taylor, 2001; Corbett and Klassen, 2006; Parmigiani, Klassen, and Russo, 2011; Waddock, Bodwell, and Graves, 2002). Some evidence suggests that companies that source from suppliers adequately managing these issues perform better financially than those that do not (Carter, 2005; Dowell, Hart, and Yeung, 2000). Others have argued that companies sourcing from suppliers that are not adequately managing these issues risk reputational damage resulting from activist attacks and media exposés (e.g., Christmann and Taylor, 2002; O'Rourke, 2003; Parmigiani, Klassen, and Russo, 2011; Roberts, 2003). They also face heightened operational and financial risks from supply chain disruptions (e.g., Kleindorfer and Saad, 2005; Kleindorfer, Singhal, and Van Wassenhoven, 2005) and product liability issues (Snir, 2001).

Companies are increasingly seeking to source from suppliers with superior labor and environmental practices. Some companies will only source from suppliers that have adopted third-party certified labor or environmental standards (Christmann and Taylor, 2001; Corbett and Kirsch, 2001; Delmas and Montiel, 2009; O'Rourke, 2003). Others have implemented supplier evaluation schemes and supplier codes of conduct to evaluate potential suppliers based on their social and environmental management practices (Jiang, 2009a; Locke, Qin, and Brause, 2007; Noci, 1997; Toffel, Short, and Ouellet, 2013).

Another option that some companies pursue is to partner with suppliers that are forthcoming about their working conditions and environmental impacts (Jira and Toffel, 2013). Researchers and policy makers have argued that transparency on these issues can prompt companies to make related improvements (e.g., Doshi, Dowell, and Toffel, 2013; Jin and Leslie, 2003). Mandatory disclosure regulations, like the U.S. Environmental Protection Agency's Toxic Release Inventory (TRI) program, anticipate that the disclosure will inform stakeholders of the company's performance and that stakeholders will in turn demand improvements (e.g., Arora and Cason, 1999; Karkkainen, 2000; Tietenberg, 1998). Disclosures that reveal inferior performance can increase scrutiny from the media and depress stock prices (Hamilton, 1995) and further evidence suggests that this increased scrutiny prompts companies to make improvements (Blackman, Afsah, and Ratunanda, 2004; Konar and Cohen, 1997; Jin and Leslie, 2003).

Companies can benefit from sourcing from suppliers that are transparent about their working conditions and environmental impacts in two ways. First, transparency may lead to improvements, which

lower the risk of reputational and financial harm to buyers. Second, transparency makes it possible for companies to assess the risks of partnering with that supplier (Jira and Toffel, 2013). Because suppliers may refuse to comply with requests to become certified (Darnall and Edwards, 2006; Delmas and Montiel, 2009) or because codes of conduct may not be effective (e.g., Locke, 2013; O'Rourke, 2003), companies may opt instead to look for suppliers that have made a public commitment to being transparent and to making future improvements.

Voluntary Programs

A primary reason companies participate in voluntary programs is to signal their commitment to the program's ideals and to receive positive benefits from this recognition from their stakeholders (e.g., Arora and Cason, 1996). Of the hundreds of voluntary programs that exist (Borkey, and Leveque, 1998; Carmin, Darnall, Mil-Homens, 2003) some provide a more effective signal of a participant's commitment than others (Darnall and Carmin, 2005). Previous research has found that voluntary programs are more likely to serve as a credible signal of superior practices when they feature relatively stringent requirements (e.g., Lenox and Nash, 2003). Requirements such as third-party certification that entry requirements have been met as well as ongoing monitoring of the participants' continued adherence increase the credibility of programs by actively helping to guard against free riders (e.g., Khanna and Damon, 1999; Levine and Toffel, 2010; Potoski and Prakash, 2005; Terlaak and King, 2006).

Other programs feature weaker requirements, allowing all organizations to participate regardless of their current management practices. These weaker programs are often meant to facilitate participants' learning and performance improvement. From a signaling perspective, a drawback of weaker programs is that some companies might seek to free ride, gaining the program's reputational benefits by joining with no intention of actually meeting the program's goals, (e.g., Darnall and Carmin, 2005).

We examine a weaker program that attempts to diminish free-riding incentives, which we classify as a "commit-and-report" program.[4] We characterize commit-and-report programs as those with entry requirements that only consist of a public commitment to the program's goals and to being transparent and forthcoming regarding the practices governed by the program. Commit-and-report programs publicly list participant names and later require participants to periodically report on the progress they have made toward achieving the goals. By publicly listing participant names, commit-and-report programs enable participants to immediately gain recognition, while also facilitating potential scrutiny by stakeholders who may assess the authenticity of participants' commitment to both the program's transparency and improvement goals (Rasche, 2009).

[4] Commit-and-report programs could be classified as voluntary reporting programs according to Darnall and Carmin (2005); though, this category is not limited to programs that publicly list participants' names.

Over one third of the voluntary environmental programs in the U.S. require participants to issue a basic statement expressing their commitment to the program's environmental goals and submit a progress report (Darnall and Carmin, 2005). Of these, the majority of these also publish the participant's names on the program's website. Despite the potential for scrutiny, several well-known commit-and-report programs have failed to completely prevent free riding. Participants of the chemical industry's Responsible Care,[5] program were heavier polluters than non-participants and their environmental performance improved less than non-participants (Gamper-Rabindran and Finger, 2012; King and Lenox, 2000; Lenox and Nash, 2003). Similar results were found for the alpine ski industry's Sustainable Slopes[6] program (Rivera and de Leon, 2004; Rivera, de Leon, and Koerber, 2006). In their analysis of the US EPA's WasteWise program,[7] Delmas and Keller (2005) found that companies that lacked previous reporting experience, that lacked support from upper management, and were not among the earliest participants were more likely to free ride by participating but then failing to submit the required progress reports.

This existing literature would suggest that companies cannot use commit-and-report programs as a credible signal of existing superior environmental management practices. However, we examine whether participation can serve as a credible signal of the participants' commitment to transparency. In their examination of Responsible Care, King and Lenox (2000: 702) posit that some companies used their membership symbolically to distract stakeholders from any potential future mishaps. The authors also suggest that "such a smoke screen works only so long as it is very difficult for external actors to evaluate the performance of member firms." Our study examines the conditions under which stakeholders are capable of lifting that smoke screen by scrutinizing participants' commitment to being transparent. By criticizing and withholding benefits from suspected free riders, stakeholders can reduce the likelihood that potential free riders would participate in voluntary programs. Under these conditions companies will be able to use participation as a clearer signal of a supplier's commitment to the program's ideals.

THEORY AND HYPOTHESES

Scrutiny refers to persistent and potentially intrusive attention paid to an organization's actions (Sutton and Galunic, 1995). Sutton and Galunic (1995) argue that stakeholder scrutiny prompts organizations to adopt symbolic measures meant to make the organizations appear legitimate. In contrast, we argue that the threat of stakeholder scrutiny can inhibit companies from symbolically joining

[5] At its inception, the Responsible Care program had no entry requirements but participants were publicly listed and annual progress reports were required (King and Lenox, 2000).
[6] Sustainable Slopes requires participants to make a public commitment to the program's Environmental Charter and to submit annual progress reports (Rivera and de Leon, 2004)
[7] The US EPA's WasteWise program asks companies to publicly commit to a waste reduction goal and submit annual updates on their progress toward their goals (Delmas and Keller, 2005).

voluntary programs because the mere act of joining can attract additional attention from stakeholders attempting to assess the athenticity of the company's commitment. Both stakeholders and truly-committed program participants have an incentive to expose companies they believe are free-riding. Stakeholders wish to reward only those companies that are truly committed, because sincere commitments to voluntary programs can lead companies to integrate the program's principles into their decision making processes and everyday tasks (Edelman, Erlanger, and Lande, 1993; Dobbin and Sutton, 1998; Short, 2006). In contrast, companies making merely symbolic commitments will not embed their principles and will tend to not alter their decision processes or daily tasks (Edelman, 1992; Krawiec, 2003). Instances of stakeholders uncovering free-riding in a commit-and-report program will erode the trust they bestow on participants committing to the program. Truly committed companies have an incentive to keep free riders from becoming participants because they want the rewards from stakeholders to be as large as possible, undiluted by concerns of free riding.

In reality it is difficult to completely eliminate free-riding in commit-and-report programs. Stakeholders can make free-riding more difficult by attempting to create real costs to likely free riders by publicly exposing and criticizing them. The following theory introduces several factors that help stakeholders identify probable free riders, thereby increasing the costs or diminishing the benefits of free rider participants and reduce the incentives to join a commit-and-report program with the intent to free ride. We hypothesize that an organization's existing reporting capabilities and past misleading disclosure will disproportionately affect the costs of participation to potential free riders. We also examine factors that enhance the impact of stakeholder scrutiny and further prevent likely free riders from participating. We hypothesize that the participant's visibility to stakeholders, the extent to which stakeholders are well informed and their expectations for corporate transparency will influence the extent to which potential free-riders will expect to benefit from joining.

Complementary capabilities: reporting experience

Capabilities such as employee training, innovation routines, continuous improvement philosophies, and managing stakeholder pressures enable companies to more easily make social and environmental improvements in their operations (Hart, 1995; Henriques and Sadorsky, 1999; Klassen and Whybark, 1999; Pil and Rothenberg, 2003; Sarkis, Gonzalez-Torre, and Adenso-Diaz, 2010). Companies that possess capabilities like these prior to joining a voluntary program will be better poised to meet the program's goals and requirements (Simpson, Power, and Klassen, 2012). In contrast, companies that joined voluntary programs despite not possessing capabilities complementary to those needed to meet the program's goals will find meeting the membership requirements more costly (Darnall and Edwards, 2006) and are more likely to have joined symbolically (Simpson, Power, and Klassen, 2012).

To join a commit-and-report program, companies generally make two public commitments: (1) to implement measures to adhere to the principles, and (2) to submit progress reports that describe their implementation progress. Both free riders and those that are truly committed are equally capable of making a public commitment to promise to adhere to the program's principles. However, membership will be less costly for companies that already possess the reporting capabilities needed to prepare a comprehensive progress report.

The demand for corporate transparency, particularly for disclosure on social and environmental risks, has been steadily increasing over the past several decades (Buzby and Falk, 1978; Epstein and Freedman, 1994; O'Dwyer, Unerman, and Hession, 2003). Companies that fail to meet their stakeholders' expectations for disclosure risk activist campaigns (Tilt, 1994) and negative reactions from investors including declining share prices (Blacconiere and Patten, 1994). Failing to submit a comprehensive progress report can be perceived as an indication that the participant is not capable of or willing to meet the program's requirements and therefore joined symbolically. Thus, this behavior risks being criticized by the program administrator, activists monitoring the program, and the company's stakeholders.

Truly committed companies can seek to ward off these free-riders and protect the program's reputation by providing comprehensive progress reports that are difficult for free riders to mimic. Preparing such reports requires processes such as identifying the company's impacts on indicators relevant to the program's principles and quantifying those impacts in a manner that is useful to stakeholders.[8] Companies vary in the extent to which they already possess these processes at the time they begin participating in a commit-and-report program. Companies with reporting experience are more likely to already possess the infrastructure such as tracking software to gather new information related to the program, which facilitates their preparing a related report (Delmas and Keller, 2005) that is comprehensive enough to meet stakeholders' expectations. Such companies likely require lower incremental investment to gather data needed to generate a comprehensive progress report, compared to companies that had not already engaged in such reporting. This lower incremental cost makes it less costly for them to provide a comprehensively progress report, which avoids stakeholder criticism. This makes it more likely that companies with reporting experience related to a commit-and-report program's principles will participate.

H1: The more comprehensive a company's past disclosure related to a commit-and-report program's principles, the more likely it will be to participate.

[8] According to the G4 Sustainability Reporting Guidelines. Source: https://www.globalreporting.org/reporting/g4/Pages/default.aspx (last accessed August, 2013).

Misleading disclosure

Stakeholders attempting to assess the authenticity of a company's commitment to a voluntary program can look for any past misleading behavior, which would cast doubt on the company's commitment. Companies can mislead stakeholders in a wide variety of ways. Some companies try to mislead investors with intentionally confusing language. Famed investor Warren Buffet has noted that companies can explain complex issues clearly if they want to be transparent with investors, noting "I won't invest in a company if I can't understand [an accounting] footnote, because I know they don't want me to understand it" (Warren Buffet Talks Business, 1995). In the wake of a scandal, some companies have changed their name to disassociate themselves from the scandal and start over to build awareness of a new brand rather than trying to salvage their old one. For example, WorldCom declared bankruptcy and then renamed itself MCI and an airplane crash led ValuJet to rename itself AirTran.

A subtler tactic companies can use to mislead stakeholders (either intentionally or out of naiveté) is to fully disclosing positive, but not negative information about their social and environmental impacts. This selective use of disclosure creates an overly positive image for the company (Lyon and Maxwell, 2011) and may be used to manipulate the public's perception of the company by deflecting attention away from the company's negative impacts on society (Lindblom, 1994). Companies are incentivized to share positive information about their social and environmental impacts, but fear disclosing negative information because of a potential backlash from stakeholders (Graham and Woods, 2006; Hess, 2007; Tietenberg, 1998). As a result few companies fully disclose equal amounts of "good news" and "bad news" (Deegan and Gordon, 1996). The discovery of a company's past attempts to mislead stakeholders via information disclosure can erode public trust and increase scrutiny by stakeholders including activists, government, and investors. For example, after whistleblowers revealed that U.S. Liquid had illegally dumped toxic wastes and falsified records, its stock dropped 58% and they were sued for having issued false and misleading reports (Repetto, 2004). This loss of trust can cause stakeholders to doubt future promises or commitments to a voluntary program's ideals.[9]

The additional scrutiny that attends participating in commit-and-report programs risks the discovery of past misleading disclosure that can result in criticism and reputational harm. Servaes and Tamayo (2013) find evidence that stakeholders are not receptive to companies that advertise their corporate social responsibility activities when the company's reputation is not in line with those actions. Here we argue that companies that disclosed misleading information will anticipate that stakeholders will

[9] The political arena serves as a different example of how past behavior can be used to determine the credibility of future commitments. Upon deciding to run for office an individual attracts the attention of both voters and the media. To discern how likely the candidate is to fulfill those promises the media attempts to dig up (and sub sequentially expose) any unethical actions a candidate may have taken in the past. These scandals may cause voters to doubt the character of the candidate and therefore the candidate's promises (Sutter, 2006).

not respond positively to their participation in a commit-and-report program because their reputation is not in line with the program's goals. This reduces the likelihood that their stakeholders will view the company's commitment to being committed to the program as being meaningful. Thus, stakeholders will be more likely to assume that companies that have disclosed information in a misleading manner joined with the intent to free ride. Companies with a history of misleading disclosure will therefore benefit less from joining commit-and-report programs.

H2: Prior misleading behavior reduces the likelihood of participating in commit-and-report programs.

Companies that are more prominently visible (e.g. larger and generally more recognizable) to their stakeholders are more likely to be heavily scrutinized by them. More visible companies are subject to strong demands from regulators (Pfeffer and Salancik, 1978; Scott, 1992) and public interest groups (Greening and Gray, 1994; Pfeffer and Salancik, 1978). More visible companies are also more likely to be targeted by activists (Eesley and Lenox, 2006). This intensive scrutiny is likely to reveal a great deal of information about these firms. In contrast, less visible companies are less likely to possess recognizable brands and their lower profile also means the public is less likely to have formed strong opinions (positive or negative) about them (Fombrun, Gardberg, and Barnett, 2000).

The additional stakeholder scrutiny cast on commit-and-report program participants is unlikely to reveal much new information on more visible companies due to their already being highly scrutinized. In contrast, the heightened scrutiny imposed on less visible companies when they participate in commit-and-report programs has the potential to reveal a great deal more information, given their low levels of prior scrutiny. Thus, participating in commit-and-report programs is more likely to change how stakeholders view less visible companies. When less visible companies have engaged in misleading disclosure in the past the discovery of those behaviors could come at considerable reputational harm. Thus, less visible companies should be less likely than highly visible companies to join commit-and-report programs when they have previously misled stakeholders.

H3: Prior misleading behavior reduces the likelihood of participating in commit-and-report programs, especially for less visible companies.

As noted above, one of the main complaints of commit-and-report programs is that some companies might seek to free ride on the reputations of truly committed participants by joining despite having no intention of fulfilling their commitment to the program (Ruggie, 2001). Such attempts are more likely in domains with less activist scrutiny, since activists often behave as corporate watchdogs, especially as the Internet has made it less costly for them to convey their charges (Tilt, Tilling, and

Davidson, 2006).[10] While activists may attack a company for the mismanagement of its social or environmental impacts anywhere geographically in the company's operations, they tend to focus their scrutiny on companies that are headquartered in their country. First, it is easier for activists to research companies that operate (and release information) in the local language. Second, activist revelations about domestic companies are more likely to attract news coverage, which magnifies their message and increases the likelihood of (a) swaying the behavior of targeted companies, and (b) convincing the activist's funders that their money is translating to effective activist action. Domains with many activists have been shown to deter overall participation in commit-and-report programs, implying that these companies wish to avoid the added scrutiny from activists that can accompany the decision to participate (Berliner and Prakash, 2012).

Activists have been particularly critical of misleading disclosure (Lyon and Maxwell, 2011) and cover-ups. They fear that stakeholders may decide to invest in or patronize a company based on the misleadingly positive perception that the company created for itself. Some of the most prominent stakeholder scrutiny triggered by companies joining commit-and-report programs is conducted by activists—including Greenpeace[11] and the Center for Research on Multinational Corporations (SOMO), which is behind the "Global Compact Critics" blog. Their exposés are meant to inform stakeholders of a company's duplicitous actions, and this leads stakeholders to believe the company joined with the intent to free ride. As a result, companies that have disclosed misleading information to their stakeholders in the past and are headquartered in a country with many activists will be especially unlikely to participate in a commit-and-report program. Such domains have more capacity to intensify scrutiny on participants which increases the likelihood of revealing these prior misdeeds.

H4: Prior misleading behavior reduces the likelihood of participating in commit-and-report programs, especially for companies headquartered in countries with many activists

Countries differ widely in stakeholder expectations for corporate transparency (Taylor Zarzeski, 1996). Companies headquartered in countries with strong norms of transparency face greater pressure to report more information on their financial, social, and environmental risks (Newson and Deegan, 2002;

[10] For example, Apple was aware of unsafe and inhumane working conditions at one of their key suppliers, Foxconn, for years before the media called attention to the supplier's working conditions (Parmigiani, Klassen, and Russo, 2011). After the cover-up was discovered many activists, such as SOMO, criticized Apple for its management of its supply chain. Source: http://somo.nl/news-en/unresolved-labour-issues-at-apple-suppliers-in-china (last accessed October, 2013). Coca Cola has been plagued with reputational damage associated in major global media outlets, stemming from allegations from a small activist group in New Delhi that its bottling plants in India have depleted and polluted groundwater, harming rural farmers.

[11] Greenpeace's website has 47 news articles (as of July, 2013) featuring Responsible Care and the duplicitous actions of its members. Source: http://www.greenpeace.org/international/en/System-templates/Search-results/?tab=1andall=responsible+care

Taylor Zarzeski, 1996). More stringent financial reporting standards reflect society's greater intolerance for opportunistic and misleading behavior of managers that could harm stakeholders (Gray, 1988). For example, countries with cultures that are less tolerant of misleading behaviors are more likely to have highly detailed legal requirements for financial disclosures (Gray, 1988).

A company's key stakeholders—including employees, regulators, and investors—tend to be concentrated in their headquarters country, and companies tend to be more responsive to the disclosure demands of their local stakeholders than of the global community (Newson and Deegan, 2002). As such, companies headquartered in countries with strong financial reporting standards are more likely to have stakeholders who are especially intolerant of misleading disclosure. Stakeholders with high standards are particularly likely to discount future commitments—such as those to commit-and-report programs—issued by companies whose past disclosure is revealed to be misleading. Thus, companies headquartered in countries with strong transparency norms face a greater threat of stakeholder scrutiny and backlash for prior misleading disclosure. Among companies contemplating free riding in commit-and-report programs, those headquartered in countries with strong financial reporting standards are likely to face higher penalties (in expectation) than companies based elsewhere.

H5: Prior misleading behavior reduces the likelihood of participating in commit-and-report programs, especially for companies headquartered in countries with stronger financial reporting standards

DATA AND MEASURES

Empirical context

We test our hypotheses in the empirical context of the Global Compact, launched by the United Nations in 2000 to elicit private sector support to remedy social and environmental concerns, especially in countries that lack strong civil and governmental institutions. This commit-&-report program requires companies to (1) make a public commitment to operate according the Compact's ten principles to protect human rights, worker rights, and the environment and to avoid corruption,[12] and (2) commit to

[12] The Global Compact's 10 principles on human rights, labor, environment, and anti-corruption are: (1) Businesses should support and respect the protection of internationally proclaimed human rights; and (2) make sure that they are not complicit in human rights abuses. (3) Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining; (4) the elimination of all forms of forced and compulsory labour; (5) the effective abolition of child labour; and (6) the elimination of discrimination in respect of employment and occupation. (7) Businesses should support a precautionary approach to environmental challenges; (8) undertake initiatives to promote greater environmental responsibility; and (9) encourage the development and diffusion of environmentally friendly technologies. (10) Businesses should work against corruption in all its forms, including extortion and bribery. (Source: http://www.unglobalcompact.org/AboutTheGC/TheTenPrinciples/index.html accessed June 2013)

periodically publicly report the company's actions and plans to implement the principles. Participants who fail to submit this "Communication on Progress" report are expelled from the Global Compact. All stakeholders can assess these reports because the Global Compact makes them publicly available on the website. Participants that fail to submit their annual progress report risk negative publicity because the list of expelled companies is also readily available on the Global Compact's website.

The Global Compact has intentionally minimized its participation requirements, which has allowed the program to grow rapidly (Berliner and Prakash, 2012) and it is now the largest voluntary corporate social responsibility program (Rasche, Waddock, and McIntosh, 2013), with nearly 7,700 business participants as of 2013. The program's considerable popularity has spurred much debate regarding its minimal requirements (Bigge, 2004; Deva, 2006; Nolan, 2005; Waddock and McIntosh, 2011). Some have argued that the minimal entry requirements have allowed companies that are not truly committed to the ten principles to join. Georg Kell, Executive Director of the Global Compact, admitted to believing that 85% of the participants in the Global Compact are not truly committed to making improvements.[13] Such companies have been charged with attempting to "bluewash," or enhance their reputation by associating with the prestige of the United Nations (and its blue flag) to distract stakeholders from their social and environmental shortcomings (CorpWatch, 2001; Deva, 2006; Williams, 2004). [14] Some activists, like those behind the "Global Compact Critics" and the "Global Compact Compliance" blogs,[15] have criticized participants they believe joined the Compact to free ride, or to bluewash.

The Global Compact has especially attracted companies headquartered in developing countries (Bremer, 2008), and companies from the United States have been more hesitant to join than those headquartered in Western Europe (Williams, 2004; Ziegler, 2007). The Global Compact has especially attracted participants from countries that invest heavily abroad (as a percentage of GDP) and from countries more supportive of the United Nations and its missions (Bennie, Bernhagen, and Mitchell, 2007; Berliner and Prakash, 2012). Berliner and Prakash (2012) found that countries with more NGOs attract fewer Global Compact participants, which they attribute to the negative perception many NGOs have of the program and its lax membership requirements in particular. Bennie, Bernhagen, and Mitchell (2007) found that companies from extractive industries are more likely to participate in the Global

[13] Source: http://www.marketplace.org/topics/sustainability/freakonomics-radio/good-corporate-citizenship-can-pay
[14] The activist group CorpWatch (2001) defines "bluewash" as referring to "corporations that wrap themselves in the blue flag of the United Nations in order to associate themselves with UN themes of human rights, labor rights and environmental protection. Even companies with practices antithetical to UN values…have attempted to bluewash their image. Bluewash is typically associated with attempts by 'corporate humanitarians' to weaken UN agreements, in favor of voluntary, toothless codes of conduct regarding social and environmental issues."
[15] Source: http://globalcompactcritics.blogspot.com/ (last accessed July, 2013)
Source: http://globalcompactcompliance.blogspot.com/ (last accessed July, 2013)

Compact than companies from other industries. Other studies found that larger and more profitable companies are more likely to participate in the Global Compact (Bennie, Bernhagen, and Mitchell, 2007), and that companies also decide to participate in response to peer pressure and to manage stakeholder pressures (Perez-Batres et al., 2012).

Sample

Our sample is defined by the coverage of Trucost Plc, the source of several key variables (described below). Trucost Plc produces and sells corporate environmental profiles—including corporate environmental performance and disclosure—to socially responsible investors. During the five-year period of 2004 through 2008 for which we purchased Trucost data, Trucost covered the 4,819 public companies that were listed on any of the following major stock indices: ASX 200, FTSE All Share (and subsets including FTSE 100 and FTSE 350), MSCI All World Developed (and subsets including MSCI Europe), MSCI Asia ex Japan, MSCI Emerging Markets, Nikkei 225, Russell 1000, S&P 500, or S&P Emerging Markets.

Because we predict Global Compact participation based on the comprehensiveness and potential misleading nature of companies' environmental disclosures, we exclude the 2,469 companies that were in service industries, where environmental reporting is much less of an issue.[16] We also exclude the 116 remaining companies that had already begun participating in the Global Compact prior to our sample period (before 2004) because they were no longer at risk of deciding whether to participate. Linking the remaining 2,234 companies to our other data sources—the United Nations, Worldscope, the International Union for Conservation of Nature, the World Economic Forum, the Yearbook of International Organizations, and the USDA Economic Research Service—results in an estimation sample of 2,019 companies headquartered in 41 countries, including 109 that began participating in the Global Compact during our sample period.

Tables 1 and 2 report the country and industry distributions of our estimation sample.

[Insert Tables 1 & 2 here]

Dependent variable

***Commit-and-report participation*.** Our dependent variable, *Global Compact participant,* is a binary variable coded "1" starting the year a company initially participated in the Global Compact and "0"

[16]Specifically, we excluded the following ICB Super Sectors: banks, financial services, healthcare, insurance, investment instruments, media, real estate, retail, telecommunications, and travel and leisure; and the following ICB Sub Sectors: business support services, business training & employment agencies, delivery services, financial administration, marine transportation, railroads, transportation services, trucking, waste & disposal services, software, computer services, and internet.

otherwise. We obtained a comprehensive list of all companies that participated in the Global Compact, including the date they began participating, from the United Nations Global Compact website.

Independent variables

Comprehensiveness of prior disclosures. We created *reporting comprehensiveness* to measure the comprehensiveness of a company's prior public disclosures that were related to the Global Compact principles. We found no data sources assessing a large global sample of companies' reporting comprehensiveness across all four of the Global Compact's four focal topics (human rights, labor, environment, and anti-corruption) and so we focus on the comprehensiveness of each company's environmental reporting.

We measure *reporting comprehensiveness* as the proportion of a company's relevant environmental indicators for which the company disclosed global quantitative figures. Trucost identified the subset of environmental indicators from a comprehensive list (e.g., SO_2 emissions, water consumption) that it deemed relevant to each of 464 industries based on lifecycle assessment and economic input-output tables. Trucost then identified the subset of these 464 industries from which each company derived revenues each year, based on the FactSet Fundamentals database, financial disclosures, and company feedback. The total number of distinct environmental indicators deemed relevant to any of a company's industries is the denominator of *reporting comprehensiveness* ratio. Trucost calculated the numerator by identifying the subset of these indicators for which the company had publicly disclosed worldwide quantitative figures (e.g., worldwide carbon dioxide emissions) in sources such as its annual report, sustainability report, or company website.

Misleading disclosure. We measure the extent to which a company's environmental disclosures were potentially misleading as *greenwash magnitude*, calculated for each company-year by subtracting Trucost's "weighted disclosure ratio" from its "absolute disclosure ratio" described above (Marquis and Toffel, 2013).[17] Greenwash can be characterized as the selective disclosure of information regarding the company's environmental impacts such that stakeholders are led to believe that the company is 'greener' than it actually is (Delmas and Burbano, 2011; Lyon and Maxwell, 2011; Ramus and Montiel, 2005). The weighted disclosure ratio is similar to the absolute disclosure ratio except that it also takes into account the relative environmental damage associated with the disclosed indicators. Trucost uses economic input-output data and lifecycle assessment data to estimate the natural resources consumed and pollution emitted per dollar of revenue for each of 464 industries. Each resource and pollution value is multiplied by its respective environmental damage cost factor, such as $31 per ton of greenhouse gas emitted, which Trucost obtains from the environmental economics literature (Trucost Plc, 2008). This enables Trucost to

[17] Marquis and Toffel (2013) provide a detailed description including examples.

estimate the environmental damage cost per revenue dollar in each industry. Trucost multiplies these factors to each company's annual revenues, which it allocates to the relevant subset of the 464 industries (typically fewer than 12) based on the FactSet Fundamentals database, financial disclosures, and company feedback. The sum of these products is the denominator of the weighted disclosure ratio. We also refer to this result as a company's *environmental damage.*

The numerator of the weighted disclosure ratio is the simply subtotal of these products (environmental indicator quantity times its damage cost factor) for just those indicators that the company publicly disclosed. Thus, a company that disclosed indicators associated with less damage (quantity times damage cost factors) but fails to disclose more damaging indicators will have an absolute disclosure ratio larger than a weighted disclosure ratio, and thus a positive *greenwash magnitude*. In a hypothetical example, suppose a company's revenues and industry mix indicate it has two relevant indicators and the following estimated *greenwash magnitude* allows us to measure the extent to which the environmental information the company discloses is representative of its environmental impacts, since disclosing many minor indicators (higher *greenwash magnitude*) can yield a false impression of transparency. Selective disclosure of low impact damages can be used to misdirect the attention of stakeholders, which can be considered a form of greenwashing (Marquis and Toffel, 2013).

Moderators

***Company visibility*.** To proxy a company's visibility to stakeholders we rely on company size measured as annual *sales*, a common approach used by many others (e.g., Patten, 2002; Hackston and Milne, 1996; Cho and Patten, 2007; Reid and Toffel, 2009; Elsayed and Hoque, 2010).[18] We gathered revenues data from Worldscope in millions of US dollars and standardize the data by country.[19] Standardizing by each country takes into account that a $500 million dollar a year company in Malaysia is large relative to its peers and will attract more scrutiny from its stakeholders than a company with the same amount of sales located in the United States.

Activist density. We measure the density of activists in each company's headquarters country as the number of environmental non-governmental organizations *(environmental NGOs)* per country-year, which we obtained from the International Union for Conservation of Nature (IUCN).[20]. Environmental

[18] Some studies use sales to proxy for visibility, while also including employees to control for organizational size. Because we are missing employee data for approximately 300 firm-years we only use sales. However, our hypothesized relationships do not change substantially when we do include employees.
[19] The average value of sales for each country in our sample is subtracted and then that value is divided by the standard deviation of sales for each country.
[20] Current IUCN membership data is located online here: http://www.iucn.org/about/union/members/who_members/members_database/. We contacted the IUCN staff to obtain historical counts of IUCN members that are either internationally or nationally focused NGOs.

activists are particularly keen to catch and criticize companies that have engaged in greenwashing behavior (Lyon and Maxwell, 2011). This is why we use the number of environmentally focused NGOs.

Financial reporting standards. We measure the *strength of financial reporting standards* for companies' headquartered country based on data from annual World Economic Forum's Global Competitiveness surveys.[21] In these surveys, business leaders were asked "In your country, how would you assess financial auditing and reporting standards regarding company financial performance?" Responses ranged from 1 "extremely weak" to 7 "extremely strong."

Control variables

We measure the extent to which a company's activities results in *environmental damage* using estimated values obtained from Trucost, described above. In our models, we use the log to reduce skew. We also obtained data from Trucost on each company's primary industry using the 19 Industry Classification Benchmark (ICB) supersector categorizations. We created dummy variables for each industry.

For each company, we created *industry participation* as the percentage of all other companies in the sample that shared its headquarters country and industry that were already participating in the Global Compact by the prior year.

We created five additional annual variables associated each company's headquarters country. We measure the support for intergovernmental organizations as the annual *number of intergovernmental organizations* (*IGOs)* in which the country participates, based on data from the annual Yearbook of International Organizations.[22] We also obtained from this source the annual number of nongovernmental organizations (NGOs) operating in the country, from which we subtract the number of *environmental NGOs* (from the IUCN, described above) to create *other NGOs*. *Other NGOs* serves to proxy for the level of scrutiny a company faces in its headquarters country from non-governmental organizations besides IUNC-member environmental organizations. We measure the economic development in each company's headquarters country as the annual *GDP per capita*, which we obtained from the USDA Economic Research Service[23] and log in our models to reduce skew. We also gather data *population* from the USDA Economic Research Service.

Summary statistics and correlations are reported in Table 3.

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[21] We used the 2003 through 2007 Global Competitiveness surveys because we lag all independent variables one year. These surveys are available at http://www.weforum.org/issues/global-competitiveness (last accessed May 2013).

[22] The Yearbook of International Organizations is available at http://www.uia.org/yearbook (last accessed August 2013). We used the 2003 through 2007 editions because we lag all independent and control variables one year.

[23] The USDA Economic Research Service's GDP per capita metric is available at http://www.ers.usda.gov/data-products/international-macroeconomic-data-set.aspx (last accessed May 2013).

[Insert Table 3 about here]

EMPIRICAL MODEL AND RESULTS

We estimate the following model:

$$y_{i,j,c,t} = \mathrm{F}(\beta_1 \gamma_{i,c,t-1} + \beta_2 X_{i,j,c,t-1} + \lambda_i + \tau_t + \mu_{i,\mathrm{j},\mathrm{c},t})$$

where $y_{i,j,c,t}$ refers to whether company *i* in industry *j* headquartered in country *c* had participated in the Global Compact in year *t (Global Compact participation).* The function *F(·)*refers to the logistic function, and the term $\gamma_{i,c,t-1}$ refers to our key explanatory variables, *reporting comprehensiveness*, *greenwash magnitude*, *sales*, *environmental NGOs*, and *strength of financial reporting standards*. [24]

The term $X_{i,j,c,t-1}$ refers to several factors we control for that might also affect a company's decision to participate in the Global Compact. We control for *environmental damage* because companies that pollute more may face more pressure to appease stakeholders and therefore may be more likely to join voluntary programs (Arora and Cason, 1996; King and Lenox, 2000; Rivera and de Leon, 2004). We include *industry participation* to account for the possibility that peer pressure (mimetic institutional forces) might influence a company's decision to participate in the Global Compact (Bennie, Bernhagen, and Mitchell, 2007; Perez-Batres, Miller, and Pisani, 2011).

$X_{i,j,c,t-1}$ also includes several country-level factors that might influence a company's decision to participate in the Global Compact. We control for the annual *number of IGOs* in each company's headquarters country because countries that are more embedded in IGO networks have stronger support for the norms embodied in the Global Compact, which encourages companies in those countries to become participants (Berliner and Prakash, 2012). In contrast, because NGOs have targeted criticism on Global Compact participants, potential participants headquartered in countries with more NGOs have more key stakeholders that oppose the Global Compact, which deters participation rates (Berliner and Prakash, 2012). Thus, we control for *Non-Environmental NGOs*: NGOs that were not included in our *environmental NGOs* tally from the IUCN. Because more populated countries will have more IGOs and NGOs, but not necessarily more scrutiny per company, we control for a country's *population.* We also control for annual *GDP per capita* in the firm's headquarters country because poorer countries tend to struggle more with the issues detailed in the Global Compact's principles. This may make it more difficult for companies from poorer countries to abide by the program's principles (Berliner and Prakash,

[24] As a robustness test we run a hierarchical model (also known as a mixed logistic regression coded as xtmelogit in Stata) with companies nested within countries. This yields similar results as our pooled logistic model (in terms of effect sizes and significance levels) with the exception that the coefficient on the interaction between greenwash and the strength of reporting standards (H5) is significant at the 5% level in the pooled logistic regression, but only significant at the 10% level in the hierarchical model.

2012), but it also may make membership more valuable because these participants are able to more easily distinguish themselves from their peers.

The term λ_i represents industry dummies (ICB supersector categories) to control for time-invariant industry differences in the tendency to participate in the Global Compact (Bennie, Bernhagen, and Mitchell, 2007). We also include year dummies (τ_t) to control for overall temporal factors that might affect participation, such as the Global Compact becoming more recognizable over time.

We estimate our models using logistic regression. Because our model predicts a company's decision to initially participate in the Global Compact, we omit from the sample participating companies' observations in the years after they began participating because they are no longer at risk of initially participating. We lag all independent variables, moderators, and control variables by one year to avoid reverse causality concerns. To ease interpretation, all interacted variables are either mean centered or standardized. Because several of our variables are measured at the country-level, we report heteroskedasticity-robust standard errors clustered by country.[25]

Because *greenwash magnitude* is constructed in part based on *reporting comprehensiveness*, we estimate the effects of these variables in two separate models that are identical except Model 1 includes *reporting comprehensiveness* whereas Model 2 includes *greenwash magnitude*. Results are reported in Table 4. The coefficients and standard errors do not differ substantially between Models 1 and 2. Focusing first on the control variables, we find that companies with more *environmental damage* are significantly more likely to participate in the Global Compact, which is consistent with other studies of voluntary program participation. We also find that companies headquartered in countries with more IGOs are more likely to participate in the Global Compact, confirming the findings of Berliner and Prakash's (2012) country-level analysis. We find no evidence that *other NGOs,industry participation, GDP per capita or population* influences companies' participation decision. [26]

[Insert Table 4 about here]

Turning to our hypothesized variables, Model 1 indicates that companies exhibiting greater *reporting comprehensiveness* are more likely to participate in the Global Compact ($\beta = 1.82$; $p<0.01$), which supports H1. The average marginal effect (AME) indicates that a 10% increase in *reporting comprehensiveness* is associated with a 0.30 percentage point increase in the probability of becoming a participant,[27] which represents a 17% increase from the sample mean probability of 1.73% to 2.03%.

[25] As a robustness test we drop observations from countries with fewer than 15 firm-years resulting in a sample of 2,000 companies in 35 countries to create a more balanced sample. The hypothesized results do not change substantially.
[26] When we exclude *environmental NGOs* and include all NGOs as a single metric, similar to Berliner & Prakash (2012), we find a negative and significant coefficient, which is also consistent with their study.
[27] 0.28 is calculated as 10% times the AME of 2.80.

Companies exhibiting more prior misleading behavior as measured by *greenwash magnitude* are significantly less likely to participate in the Global Compact (Model 2 $\beta = -1.22$; $p<0.01$), lending support for H2. The average marginal effect indicates that a one standard deviation increase of *greenwash magnitude* corresponds to a 0.54 percentage point decrease in the likelihood of participating in the Global Compact,[28] which represents a 31% decrease in the probability of participation from the 1.73% baseline probability to 1.19%.

The significant negative coefficient on *greenwash magnitude* in Model 3 ($\beta = -1.30$; $p<0.01$) suggests that overall greenwashing deters joining. The positive coefficient on the interaction suggests that this deterrent effect is substantially stronger for less visible companies. We test H3 by including in Model 3 an interaction between *greenwash magnitude* and *sales*. The positive significant coefficient on this interaction term ($\beta = 0.31$; $p<0.05$) yields support for H3, which predicts that greenwashing is an especially strong deterrent to Global Compact participation for less visible companies. Figure 1 depicts the average predicted probability of participating in the Global Compact along varying levels of *greenwash magnitude*. The solid line represents the average predicted probability of participation of low visibility companies: those with annual sales at the 5th percentile in their country. The dashed line represents the average predicted probability of participation of high visibility companies: those with annual sales at the 95th percentile in their country. Recalling the significant negative overall relationship between *greenwash magnitude* and the probability of participation indicated in Models 2 and 3, it is not surprising to see a downward sloping relationship for both high- and low-visibility companies. The significant interaction term in Model 3 indicates that the negative relationship is more pronounced (steeper) for less visible companies than for more visible companies.

We test H4 by including an interaction between *greenwash magnitude* and *environmental NGOs* in Model 4. While the negative coefficient on this interaction term ($\beta = -0.26$) is consistent with our hypothesis that more greenwashing is an especially strong deterrent from participating in the Global Compact in countries with many environmental NGOs, the coefficient is not statistically significant.

The interaction between *greenwash magnitude* and *strength of financial reporting standards* in Model 5 is significant negative coefficient on this interaction term ($\beta = -0.51$; $p<0.05$) indicates that companies engaging in more greenwash are especially less likely to participate in the Global Compact in countries with stronger reporting standards, which supports H5. The dashed line in Figure 2 represents the average predicted probability of participation of companies headquartered in countries with very strong financial reporting standards (the 95th percentile in our sample, or 6.62). The negative slope of this line indicates that for these companies, there is a negative relationship between greenwashing and the probability of participating in the Global Compact. The rather flat solid line indicates that for companies

[28] 0.54 is calculated as one standard deviation (0.27) times the AME of -1.99.

headquartered in countries with very weak financial reporting standards (the 5th percentile, or 4.73), there appears to be no relationship between greenwashing and the probability of participating. The significant negative coefficient indicates that relationship between greenwashing is a more significant deterrent to participating among companies headquartered in countries with stronger reporting standards than among those headquartered in countries with weaker standards.

DISCUSSION

While companies face increasing expectations of being accountable for the labor practices and environmental performance of their suppliers, managing these difficult-to-observe attributes presents serious challenges. Some companies have deployed proprietary supplier codes of conducts and teams of auditors to assess conformity (e.g., Locke, Qin, and Brause, 2007), whereas others have sought to rely on suppliers that joined voluntary programs to help them manage these issues (e.g., King, Lenox, and Terlaak, 2005). We examine a class of voluntary programs, commit-and-report programs, which require companies to make a public commitment to goals toward improving their social and environmental impacts and to being transparent and forthcoming about those impacts. The hope of the program administrators is that transparency will help empower stakeholders to assess the authenticity of the company's commitment to the program (Rasche, 2009) and that scrutiny will lead to improvements (e.g., Jin and Leslie, 2003).

We find that on average companies that join commit-and-report programs are more capable of meeting the program's reporting requirement implying they were less likely to have joined symbolically. We also find that companies are less likely to join if they disclosed information in a misleading manner and conversely that companies that are truly committed to being transparent are more likely to join. Despite finding evidence that probable free riders are discouraged from joining on average, we know that some free riders do still join. We examine firm-level and country-level institutional factors that enhance the impact of stakeholder scrutiny, thereby further discouraging free riders from joining the program. We find that companies that disclosed environmental information in a potentially misleading manner are especially deterred from joining when they were less visible to stakeholders prior to joining and when they are headquartered in countries with strong reporting standards.

Theoretical contributions

Our findings contribute to research on how buyers attempt to manage supply chain risks associated with poor working conditions and environmental impacts, and organizational decisions to adopt voluntary programs. A large literature has explored the practice of buyers mandating their suppliers use certifications to manage their working conditions and environmental performance (e.g., Arimura, Darnall, Katayama, 2011; Corbett and Kirsch, 2001; Delmas and Montiel, 2009; O'Rourke, 2003).

Several papers have also explored the use of proprietary supplier codes of conducts (e.g., Jiang, 2009a; Locke et al., 2007; Toffel et al., 2013). To our knowledge this is the first analysis of the use of voluntary programs as a signal to potential buyers of suppliers' commitment to transparency.

Companies may not want to require their supply chain to adhere to a specific certification, like ISO 14001, because these can be costly and suppliers may refuse to comply (Darnall and Edwards, 2006). The overall effectiveness of supplier codes of conducts has also been called into question (e.g., O'Rourke, 2003). Previous research has concluded that voluntary programs with lax requirements do not serve as an effective signal of a company's superior environmental performance (e.g., Lenox and Nash, 2003) or their commitment to making future environmental improvements (e.g., King and Lenox, 2000). Consistent with previous research we find that companies with larger environmental impacts are more likely to become participants of commit-and-report programs. However, we find that on average companies that are more capable of meeting the program's requirements and are committed to being forthcoming about their environmental impacts are more likely to become participants. Companies looking for reliable, low risk suppliers want to source from transparent companies for two reasons: those that are transparent are more likely to make improvements (e.g. Jin and Leslie, 2003), which lowers the risk of reputational and financial harm to the buyers, and transparency makes it possible for companies to assess the risks of partnering with that supplier (Jira and Toffel, 2013). Thus, companies can on average use participation in commit-and-report programs as a useful screen of potential suppliers' commitment to transparency.

In reality it is difficult to completely eliminate free-riding in voluntary programs that lack sanctions. Previous research has demonstrated that effective sanctions can take many forms: sanctions from program administrators (Lenox and Nash, 2003), additional audits from buyers (Jiang, 2009b), or from external regulators (Short and Toffel, 2010). We add to this discussion by demonstrating that programs that publicly announced its members and require follow up reports empower stakeholders to "lift the smoke screen" by acting as an external monitoring system. Contrary to previous research that theorized that stakeholder scrutiny encourages companies to take symbolic actions (Sutton and Galunic, 1995) such as joining a voluntary program with the intent to free ride, we theorize and find empirical evidence to suggest that stakeholder pressures may prevent companies from taking such symbolic actions.

Insights for managers and program designers

Our research offers insights to managers of both buyers and suppliers. The results of our study suggest that on average participation in commit-and-report programs provides a useful signal of the company's commitment to being transparent. This is useful to managers of buying companies looking for ways to identify, or screen, transparent suppliers. It is also useful to managers of suppliers attempting to decide which voluntary programs to join. Before deciding which voluntary program to join, managers of

suppliers should consider the costs and benefits of each of their options (Potoski and Prakash, 2002). While joining a program with strict requirements can be costly it is a surer way of sending a clear signal of the company's commitment to properly managing their social or environmental impacts. However, joining a commit-and-report program may be less costly, but it will only send a clear signal of the company's commitment to the program's transparency goals when stakeholder scrutiny is strong enough to prevent free riders.

We find that companies suspected of free-riding are especially deterred from joining commit-and-report programs when they have stakeholders with high expectations for strong financial reports. This implies that likely free riders are not as deterred from joining commit-and-report programs when they are headquartered in countries with weak reporting standards, because stakeholders are not as critical of these companies becoming participants. Thus, suppliers headquartered in countries with weak reporting standards will not be able to send a credible signal even if they are actually committed to the program. Managers of suppliers headquartered in these countries should consider joining a voluntary program with more stringent requirements to send a better signal of their superior working conditions or environmental performance.

Our research also offers insights for designers of voluntary programs. Program designers face a tradeoff in deciding how stringent to set their entry requirements: too stringent risks yielding few participants, but too lax risks free riders undermining the credibility of the program. Commit-and-report programs attempt to strike a balance between these two extremes by requiring public commitments and progress reports, which allows stakeholders to scrutinize the authenticity of the participant's commitment. However, these administrative sanctions only prevent free riders from joining the program when stakeholders scrutinize the authenticity of the participants' commitments. In countries where stakeholders do not scrutinize participants as carefully (i.e. countries with weak financial reporting requirements) programs may need to engage with those participants more fully to prevent free ridership.

Limitations and future research

There are some limitations to our work. Due to data constraints this study is limited to analyzing only the decisions of companies to join the Global Compact, a popular commit-and-report program. Commit-and-report programs all share a goal toward transparency and they all require progress reports. However, they do differ in terms of their target participants (some programs like Responsible Care are limited to a specific industry), the focus of the program's goals (working conditions versus environmental impacts) and the sanctions levied on firms failing to meet the progress report requirement. Of the programs falling into our commit-and-report classification the Global Compact has one of the strictest administrative sanctions on firms failing to provide comprehensive progress reports: they publicly

disclose reports and they expel companies that failed to submit their reports. Some commit-and-report programs, like the NACD's Responsible Distribution Process, do expel participants for failing to submit reports, and some programs, like Responsible Care, make those reports available internally to allow for peer pressure (Lenox and Nash, 2003). We cannot test directly whether the Global Compact serves as a good signal of transparency because like all commit-and-report programs it requires a follow up report, or because it publicly discloses those reports to external stakeholders.

This study is also limited to analyzing only the decisions of publicly traded companies to join the Global Compact. Publicly traded companies only account for approximately 12 percent of the Global Compact business participants.[29] Privately owned companies are subject to less scrutiny from stakeholders generally, so it may not be possible for commit-and-report programs to be a credible signal under any circumstances given the lack of external monitoring. We are also limited to data on a company's environmental disclosures. While environmental disclosure has garnered far more attention from investors and other stakeholders than disclosure on social issues, such as working conditions, it is only one factor that companies should consider when attempting to find suppliers that are properly managing environmental impacts and labor conditions.

Our work expands the possibilities for future research on voluntary programs with weak program designs. Previous studies had presumed that these programs were ineffective because they could not prevent free riders from joining. Our analysis of the circumstances that prevent companies that are not forthcoming about their impacts could provide insights as to when program designers can expect participants to make future improvements and when they cannot. Future research could also examine whether companies are more likely to join a program with a stricter program design, like ISO certification, when the risk of being criticized for joining a program with weak requirements are high and when joining a program with a weak design will likely fail to provide a clear signal.

Conclusion

In this study we find that commit-and-report programs are capable of providing a signal of participant's commitment to being transparent and forthcoming about their impacts as they relate to the program's ideals. We also highlight the importance of stakeholder scrutiny in preventing free riders from participating in commit-and-report programs, thereby allowing truly committed participants to send a clearer signal of their commitment toward meeting the program's goals. We theorized and empirically demonstrated that companies that had more reporting experience and disclosed information such that it did not mislead stakeholders about their true impacts were more likely to join. We also showed that the additional scrutiny companies attract upon joining a commit-and-report program acts as a stronger

[29] Source: http://www.unglobalcompact.org/participants/search. Last accessed September, 2013.

deterrent for companies that disclosed misleading information that were less visible to their stakeholders prior to joining. Finally, we showed that companies that disclosed misleading information are also especially deterred from joining when stakeholders have high expectations for financial, social and environmental disclosures and so are more likely to criticize companies failing to meet those expectations. Overall, our research demonstrates the importance of considering the usefulness of transparency requirements in voluntary programs and the role of stakeholder scrutiny when assessing the viability of using a voluntary program with lax requirements as a signal of a company's commitment to the program's ideals.

REFERENCES

Albuquerque, P., Bronnenberg, B. J., and Corbett, C. J. 2007. A spatiotemporal analysis of the global diffusion of ISO 9000 and ISO 14000 certification. *Management science*, 53(3): 451-468.

Arimura, T. H., Darnall, N., and Katayama, H. 2011. Is ISO 14001 a gateway to more advanced voluntary action? The case of green supply chain management. *Journal of Environmental Economics and Management*, 61(2): 170-182.

Arora, S., and Cason, T. N. 1996. Why do firms volunteer to exceed environmental regulations? Understanding participation in EPA's 33/50 program. *Land economics* 72(4): 413-432.

Arora, S., and Cason, T. N. 1999. Do community characteristics influence environmental outcomes? Evidence from the toxics release inventory. *Southern Economic Journal*, 65(4): 691-716.

Bansal, P. 2005. Evolving sustainably: a longitudinal study of corporate sustainable development. *Strategic management journal*, 26(3): 197-218.

Bansal, P., and Roth, K. 2000. Why companies go green: a model of ecological responsiveness. *Academy of management journal*, 43(4): 717-736.

Bennie, L., Bernhagen, P., and Mitchell, N. J. 2007. The logic of transnational action: The good corporation and the Global Compact. *Political Studies*, 55(4): 733-753.

Berliner, D., and Prakash, A. 2012. From norms to programs: The United Nations Global Compact and global governance. *Regulation and Governance*, 6(2): 149-166.

Bigge, D. M. 2004. Bring on the bluewash: A social constructivist argument against using Nike v. Kasky to attack the UN Global Compact. *International Legal Perspectives*, 14(6): 6-21.

Blacconiere, W. G., and Patten, D. M. 1994. Environmental disclosures, regulatory costs, and changes in firm value. *Journal of accounting and economics*, 18(3): 357-377.

Blackman, A., Afsah, S., and Ratunanda, D. 2004. How do public disclosure pollution control programs work? Evidence from Indonesia. *Human Ecology Review*, 11(3): 235-246.

Borkey, P., and Leveque, F. 1998. *Voluntary Approaches for Environmental Protection in the European Union*. OECD, ENV/EPOC/GEEI(98)29/FINAL. Paris: OECD.

Bremer, J. A. 2008. How global is the Global Compact? *Business Ethics: A European Review*, 17(3): 227-244.

Buzby, S. L., and Falk, H. 1978. A survey of the interest in social responsibility information by mutual funds. *Accounting, Organizations and Society*, 3(3): 191-201.

Carmin, J., Darnall, N., and Mil-Homens, J. 2003. Stakeholder involvement in the design of US voluntary environmental programs: does sponsorship matter? *Policy Studies Journal*, 31(4): 527-543.

Carter, C. R. 2005. Purchasing social responsibility and firm performance: the key mediating roles of organizational learning and supplier performance. *International Journal of Physical Distribution and Logistics Management*, 35(3): 177-194.

Cho, C. H., and Patten, D. M. 2007. The role of environmental disclosures as tools of legitimacy: A research note. *Accounting, Organizations and Society*, 32(7): 639-647.

Christmann, P., and Taylor, G. 2001. Globalization and the environment: Determinants of firm self-regulation in China. *Journal of International Business Studies,* 32(3): 439-458.
Christmann, P., and Taylor, G. 2002. Globalization and the environment: Strategies for international voluntary environmental initiatives. *Academy of Management Executive,* 16(3): 121-135.
Corbett, C. J., and Kirsch, D. A. 2001. International diffusion of ISO 14000 certification. *Production and Operations Management,* 10(3): 327-342.
Corbett, C. J., and Klassen, R. D. 2006. Extending the horizons: environmental excellence as key to improving operations. *Manufacturing and Service Operations Management,* 8(1): 5-22.
CorpWatch. 2001. Greenwash Fact Sheet, March 22. http://www.corpwatch.org/article.php?id=242
Darnall, N. 2006. Why firms mandate ISO 14001 certification. *Business and Society,* 45(3): 354-381.
Darnall, N., and Carmin, J. 2005. Greener and cleaner? The signaling accuracy of US voluntary environmental programs. *Policy Sciences* 38(2-3): 71-90.
Darnall, N., and Edwards, D. 2006. Predicting the cost of environmental management system adoption: the role of capabilities, resources and ownership structure. *Strategic Management Journal,* 27(4): 301-320.
Deegan, C., and Gordon, B. 1996. A study of the environmental disclosure practices of Australian corporations. *Accounting and Business Research,* 26(3): 187-199.
Delmas, M. A., and Burbano, V. C. 2011. The drivers of greenwashing. *California Management Review,* 54(1): 64-87.
Delmas, M., and Keller, A. 2005. Free riding in voluntary environmental programs: The case of the US EPA WasteWise program. *Policy Sciences,* 38(2-3): 91-106.
Delmas, M., and Montiel, I. 2009. Greening the supply chain: when is customer pressure effective?. *Journal of Economics and Management Strategy*, 18(1): 171-201.
Deva, S. 2006. Global Compact: A Critique of the UN's public-private partnership for promoting corporate citizenship. *Syracuse Journal of International Law and Commerce,* 34(1): 107-152
Dobbin, F., and Sutton, J. R. 1998. The strength of a weak state: The rights revolution and the rise of human resources management divisions. *American Journal of Sociology* 104(2): 441-476.
Doshi, A. R., Dowell, G. W., and Toffel, M. W. 2013. How firms respond to mandatory information disclosure. *Strategic Management Journal,* 34(10): 1209-1231.
Dowell, G., Hart, S., and Yeung, B. 2000. Do corporate global environmental standards create or destroy market value? *Management Science,* 46(8): 1059-1074.
Edelman, L. B. 1992. Legal ambiguity and symbolic structures: Organizational mediation of civil rights law. *American Journal of Sociology*, 97(6): 1531-1576.
Edelman, L. B., Erlanger, H. S., and Lande, J. 1993. Internal dispute resolution: The transformation of civil rights in the workplace. *Law and Society Review* 27(3): 497-534.
Eesley, C., and Lenox, M. J. 2006. Firm responses to secondary stakeholder action. *Strategic Management Journal* 27(8): 765-781.
Elsayed, M. O., and Hoque, Z. 2010. Perceived international environmental factors and corporate voluntary disclosure practices: an empirical study. *The British Accounting Review, 42*(1): 17-35.
Epstein, M. J., and Freedman, M. 1994. Social disclosure and the individual investor. *Accounting, Auditing and Accountability Journal,* 7(4): 94-109.
Fombrun, C. J., Gardberg, N. A., and Barnett, M. L. 2000. Opportunity platforms and safety nets: Corporate citizenship and reputational risk. *Business and Society Review, 105*(1): 85-106.
Gamper-Rabindran, S., and Finger, S. R. 2013. Does industry self-regulation reduce pollution? Responsible Care in the chemical industry. *Journal of Regulatory Economics*, 43(1): 1-30.
Graham, D., and Woods, N. 2006. Making corporate self-regulation effective in developing countries. *World Development*, 34(5): 868-883.
Gray, S. J. 1988. Towards a theory of cultural influence on the development of accounting systems internationally. *Abacus,* 24(1): 1-15.
Greening, D. W., and Gray, B. 1994. Testing a model of organizational response to social and political issues. *Academy of Management Journal,* 37(3): 467-498.

Hamilton, J. T. 1995. Pollution as news: media and stock market reactions to the toxics release inventory data. *Journal of Environmental Economics and Management*, 28(1), 98-113.
Hackston, D., and Milne, M. J. 1996. Some determinants of social and environmental disclosures in New Zealand companies. *Accounting, Auditing and Accountability Journal*, 9(1): 77-108.
Hart, S. L. 1995. A natural-resource-based view of the firm. *Academy of Management Review,* 20(4): 986-1014.
Henriques, I., and Sadorsky, P. 1999. The relationship between environmental commitment and managerial perceptions of stakeholder importance. *Academy of Management Journal*, 42(1): 87-99.
Hess, D. 2007. Social reporting and new governance regulation: The prospects of achieving corporate accountability through transparency. *Business Ethics Quarterly*, 17(3): 453-476.
Jiang, B. 2009a. The effects of interorganizational governance on supplier's compliance with SCC: an empirical examination of compliant and non-compliant suppliers. *Journal of Operations Management*, 27(4): 267-280.
Jiang, B. 2009b. Implementing supplier codes of conduct in global supply chains: Process explanations from theoretic and empirical perspectives. *Journal of Business Ethics*, 85(1): 77-92.
Jin, G. Z., and Leslie, P. 2003. The effect of information on product quality: Evidence from restaurant hygiene grade cards. *Quarterly Journal of Economics*, 118(2): 409-451.
Jira, C. F., and Toffel, M. W. 2013. Engaging supply chains in climate change. *Manufacturing and Service Operations Management*, 15(4): 559-577.
Karkkainen, B. C. 2000. Information as environmental regulation: TRI and performance benchmarking, precursor to a new paradigm. *Georgetown Law Journal*, 89(1): 257-370.
Kassinis, G., and Vafeas, N. 2006. Stakeholder pressures and environmental performance. *Academy of Management Journal,* 49(1): 145-159.
King, A. A., and Lenox, M. J. 2000. Industry self-regulation without sanctions: the chemical industry's responsible care program. *Academy of Management Journal,* 43(4): 698-716.
King, A. A., Lenox, M. J., and Terlaak, A. 2005. The strategic use of decentralized institutions: Exploring certification with the ISO 14001 management standard. *Academy of management journal*: 48(6), 1091-1106.
Klassen, R. D., and Whybark, D. C. 1999. The impact of environmental technologies on manufacturing performance. *Academy of Management Journal*, 42(6): 599-615.
Kleindorfer, P. R., and Saad, G. H. 2005. Managing disruption risks in supply chains. *Production and Operations Management*, 14(1): 53-68.
Kleindorfer, P. R., Singhal, K., and Wassenhove, L. N. 2005. Sustainable operations management. *Production and Operations Management,* 14(4): 482-492.
Konar, S., and Cohen, M. A. 1997. Information as regulation: The effect of community right to know laws on toxic emissions. *Journal of Environmental Economics and Management*, 32(1): 109-124.
Krawiec, K. D. 2003. Cosmetic compliance and the failure of negotiated governance. *Washington University Law Quarterly*, 81(1): 487-544.
Lenox, M. J., and Nash, J. 2003. Industry self-regulation and adverse selection: a comparison across four trade association programs. *Business Strategy and the Environment*, 12(6): 343-356.
Levine, D. I., and Toffel, M. W. 2010. Quality management and job quality: How the ISO 9001 standard for quality management systems affects employees and employers. *Management Science*, 56(6): 978-996.
Lindblom, C.K. 1994. The implications of organizational legitimacy for corporate social performance and disclosure. Presented at Critical Perspectives on Accounting Conference, New York.
Locke, R. M. 2013. Can global brands create just supply chains? *Boston Review*, May 21.
Locke, R., Qin, F., and Brause, A. 2007. Does monitoring improve labor standards?: Lessons from Nike. *Industrial and Labor Relations Review,* 61(1): 3-31
Lyon, T. P., and Maxwell, J. W. 2011. Greenwash: Corporate environmental disclosure under threat of audit. *Journal of Economics and Management Strategy*, 20(1): 3-41.

Marquis, C., and Toffel, M.W. 2013. The globalization of corporate transparency: An investigation of the international and domestic determinants of greenwashing. Boston: Harvard Business School Working Paper.
Montiel, I., Husted, B. W., and Christmann, P. 2012. Using private management standard certification to reduce information asymmetries in corrupt environments. *Strategic Management Journal*, 33(9): 1103-1113.
Newson, M., and Deegan, C. 2002. Global expectations and their association with corporate social disclosure practices in Australia, Singapore, and South Korea. *The International Journal of Accounting*, 37(2): 183-213.
Noci, G. (1997). Designing 'green'vendor rating systems for the assessment of a supplier's environmental performance. *European Journal of Purchasing and Supply Management*, 3(2): 103-114.
Nolan, J. 2005. The United Nations' compact with business: Hindering or helping the protection of human rights? *University of Queensland Law Journal*, 24(2): 445-466.
O'Dwyer, B., Unerman, J., and Hession, E. 2005. User needs in sustainability reporting: perspectives of stakeholders in Ireland. *European Accounting Review*, 14(4): 759-787.
O'Rourke, D. 2003. Outsourcing regulation: Analyzing nongovernmental systems of labor standards and monitoring. *Policy Studies Journal*, 31(1), 1-29.
Parmigiani, A., Klassen, R. D., and Russo, M. V. 2011. Efficiency meets accountability: Performance implications of supply chain configuration, control, and capabilities. *Journal of Operations Management*, 29(3): 212-223.
Patten, D. M. 2002. The relation between environmental performance and environmental disclosure: a research note. *Accounting, Organizations and Society*, 27(8): 763-773.
Perez-Batres, L. A., Miller, V. V., and Pisani, M. J. 2011. Institutionalizing sustainability: an empirical study of corporate registration and commitment to the United Nations Global Compact Guidelines. *Journal of Cleaner Production*, 19(8): 843-851.
Perez-Batres, L. A., Doh, J. P., Miller, V. V., and Pisani, M. J. 2012. Stakeholder pressures as determinants of CSR strategic choice: Why do firms choose symbolic versus substantive self-regulatory codes of conduct? *Journal of Business Ethics*, 110(2): 157-172.
Pil, F. K., and Rothenberg, S. 2003. Environmental performance as a driver of superior quality. *Production and Operations Management*, 12(3): 404-415.
Potoski, M., and Prakash, A. 2002. Protecting the environment: voluntary regulations in environmental governance. *Policy Currents*, 11(4): 9-14.
Potoski, M., and Prakash, A. 2005. Green Clubs and Voluntary Governance: ISO 14001 and Firms' Regulatory Compliance. *American Journal of Political Science*, 49(2): 235-248.
Ramus, C. A., and Montiel, I. 2005. When are corporate environmental policies a form of greenwashing?. *Business and Society*, *44*(4): 377-414.
Rasche, A. 2009. Toward a model to compare and analyze accountability standards–The case of the UN Global Compact. *Corporate Social Responsibility and Environmental Management*, 16(4): 192-205.
Rasche, A., Waddock, S., and McIntosh, M. 2013. The United Nations Global Compact retrospect and prospect. *Business and Society*, 52(1): 6-30.
Reid, E. M., and Toffel, M. W. 2009. Responding to public and private politics: Corporate disclosure of climate change strategies. *Strategic Management Journal*, *30*(11): 1157-1178.
Rivera, J., and De Leon, P. 2004. Is greener whiter? Voluntary environmental performance of western ski areas. *Policy Studies Journal*, *32*(3): 417-437.
Rivera, J., De Leon, P., and Koerber, C. 2006. Is greener whiter yet? The sustainable slopes program after five years. *Policy Studies Journal*, 34(2): 195-221.
Roberts, S. 2003. Supply chain specific? Understanding the patchy success of ethical sourcing initiatives. Journal of Business Ethics, 44(2-3): 159-170.
Ruggie, J. G. 2001. global-governance. net: The Global Compact as learning network. *Global Governance*, 7(1): 371-378.

Salancik, G. R., and Pfeffer, J. 1978. A social information processing approach to job attitudes and task design. *Administrative science quarterly*, 23(2): 224-253.
Sarkis, J., Gonzalez-Torre, P., and Adenso-Diaz, B. 2010. Stakeholder pressure and the adoption of environmental practices: The mediating effect of training. *Journal of Operations Management*, 28(2), 163-176.
Scott W. R. 1992. *Organizations: Rational, Natural, and Open Systems*. Prentice-Hall: Englewood Cliffs, NJ.
Servaes, H., and Tamayo, A. 2013. The impact of corporate social responsibility on firm value: The role of customer awareness. *Management Science*, 59(5): 1045-1061.
Short, J. L. 2006. Creating peer sexual harassment: mobilizing schools to throw the book at themselves. *Law and Policy*, 28(1): 31-59.
Short, J. L., and Toffel, M. W. 2010. Making self-regulation more than merely symbolic: The critical role of the legal environment. *Administrative Science Quarterly*, *55*(3): 361-396.
Simpson, D., Power, D., and Klassen, R. 2012. When One Size Does Not Fit All: A Problem of Fit Rather than Failure for Voluntary Management Standards. *Journal of business ethics*, 110(1): 85-95.
Sutter, D. 2006. Media scrutiny and the quality of public officials. *Public Choice*, 129(1-2): 25-40.
Sutton, R. I., and Galunic, D. C. 1995. *Consequences of public scrutiny for leaders and their organizations*. INSEAD.
Snir, E. M. 2001. Liability as a catalyst for product stewardship. *Production and Operations Management*, 10(2): 190-206.
Taylor Zarzeski, M. 1996. Spontaneous harmonization effects of culture and market forces on accounting disclosures practices. *Accounting Horizons* 10(1): 18-37.
Terlaak, A. and King A. 2006. The Effect of Certification with the ISO 9000 Quality Management Standard: A Signaling Approach. *Journal of Economic Behavior and Organization*, 60(4): 579-602.
Tietenberg, T. 1998. Disclosure strategies for pollution control. *Environmental and Resource Economics*, 11(3-4), 587-602.
Tilt, C. A. 1994. The influence of external pressure groups on corporate social disclosure: some empirical evidence. *Accounting, Auditing and Accountability Journal*, 7(4): 47-72.
Tilt, C., Tilling, M. V., and Davidson, R. A. 2006. NGO activism via websites. Paper presented at the Australasian Conference on Social and Environmental Accounting Research, Wellington, New Zealand, November 22-24.
Toffel, M. W., Short, J.L., Ouellet, M. 2013. Reinforcing regulatory regimes: How state and civil society institutions promote adherence to international labor standards. Harvard Business School Working Paper No. 13-045
Trucost Plc. 2008. Trucost methodology overview: Measuring company environmental Impacts. April. London: Trucost Plc.
Waddock, S. A., Bodwell, C., and Graves, S. B. 2002. Responsibility: The new business imperative. *The Academy of Management Executive*, 16(2): 132-148.
Waddock, S., and McIntosh, M. 2011. SEE change: Making the transition to a sustainable enterprise economy. Sheffield, UK: Greenleaf.
Warren Buffett Talks Business [PBS Home Video]. 1995. United States: Center for Public Television, Chapel Hill.
Williams, O. F. 2004. The UN Global Compact: The challenge and the promise. *Business Ethics Quarterly*, 14(4): 755-774.
Ziegler, O. 2007. Global Compact membership in Europe and the US. *Journal of Corporate Citizenship*, 2007(26): 53-68.

Table 1. Headquarters composition of sample

Country	Firms	Percent	Country	Firms	Percent
Australia	108	5.35	Mexico	10	0.5
Austria	11	0.54	Netherlands	30	1.49
Belgium	10	0.5	New Zealand	4	0.2
Brazil	24	1.19	Norway	36	1.78
Canada	88	4.36	Pakistan	10	0.5
Chile	5	0.25	Philippines	7	0.35
China	51	2.53	Poland	3	0.15
Denmark	11	0.54	Portugal	4	0.2
Finland	26	1.29	Russia	13	0.64
France	27	1.34	Singapore	17	0.84
Germany	52	2.58	South Africa	16	0.79
Greece	10	0.5	South Korea	68	3.37
Hungary	1	0.05	Spain	13	0.64
India	41	2.03	Sri Lanka	2	0.1
Indonesia	16	0.79	Sweden	27	1.34
Ireland	12	0.59	Switzerland	23	1.14
Israel	14	0.69	Thailand	17	0.84
Italy	23	1.14	Turkey	4	0.2
Japan	289	14.31	United Kingdom	245	12.13
Luxembourg	5	0.25	United States	615	30.46
Malaysia	31	1.54	**N=2,019**		

Table 2. Industry composition of sample

ICB Super Sector	Firms	Percent
Automobiles and Parts	66	3.27
Basic Resources	214	10.6
Chemicals	137	6.79
Construction and Materials	169	8.37
Food and Beverage	158	7.83
Industrial Goods and Services	432	21.4
Oil and Gas	280	13.87
Personal and Household Goods	218	10.8
Technology	168	8.32
Utilities	177	8.77
N=2,019		

Table 3. Summary Statistics

	Variable	Mean	SD	Min	Max	Correlations											
						[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
[1]	Global Compact Participant	0.02	0.13	0	1	1.00											
[2]	Reporting Comprehensiveness	0.05	0.11	0	0.94	0.06	1.00										
[3]	Greenwash Magnitude	-0.15	0.27	-0.94	0.55	-0.05	0.07	1.00									
[4]	Sales (mUSD)	6,055	15,085	0	335,086	-0.04	-0.06	0.49	1.00								
[5]	Environmental NGOs	26.34	17.21	0	53	0.08	0.33	-0.02	-0.17	1.00							
[6]	Strength of Financial Reports	5.85	0.64	3.48	6.65	0.04	-0.05	0.24	0.50	-0.16	1.00						
[7]	Ln Environmental Damages	3.10	2.08	0	9.31	0.00	0.00	0.71	0.66	-0.12	0.79	1.00					
[8]	IGOs	0.76	0.22	0.30	1.32	0.06	0.01	-0.15	0.02	0.02	0.28	0.11	1.00				
[9]	Other NGOs	6.26	1.73	1.67	8.79	-0.02	0.05	0.43	0.55	-0.10	0.40	0.59	-0.08	1.00			
[10]	Industry Participation	0.05	0.09	0	0.80	-0.03	0.10	0.61	-0.22	0.11	-0.25	0.17	-0.09	-0.24	1.00		
[11]	Ln GDP per Capita	10.26	0.89	6.40	11.33	0.06	0.10	-0.01	0.00	0.33	0.07	0.04	0.09	0.03	-0.03	1.00	
[12]	Ln Population	18.34	1.32	13.03	20.99	-0.09	-0.20	0.04	-0.03	-0.41	-0.03	-0.02	-0.08	-0.03	0.05	-0.47	1.00

N = 6,476 company-year observations from 2,019 companies.

Table 4. Logistic Regression Results

	(1)		(2)		(3)	(4)	(5)
DV: Global Compact Participant	Coef.	AME	Coef.	AME	Coef.	Coef.	Coef.
Reporting Comprehensiveness	1.816**	2.96%					
	[0.438]						
Greenwash Magnitude (c)			-1.223**	-1.99%	-1.397**	-1.330**	-1.355**
			[0.382]		[0.370]	[0.345]	[0.335]
Sales (s by country)	0.211**	0.34%	0.203**	0.33%	0.308**	0.195**	0.184**
	[0.049]		[0.052]		[0.073]	[0.054]	[0.049]
Environmental NGOs (s)	-0.672*	-1.10%	-0.675*	-1.10%	-0.638*	-0.717*	-0.698*
	[0.269]		[0.273]		[0.278]	[0.281]	[0.284]
Strength of Financial Reports (s)	-0.036	-0.06%	-0.050	-0.08%	-0.051	-0.052	-0.103
	[0.128]		[0.129]		[0.130]	[0.130]	[0.135]
Ln Environmental Damages	0.325**	0.53%	0.278**	0.45%	0.251**	0.279**	0.290**
	[0.077]		[0.085]		[0.091]	[0.085]	[0.088]
IGOs (1000's)	2.336+	3.81%	2.347*	3.82%	2.404*	2.322*	2.359*
	[1.199]		[1.132]		[1.124]	[1.134]	[1.100]
Other NGOs (1000's)	-0.032	-0.05%	-0.035	-0.06%	-0.049	-0.028	-0.031
	[0.177]		[0.170]		[0.168]	[0.170]	[0.168]
Industry Participation	1.062	1.73%	1.038	1.69%	1.063	1.041	0.916
	[0.805]		[0.811]		[0.807]	[0.813]	[0.826]
Ln GDP per Capita	-0.015	-0.02%	-0.032	-0.05%	-0.022	-0.031	-0.010
	[0.197]		[0.194]		[0.194]	[0.196]	[0.207]
Ln Population	0.197	0.32%	0.193	0.31%	0.196	0.191	0.201
	[0.187]		[0.182]		[0.183]	[0.183]	[0.189]
Greenwash Magnitude (c) X Sales (s by country)					0.311*		
					[0.138]		
Greenwash Magnitude (c) X Environmental NGOs (s)						-0.262	
						[0.254]	
Greenwash Magnitude (c) X Strength of Financial Reports (s)							-0.506*
							[0.251]
Year Dummies	Yes		Yes		Yes	Yes	Yes
Industry Dummies	Yes		Yes		Yes	Yes	Yes
Observations (company-years)	6,476		6,476		6,476	6,476	6,476
Companies	2,019		2,019		2,019	2,019	2,019
Participants	109		109		109	109	109
Countries	41		41		41	41	41

Logistic regression coefficients with standard errors clustered by country in brackets. ** p<0.01, * p<0.05, + p<0.10. (c) indicates variables that are mean-centered and (s) indicates variables that are standardized.

Figure 1. Greenwashers are deterred from joining the Global Compact more so when they are less visible to stakeholders prior to joining

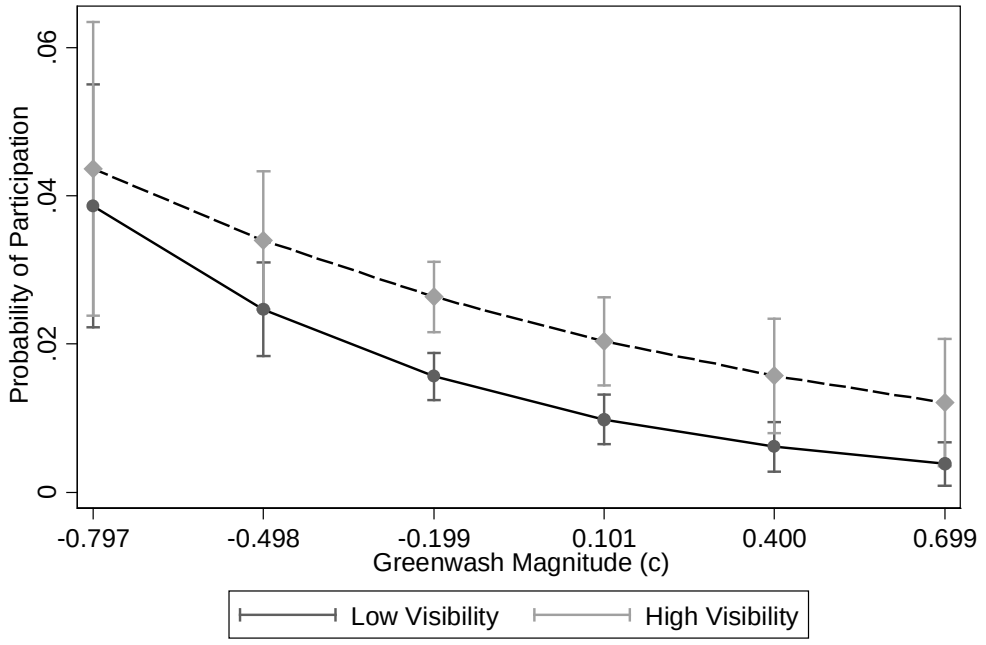

Figure 2. Greenwashers are deterred from joining the Global Compact more so when financial reporting and audit institutions are strong