

Secondary Stakeholder Influence on CSR Disclosure: An Application of Stakeholder Salience Theory

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Abstract The aim of this study is to analyse how secondary stakeholders influence managerial decision-making on Corporate Social Responsibility (CSR) disclosure. Based on stakeholder salience theory, we empirically investigate whether differences in environmental disclosure among companies are systematically related to differences in the level of power, urgency and legitimacy of the environmental non-governmental organisations (NGOs) with which these companies are confronted. Using proprietary archival data for an international sample of 199 large companies, our results suggest that differences in environmental disclosures between companies are mainly associated with differences between their environmental stakeholders' legitimacy. The effects of power and urgency are of an indirect nature, as they are mediated by legitimacy. This study improves our understanding of CSR disclosure by demonstrating that, next to the welldocumented effect of company characteristics, stakeholder characteristics are also important. Besides, it provides scarce empirical evidence that not only primary stakeholders, but also secondary stakeholders are influential with regards to management decision-making. And more specifically, it offers insight into why some stakeholder groups are better able to influence disclosure decisions than other. The results also have important practical implications for managers of both environmental NGOs and large companies. For managers of environmental NGOs the results provide evidence of the most successful tactics for having their environmental information demands satisfied by companies. For company management the results provide insights into the most important stakeholder characteristics, on the basis of which they may develop strategies for proactively disclosing environmental information.

Keywords Stakeholder salience theory · CSR disclosure · Corporate Social Responsibility · Environmental NGOs · Environmental reporting

Introduction

Despite the fact that it is largely a voluntary activity, Corporate Social Responsibility (CSR) disclosure has become common business practice among large companies (KPMG International 2013). Nevertheless, the supply of CSR information is still far from meeting demand, and there is considerable variation in CSR disclosure across companies (e.g., Cho and Patten 2007; Clarkson et al. 2008; KPMG International 2013; Tilt 1994). Hence, the question arises as to what the specific factors are that inspire the management of one company to engage in extensive CSR disclosure, and the management of another company to disclose the bare minimum.

This study seeks to examine the extent to which CSR disclosure is a response to stakeholders' information needs. Stakeholders represent an important factor in the context of

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CSR disclosure, a fact which is well illustrated by the sustainability reporting guidelines (G4) issued by the Global Reporting Initiative (GRI). In order to identify the information needs of the various users of sustainability reporting, stakeholder consultation is at the heart of the development of these guidelines (GRI 2013???), which have become the leading standard for CSR reporting (KPMG International 2013).

The importance of stakeholders is also acknowledged by management researchers. Yet, this body of research essentially refers to primary stakeholders (Clarkson 1995), referring to those stakeholders which engage in formal contractual relationships with a company, such as customers, employees, and shareholders. It is widely recognised that companies cannot survive without the consent of these primary stakeholders and consequently should pay attention to their needs. However, the importance of secondary stakeholders (Clarkson 1995), which do not engage in transactions directly relating to the company's going concern and lack formal contractual relationships, is essentially stressed only by stakeholder theory. There is growing evidence that secondary stakeholders, such as community groups, religious groups, and other non-governmental organisations (NGOs), are able to induce companies to respond to their needs.

In this study, we investigate how secondary stakeholders influence managerial decision-making on CSR disclosure. Our starting point is stakeholder theory. Many scholars state that stakeholder theory is inherently normative (Clarkson 1995; Donaldson and Preston 1995; Freeman 1984). From a normative stakeholder point of view, CSR disclosures are considered to be expressions of accountability. That is, many companies inform stakeholders about the extent to which their respective interests have been addressed, because they feel such is the right thing to do. However, CSR disclosure may also be driven by a belief that it is instrumental to profit (Donaldson and Preston 1995). In order to take into account the diversity of motives that inspire CSR disclosure, a descriptive or empirical stakeholder view (Donaldson and Preston 1995) is needed, which frames the way in which managers actually behave with regard to the various stakeholders. Applying this view, one cannot ignore the empirical reality that companies have limited resources and consequently may prioritise stakeholder claims on the basis of cost-benefit assessments. Continuing on this line of thought, the level of priority that is given by company management to a stakeholder's claim will depend on the ability of that stakeholder to influence company management. Mitchell et al.'s (1997) theory of stakeholder identification and salience (in short: stakeholder salience theory) provides a consistent framework for analysing the extent to which stakeholder characteristics influence managerial decision-making with respect to stakeholder claims. The theory states that managers ascribe salience to stakeholder claims on the basis of the degree to which these stakeholders possess one or more of the following key attributes: power, legitimacy, and urgency. Salience is reflected by managers' stakeholder prioritisation, conditional upon which resources are allocated to respond to their claims (Mitchell et al. 1997). In the context of CSR disclosures, claims represent stakeholders' needs for CSR information that enables them to assess the degree to which the company has addressed their interests.

Empirical CSR disclosure studies, investigating how stakeholders affect managerial decision-making are scarce (e.g., Boesso and Kumar 2009; Cormier et al. 2004; Deegan and Blomquist 2006; Neu et al. 1998) and so far have not provided insight into the extent to which stakeholders' characteristics are relevant in CSR disclosure. This study will research the degree to which the extensiveness of a company's environmental disclosure can be explained by specific attributes of the environmental NGOs with which it is confronted; more specifically, the attributes included are those which determine the salience of the environmental NGO.

Our focus on environmental NGOs is motivated by the fact that, in order to fully understand the role of stakeholder salience in CSR disclosure, it is essential to understand not only the role of primary, but also the role of secondary stakeholders (Clarkson 1995, p. 107). Environmental NGOs' potential influence is generally presumed but rarely empirically addressed (Deegan and Blomquist 2006). Although environmental stakeholders have not been a major topic in existing disclosure literature, research on environmental stakeholders and their role in environmental disclosure are nevertheless expanding fields (e.g., Halme and Huse 1997; O'Dywer et al. 2005; Wheeler and Elkington 2001). Besides, environmental disclosure is an important subset of CSR disclosure. This is illustrated by the fact that the previously mentioned G4 guidelines of the GRI originally started as a framework for environmental disclosure. Besides, the environment forms one of the three pillars of the 'Triple Bottom Line' approach that many companies follow in their CSR efforts.

Using archival data retrieved from a proprietary database for an international sample of 199 large listed companies, we hypothesise that each of the stakeholder attributes (power, urgency, and legitimacy) is positively related to the level of public environmental disclosure. Even though univariate results affirm the hypothesised relationships, multivariate analysis reveals that the influences of power and urgency are in fact mediated by legitimacy. Hence, only legitimacy is directly associated with environmental disclosure, while the influences of power and urgency are of an indirect nature. These findings also hold when controls for company size, institutional context, industry, environmental performance, and institutional shareholdings are included in the model.



Our study contributes to the CSR disclosure literature by providing evidence that, in addition to the well-documented effect of company characteristics, stakeholder characteristics also explain the extent of CSR disclosure. To the best of our knowledge, it is the first study that seeks to explain differences in the extensiveness of CSR disclosure by studying stakeholder characteristics. Through this research design, it further advances the CSR disclosure literature by giving specific insight into the underlying factors that enable one stakeholder group to influence management decisions on CSR disclosure more than another.

The remainder of the paper is organised as follows. The next section reviews previous literature and subsequently develops the hypotheses. This is followed by a "Research Method" section, which includes a discussion of the sample, the variables used, and the statistical analysis. The empirical results, along with a discussion, and limitations are presented in the final sections of this paper.

Prior Literature and Hypotheses Development

Stakeholder theory broadly refers to the notion that companies have responsibilities not only toward their shareholders or other primary stakeholders—such as customers and employees—but also toward their secondary stakeholders, such as environmental NGOs. Freeman (1984) defines a stakeholder in an organisation as "...any group or individual who can affect or is affected by the achievement of the organization's objectives...". Although many researchers have set up empirical research on the broad idea that 'social pressures' affect CSR disclosure (for a review, see Hibbitt 2004); the number of empirical studies explicitly referring to stakeholder theory in explaining CSR disclosure is limited.

First of all, there are studies that provide evidence for the general notion that stakeholders are able to influence the extensiveness of CSR disclosure and the conditions under which this influence occurs. As one of the first studies in this area, Tilt (1994) showed that almost all stakeholders consider the CSR disclosures of companies to be insufficient and therefore attempt to influence these companies. However, the results do not mention the extent to which this influence is effective. Boesso and Kumar (2007) found that voluntary disclosure (among which social and environmental disclosure) is not restricted to satisfying investors' information needs, but rather a tool for managing broad stakeholder relationships, which is driven by "(...) those stakeholders that are important and have influence on company activities". Smith et al. (2005), researching differences in CSR disclosure among countries, distinguish between stakeholder-oriented and shareholderoriented countries on the basis of differences in cultural settings and corporate governance and ownership structures. They find that companies from stakeholder-oriented countries (Norway and Denmark) have more advanced CSR disclosure than companies from shareholder-oriented countries (US). Weber and Marley (2012), in their descriptive study on the salience of stakeholders in various country clusters and industries, even constructed their salience measure on the basis of CSR disclosures.

Second, there are empirical studies that more specifically research how stakeholders try to influence disclosure practices. Roberts (1992) and Magness (2006) found evidence for Ullmann's (1985) contingency framework for CSR, which states that CSR (disclosure) strategies are determined by stakeholder power, strategic posture, and economic performance. Other disclosure studies that have found empirical evidence for stakeholder theory also refer to 'stakeholder power' or related constructs (Deegan and Blomquist 2006; Elijido-Ten et al. 2010; Neu et al. 1998). In addition to power, alternative stakeholder traits have been found to be relevant, such as a pragmatic and collaborative stand (Deegan and Blomquist 2006) and the level of interest in a company (Cormier et al. 2004). Finally, Darnall et al. (2009) find that differences across companies in the use of (largely voluntary) environmental audits can be attributed to variations in stakeholder influences.

However, in order to establish a consistent framework for the relationship between stakeholders and CSR disclosure, it is important to understand *why* some stakeholders are better able to influence CSR disclosure than other. This requires insight into the exact stakeholder characteristics that determine management decisions on CSR disclosure.

The relationship between stakeholder characteristics and management decisions is explicitly addressed in stakeholder salience theory, which has received considerable attention among scholars in the 'strategic management' field. It is based on the argument that, although virtually anyone can be a stakeholder, at the same time managers simply do not have the resources to respond to all claims made by stakeholders. The added value of stakeholder salience theory is that it recognises the practical reality in which managers take into account stakeholder claims—not only because they feel that it is the right thing to do, but also in order to achieve certain company goals (Mitchell et al. 1997).

Mitchell et al. (1997) introduce the term 'stakeholder salience', which is the result of the degree to which a particular stakeholder has three attributes: power, legitimacy, and urgency. The authors take Pfeffer's (1981) definition of power: "a relationship among social actors in which one social actor (A), can get another social actor (B), to do something that B would not have otherwise done". Using Suchman's (1995) definition, they define legitimacy as "A generalized perception or assumption that the actions



of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions". Urgency refers to "the degree to which stakeholder claims call for immediate attention", on the basis of time sensitivity or criticality (Mitchell et al. 1997).

More recent studies have refined stakeholder salience theory by means of theoretical contributions, stressing the importance of 'stakeholder proximity' (Driscoll and Starik 2004), interactions between stakeholders (Neville and Menguc 2006) and stakeholder attributes (Neville et al. 2011), family firm contexts (Mitchell et al. 2011), corporate culture (Jones et al. 2007), and other stakeholders' perceptions of salience (Tashman and Raelin 2013). More recent empirical research has suggested more stakeholder characteristics, such as trust and learning potential (Myllykangas et al. 2010).

Empirical studies generally find support for stakeholder salience theory. However, the exact attributes that relate to salience differ from one study to the other. Agle et al. (1999) found that, in case of shareholders, legitimacy and urgency are significantly related to salience, whereas for community stakeholders all attributes are significant. They also provided evidence that the salience of 'traditional stakeholders' (i.e., shareholders, employees and customers) is higher than that of governments and communities, implying the dominance of the 'traditional production view' in large companies (Agle et al. 1999). Gago and Antolin (2004) found that, in the context of the natural environment, perceived stakeholders attributes and salience are correlated. However, Harvey and Schaefer (2001), also focusing on environmental issues, concluded that company representatives only see stakeholders with institutional power (such as the Environmental Protection Agency or other environmental regulators) as having significant salience. This dominance of the power attribute is in line with results from case studies (Neill and Stovall 2005; Parent and Deephouse 2007).

Empirical studies linking stakeholder salience to CSR disclosure are scarce. Eesley and Lenox' (2006), in a study on company responses to secondary stakeholder actions in the US, showed that environmental NGOs with a higher level of power and legitimacy have a higher likelihood that the targeted company responds positively to their requests, among which 'reporting' is one of the responses. However, their study did not take into account the extensiveness of reporting, only the likelihood. Boesso and Kumar (2009) examined the extent to which disclosure of key performance indicators (KPIs) is associated with the perceived salience of a number of stakeholder groups (among which social and environmental stakeholders) for a sample of 72 Italian and US companies. Their results provide some evidence that for a cluster of social and environmental groups, the level of perceived salience is associated with the disclosure of some social and environmental KPI's in the annual report. Their study does not give specific insight into the extent to which each specific characteristic of environmental stakeholders influences environmental disclosure.

Adding to the scarce empirical literature on the salience of secondary stakeholders, this study will research the degree to which the extensiveness of a company's environmental disclosure can be explained by the salience of the environmental NGOs with which it is confronted. Environmental stakeholders are considered 'secondary' stakeholders. These are different from primary stakeholders, as they do not engage in transactions with the company and are not considered to be essential for the company's survival (Clarkson 1995, p. 107).

Following prior research (Eesley and Lenox 2006), in this study salience is not measured using self-reported perceptions by managers. In fact, it is measured by the degree to which a company responds positively to a stakeholder request, i.e., the degree to which stakeholders' information needs are satisfied. As such, we assume that the level of CSR disclosure is determined by stakeholder power, urgency, and legitimacy. This corresponds to findings by Mitchell et al. (1997, p. 877) suggesting that "(...) corporations produce reports to legitimate, powerful stakeholders, including annual reports, proxy statements, and, increasingly, environmental and social responsibility reports". We define CSR disclosures as a company's information disclosure to all of its stakeholders, supplementary to and via its financial accounts, in response to their perceived information needs. Consequently, it exceeds the traditional notion of reporting in which a company provides a financial account and accompanying notes to its shareholders. For the purpose of this study, CSR disclosure is limited to public disclosure, i.e., CSR information disclosure into the public domain that is initiated by the company. Consequently, other forms of disclosure—such as information dispersion to individuals (e.g., through questionnaires) or CSR information about a company that is initiated by other parties (e.g., the media)—will not be considered. Next to the annual report, public CSR disclosures also include standalone special-purpose reports (e.g., environmental or sustainability report) and corporate websites.

Environmental disclosure is a subset of CSR disclosure. This study starts from the premise that environmental disclosure principally reflects the salience of the environmental NGOs. Since the costs of collecting and analysing information for stakeholders are considerable (Schaltegger 1997) and stakeholder resources are also limited (Eesley and Lenox 2006), stakeholders will prioritise their information requests. In line with previous literature (Grunig 1983), it is suggested that prioritising is effectuated through active versus passive information behaviour. When stakeholders have a high level of awareness of, and involvement in, a problem, they will engage in active information collection, whereas passive behaviour—processing the information when it is available—is associated with low levels



of involvement and awareness (Grunig 1983). Since environmental NGOs are the stakeholders that are most aware of, and involved in, environmental issues, they spend more resources on obtaining environmental information.

Consistent with the existing literature on stakeholder salience theory (e.g., Agle et al. 1999; Eesley and Lenox 2006), the following three hypotheses are developed in the specific context of environmental NGOs:

- **H1** The total level of public environmental disclosure of a company is positively related to the level of power of the environmental NGOs with which it is confronted.
- **H2** The total level of public environmental disclosure of a company is positively related to the level of urgency of the environmental NGOs with which it is confronted.
- **H3** The total level of public environmental disclosure of a company is positively related to the level of legitimacy of the environmental NGOs with which it is confronted.

Research Method

Sample

Our sample consists of companies that are included in the 2004 SiRi (Sustainable Investment Research International) database, which holds sustainability profiles of companies included in the MSCI World Index. As this index includes the 1500 largest (by market capitalisation) equities in the world, our sample represents large corporations from developed markets. SiRi is an international network of socially responsible investment research organisations collecting a range of CSR information of companies for their customers, which are mainly institutional investors.² The network members use the collected information also for their local databases and other investment services. The SiRi data have been used in prior research (van Nimwegen et al. 2008; Prior et al. 2008; Surroca et al. 2010). In addition, the local databases of some of the SiRi members—among which Kinder Lydenberg Domini (KLD), Michael Jantzi Research Associates, and Pensions and Investment Research Consultants-have been extensively used in previous studies. The SiRi database is broadly considered a reliable and high-quality information source on CSR data. The companies that are profiled in the database are all large public companies.

The SiRi global profiles that were used contain over 350 data points and are structured according to the following research themes: community, corporate governance, customers, employees, environment, contractors/human rights, and business ethics. The themes correspond to the following stakeholder groups: the community, shareholders, customers, employees, environmental stakeholder groups, and human rights groups. Due to this stakeholder orientation, the database is considered to be an appropriate tool for the purpose of this study. The sources, on which the profile content is based, are not limited to annual reports, but also include special-purpose reports (environmental reports, sustainability reports, and personnel reports), consultation of NGOs and governments, the media, one-to-one meetings with company representatives, and questionnaires.

The items covered by the profiles were obtained via active solicitation of information needs with the various stakeholders (such as labour unions and environmental NGOs) and consultation with experts in the respective fields and therefore can be considered a realistic representation of the actual CSR information needs of the various stakeholders. The SiRi profiles illustrate that the information needs of environmental stakeholders consist of topics such as environmental management systems (EMSs) and policies, certification, emissions, energy consumption, waste, and remediation (see "Appendix" section).

Due to the large amount of data that had to be coded for each company, it was not feasible to analyse all companies in the database. Hence, a sample was taken that, in line with prior research, provided an equal spread over two country types: shareholder versus stakeholder-oriented countries (Holder-Webb et al. 2008; Simnett et al. 2009; Smith et al. 2005). To accomplish this, we first selected per country type the corresponding countries with sufficient numbers of company observations, resulting in the US, the UK, Australia, Canada, and Hong Kong for shareholderoriented, and Germany, France, Japan, Belgium, Denmark, Finland, and The Netherlands for stakeholder-oriented countries. Secondly, 100 companies were randomly selected from each of these two country types. The resulting 200 companies accounted for slightly more than 50 % of the companies in our dataset and thus formed a good representation.³ After taking care of duplicates and adjusting for the fact that companies in the database were

¹ Some might argue that governments are at least equally involved in and knowledgeable of environmental issues, yet in the context of environmental disclosure—which is largely voluntary—governments are only indirectly involved.

² In September 2008, SiRi announced that it would cease the current organisation of its operations and continue its services under the name 'Sustainalytics' as from 2009.

³ Given that 2 years of data were available (from the 2002 and 2004 database), the initial aim was to use panel data. Thus, as a first step in our sample selection, companies included in both the 2002 and 2004 database were selected, resulting in a dataset of 397 companies. However, during the coding process, it appeared that in the 2002 database many of the variables of interest for this study were missing, which would seriously negatively affect the sample size. Consequently, it was decided to use a cross-sectional design by only including the 2004 data.

geographically ordered according to country of their main stock listing, whereas our country classification was based on the country in which the company was headquartered, the final sample consisted of 199 companies, of which 101 from shareholder and 98 from stakeholder-oriented countries.

Measure for Dependent Variable

Mitchell et al. (1997, p. 854) define stakeholder salience as "the degree to which managers give priority to competing stakeholder claims". Where most empirical studies measure salience by means of surveys on management perception (e.g., Agle et al. 1999; Harvey and Schaefer 2001), more recently Eesley and Lenox (2006) have defined stakeholder salience as the likelihood of an actual company response to a stakeholder's request. Corresponding to the latter study, we operationalise stakeholder salience through the level of response by a company to a stakeholder request. This underlines the importance of management action. More specifically, we assess the level of environmental disclosure of a company in response to the information needs of its environmental stakeholders.

The measure for this environmental disclosure level was constructed using the previously mentioned SiRi company profiles, by taking into consideration 47 items under the theme 'environment'. The profiles divide these items between three broad categories of 'principles and policies', 'management systems', and 'performance'. "Appendix" section gives a complete overview of the environmental information items included in the profile, as well as the corresponding category for each item. 5 As indicated before, these items are considered to represent the information needs of the environmental stakeholders. For each piece of information that is presented under each of the 47 items, SiRi mentions the exact source (see our discussion under "Sample") from which it was taken. Based on these sources, two researchers independently scrutinised whether the majority of the pieces of information provided was

⁵ A sample profile can be downloaded from http://dl.dropbox.com/u/20631923/sample%20company%20profile%20siri.pdf.



publicly disclosed or not, resulting in a score of 1 or 0 for each item. For this purpose, they made use of a detailed coding protocol in which all company-initiated information disclosures via public media (e.g., annual and specialpurpose reports, website) were considered as public disclosure. They then compared their outcomes; in case the opinions contradicted, the results were discussed until agreement was reached. After coding, the individual scores per company were aggregated assuming equal weights and expressed as a proportion of the total number (i.e., 47) of information items. The resulting disclosure index, labelled ENVDISC, represented the level of environmental disclosure as expressed by the extent and type of information, reflecting a company's overall disclosure strategy (Brammer and Pavelin 2006). To illustrate the previous, a company profile with information on 35 environmental items (and consequently no information for 12 items), of which 27 items were sourced from a company's public disclosure and 6 items from other sources (such as the media or a questionnaire), would result in an index score of 27/47 = 0.57. This method is similar to the one applied by Brammer and Pavelin (2006, p. 1176), which the authors present as an improvement over previous measures that only take into account the volume of disclosures.

Measures for Explanatory Variables

The main explanatory variables in this study are the stakeholder attributes: power, urgency, and legitimacy. Following suggestions by prior literature to circumvent potential self-report bias associated with measuring stakeholder attributes by means of management surveys (Eesley and Lenox 2006), we develop observable measures for each of the stakeholder attributes at the company level. These measures capture for each company the levels of power, urgency, and legitimacy of the environmental stakeholders with which it is confronted. We focus on environmental NGOs, as they are considered to be the stakeholders that are most involved in, and aware of, environmental issues. Other stakeholders, such as shareholders and consumers, typically pick up environmental issues only when they have gained publicity through NGOs actions. Although we recognise that managerial characteristics are a crucial moderator of a company's actions in response to stakeholder attributes (Mitchell et al. 1997), by choosing these measures we nonetheless assert that management perceptions of stakeholder power and urgency derive from actual stakeholder traits. Table 1 provides an overview of the explanatory variables used in this study. The different measures for each stakeholder attribute will now be discussed individually.

Environmental NGOs lack the direct power associated with control over valuable resources (Pfeffer and Salancik

⁴ Using measures of management action has two major advantages over survey studies measuring management perceptions. First, the multi-dimensional nature of CSR information and the complexity of many CSR issues mean that decision-making on CSR disclosure is a multilateral process, bringing together specialised knowledge from different corporate managers and departments. This makes it difficult to pinpoint the locus of actual decision-making and, consequently, to measure perceptions of the decision makers regarding the priorities of stakeholders. Secondly, as mentioned earlier, we avoid potential biases in our results due to dissimilarity between perceptions and actual behaviour, or even socially desirable answers, which are associated with survey research on manager perceptions (Eesley and Lenox 2006).

Table 1 Explanatory variables

Attributes	Variable description
POWER	ENVPOW = 1 if a company has been in contact with one or more environmental NGOs, as mentioned in company documents or the press
URGENCY	ENVURG = $\frac{\text{\# controversial issues in which company has been involved}}{\text{\# controversial issues covered in SiRi profile in total}}$
	Controversial issues covered in SiRi profile: (1) waste management, (2) soil pollution, (3) water pollution, (4) air pollution, (5) resource use/ecosystem damage, (6) products and services, (7) supply chain issues
LEGITIMACY	$ENVLEG = \frac{\# \text{ formal environmental arrangements the company has in place}}{\# \text{ formal environmental arrangements covered in SiRi profile in total}}$
	Environmental arrangements: (1) environmental department, (2) environmental management system, (3) formal mechanisms for environmental stakeholder engagement

When it is stated that a variable is given the value '1' in case a certain condition is met, it is implicitly assumed that in any other condition the variable was valued '0'

1978). The power of environmental NGOs relates to the extent to which they are able to let primary stakeholders withhold, or conditionally provide, resources to the company, or to involve the government in forcing the company to meet their claims (Rowley 1997). In order to assess the power of a company's environmental stakeholders, the SiRi global profiles were first screened for the names of environmental NGOs that had been able to gain publicity, either in company documents or via any other public media, concerning environmental issues in which the particular company was involved. Underlying this measure is the idea that NGO power can be expressed by means of collaborative or confrontational tactics (Deegan and Blomquist 2006). The argumentation is that, if an NGO is mentioned in the public disclosure of a company, this signals that it was able to engage in direct dialogue with a company (collaborative power). If the media write about the relationship between an NGO and a company, this signals that an NGO has been able to gain publicity (confrontational power). For this purpose, a binary variable (ENVPOW) was used which takes the value 1 when contact between the company and one or more NGOs was mentioned in company, or other public documents [such as (inter)national press], and 0 otherwise.⁶

Mitchell et al. (1997) define urgency as the degree to which stakeholders' claims call for immediate attention, on the basis of time sensitivity or criticality. Whereas time sensitivity refers to "the degree to which managerial delay in attending to the claim or relationship is unacceptable to the stakeholder", criticality is related to the "importance of the claim or the relationship to the stakeholder" (Mitchell et al. 1997, p. 876). In order to develop a measure for urgency at the company level, for each company we assessed the degree to which in recent years a company had been involved in any major (i.e., critical) controversial environmental issues, or any other environmental controversy that needed immediate attention (i.e., time sensitive). This information was distilled from the SiRi company profiles, by taking into account a category of seven environmental information items labelled 'major recent controversies'. This information category mentions whether or not companies have been involved in various types of publicly debated controversial issues, comprising both critical issues—such as major environmental accidents (e.g., oils spills, leakage of hazardous waste)—and timesensitive issues—such as being targeted by NGO campaigns (e.g., some of the banks in our sample had been under attack from environmental NGOs for their alleged financing of dams or pipelines with potentially large

Footnote 6 continued

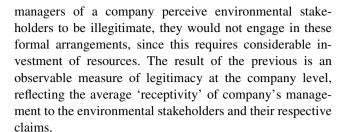
information resulted in 12 categories of NGOs, ranging from small local NGOs that are not engaged in coalitions (power level = 1) to large international NGOs that are part of a coalition (power level = 12). Adding the power categories of all environmental NGO contacts of a company resulted in a power measure at the company level (ENVPOW2). However, this procedure resulted in only 73 observations, which could potentially jeopardise the robustness of the multivariate analysis. Given the multivariate empirical design of this study, our initial measure (ENVPOW) therefore was considered to be the more appropriate measure, and consequently in the remainder of this paper the results for ENVPOW will be reported. The statistical results for ENVPOW2 will only be reported in case they deviate from ENVPOW.



Goriginally, a further sophistication of the environmental power measure was intended, in that as a next step for each of the NGOs mentioned, the annual reports or Form 990 were downloaded to discover the amount of total financial assets, which are highly correlated with membership (Deegan and Blomquist 2006; Eesley and Lenox 2006). We categorised the NGOs into three groups: large (financial assets of over 10 million US\$), medium (between 1 and 10 million US\$ in assets), and small (less than 1 million US\$ in financial assets). The websites of these NGOs were also consulted to find out whether these are internationally organised and if they engage in coalitions with other NGOs. The rationale for including this information is that NGOs with local branches in different countries will have greater availability of resources than those operating from one country, and coalitions of NGOs will be more powerful than each of the NGOs individually (Eesley and Lenox 2006; Neville et al. 2011). Pooling this

negative environmental impact). Typically, the companies did not disclose involvement in these controversies, yet the media reported them. The measure of urgency was constructed through application of a simplified version of a decision technique for quantifying the absence or presence of variables (Agle et al. 1999; Mitchell and Agle 1997). Quantifying the absence or presence of involvement in environmental controversies for each company, a basic interval scale (Nunnally 1978) was formed, ranging from 0 to 7. For reasons of enhanced interpretability of the descriptive results, this number was divided by the total number (i.e., seven) of controversial issues covered in the SiRi profile, resulting in the variable labelled ENVURG. Table 1 provides more detail on the nature of these controversial issues.

Mitchell et al. (1997) use Suchman's (1995) definition of legitimacy: "A generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions". For the purpose of this research, it was necessary to construct an observable measure at the company level. Hence, for each company in our sample, the degree to which environmental stakeholders were considered legitimate by the company's management is needed to be assessed. For this purpose, we build on Suchman's (1995) ideas regarding legitimisation processes in companies, stating that these processes are reflected by activities such as formalisation and professionalization. Formalisation is described as (1) "codifying informal procedures, (2) bringing previously marginal activities under official control, and (3) establishing hierarchical links with superordinate environmental units", whereas professionalization refers to (4) "linking their activities to external definitions of authority and competence" (Suchman 1995, pp. 587-589). In line with this, we argue that the legitimacy of environmental stakeholders is reflected by the extent to which a company engages in formalisation and professionalization in order to respond to the interests of environmental stakeholders. Building on our previous discussion of Suchman's (1995) ideas, we propose that (1) is measured by the presence of a formal EMS, whereas (2) and (3) are reflected by the presence of an environmental department and (4) by the existence of formal mechanisms for stakeholder engagement. As none of these arrangements is typically required by law, their presence signals a company's willingness to incorporate environmental issues in its business conduct. Corresponding to Hart and Milstein (2003), we argue that, when



Similar to the urgency measure, a basic interval scale (Nunnally 1978) was formed by quantifying the presence or absence of the previously mentioned formal environmental arrangements for each company. After dividing the total number of arrangements by the theoretical maximum (i.e., 3)—thus enhancing the interpretation of the descriptives—the environmental legitimacy measure ENVLEG was created (see Table 1).

Mitchell and Agle (1997) imply that stakeholder legitimacy may be the result of institutional factors. Thus, stakeholder legitimacy may be more pronounced in some countries than in others. As legitimacy in this study is operationalised in terms of the presence of a number of environmental management arrangements, and in general environmental management is not regulated by law, institutional factors in this context refer to potential voluntary initiatives. Since institutional factors may cause a lack of variance in our legitimacy measure between companies within a country, it could potentially affect the significance of our models. Hence, as part of the multivariate analysis, a sensitivity analysis was carried out, in which we test our empirical model for different institutional contexts.

Control Variables

Most studies that investigated the determinants of CSR disclosure also included company characteristics. Researchers in this field have suggested a large number of company characteristics associated with CSR disclosure, such as company size, industry affiliation, country, profitability, capital structure, cost of capital, and management style (for a review of 'company characteristics' research, see Hahn and Kühnen 2013). Even though empirical tests of such associations provide to a large extent inconclusive and even contradictory outcomes, they consistently tend to conclude that CSR disclosure is associated with company visibility, as expressed by company size and industry affiliation, as well as country-specific factors (Adams 2002; Brammer and Pavelin 2004; Hahn and Kühnen 2013). Moreover, a stream of CSR disclosure literature finds that there is a relation between environmental performance and environmental disclosure (for a literature overview, see Cho et al. 2012; Hahn and Kühnen 2013). The exact nature of this relation however is still to be determined, given that previous empirical studies inconclusively find evidence for



⁷ Constructing a 'direct' measure of corporate legitimacy using 'media coverage', as suggested by recent literature (see e.g., Deephouse and Carter 2005; Clarkson et al. 2008; Aerts and Cormier 2009), was thus considered inappropriate, since this construct measures legitimacy at society level.

Table 2 Control variables

Size		
SIZE	=	market value of the company, calculated as the number of shares in issue times the share price (\$ millions)
LNSIZE	=	natural logarithm of SIZE
Industry		
IND_VISIB	=	1 if company operates in an industry with high visibility
Country		
STAK	=	1 if a company's country of origin is Belgium, Denmark, Finland, France, Germany, The Netherlands
SHR_N_US	=	1 if a company's country of origin is Australia, Canada, Hong Kong, UK
SHR_US	=	1 if a company's country of origin is US
Institutional ownership		
INSTOWN	=	the percentage of shares outstanding that are held strategically by governments, pension funds, and investment companies, calculated as NOSHGV + NOSHPF + NOSHIC

When it is stated that a variable is given the value '1' in case a certain condition is met, it is implicitly assumed that in any other condition the variable was valued '0'

both a positive (e.g., Clarkson et al. 2008) and a negative (e.g., Cho and Patten 2007) relationship. Finally, although Hahn and Kühnen (2013) report overall mixed findings for the association between concentrated ownership and CSR disclosure, there is some other evidence that institutional investors can influence strategic decisions regarding CSR (Cox et al. 2008; Graves and Waddock 1994; Johnson and Greening 1999), which also may have implications for CSR disclosure.

Based on the previous, a number of control measures were developed (see Table 2), which will be discussed more in detail in the remainder of this section.

First, we control for size. The idea is that larger companies have more impact on society and are more visible than smaller companies, and therefore are scrutinised more intensively by stakeholders. However, in this study, the effect is expected to be modest, given that sample companies are all large multinational companies and size variance therefore will be limited. In this study, size is measured by the market value of a company. This measure was considered to be more appropriate than alternative size measures such as sales or total assets, since a considerable amount of sample companies provide financial services, for which total assets are typically very high, and sales figures incomparable, as compared to companies from other industries. Company data on size (SIZE) were taken from the Datastream financial statistical database.

Second, we control for industry effects by including an industry dummy that takes account of an industry's issue visibility (IND_VISIB). It builds on the idea that some industries are more visible due to an inherent impact of their activities on society. Bowen (2000) puts forward that issue visibility is high when issues "are easily noticeable by groups inside or outside the organization". This method

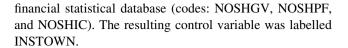
for controlling for industry effects has been suggested by prior studies, such as Roberts (1992), Hackston and Milne (1996), and Brammer and Millington (2004). Our measure was based on the classifications of these studies, updated with a number of industries that have faced major CSR issues in later years (Carroll and Buchholtz 2008). Consequently, IND_VISIB takes the value 1 if an industry is classified as having high visibility due to high impact, and the value 0 otherwise.⁸

Third, we control for the potential effect of institutional factors, as the relevance of institutional settings in relation to CSR disclosures is frequently stressed (e.g., Doh and Guay 2006; Maignan and Ralston 2002). Based on previous CSR disclosure research, we distinguish between an institutional setting with a stakeholder versus shareholder orientation (see Holder-Webb et al. 2008; Simnett et al. 2009; Smith et al. 2005) as well as the US versus non-US countries (Aguilera et al. 2006; Buhr and Freedman 2001; Cormier and Magnan 1999; Holder-Webb et al. 2008). This results in three country clusters: STAK (stakeholder-oriented), SHR_N_US (shareholder-oriented non-US), and SHR US (shareholder-oriented US). This classification is consistent with an earlier study by Meek et al. (1995) that finds differences in CSR disclosures between the US, the UK, and continental European companies. Table 2 lists the constituent countries of each cluster.

⁸ The following (GICS) industries have been classified as 'highly visible': oil and gas, chemicals, metals and mining, paper and forest products, aerospace and defence, airlines, cars, textiles, apparel and luxury goods, all retailing, food and staples, beverages, food products, tobacco, household products, personal products, healthcare equipment and supplies, biotechnology, pharmaceuticals, telecommunication services, and all utilities.

Fourth, environmental performance is included as a control variable. We use the performance measure as provided by Dutch Sustainability Research (DSR), one of the partners in the SiRi network. This measure is based on the information in the SiRi profiles, as previously discussed. The performance score for each item was derived through a SiRi/DSR analyst scrutinising and quantifying the level to which a company satisfied that particular item. Dependent on the application level (e.g., for more or less than 50 % of operations, qualitative vs. quantitative benchmarks), the resulting score (S) varies from 0 to 100 %. Each item was also assigned a specific weight (W) by applying an industry-specific weighting methodology. Total environmental performance was calculated as the weighted aggregate of all the individual scores per environmental information item $(\Sigma_i S_i \times W_i)$. A more detailed explanation of the SiRi methodology can be found in Prior et al. (2008). The resulting measure for environmental performance was labelled ENVPERF. 10

Fifth, we control for the potential influence of institutional investors, since there is some evidence of institutional investors' influence on strategic decisions regarding CSR (Cox et al. 2008; Graves and Waddock 1994; Johnson and Greening 1999), as described above. However, there are only a handful of empirical studies on the role of institutional shareholders in CSR disclosure, of which some report on a general passivity of institutional investors (Friedman and Miles 2001; Miles et al. 2002), whereas others observe a trend of growing active engagement of institutional investors (Sparkes and Cowton 2004). Thus, it is not clear whether institutional shareholders actually do have an influence on environmental disclosure, let alone whether this influence is of a positive or negative nature. To control for the potential effect of institutional ownership, we included a variable that was calculated as the percentage of shares outstanding that are held strategically by institutional shareholders. These institutional shareholders include governments, pension funds, and investment companies. Data were retrieved from Datastream



Empirical Model

Ordinary least-square (OLS) multiple regression analysis was used to analyse the relationship between stakeholder attributes and public environmental disclosure, resulting in model (1). The model accounts for the effect of the individual attribute measures separately; this statistical specification is in line with previous empirical studies (Agle et al. 1999; Eesley and Lenox 2006). Nested regressions are specified, including six models labelled A, B, C, D, E, and F. Models A–D use only (combinations of) the independent variables. In the E model, the control variables for size, industry, country, and performance are added. The F model controls for potential other sources of stakeholder influence on environmental disclosure, by including the proxy for institutional ownership.

This approach is summarised by the following model:

Environmental Disclosure,

=
$$f(\text{Power}, \text{ Urgency}, \text{ Legitimacy}, \text{ Control Variables})_i$$

($i = 1, ..., 199$). (1)

Results

Descriptives

Table 3 shows the descriptive statistics for dependent and explanatory variables.

Panel A of Table 3 shows the descriptive statistics for the continuous variables. Disclosure levels indicate that, on average, the level of response of companies toward their environmental stakeholders amounts to a mere 29 %. This relatively low level of response is in line with previous research (Agle et al. 1999). The average level of urgency is very low, which indicates that many companies are not involved in any environmental controversies at all. The legitimacy measure shows that companies vary considerably in the extent to which they perceive their environmental NGOs to be legitimate. Given that the strength of operationalisation is not equivalent across the various attribute proxies, comparing the descriptive statistics of the various attribute measures is not meaningful (Cooper and Richardson 1986). Hence, it cannot be assessed whether



 $^{^{9}}$ As of September 2008, the company has continued its operations under the colours of the previously mentioned Sustainalytics.

Provided that environmental performance measurement is "notoriously difficult" (Agle et al. 1999), an alternative performance measure was included in our analysis. This measure is based on KLD's Socrates database, which has been tried-and-tested in previous research (for an overview of studies, see Chen et al. 2008) and has been validated as an appropriate measure for CSR performance in general (Sharfman 1996) and consequently also for environmental performance (as a subset of CSR performance). However, the disadvantage of this measure is that it is only available for the US companies, which seriously limits our sample size. Therefore, it has been mainly included as a robustness check in our sensitivity analysis for the US companies; the results for this variable will be only reported if they deviate from ENVPERF.

Given the low mean for environmental disclosure, we assessed the number of cases for which this variable equals zero; this turned out to be only one company, and consequently the variable is not truncated at zero, which takes away the need for censored regression.

Table 3 Descriptive statistics

Variables	Description		N	Min	Max	Mean	SD
Panel A: continuous varial	ples						
(1) Dependent/explanatory	variables						
Disclosure	ENVDIS	2	198	.00	.77	.29	.19
Urgency	ENVURO	3	199	.00	.71	.09	.14
Legitimacy	ENVLEC	ł	196	.00	1.00	.51	.38
Performance	ENVPER	F	198	.16	.93	.46	.21
Institutional ownership	INSTOW	N	195	.00	.62	.19	.20
(2) Control variables							
Size	$SIZE^a$		195	412	319,848	37,556	52,492
	LNSIZE		195	6.02	12.68	9.87	1.19
Variables	Description	N	High		Low		
			Frequency	%	Frequency	%	
Panel B: dichotomous varia	ables						
(1) Explanatory variables							
Power	ENVPOW	196	76	38.8	120	61.2	
(2) Control variables			Value = 1		Value = 0		
Industry	IND_VISIB	199	94	47.2	105	52.8	
Country	STAK	199	98	49.2	101	50.8	
	SHR_N_US	199	32	16.1	167	83.9	
	SHR_US	199	69	34.7	130	65.3	

^a In millions \$

companies on average are confronted with NGOs that are more legitimate than urgent. Table 3 also includes a new measure for size, representing the original size measure after log-transformation. These changes were informed by the fact that further descriptive analysis revealed that this variable was both peaked and skewed.¹²

Panel B of Table 3 lists the frequencies of the dichotomous variables. None of the binary variables has a split above 90:10, hence none of the categories are underrepresented.

Univariate Analysis

Table 4 presents the individual associations between the dependent variable, explanatory attribute variables, as well as the control variables. ¹³

When analysing the association between the individual attribute measures and the dependent variable, the

relationships are in line with what was hypothesised. All stakeholder attributes are significantly positively associated with disclosure. Regarding the control variables, the univariate analysis illustrates that the environmental disclosure of companies in highly visible industries and stakeholder-oriented countries is significantly more extensive. Table 4 also illustrates that institutional ownership and environmental disclosure are negatively correlated, implying that higher institutional ownership is associated with less-extensive environmental disclosure. This implies that, next to environmental NGOs, institutional shareholders also have an influence on environmental disclosure. Notably, environmental performance is not significantly associated with disclosure. ¹⁴

Table 4 also includes the associations between the individual explanatory variables. It illustrates that each of the stakeholder attributes (power, legitimacy, and urgency) is positively associated with the others. The associations between the environmental stakeholder attributes are highly

 $[\]overline{}^{12}$ Skewness and kurtosis measured at the +3 to -3 range.

¹³ Given the nature of some variables (basic interval scales of four categories), we checked all continuous variables for possible violations of the normality assumptions. Non-parametric univariate tests were performed for all variables. Also, as part of the multivariate analysis, we analysed the residuals of the models and, if necessary, ran additional regressions. However, none of these led to different conclusions.

¹⁴ The same holds for the alternative performance measures based on the KLD data. However, the Pearson correlation between the alternative environmental performance measure and environmental disclosure is negative (–.16), although non-significant. It is also worth mentioning that ENVPERF and the alternative KLD measure are not significantly correlated. Yet, it should be kept in mind that the latter associations are based on the US companies only.

Table 4 Correlations between dependent, explanatory, and control variables

	Variables	Type	1	2	3	4	5	6	7	8
1	ENVDISC	С	1							
2	ENVPOW	D	.18*	1						
3	ENVURG	C	.17*	.57**	1					
4	ENVLEG	C	.62**	.34**	.27**	1				
5	LNSIZE	C	.01	.25**	.23**	.12	1			
6	IND_VISIB	D	.34**	.18*	.30**	.31**	.02	1		
7	ENVPERF	C	.05	01	03	06	.01	02	1	
8	INSTOWN	C	15*	.08	.09	12	.29**	.03	.01	1
9	STAK	D	.24**	06	07	.14	40**	.08	.03	73**
10	SHR_N_US	D	.08	15*	20**	04	15*	11	08	.05
11	SHR_US	D	31**	.18*	.24**	11	.53**	.01	.03	.72**

Pearson correlations are tabulated; given the dichotomous nature of some of the variables, as indicated, I also performed independent sample t-tests and χ^2 tests and compared the results; all results were similar

Type C continuous variable, Type D dummy variable

significant. The significance of the association between power and legitimacy is in line with literature suggesting close ties between the two (e.g., Mitchell et al. 1997 indicate that the constructs are "sometimes overlapping").

Further, Table 4 illustrates that bigger companies have to deal with more powerful environmental NGOs and with environmental NGOs with more urgent claims. Besides, the significant positive correlations between industry visibility on the one hand, and each of the stakeholder attributes on the other hand, indicate that companies from highly visible industries are confronted with more NGO power and urgency and tend to perceive environmental NGOs as more legitimate. This last point corresponds to empirical research findings indicating that the most polluting industries have the most developed CSR management practices (Delmas and Blass 2010; Mattingly and Berman 2006). Table 4 also shows that there are differences between stakeholder attributes and other variables across country clusters. Therefore, as part of the multivariate analysis in the next section, a sensitivity analysis will be carried out in order to analyse whether the hypothesised relations are consistent across country clusters.

Multivariate Analysis

Table 5 presents the multivariate results of the OLSs regression analysis for the model specified earlier in Eq. 1.¹⁵

The F-statistics show that all models are significant.

Models 1A–D include the coefficient estimates for the models with only (some of) the primary explanatory variables, i.e., the individual stakeholder attributes. Given that power and urgency are highly correlated, in models 1B and 1C the two variables are individually entered, whereas model 1D includes all of the stakeholder attributes. Each of these base models explains approximately 38 % of the variance in disclosure. The coefficients in these models remain stable and confirm what univariate analysis has already uncovered: legitimacy is consistently directly associated with environmental disclosure, and hence hypothesis 3 is accepted. However, different from the univariate results, power and urgency are no longer significantly directly related to environmental disclosure, and therefore hypotheses 1 and 2 are rejected.

Model 1E includes the control variables for size, industry, country, and performance. This model adds another 10 % to the explanatory power of the previous models. As for the variables of primary interest, the direction and significance of the coefficients of the attributes remain unchanged. Table 5 further illustrates that environmental disclosure is (marginally) significantly positively determined by size,

Footnote 15 continued

(ENVDISC2) from which the *disclosures* on three environmental items (i.e., an environmental department, EMS, and stakeholder engagement) were excluded. This was done as the *existence* of these three arrangements was also used to construct the legitimacy variable, and consequently the strength of the relation between disclosure and legitimacy could have been inflated. Again, this did not change any of the results. Third, we also applied our regressions to a split sample of highly visible and non-highly visible companies, in order to account for potential distorting effects from the associations between IND_VISIB and each of the attribute variables. This did not result in any other conclusions.



^{*} p < .05, ** p < 0.01 (two-tailed)

 $^{^{15}}$ We also performed a number of additional statistical tests. First, we ran OLS regressions with the previously mentioned alternative environmental power variable (ENVPOW2). The results largely remain unchanged, except for a small decrease in the significance levels of the size and industry measures (IND_VISIB and LNSIZE), the latter of which may be attributed to the decrease in sample size to n=70. Second, we ran regressions using a dependent variable

Table 5 OLS regression results for environmental disclosure

Dependent variable	Exp. sign	Environmental disclosure							
Variables		Model 1A	Model 1B	Model 1C	Model 1D	Model 1E	Model 1F		
Explanatory									
(Constant)	+/-	(.126***)	(.128***)	(.125***)	(.127***)	(187)	(352**)		
ENVPOW	+		012		021	006	002		
ENVURG	+			.022	.060	.061	.081		
ENVLEG	+	.321***	.327***	.319***	.325***	.262***	.267***		
Control									
LNSIZE	+					$.018^{\dagger}$.025*		
IND_VISIB	+					.074**	.057*		
ENVPERF	+/-					.001†	.001		
STAK	+/-					.128***	.229***		
SHR_N_US	+/-					.152***	.204***		
SHR_US	+/-					Baseline	Baseline		
INSTOWN	+/-						.003**		
Adjusted R^2		0.386	0.380	0.380	0.378	0.477	0.510		
F-value		121.311***	60.549***	60.395***	40.361***	22.564***	22.592***		
N		194	194	194	194	189	187		

Unstandardised coefficients are reported

industry, and environmental performance¹⁶; and compared to the US, companies from other countries have significantly more extensive environmental disclosure.

The model in which we control for potential other sources of stakeholder influence by including the proxy for institutional ownership is labelled 1F. This model accounts for an additional increase in R^2 by approximately 3 % as compared to the E model. As for the variables of primary interest, the model demonstrates the persistent quintessence of legitimacy, as well as non-significant effects of urgency and power. However, it illustrates that in a multivariate setting the level of institutional ownership is positively and significantly associated with environmental disclosure, which is in contrast with the univariate result presenting a negative and significant association. So as to further explore the nature of this change, we ran a regression in which next to the stakeholder attributes only institutional ownership was included as a control. In this model, the coefficient for institutional ownership becomes again negative, although non-significant. An explanation for the inconsistent behaviour could be the existence of a relationship with any of the other control variables. Given the notably high correlation between the country variables and institutional ownership (see Table 4), differences between country clusters seem to be a likely candidate for the cause of this change in sign of the coefficient. Formal collinearity diagnostics do not indicate any multicollinearity problems. Further insight will be derived from the sensitivity analysis that will be discussed in the last paragraph of this "Results" section.

Mediation Test

The change in the relationship between attributes and environmental disclosure when moving from a univariate to a multivariate context illustrates that mutual relationships between the attributes come into play. Mitchell et al. (1997, p. 870) acknowledge the importance of potential interrelationships between stakeholder attributes by stating "Legitimacy gains rights through power and voice through urgency". In the case of environmental stakeholders, legitimacy seems to take over the individual effects of power and urgency. There is preliminary evidence on the idea that non-resource-based stakeholders need power in order to be considered a legitimate stakeholder (Driscoll and Crombie 2001). Based on this literature and statistical results, we will test for a potential mediating role of legitimacy in the relationship between each of the other two attributes (power and urgency) and environmental disclosure. Baron and Kenny (1986) provide a basic mediation test, which consists of three regression equations: (1) regressing the



[†] p < 0.10; * p < .05; ** p < 0.01; *** p < 0.001 (two-tailed)

¹⁶ In the regression model using the alternative performance measure based on KLD data, the coefficient of the environmental performance variable becomes non-significant.

Table 6 Mediation test: OLS regression results for power and urgency with ENVLEG (mediator) and ENVDISC (dependent variable) as dependent variable

Dependent	ENVLEG		ENVDISC		
Independent	Exp. sign	Power	Urgency	Power	Urgency
Explanatory					
(Constant)	+/-	(300)	(374)	(426**)	(446*)
ENVPOW	+	.217***		.067**	
ENVURG	+		.549**		.223*
Control					
LNSIZE	+	.057*	.066*	.040**	.042**
IND_VISIB	+	.187***	.183**	.110***	.104***
ENVPERF	+/-	001	001	.001	.001
STAK	+/-	$.198^{\dagger}$.213*	.279***	.288***
SHR_N_US	+/-	.185*	.198*	.247***	.256***
SHR_US	+/-	Baseline	Baseline	Baseline	Baseline
INSTOWN	+/-	001	.000	.002*	.003*
Model		7.568***	6.080***	12.028***	11.848***
Adjusted R^2		0.196	0.159	0.292	0.288
N		188	188	187	188

Unstandardized coefficients are reported

mediator on the explanatory variable, (2) regressing the dependent on the explanatory variable, and (3) regressing the dependent on both the explanatory and mediating variable.

According to Baron and Kenny (1986), mediation is established when the coefficient of the explanatory variable in the first two regression equations is significant, and moreover the coefficient for the mediator in the third equation is significant, whereas in case of the explanatory variable the significance of the coefficient decreases.

Table 6 provides the results of equations 1 and 2 for both power and urgency including all covariates.

As Table 6 illustrates, both explanatory variables (power and urgency) are significantly related to both legitimacy and disclosure. Since from Table 5 it can be distilled that the coefficient of the potential mediator (legitimacy) in equations 3 is significant, whereas the coefficients of the explanatory variables (power and urgency) are non-significant, it can be concluded that the effects of stakeholder power and urgency on environmental disclosure are mediated by legitimacy. This implies that for environmental NGOs the effects of power and urgency on disclosure are of an indirect nature, and consequently that they need power and urgency to become legitimate, which subsequently leads to more disclosure.

Sensitivity Analysis

Given the overall importance of the country variables in a univariate context (Table 4) and the fact that the multivariate analyses (Table 5) showed that, compared to the

US, companies from other countries have significantly more extensive environmental disclosure, in this section we will investigate whether the relation between environmental disclosure and stakeholder salience is conditional upon institutional factors. We do so by splitting up the sample in the US versus non-US companies.

Analysis of the (non-tabulated) descriptives learns that non-US companies on average have higher disclosure (0.34 vs. 0.21) and legitimacy (0.54 vs. 0.45) but lower urgency (0.07 vs. 0.14). 17 All differences, except legitimacy, are significant (at the p < 0.001 level). An explanation for the lack of significance for legitimacy may be the general lack of legal requirements for the environmental management arrangements with which stakeholder legitimacy is operationalised in this study. Environmental management initiatives are typically voluntary and initiated within an industry, which is in line with the significant positive correlation between industry visibility and legitimacy as previously discussed. As for stakeholder power, the descriptives show that non-US companies' distribution over high versus low power (32.3 vs. 67.7) differs from that of the US companies, showing an almost equal dispersion (50.7 vs. 49.3). This confirms the results from the univariate analysis in Table 4. The differences for power and urgency imply that the level of activism of the environmental NGOs in the US is on average higher than in other



[†] p < 0.10; * p < .05; ** p < 0.01; *** p < 0.001 (two-tailed)

¹⁷ As the descriptives for the non-US sample illustrated that ENVURG and INSTOWN were peaked, log-transformations were applied to solve the problem. The results of the remainder of the sensitivity analysis are based on these new measures, LN_ENVURG and LN_INSTOWN, respectively.

Table 7 Models for non-US and the US

Dependent	Environmental disclosure								
	Non-US			US					
Independent	Model 2A	Model 2B	Model 2C	Model 2A	Model 2B	Model 2C			
Explanatory									
(Constant)	(.176***)	(094)	(096)	$(.045^{\dagger})$	(158^{\dagger})	(367^{\dagger})			
ENVPOW	032	025	013	.025	.017	.021			
ENVURG	.174	.063	.061	.117	.078	.115			
ENVLEG	.289***	.258***	.255***	.303***	.275***	.279***			
Control									
LNSIZE		.020	.021		.018	.022			
IND_VISIB		.082**	.062*		.051	.046			
ENVPERF		.001 [†]	.001 [†]		.000	.000			
STAK		Baseline	Baseline						
SHR_N_US		.025	019						
SHR_US									
INSTOWN			.020			.045			
Adjusted R^2	0.315	0.354	0.372	0.516	0.518	0.529			
F-value	20.184***	10.474***	9.798***	25.206***	13.015***	11.748***			
N	125	121	119	68	67	67			

Unstandardized coefficients are reported

countries; this may be related to the bigger size of the US companies (as previously shown in Table 4), which makes them more visible. The (non-tabulated) associations between the variables for each of the split samples are also overall similar to those presented in Table 4¹⁸: The levels of significance for the associations between each of the attributes and environmental disclosure remain the same or slightly increase for both the US and non-US samples.

The results of the separate multivariate analysis for the US and non-US companies are presented in Table 7. The split sample models 2A–C, respectively, correspond to models 1D–F in Table 5. With regard to the independent variables, the results are consistent with Table 5, in that the effect of legitimacy is positive and significant, where the effects of power and urgency are non-significant. Regarding the coefficients of the control variables, size and institutional ownership become non-significant for both specifications. Hence, their apparent positive effect on environmental disclosure as shown in the main model (Table 5) should be actually attributed to country differences. The effect of industry appears to be relevant for non-US companies only. Overall, these findings imply that the

accurateness of our hypothesised relations between stakeholder attributes and CSR disclosure is consistent for the US versus non-US settings.

Conclusion

This study investigates the influence of secondary stakeholders on the extensiveness of CSR disclosure. Using stakeholder salience theory, we seek to explain differences in CSR disclosure across companies by characteristics of the stakeholders with which they are confronted. This hypothesised conceptual relation is empirically addressed through assessing the extent to which environmental stakeholders' power, urgency, and legitimacy influence the level of management response to the demand for environmental information.

Based on OLS regression analysis for an international sample of 199 large companies, we find support only for the hypothesised direct relation between legitimacy and environmental disclosure; there is no direct relation with environmental disclosure for power or urgency. However, further analysis reveals that this does not mean that power and urgency are unrelated to disclosure; their relation is rather of an indirect nature, as it is mediated by legitimacy. It is legitimacy that explains most of the variation in environmental disclosure. This implies that more legitimate environmental NGOs are better able to persuade companies



[†] p < 0.10; * p < .05; ** p < 0.01; *** p < 0.001 (two-tailed)

 $^{^{18}}$ Some of the figures for the control variables change: the correlations between size and disclosure, legitimacy, become significant (at the p < 0.05 level), whereas correlations between size and urgency, power, as well as correlations between institutional ownership and size, disclosure, and the correlation between industry and power become non-significant.

to disclose more extensive environmental information. Yet, in order to become (more) legitimate, environmental NGOs need both power and urgency.

In our empirical model, we control for a number of factors, which have been suggested to influence CSR disclosure in prior literature; the control variables included in the model are company size, industry affiliation, environmental performance, country, and institutional ownership. The results show that only a company's country of origin is consistently significantly related to environmental disclosure, in that non-US companies disclose more extensively than their US counterparts. An explanation for this finding may be the specific legal environment of the US, which is characterised by a high risk of litigation and results in greater incentives for providing mandatory CSR disclosure and for abstaining from voluntary disclosure (Buhr and Freedman 2001). However, our findings do not support the idea that this distinction in environmental disclosure between the two country clusters can be attributed to differences in stakeholder salience. The relationship between stakeholder attributes and environmental disclosure appears to be robust for changes in institutional contexts.

This study improves our understanding of CSR disclosure by demonstrating that, next to the well-documented effect of company characteristics, stakeholder characteristics are also essential. Besides, it provides scarce empirical evidence that not only primary stakeholders but also secondary stakeholders are influential with regard to management decision-making. And more specifically, it offers insight into why some stakeholder groups are better able to influence disclosure decisions than other. Our finding that the relation between environmental stakeholders' characteristics and environmental disclosure holds for various institutional contexts implies that (future) research outcomes on the topic, based on empirical studies from different countries, are well comparable.

The results also have important practical implications for managers of both environmental NGOs and large companies. For managers of environmental NGOs, the results provide evidence of the most successful tactics for having their environmental information demands satisfied by companies. The results suggest that environmental stakeholders benefit most from an increase in their legitimacy as perceived by company management. The high and consistent association between legitimacy and disclosure implies that this is the best way to enhance disclosure. Our findings on the indirect effect of environmental power and urgency suggest that for environmental stakeholders increasing legitimacy is associated with putting critical and time-sensitive environmental issues on the corporate agenda, by means of confrontational or collaboration tactics. For company management, the results provide insights into the most important stakeholder characteristics, on the

basis of which they may develop strategies for proactively disclosing environmental information.

In order to further improve our understanding, future research may focus on what types of environmental information companies disclose in response to NGO information needs. Comparing the actual attributes with management perceptions may also be an interesting avenue for future studies in this area, as is CSR disclosure to other stakeholders, such as employees or (institutional) investors.

The results are subject to a number of limitations. First, they are only applicable to contexts in which large companies disclose environmental information. The relationship in settings with smaller companies (see e.g., Knox et al. 2005), or CSR disclosures to other stakeholders, may follow different patterns. Secondly, in using measures of actual power and urgency, we did not take into account any biases that stem from the fact that managerial actions are a result of their *perceptions* of these actual attributes. Third, (prior) interactions of a company with other stakeholders and between stakeholder groups may influence the priority that managers give to one particular stakeholder (Neville and Menguc 2006; Reid and Toffel 2009; Rowley 1997); therefore disclosure may reflect the combined attributes of several different stakeholder groups. Given our research design, it was not possible to specifically address any potential interdependencies between stakeholders. Fourth, although causation can never be empirically demonstrated, making causal inferences in cross-sectional research designs is particularly difficult. Nevertheless, the observed regularities and correlations in our study correspond to the theoretical relations from prior research.

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Appendix

Items included in the SiRi company profiles and the environmental disclosure index.

Category 1: Principles and Policies

 The company has a formal environmental policy statement.



Category 2: Management Systems

- (2) The company has board-/management-level responsibility for environmental issues,
- (3) The company has an environmental department,
- (4) The company has an EMS,
- (5) The company monitors its environmental impact,
- (6) The company sets quantitative environmental performance targets,
- (7) The company conducts internal audits,
- (8) The company conducts third-party audits,
- (9) The company conducts environmental training of employees,
- (10) The company has formal mechanisms for engagement with environmental stakeholders,
- (11) The company has criteria for the selection of suppliers that include environmental policies or EMS,
- (12) The company has environmental criteria for the procurement of products/raw materials,
- (13) The company has programmes to take into account environmental impact of products at the R&D stage,
- (14) The company has programmes to reduce the impact of products at the end of the life-cycle,
- (15) The company has programmes to reduce water consumption,
- (16) The company has programmes to reduce material consumption,
- (17) The company has programmes to reduce air emissions,
- (18) The company has programmes to reduce water pollution.
- (19) The company has programmes to reduce the impact of waste,
- (20) The company has programmes to improve energy efficiency,
- (21) The company has programmes to improve environmental performance of logistics and fleet management.

Category 3: Performance

- (22) Data on facilities with environmental certification,
- (23) Major recent fines,
- (24) Energy consumption,
- (25) Electricity consumption,
- (26) Gas consumption,
- (27) Oil consumption,
- (28) Renewable energies,
- (29) Other energy,
- (30) Water consumption,

- (31) Discharges to water,
- (32) GHG (CO₂ equivalents) emissions,
- (33) VOC emissions,
- (34) ODC (CFC11 equivalents) use,
- (35) Other air emissions,
- (36) Industrial waste,
- (37) Common waste,
- (38) Products beneficial to the environment or leading to a reduced environmental impact,
- (39) Accruals for environmental remediation,
- (40) Recent controversies over waste management,
- (41) Recent controversies over soil pollution,
- (42) Recent controversies over water pollution,
- (43) Recent controversies over air pollution,
- (44) Recent controversies over resource use or damage to ecosystems,
- (45) Recent controversies over products and services,
- (46) Recent controversies over supply chain issues,
- (47) Other notable issues.

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