

Webs of Influence: National Stakeholder Networks and Corporate Social Performance

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ABSTRACT

Drawing on stakeholder, social network and social movement theories, we argue that the prominence of environmental and social stakeholders within a country's socio-political network and their ability to overcome collective action problems together influence Corporate Social Performance (CSP). We draw upon a novel dataset of 250 million media-reported events to construct comprehensive national networks of organizations and individuals as well as sub-networks of environmental and social stakeholders. We empirically demonstrate that within country variation across time in the prominence of stakeholders in the broader country network and the heterogeneity of sub-network actors are both associated with increased CSP by individual firms among a sample of 3,500 firms spanning 42 countries. These results highlight the importance of taking a holistic network approach to the stakeholder landscape for understanding corporate social responsibility practices. We argue that a similar approach may be applied for a wide array of corporate practices of relevance to various socio-political stakeholders.

Keywords:

Stakeholder theory, social network analysis, corporate social performance

INTRODUCTION

Stakeholder theory has enriched our understanding of how multiple and diverse stakeholders influence organizational practices. Organizational practices as diverse as the timing of earnings announcements (Bowen et al. 1992) and changes in CEO compensation (Arora & Alam 2005), have been tied to stakeholder influence and interests. Nowhere has stakeholder theory been as prominent as in the study of corporate social responsibility (CSR). CSR is seen by many scholars as a strategic response to pressure from stakeholders (Yang & Rivers 2009; Murillo-Luna et al. 2008; McWilliams & Siegel 2001) on whom organizations depend for resources and support (Pfeffer & Salancik 1978), or as a pro-active attempt by firms to pre-empt or mitigate these pressures and enhance the reputation and value of the corporation (Jackson & Apostolakou 2010).

Today, U.S. and U.K. companies in the Fortune Global 500 are estimated to spend \$15.2 billion per year on CSR activities (Financial Times, 2014). Nevertheless, large differences remain between firms in the magnitude, focus and efficacy of these activities. Therefore, scholars are increasingly interested in understanding the drivers of the heterogeneity in corporate social performance across firms (Aguilera et al. 2007), and especially across countries (Brammer et al. 2011). To date, cross-country investigations of CSR heterogeneity have concentrated on institutional determinants of CSR (Ioannou & Serafeim 2012; Matten & Moon 2008), tending to rely on either comparative legal or comparative institutional analysis (Williams & Aguilera 2008). For example, cross-country differences in corporate governance arrangements (Aguilera et al. 2007) or political, legal and labor institutions (Ioannou & Serafeim 2012) are often used to explain differences in firms' CSR across countries.

We propose that taking account of stakeholders in the socio-political environment in which firms operate can contribute to our understanding of firm's corporate social performance from a comparative perspective. Stakeholders occupy a central role in many single-country studies of CSR as catalysts for corporate investment in social and environmental performance improvement (Arenas et al. 2009; Henriques & Sadosky 1996; Henriques & Sadosky 1999; Lee 2011; Kim & Lyon 2015). NGOs uncover and publicize labor or environmental violations, workers picket for fair wages, governments disseminate best practices, investors demand 'social impact' funds, and inter-governmental organizations set up voluntary organizations such as the UN Global Compact where companies pledge to principles. Given the central position stakeholders occupy in the domestic CSR research space, there is a need for comparative investigations of the respective roles of government, and other actors such as labor unions, non-governmental organizations (NGOs), and communities to further our understanding of the differing pressures towards responsible corporate actions (Williams & Aguilera 2008). Our work represents a significant theoretical shift in comparative CSR research, focusing attention on managerial evaluations of stakeholder salience, and in turn, firm responsiveness to stakeholder interests. While institutions have been shown to strongly influence CSR heterogeneity (Hartmann & Uhlenbruck 2015; Ioannou & Serafeim 2012; Matten & Moon 2008; Jackson & Apostolakou 2010), a stakeholder perspective can further enrich comparative CSR linking it to more micro-mechanisms within stakeholder theory known to impact CSR at the firm-level.

A relational perspective, that takes account of stakeholders' multiplex ties in the socio-political network in which firms operate, can contribute to our understanding of the (observable) social and environmental performance outcomes (i.e., Corporate Social Performance or CSP) of a firm's CSR activities (Ioannou & Serafeim 2012). A socio-political network consists of the

social and political actors, such as branches of government, non-governmental organizations (NGOs), citizens, and the media, that compose a firm's nonmarket environment (Baron & Diermeier 2007; Hadjikhani et al. 2008). We explore the extent to which cross-national variation in CSR practices can be explained by differences in the position and structure of stakeholder networks within countries.

Across countries, individual stakeholders vary in the prevalence and prominence of their positions within the socio-political network (Marquis & Toffel 2013). As such, firms experience divergent degrees of pressures to engage in social responsibility initiatives from distinct groups of interconnected stakeholders who sometimes collaborate and sometimes compete for corporate attention (Aguilera et al., 2007: 836). This variation yields divergent patterns across countries of stakeholder issues to which firms attend (Maignan & Ralston 2002). For example, Marquis & Toffel (2013) show that greater presence of environmental NGOs in countries deters companies from engaging in selective environmental disclosure.

Further, the characteristics of networks of actors with a stake in firms' CSP varies across countries. In some, stakeholder networks are densely connected and composed of relatively homogenous and nationally-bound stakeholders, whereas in others, networks are populated by diverse stakeholders that cross national boundaries and organizational purposes. These structural characteristics of the networks in which stakeholders are embedded also alter the pressures on firms to engage in CSR. Where stakeholder networks are denser, as Rowley (1997) argues, organizations face greater pressure for compliance. We extend this argument to consider the importance of the heterogeneity of stakeholders within an issue network and highlight the increased salience of more diverse stakeholder networks, *ceteris paribus*.

We thus draw on and integrate stakeholder theory, social network theory, and social movement research, to propose that the prominence of environmental and social stakeholders within a country's socio-political network, and their ability to overcome collective action problems via inter-stakeholder network ties, together influence managerial perceptions of the salience of these stakeholders. Taking account of the interconnectedness of a firms' external environment, as suggested by resource dependency theory (Wry et al. 2013), allows us to reframe stakeholder power as relational. Privileging firm-stakeholder dyadic ties and resources at the direct disposal of a stakeholder alone underestimates the power of stakeholders with indirect influence via ties to firms' resource providers (Gargiulo 1993), or who may not have a direct interest in an issue but can join a coalition of opposition based on their pre-existing relationships with other stakeholders (Clark et al. 1998; Della Porta & Diani 2006; Diani 2000; Diani & McAdam 2003; McAdam & Paulsen 1993) or issues (Jinnah 2011; Sell & Prakash 2004). Additionally, building on and extending Rowley's (1997) network approach to stakeholder theory, we propose that the characteristics of the network of interconnected stakeholders, and the heterogeneity of means by which they exert influence (Oliver 1991), conditions managerial perceptions of stakeholder salience.

Based on this theoretical framework, we expect Corporate Social Performance (CSP) to be higher in countries where environmental and social stakeholders are more prominent in national socio-political networks, and where environmental and social stakeholder networks are denser and contain heterogeneous actors. A framework that brings to the fore indirect channels of stakeholder influence and interconnectedness of heterogeneous stakeholders is particularly important in the context of CSP, where historically some of the greatest pressure for firms to adopt environmentally or socially responsible practices have come from interconnected networks

of activists, inter-governmental efforts, or cross-sectoral efforts. Although our propositions are actor-centered (Williams & Aguilera 2008), we take the view that stakeholder influence is institutionally contingent, and control for national-level institutions that have been found to influence CSP across countries (Ioannou & Serafeim 2012).

We construct our networks using events reported in the Global Data on Events, Location and Tone (GDELT) dataset which contains over a quarter-billion media-reported events in print, broadcast, and web news media across the world in over 100 languages. Each event record includes information on a source actor and a target actor as well information on the degree of cooperation or conflict characterized by the actions or statements of the source towards the target. Within these comprehensive national socio-political networks composed of every media-reported event-tie between all actors in the country, we also examine the characteristics of the subset of environmental and social stakeholders and the structure of relationships between them.

We begin by reviewing literature on stakeholder theory, focusing on drivers of stakeholder salience, and introduce the valuable insights offered by social network theory to a stakeholder view of corporate action. Second, we draw on relational perspectives of power, and research on stakeholder salience and social movements to identify specific elements of the network structure of environmental and social stakeholders that influence the salience of environmental and social stakeholders to managers and generate hypotheses regarding their influence on the observed levels of CSP. In the latter sections, we describe how we identify stakeholders and construct socio-political and stakeholder networks, detail our data sources and methodology, and present empirical analyses and results. We conclude with a discussion of the additional value that a stakeholder network perspective provides to studies of comparative CSR, and corporate behavior in global markets, more broadly.

STAKEHOLDER THEORY & SOCIAL NETWORKS

Stakeholder theory posits that strategic management involves consideration of stakeholders who can affect, or are affected by, the accomplishment of an organization's purpose (Freeman, 1984). However, not all stakeholders are created equal, influencing corporate actions to varying degrees. Managerial perceptions of the importance of stakeholder groups varies according to their identity (e.g., regulators, community stakeholders, or peer organizations) (Henriques & Sadorsky 1999), and their possession of relationship attributes such as power (Mitchell et al. 1997). For instance, in a study of Amoco Corporation, the power of activist groups filing shareholder resolutions were found to influence the decision by Amoco to respond (Hoffman 1996). Social movement theory supports the contention that well-endowed stakeholder groups are likely to be more successful in bringing about positive firm responses (McCarthy & Zald, 1977). The effectiveness of stakeholder pressure also interacts with firm characteristics. For example, stakeholder mobilization and influence may be more successful when the target organization is large (King 2011; Bartley & Child 2012), has a strong reputation (McDonnell & King 2013; Schurman 2004; King 2011; Bartley & Child 2012; Bartley & Child 2014), or operates in a regulated industry (Kim & Lyon 2015). Similarly, there is variation across national context in the ability of stakeholders to prompt corporate change (Doh & Guay 2006). Aguilera et al. (2007) highlight differences in national laws and the enforcement thereof, support for corporatism and public-private partnerships, and the legitimacy of intergovernmental organizations as important determinants of cross-national variation in CSR practices. Clearly, the role of stakeholders is highly situational and dependent on a number of variables related to managerial perceptions of stakeholders (Mitchell et al., 1997).

Hence, one prominent area of inquiry in stakeholder theory is what determines the salience of stakeholders to managers, and therefore, mediates organizational response to stakeholder pressure. Building on Mitchell et al.'s (1997) stakeholder salience frameworks, many scholars have studied how stakeholder power, legitimacy, and the urgency of their claim, influence managerial behavior (Agle et al. 1999; Eesley & Lenox 2006; Gago & Antolín 2004; Julian et al. 2008; Yang & Rivers 2009). Stakeholder power has been either operationalized via surveys of managers as the perceived ability to influence via coercive, economic or normative means (Agle et al. 1999; Gago & Antolín 2004), or via archival methods as the direct possession of financial or technical resources (Eesley & Lenox 2006; Yang & Rivers 2009). In a study of protests, boycotts, and letter writing campaigns in the U.S. for example, Eesley and Lenox (2006) found that a stakeholder with greater power relative to the target firm in terms of financial resources is more likely to elicit a positive response from a firm. In addition to the resources at the stakeholder's disposal, scholars have also emphasized that stakeholder mobilization (Campbell, 2007), or the active pursuit of demands (Agle et al., 1999) and the public visibility of pressures and anticipation of a crisis (Julian et al. 2008) condition firm responsiveness to stakeholders. Informed by resource dependence theory's (RDT) insights regarding power and influence (Pfeffer & Salancik 1978), most research to date has focused on dyadic resource dependence to predict which stakeholders firms attend to (e.g. Frooman, 1999; Mitchell et al., 1997). From a social network perspective (Borgatti & Halgin, 2011), this classifies as an egocentric approach to studying stakeholders' influence. Egocentric networks focus on one organization's network ties without considering ties between alters, resulting in a hub and spoke configuration of a focal organization and its stakeholders.

However, RDT also emphasizes interconnectedness of actors as an elemental structural characteristic of environments in which an organization is embedded (Pfeffer & Salancik 1978:65). In a review of RDT, Wry et al. (2013: 474) argue that one of its key contributions is that individual components of an organization's external environment are inter-linked. The interconnectedness of organizations and actors creates "webs of power" that affect the level of influence associated with different interests (Pfeffer & Salancik, 1978: 65–71; Wry et al. 2013). In other words, organizations are not perceiving, and responding to, atomistic stakeholders in a vacuum of dyadic ties, but rather the interaction of multiple influences from their entire stakeholder environment (Rowley, 1997). Given that constructs central to stakeholder salience such as power and legitimacy are inherently relational (Cattani et al. 2008; Hafner-Burton et al. 2009), it is no surprise that calls have been made for the addition of a social network perspective to stakeholder theory that takes account of stakeholder ties (Rowley, 1997).

Taking account of the interconnectedness of stakeholders provides conceptual and methodological opportunities for re-conceptualizing stakeholder salience, and in turn, corporate behavior central to all management research. First, an expanded view of interconnected stakeholders allows consideration of how an external party may be able to influence a firm despite being unable to directly affect the flow of resources to the company (Wry et al., 2013). Actors can exert indirect network pressure by building cooperative relationships with a third actor with influence or control over a firm's behavior (Gargiulo 1993; Keck & Sikkink 1999). Resource-constrained stakeholders, such as environmental NGOs, will often implement indirect influence strategies via their social network ties, seeking the assistance of allies to effect organizational change (Frooman & Murrell 2005). As such, a stakeholder's ties and position within a network can provide information about the stakeholder's influence capacity (Henisz

2013). For example, Brewington, Davis, and Murdie demonstrate that within the international human rights NGO network, more central NGOs undertake more advocacy (2009: 576). Further, the structural characteristics of a network of stakeholders interested in similar issues may itself be important to understanding the likelihood of stakeholder pressure and influence. For instance, social movement research suggests that inter-stakeholder ties enable stakeholder mobilization (Diani 2000; Diani & McAdam 2003; McAdam & Paulsen 1993), increase the sustainability of pressure (Diani 1995; Diani 1997; Sikkink 2009), and issue visibility (Carpenter 2007). Network relations among stakeholders can foster the sharing of resources, ideas, frames, and tactics as well as promote collaboration (Soule 2012), that in turn, multiply the impact of individual stakeholder actions (Aguilera et al. 2007).

We propose that a relational perspective that takes account of stakeholders' multiplex ties offers insight into managerial perceptions of stakeholder salience and conditions organizational responsiveness. While we are not the first to make this claim (Rowley, 1997), we build on and expand Rowley's (1997) framework of firm responsiveness to incorporate the notions of actor heterogeneity within the stakeholder network and actor power within the broader socio-political network. Rowley (1997) focuses on the simultaneous influence of multiple stakeholders on firm behavior, acknowledging that this "represents only a subset of variables," (910). Oliver (1991) contends that beyond environmental connectedness, the means by which pressure is being exerted conditions strategic response. As such, we propose that taking account of the heterogeneity of bases of influence that different stakeholders wield (e.g. legal coercion versus norm diffusion) will also condition firm behavior. Additionally, when firms face a multiplicity of conflicting pressures, organizations may choose to defy the demands of one constituent in order to meet the demands of another (ibid.). In such circumstances, powerful stakeholders that can

impose their will on the firm or on other stakeholders (Mitchell et al., 1997) are more likely to be attended to. Re-conceptualizing stakeholder power as relational (Hafner-Burton et al. 2009) acknowledges that stakeholder influence is not limited to, or even sometimes focused on, any one company but can take the form of influence strategies (Frooman 1999) targeting changes in government policy (Burstein & Linton 2002; Doh & Guay 2006; Giugni 1998; Tarrow 1996), consumer purchasing behavior (King 2008; King & Pearce 2010; King 2011), and even industry self-regulation (Bartley 2003; King & Lenox 2000; Mena & Waeger 2014).

Drawing on research in stakeholder salience, social movements and policy networks, in the following section we re-conceptualize stakeholder salience from a social network perspective, arguing that the relative power of environmental and social stakeholders in the socio-political network and their ability to engage in collective action via inter-stakeholder ties influence the observed level of corporate social performance.

STAKEHOLDER NETWORKS AND CORPORATE SOCIAL PERFORMANCE

Corporate social performance (CSP) is the social and environmental performance outcome of a firm's undertaking of CSR activities (Ioannou & Serafeim, 2012), resulting in a "configuration of principles of social responsibility, processes of social responsiveness, and policies, programs, and observable outcomes as they relate to the firm's societal relationships" (Wood 1991: 693). We begin with the assumption that stakeholder interests and influence are issue specific (Lee 2011; Rowley & Moldoveanu 2003). Therefore, we expect managerial perceptions of the salience of stakeholders with interests in CSP outcomes (e.g. a firm's human rights policies) to drive CSP. As such, we define a CSP stakeholder as any group or individual who can affect or is affected by the achievement of the organization's objectives (Freeman, 1984;

Jones, 1995; Mitchell et al., 1997) with respect to social and environmental performance. Social stakeholders include regulatory or government agencies concerned with labor, human rights, and health issues (Miller & Guthrie, 2007; Aguilera et al., 2007), non-governmental organizations identifying with those same issues (Arenas et al. 2009), and communities and residents (Maignan & Ralston, 2002). Environmental stakeholders include regulatory or government agencies charged with environmental mandates (Murillo-Luna, Garcés-Ayerbe & Rivera-Torres, 2008; (Henriques & Sadowsky, 1996), environmental NGOs and individual conservationists (Doh & Guay, 2006; Eesley & Lenox, 2006; Doh & Teegen, 2003), and communities and residents (Murillo-Luna, Garcés-Ayerbe & Rivera-Torres, 2008; Henriques & Sadowsky, 1996). Below we consider how social and environmental stakeholders' ties to non-stakeholder actors in the socio-political network, and to each other, influence managerial perceptions of their salience, and in turn CSP.

Perhaps one of the most consistently employed constructs in studies of stakeholder salience, and in turn, firm behavior, is stakeholder power. Power exists where one stakeholder, A, can get another stakeholder, B, to do something that B would not have otherwise done (Weber 1947; Pfeffer 1981; Mitchell et al. 1997). Freeman's classic definition of stakeholder as "any group or individual who can affect or is affected by the achievement of the organization's objectives" (1984: 46), leaves the universe of stakeholders potentially infinite. Sampling only powerful stakeholders narrows the scope of actors to those groups or individuals that can impose their will on the firm or on other stakeholders (Mitchell et al., 1997). Mitchell et al. (1997: 865) suggest that a stakeholder "has power to the extent it has or can gain access to coercive, utilitarian, or normative means, to impose its will." To date, stakeholder power has been primarily operationalized as an actor attribute, such as the possession of financial resources

(Eesley & Lenox, 2006; Yang & Rivers, 2009), the ability to block policy (Tsebelis 2002) or the right to impose decisions (Moe 1990). However, Mitchell et al.'s definition of stakeholder power is inherently relational in that a stakeholder does not have to be in direct possession of coercive, utilitarian or normative means; the sufficient condition is that it *can gain access* to them. We suggest that network ties can provide stakeholders indirect access to the means of influence over firm behavior.

A social network perspective on power challenges the notion that power is primarily derived from individual attributes (Hafner-Burton et al. 2009). Instead, a structural perspective equates power of a particular node to its position and ties in a particular network. In policy networks for example, actors with privileged positions are able “to set agendas, frame debates, and promulgate policies that benefit them,” (Beckfield, 2003:404). Influence in policy networks is important to CSR outcomes, as movements often turn to the state because of its capacity to regulate industry (King & Pearce 2010). In management research, social capital in intra-organizational ties can lead to increased power of individuals because ties enable lobbying for personal interests, and grant access to strategic information (Blyler & Coff 2003; Coff 1999). Network ties can also enable the flow of resources thereby allowing relatively-resource poor actors to tap into the resources of their resource-rich counterparts, as is often seen in the linkages between developing country NGOs and NGOs from developed countries (Keck & Sikkink 1999).

An actor's power from a social network perspective stems from its “prominence” in networks and is usually related to one of several competing measures capturing the relative number of ties possessed by a stakeholder variously weighted (Knoke, 1990: 9-10; Boutilier, 2012). From a stakeholder bargaining perspective, Blyler and Coff (2003) suggest that actors in

highly central positions will appropriate greatest rents because such actors have access to and channels for disseminating information and hence have influence within the network. A central actor can also gain control possibilities over the flow of resources or information, which is also conducive to power (Knoke, 1990; Knoke et al., 1996). In a study of environmental organizations, Diani (2003) found that organizations central in the network were more likely to be identified by other organizations as leaders and be connected to political institutions. Therefore, we propose that managers' evaluations of the power of environmental and social stakeholders will increase in the centrality of those stakeholders in the country socio-political network, in turn, increasing a firm's corporate social performance.

Hypothesis 1: Corporate social performance increases in the centrality of environmental and social stakeholders in the country's socio-political network.

In addition to the level of power of environmental and social stakeholders, managers also look for indications of the ease with which that power can be coordinated, directed and deployed against them. Environmental and social stakeholders face substantial collective action challenges in achieving their objective of changing management practice (Campbell, 2007). Dense ties among a group of social actors deter free-riding in collective action, and facilitate the diffusion of norms and expectations (Rowley & Moldoveanu 2003). Dense stakeholder networks can reduce variation in stakeholders' evaluation and framing of issues and the number of competing issue resolution coalitions that form (Mahon et al., 2004), translating into more sustained efforts at issue resolution. The sustainability of issues and pressure is also more likely in dense networks where there are limits on firms' ability to use 'divide-and-conquer' tactics (Mahon et al. 2004).

Related research suggests that social movements which engage in (large) public demonstrations (King & Soule 2007; King 2011), gain celebrity endorsements (King 2011),

attract larger and more numerous participants (King & Soule 2007; King 2011), and attract national media attention (King 2008a; Bartley & Child 2012; King & Soule 2007) in their repertoire are more successful. Inter-stakeholder ties enable such repertoires by making issues more visible to greater number of constituents who can subsequently support the movement, and helping to coordinate efforts on those issues and against common target firms (McAdam & Schaffer Boudet, 2012). Given the returns to inter-organizational efforts in movement success, it is perhaps unsurprising that organizations that participate in coalitions are also more likely to have higher levels of protest (Larson & Soule, 2009). Scholars studying the influence of social movements on public policy also emphasize cross-organizational ties. Success in influencing policy depends on the strength and density of the network (Keck & Sikkink, 1999). Doh and Guay (2006) found that the high levels of coordination between prominent environmental NGOs in Europe contributed to their success in persuading national governments to consider seriously the implications of climate change.

This wide-ranging research suggests that in addition to stakeholders' centrality in the broader socio-political network, managerial attention to stakeholders will be conditioned by inter-stakeholder ties (i.e., the stakeholder network). Specifically, stakeholders embedded in densely connected networks with others sharing similar interests can coordinate action with greater ease, posing a more serious and credible threat to management (Coff 1999). Therefore, we propose that managers' evaluations of environmental and social stakeholder salience will increase in the density of cooperative ties in the stakeholder network, and correspondingly, a firm's corporate social performance.

Hypothesis 2: Corporate social performance increases in the density of cooperative ties in the environmental and social stakeholder network.

In addition to the structure of the stakeholder network, its composition, or who participates in the stakeholder network, is equally relevant for managerial evaluations of stakeholder salience. To begin with, stakeholders vary in the sources or avenues of influence at their disposal. For instance, political or regulatory stakeholders can deploy coercive pressure via legislation or regulation. NGOs can exert normative pressures through issue framing. Organized labor has avenues for pressure directly into the organization through its membership. A dense issue network composed of environmental NGOs alone may be less salient than an equivalently dense network that includes other dissimilar actors such as regulators or intergovernmental organizations. Policy network research suggests that the influence of stakeholder groups on policy is not only dependent on ties with similar others, but also their ability to form ties with diverse peers in the policy space. Baumgartner & Mahoney (2005) suggest that because NGOs are not the only source of new issues and pressure, their long-term impact depends on close interactions with other groups within their organizational field.

Beyond the heterogeneity of stakeholders' bases of influence, social movement research suggests that collective action is enabled by resource heterogeneity of group members (Marwell et al. 1988). For example, stakeholders with international reach may have greater access to financial or political resources than national or more regional groups (Eesley & Lenox, 2006), and can make issues more visible to a geographically broader swath of stakeholders. Transnational advocacy networks make international resources available to new actors in domestic political and social struggles such as environmental or human rights issues (Keck & Sikkink, 1999).

Further, a stakeholder network composed of heterogeneous actors signals broad support for an issue (e.g. human rights). Firms are more likely to acquiesce to institutional pressures

when the expectations exerted on the organization by stakeholders are non-conflicting and when an institutional expectation has diffused more widely (Oliver 1991). Conversely, when firms face a multiplicity of conflicting pressures, responding to stakeholder demands may be more difficult as it often involves ignoring or defying the demands of others (ibid.). Similarly, political actors are more likely to respond to pressures from coalitions that benefit from diverse supporters who agree on the legitimacy of an issue (Henisz & Zelner 2005).

Therefore, we expect a stakeholder network composed of heterogeneous actors, each possessing different influence tactics and levers, and one representing broad issue support for political actors (Marwell et al., 1988), to increase managerial evaluations of stakeholder salience, and correspondingly corporate social performance.

Hypothesis 3: Corporate social performance increases in the heterogeneity of stakeholders in the environmental and social stakeholder network.

METHODS

Constructing Stakeholder Networks

Since stakeholder salience is determined by the perception of stakeholders by managers (Mitchell et al., 2007), our stakeholder networks must be readily observable by managers. One such network is the population of stakeholders (nodes) connected by actions or statements (ties) reported in global and local media.

Media is an information intermediary that provides stimuli that affect impression formation (Pollock & Rindova 2003). Media “influences decision makers by identifying the topics, issues, activities, and events that are perceived as notable and salient,” (Aharonson & Bort 2015). Acknowledging sources of selection bias in media reported events (e.g. ideological

biases, over-reporting of negative events), we do not make the claim that all stakeholder ties will be reported by media. Instead we suggest that an approach that relies on media reports conforms with the idea of stakeholder attributes and salience being a 'socially constructed' reality (Mitchell et al. 1997). Organizational researchers have shown that what stakeholders know about organizations is largely shaped by what the media reports about them (Deephouse 2000; Petkova et al. 2013; Pollock & Rindova 2003). Therefore, while other studies have relied more on archival data, such as the financial resources at the disposal of an NGO to measure stakeholder salience (Eesley & Lenox, 2006), we believe studying media-reported stakeholder networks better reflects the limited perceptual energy managers can devote to understanding their stakeholder environment (Mitchell et al. 1997).

Archival media data has been used in analyses of firm response to stakeholder pressures (Dorobantu et al. 2014; Eesley & Lenox 2006). Similarly, social movement literature relies heavily on media to identify boycotts, the size of protests, the number of organizations involved and issues (e.g. King & Soule, 2007; King, 2008b; McDonnell & King, 2013). Political science scholars have arguably advanced the use of media the furthest by leveraging automated linguistic coding algorithms and exponentially increasing computational power to construct geographically coded datasets of events.

An “event” is a discrete incident that can be located at a single time with an accompanying set of actors, usually a dyad of a source and target (Leetaru & Schrodt 2013). We leverage one such dataset, the Global Data on Events, Location and Tone (GDELT) to construct stakeholder networks. GDELT is arguably the largest event data collection in social science with over a quarter-billion events reported in print, broadcast, and web news media across the world in 100 languages. GDELT data are based on both international and translated local news

sources¹ coded using the Textual Analysis by Augmented Replacement Instructions (TABARI) system. GDELT's reliance on both domestic and international news sources reduces the likelihood of bias due to varying levels of domestic press freedom as an event is likely to be reported to the extent that foreign correspondents representing foreign news wires are present in the country.

Although they have been used longest in political science, event databases are increasingly being leveraged by management scholars as well. Zelner, Henisz, & Holburn (2009) used a very similar database to measure variations in sentiment towards private enterprise across countries. Henisz et al. (2014) used actor dyad media events surrounding mineral development to construct networks of stakeholders with whom mining company's cooperation or conflict impacted investor's perceptions of the mine's value.

Our network consists of actor dyads connected by events occurring in a given country as reported in the media. An event in GDELT describes interactions between two actors that can vary from cooperative, such as "express intent to cooperate" or "engage in material cooperation", to conflictual, such as "demand", "threaten", and "protest." The ties in our network are what Borgatti and Halgin (2011) refer to as event-type ties; they have a discrete, transitory nature allowing them to be counted over time, and dimensionalized in terms of frequency of occurrence. GDELT deduplicates events by collapsing multiple references to the same event across one or more articles into a single event record (Leetaru & Schrodtt 2013), while separately recording the number of articles carrying the event. Using event databases to construct stakeholder networks

¹ Sources include all international news coverage from AfricaNews, Agence France Presse, Associated Press Online, Associated Press Worldstream, BBC Monitoring, Christian Science Monitor, Facts on File, Foreign Broadcast Information Service, United Press International, and the Washington Post; all national and international news coverage from the New York Times, all international and major US national stories from the Associated Press, and all national and international news from Google News with the exception of sports, entertainment, and strictly economic news (Leetaru and Schrodtt, 2013). In cooperation with Google, GDELT expanded coverage to local media in 100 languages using Google Translate.

has several advantages. First and foremost, events capture actual interactions between actors that are both directed and classified according to positive versus negative affect or verbal versus material cooperation. Second, ties can be valued by number of occurrences and media mentions, which has theoretical grounding for understanding the number of possible media impressions and therefore managerial perceptions. Finally, event databases capture the census of actors that appear in the media, and by geographically locating where the event took place, enable construction of national socio-political networks.

Our stakeholders include prominent individuals (e.g. Minister of Labor, George Soros, Obama), organizations (e.g. Starbucks, Ministry of the Environment, Human Rights Commission, Greenpeace, Congress), and other groups or individuals identified by role (e.g. villagers, landowner, mayor, conservationist, rights activist). All actors are assigned role codes, which indicate broader categories to which they belong (e.g. government or media) and the actor's specialty (e.g. actors whose primary area of operation or expertise is human rights) (Leetaru & Schrodtt 2013). Actor role and specialty codes facilitated our categorization of GDELT actors as 'environmental' and 'social' stakeholders.

First, we used GDELT role codes to identify those stakeholders classified as national or international political or regulatory actors (including government, judiciary, opposition, or legislative role codes), labor organizations, non-governmental organizations and communities or residents. We chose this subset of roles (i.e., excluding such roles as insurgents, military, rebels and intelligence services) due to their association with the advocacy of environmental and social issues of relevance to corporations. Second, we used GDELT specialty codes to identify the issues that were the focus of these actors. Specifically, we classify as environmental stakeholders all actors in the roles described above whose primary, secondary, or tertiary specialty code is

ENV. Similarly, we classify as social stakeholders all actors in the roles described above whose primary, secondary, or tertiary specialty code is HRI (human rights) or LAB (labor). We made minimal manual adjustments to insure labor organizations were organized labor groups rather than individual employees of organizations.

Sample

The sample used in our analysis is firms in the ASSET4 database (Thomson Reuters), which provides CSP scores on 4,600 companies headquartered in 58 countries, for which we obtained accounting data from Thomson Reuters WorldScope. With growing importance placed on CSP, several independent organizations provide firm-level CSP metrics or rankings (e.g. Kinder, Lydenberg and Domini). We follow others (Hartmann & Uhlenbruck 2015; Hawn & Kang 2014; Ioannou & Serafeim 2012) in choosing the ASSET4 database due to the methodological rigor it employs drawing information from “objective, comparable and transparent data” sources and subjecting each data point to a “multi-step verification and quality control process” (ibid.), its reliance on objective indicators across multiple dimensions of performance, and most importantly, the geographic breadth of the companies it evaluates (58 countries).

Dependent Variable

Our dependent variable is corporate social performance, which we construct using both the environmental and social scores from ASSET4. The scores are calculated based on the performance of a firm on several key environmental and social performance indicators gathered from public sources. The indicators evaluate the policies or principles to which the firm subscribes (e.g. emissions reduction policy or employment quality policies), the implementation of those policies (e.g. environmental R&D spending or employment awards), and finally the

observable outcomes (e.g. CO2 emissions or employee turnover) (Wood 1991). We follow Ioannou & Serafeim (2012) in constructing the CSP composite as the equally weighted average of social and environmental performance for each firm-year observation (scale of 0 to 100).

Independent Variables

Centrality. Centrality refers to the prominence of an actor's position relative to others in the network. Several measures of centrality exist, each corresponding to different types of influence (Borgatti, Everett, & Johnson, 2013; Freeman, 1979; Mahon et al., 2004). The simplest measure, degree centrality, which we employ here, is simply the count of the number of outgoing and in-coming ties in a directed network. Actors with high degree centrality enjoy influence and access to resources via their plentiful relations (Mahon et al. 2004). More complex measures adjust or weight the count of ties for the extent to which an actor is tied to other central actors (i.e., eigenvector centrality) and the relative ease with which it can access all other stakeholders as compared to its peers (i.e., betweenness centrality) but have been argued to be less stable and reliable particularly in sparse networks such as ours (Neal 2013).

In our network of cooperative and conflictual ties, we calculate degree centrality using both cooperative and conflictual ties. Since stakeholder power bases include coercive and normative power, it is important to account for both cooperative and conflictual ties in our measure of power. While a stakeholder's number of cooperative ties provides managers with signals as to how many possible alters an actor can influence or get resources from, conflictual ties' are also salient to managers because they are indicator of the exercise of stakeholders' voice and power against enemies. We expect that stakeholders that occupy central positions in the overall socio-political network of a country will be attributed as having power by managers, and therefore, more likely to be attended to via improvements in corporate social performance.

In calculating degree centrality, we also weight ties by the number of media mentions each tie garnered, as this corresponds to the number of possible media impressions that influence managerial perceptions. We calculate degree centrality by summing the mentions-weighted degree centrality of all social and environmental stakeholders, and then normalize it relative to the sum of mentions-weighted degree centrality of all actors in the country network. This ensures we are not privileging stakeholders in countries with greater media coverage, as well as accounting for any changes in the universe of source documents and therefore media-reported events over time.

Density. We calculate the relative density of cooperative ties among environmental and social stakeholders as a ratio of the density of cooperative ties in the socio-political network of the country as a whole. Ties are weighted by the number of media mentions, matching the approach and rationale used for degree centrality. The density of cooperative ties in a stakeholder (or national) network is calculated as follows:

$$D_{it} = \frac{\sum w_{it}}{n_{it}(n_{it} - 1)}$$

Where w_{it} is the number of media mentions of cooperative ties between stakeholders (or all actors) in country i and year t , and n_{it} is the number of nodes in the stakeholder network (or national network) in country i and year t . Since our network is composed of directed ties, our denominator (number of possible ties) is not divided by two as it would be in an undirected network. We then divide by the analogous measure of density in the national network as a whole to ensure that we account for the secular increase in the corpus of source documents and resulting increase in the density of media-reported events over time.

Heterogeneity. We classify heterogeneous actors as those with different organizational forms or purposes (e.g. government versus non-governmental organization), different issue interests (e.g. environmental versus labor issues), and locations (e.g., domestic, foreign or multinational). We use the raw count of unique actor types in each stakeholder network as our measure of heterogeneity. Stakeholders not connected to the network (i.e., isolates) are not included in this analysis. For example, country A may have many connected environmental and social stakeholders in absolute terms (e.g., 30), but, if they are all domestic environmental NGOs, its stakeholder network is assigned a 1 for having only one actor type. Conversely, country B may have only a few connected environmental and social stakeholders in absolute terms (e.g. 3), but if they are all different actor types (e.g. domestic environmental NGOs, domestic environmental government agency, foreign human rights NGO), the country is assigned a heterogeneity score of 3. Although we explored more complex heterogeneity measures such as Blau's (1977) index, these measures reward equal balance of actors in each category while our arguments center on variety in stakeholders (Harrison & Klein 2007). That variety need not be balanced because it suffices that just one domestic environmental government agency is part of the network in order for it to be influenced by, or exert influence over, the other actors in the network. In fact, in many instances, we could not expect to achieve perfect heterogeneity in the Blau index sense for the simple reason that in many countries NGOs outnumber government departments. Therefore, we prefer to use the raw actor type count instead.

Control Variables

Country institutional controls. While our arguments are actor-centered (Williams & Aguilera 2008), we acknowledge that a country's institutions condition firm behavior. Following

Ioannou & Serafeim (2012), we control for laws that encourage competition in the country, laws that protect minority shareholders, the political ideology of legislators, corruption, the availability of skilled labor, union density, the type of financial system, size of the capital market and whether a socially responsible market index exists. We also include controls for culture, including Hofstede's (1997, 2001) measures of power distance and individualism (Ioannou & Serafeim 2012; Hartmann & Uhlenbruck 2015), the degree of press freedom (Marquis & Toffel, 2014), the competitiveness and openness of the economy and the quality of its infrastructure (Ioannou & Serafeim, 2012).

Firm-level controls. As mentioned in our review of the literature, firm characteristics matter tremendously for CSP. We control for several firm variables, including size (Campbell, Eden, & Miller, 2011; Chih, Chih, & Chen, 2010; Ioannou & Serafeim, 2012), profitability (ibid., Hartmann & Uhlenbruck, 2015; Jackson & Apostolakou, 2010), R&D expenses (Ioannou & Serafeim 2012; Murillo-Luna et al. 2008)², stock volatility, market to book ratio, diversification, whether the firm trades an American Depository Receipt (ADR), the degree to which shares are closely held, and leverage (Ioannou & Serafeim, 2012). Further, we acknowledge that there may be other unobserved factors that drive firm behavior (e.g. ethical orientation of the management team). Therefore, our full models include firm fixed effects to control for firm-level time-invariant unobserved heterogeneity. The Hausman test comparing random effects and fixed effects estimates indicated that our explanatory variables are correlated with firm fixed effects.

² Following Ioannou and Serafeim (2012) we assume missing values of R&D expenses correspond to zeros. We also run our models excluding observations with missing R&D expense data, losing nearly 60% of our observations, and our results remain consistent (available upon request from authors).

Table 1 describes all independent and control variables in detail, as well as their sources. All independent and control variables are lagged one year in order to avoid temporal endogeneity. Our unbalanced panel dataset is composed of observations at the level of the firm-year spanning a decade (2004 to 2013). After case-wise deletion of observations with missing data, we are left with 20,047 observations. Table 2 presents the distribution of observations by country, and the average CSP score, stakeholder centrality, density and heterogeneity, across all years.

Insert Table 1 and Table 2 about here.

RESULTS

Summary statistics and correlations are presented in Table 3, respectively.

Insert Table 3 about here.

For all specifications we use OLS to estimate our models, and present results in Tables 4 and 4. In Model 1, we approximately replicate Ioannou & Serafeim (2012) with clustered, at the firm level, and robust standard errors and industry and year fixed effects.³ We obtain highly consistent results, with cultural, labor, and political institutional variables having the same direction of effect on CSP and significance, while the coefficient for both financial system variables (SRI index and country debt to assets ratio) are positively and significantly associated with CSP. As both variables are measured annually, the difference may be attributable to the years covered by our respective samples (2004 to 2013 versus 2002 to 2008 in Ioannou &

³ Our model varies slightly in the inclusion of the Free Press Index (Marquis & Toffel, 2015), and two variables (industry Herfindahl index and Analyst coverage) have not yet been collected.

Serafeim). We also obtain consistent results for all firm-level control variables. Using the same estimation approach, we include the measures associated with our three theoretical constructs of centrality, density and heterogeneity hierarchically in Models 2 through 4, and include all independent and control variables in Model 5. We also explore the robustness of our results across a split sample of purely domestic firms (Model 6), and those with assets in foreign countries (Model 7). For firms operating in multiple countries and subject to the influence of multiple national-level stakeholder networks and institutions, the influence of the country where they are incorporated may be attenuated. Our hypothesized stakeholder network effects are consistent across both domestic and multinational firms. However, the significance of some country and firm controls (e.g. anti-self dealing index) varies across the subsamples, so we control for percentage of assets in foreign countries in our firm fixed effects models.

Insert Table 4 about here.

In Table 5 we replicate the same progression in Models 8 through 12, which control for time-invariant firm-level unobserved heterogeneity with the inclusion of firm fixed effects in addition to year fixed effects, with robust standard errors. We believe that a firm fixed effects model provides the most stringent test of our propositions by reducing the impact of difficult to observe firm and individual level variables influencing CSP. Our underlying assumption is that firms will be motivated to take substantive actions that lead to CSP outcomes to satisfy stakeholders, in line with past findings that perceived stakeholder pressure leads to proactive response (Murillo-Luna et al. 2008). However, evidence also suggests that firms may vary in their stakeholder responsiveness (Henriques & Sadosky 1996) for various reasons that are not easily measurable, such as dynamic capabilities (Julian et al. 2008) or management's

commitment to ethics (Muller & Kolk 2010). Identifying off within country variation across time in our variables of interest, means that time-invariant institutional (individualism index, power distance, anti-self-dealing index, political ideology and union density) and firm (ADR company) controls can no longer be estimated. Approximately half of the control variable coefficients become insignificantly different from zero in the firm fixed effects model (trade, market capitalization, and number of segments the company operates in). Finally, in Models 13 and 14 we separate out environmental from social stakeholders and estimate the same model but for the environmental and social score from ASSET4, respectively.

We focus our discussion on Model 10, the fully saturated firm and year fixed effects model with robust standard errors. We observe that the centrality of stakeholders in the socio-political landscape is positively and significantly associated with CSP ($p=0.003$), as we predicted in hypothesis 1. All of the stakeholder network variables, with the exception of heterogeneity, are log-transformed due to skewness of the data and so are interpreted as percent changes. Taking into account the impact of all control variables and firm fixed effects, a one standard deviation increase in stakeholder centrality in a given country's network over time is associated with a predicted increase of 9.5 points in the average CSP score of a firm in that country (CSP is measured on a 0 to 100 scale). To put the magnitude of this effect in context, it is equivalent to seven times the impact of a 1 standard deviation increase in firm profitability (ROA), and three times the impact of the country having a SRI index. Past research has repeatedly shown firm profitability to be a significant predictor of CSP (Campbell et al., 2011; Chih et al., 2010; Ioannou & Serafeim, 2012).

We find no support for hypothesis 2, that the density of cooperative ties amongst stakeholders will be positively associated with CSP. Conversely, we find support for hypothesis

3, that heterogeneity of stakeholders in the stakeholder network is positively associated with CSP ($p=0.001$). A 1 standard deviation increase in stakeholder heterogeneity, is equivalent to an increase of 0.836 in CSP, equivalent to the impact of 1 standard deviation increase in a firm's market to book ratio, and nearly equivalent to the impact of a 1 standard deviation increase in the degree to which the financial system is credit-based (Country debt over assets).

Insert Table 5 about here.

Robustness Checks

We perform several robustness checks. First, we replicate our full firm fixed effects model with the inclusion of two stakeholder network controls. We include a measure of the prevalence of civil society actors in the stakeholder network, as recent research suggests that the mere count of civil society organizations in the country increases scrutiny over company practices and may deter poor practices in areas such as environmental reporting (Marquis & Toffel, 2013). We calculate the percentage of actors in the stakeholder network that are either NGOs, and activists or citizens with no organizational affiliation but an interest in issues included in our CSP measure. We also include a measure for how conflictual relations are between stakeholders and firms in the country. We calculate the percentage of events in which a stakeholder performs an action on another actor (out-going ties) that are directed at a business and conflictual. Both controls are weighted by the number of media mentions. The two hypotheses for which we found support remain significant and positively associated with CSP, as is the prevalence of civil society ($p=0.000$) as is implied by Marquis & Toffel's findings (2013). We also replicate our full model with the exclusion of the United States to address any potential

bias in our results due to the over-representation of the United States which accounts for 33 percent of our observations. Our results remain substantively unchanged.

Finally, we disaggregate our dependent variable into its respective component environmental and social scores from ASSET4, and estimate the models constructing our stakeholder variables on only environmental or social stakeholders (Models 13 and 14 in Table 5). Hypotheses 1 and 3 are positively and significantly associated with the social and environmental scores, although the magnitudes of the effects differ, especially for stakeholder centrality. Stakeholder centrality has a larger impact on the social score of firms than their environmental, while network heterogeneity has a slightly larger impact on environmental performance. We hope to explore these differences in subsequent research.

DISCUSSION & CONCLUSION

Using the constructs of stakeholder and socio-political networks, we link comparative country-level analysis of corporate social performance (CSP) to that at the firm- or issue-level. We add to the comparative country-level analysis, the importance of the structure of stakeholder networks. Specifically, we show that the relative prominence of environmental and social stakeholders within the broader national socio-political network influences CSP of firms headquartered in that country. Furthermore, greater heterogeneity of stakeholders connected to a given issue network also increases the salience of those stakeholders and improves CSP. Our conceptualization of stakeholder networks draws and builds upon established calls for stakeholder theory to adopt a network perspective (Rowley, 1997). We add new constructs of stakeholder network heterogeneity and stakeholder centrality to that literature. First, we consider how heterogeneous bases of influence within a stakeholder network can increase the salience of

the stakeholder network. Second, we propose that when firms face multiple competing demands, stakeholder power or centrality within the broader socio-political network will condition attributions of salience, and in turn, firm behavior. Our theory uses network constructs to highlight the determinants of and objective metrics for stakeholder salience (Mitchell et al. 1997). Stakeholder salience is well established in the literature as a driver of firm responsiveness but the measurement thereof has posed challenges. We believe our use of objective media event data can overcome some of these challenges.

We offer cross-national empirical evidence in support of our arguments. Prior research has found indirect support using firm- or country-level variables which are associated with greater sensitivity to or impact of stakeholder pressure. By contrast, we exploit within country differences in the salience of environmental and social stakeholders over time to show that as the power and heterogeneity of environmental and social stakeholders increase, firms make substantive improvements in their CSP. The effect sizes are also highly significant, analogous to those caused by increases in firm profitability and the impact of financial system institutions.

Our analysis not only provides direct empirical evidence of the importance of cross-national and intertemporal variation in stakeholder pressures on CSP, it also reinforces the importance of viewing the stakeholder landscape as a network of interconnected actors. Both stakeholder and social movement theory have long included calls for a more holistic approach to the socio-political environment in which firms compete (McAdam & Diani, 2003; Rowley, 1997; Rowley & Moldoveanu, 2003). Despite these calls, empirical progress has been limited largely due to data limitations. While a growing body of work has highlighted the importance of firm-, activist-, protest- and national-level constructs on corporate social responsibility practices and outcomes, the few studies employing network analyses have relied on painstakingly constructed

ego networks of firms or stakeholders (Dorobantu et al. 2014), rather than more comprehensive systems in which these partial networks are embedded. It has thus not been empirically possible to explore the importance for CSP of the “webs of power” suggested by resource dependence theory (Pfeffer & Salancik, 1978: 65–71; Wry et al. 2013) or the network approach to stakeholders (Rowley, 1997) or social movements (McAdam & Diani, 2003).

We draw upon an exciting new data source that has only recently become available and has not heretofore been deployed in management to overcome this challenge. We construct national-level socio-political networks including every organization or entity mentioned in over 250 million news articles. Comparing the characteristics of the networks of environmental and social stakeholders to the country-level complete socio-political network, we find variation over time in the relative prominence of these stakeholders in the overall country network, as well as their ability to mobilize for collective action. Finally, we show that these differences are associated with variation within firms over time in their corporate social performance.

Not only do our results highlight the importance of stakeholder pressure using a network perspective, they also demonstrate that firms proactively respond to variation across time in national stakeholder networks. Even before stakeholders explicitly target a firm or mount a campaign around an issue, managers assess the stakeholder landscape and the potential for environmental and social stakeholders to pressure them, and design proactive corporate social responsibility practices that lead to differential corporate social performance. Like a country’s political or legal institutional environment, a country’s stakeholder landscape is a critical source of risks and opportunities for domestic, as well as multinational, firms and should be carefully assessed before the design and implementation of strategies relevant to stakeholders.

This finding has important implications for global strategy and international business. Prior work in corporate social responsibility has shown that country-level legal institutions and culture impact the corporate social performance of firms in that country. Our results extend this finding to include country-level variation in the stakeholder environment and suggest that a broad class of scholarship in global strategy and international business should similarly explore the implications of stakeholder network structure. For example, prior research on international diversification, entry mode and survival which has shown the importance of political risk or legal origin should consider the impact of country-level stakeholder networks. Following a similar approach to what we pursue here, one could construct the network of nationalist or populist actors or that of organized labor or agricultural interests, business entities, educational stakeholders or health stakeholders, and compare it to the overall national network in terms of its structure, explore the degree of cooperation or conflict within the sub-network as well as between it, and the national network or other sub-networks.

Our work stops short of considering the position of the focal firm within the socio-political network and stakeholder network, which Rowley's (1997) arguments suggest is important. Future works could explore whether specific firms in our analysis are proactively connected to or attacked by environmental and social stakeholders, and how the prominence of individual firms within the broader national network influence their responsiveness to stakeholder pressures (Rowley, 1997). Such extensions would allow for important comparisons between the importance of proactive assessments of risks and opportunities emanating from the stakeholder landscape and reactions to specific stakeholder demands or pressures targeting the focal firm. We could further explore the types of firms which are relatively more or less

proactive, and how the institutional environment impacts their responsiveness to stakeholder pressure.

Another potential exciting extension would be to take an analogous approach within a specific firm to better explicate the mechanisms that lead to higher salience for stakeholder pressures. Such an analysis could even extend to the individual level and identify how specific managers perceptions of the salience of environmental and social issues changed as a result of their interactions with these stakeholders as well as their interactions with their peers inside the organization. The process by which managerial perceptions of salience actually form and the mechanisms by which such perceptions lead to variation in corporate social performance are both omitted from our analysis but important topics for future research.

REFERENCES

- Agle, B.R., Mitchell, R.K. & Sonnenfeld, J.A., 1999. Who Matters to CEOs? An investigation of stakeholder attributes and salience, corporate performance, and CEO values. *Academy of Management Journal*, 42(5), pp.507–525.
- Aguilera, R. V. et al., 2007. Putting the S Back in Corporate Social Responsibility: a Multilevel Theory of Social Change in Organizations. *Academy of Management Review*, 32(3), pp.836–863.
- Aharonson, B.S. & Bort, S., 2015. Institutional pressure and an organization's strategic response in Corporate Social Action engagement: The role of ownership and media attention. *Strategic Organization*, 13(4), pp.307–339.
- Arenas, D., Lozano, J.M. & Albareda, L., 2009. The Role of NGOs in CSR : Mutual Perceptions Among Stakeholders. *Journal of Business Ethics*, 88(1), pp.175–197.
- Arora, A. & Alam, P., 2005. CEO Compensation and Stakeholders ' Claims. *Contemporary Accounting Research*, 22(3), pp.519–547.
- Baron, D. & Diermeier, D., 2007. Introduction to the Special Issue on Nonmarket Strategy and Social Responsibility. *Journal of Economics & Management Strategy*, 16(3), pp.539–545.
- Bartley, T., 2003. Certifying Forests and Factories: States, Social Movements, and the Rise of Private Regulation in the Apparel and Forest Products Fields. *Politics & Society*, 31(3), pp.433–464.
- Bartley, T. & Child, C., 2012. Movements, Markets and Fields: The Effects of -Anti-Sweatshop Campaigns on U.S. Firms, 1993-2000. *Social Forces*, 90(2), pp.425–451.
- Bartley, T. & Child, C., 2014. Shaming the Corporation The Social Production of Targets and the Anti-Sweatshop Movement. *American Sociological Review*, 79(4), pp.653–679.
- Baumgartner, F.R. & Mahoney, C., 2005. Social Movements, the Rise of New Issues, and the Public Agenda. In D. S. Meyer, V. Jenness, & H. Ingram, eds. *Routing the Opposition: Social Movements, Public Policy, and Democracy*. University of Minnesota Press, pp. 65–86.
- Beckfield, J., 2003. Inequality in the World Polity: The Structure of International Organization. *American Sociological Review*, 68(3), pp.401–424.
- Blyler, M. & Coff, R.W., 2003. Dynamic Capabilities, Social Capital, and Rent Appropriation: Ties That Split Pies. *Strategic Management Journal*, 24, pp.677–686.
- Borgatti, S., Everett, M. & Johnson, J., 2013. *Analyzing social networks*, SAGE Publications Limited.
- Borgatti, S. & Halgin, D., 2011. On network theory. *Organization Science*, 22(June 2015), pp.1168–1181.
- Bowen, R.M. et al., 1992. Determinants of the Timing of Quarterly Earnings Announcements. *Journal of Accounting, Auditing & Finance*, 7(4), pp.395–422.
- Brammer, S., Jackson, G. & Matten, D., 2011. Corporate Social Responsibility and institutional theory: new perspectives on private governance. *Socio-Economic Review*, 10(1), pp.3–28.
- Burstein, P. & Linton, A., 2002. The impact of political parties interest groups and social movement organizations on public policy. *Social Forces*, 81(2), pp.381–408.
- Campbell, J.L., 2007. Why Would Corporations Behave in Socially Responsible Ways? an Institutional Theory of Corporate Social Responsibility. *Academy of Management Review*, 32(3), pp.946–967.
- Campbell, J.T., Eden, L. & Miller, S.R., 2011. Multinationals and corporate social responsibility in host countries: Does distance matter? *Journal of International Business Studies*, 43(1), pp.84–106.
- Carpenter, R.C., 2007. Setting the Advocacy Agenda: Theorizing Issue Emergence and Nonemergence in Transnational Advocacy Networks. *International Studies Quarterly*, 51(1), pp.99–120.
- Cattani, G. et al., 2008. The Structure of Consensus: Network Ties, Legitimation, and Exit Rates of U.S. Feature Film Producer Organizations. *Administrative Science Quarterly*, (March), pp.145–182.
- Chih, H.-L., Chih, H.-H. & Chen, T.-Y., 2010. On the Determinants of Corporate Social Responsibility: International Evidence on the Financial Industry. *Journal of Business Ethics*, 93(1), pp.115–135.
- Clark, A.M. et al., 1998. The Sovereign Limits of Global Civil Society: A Comparison of NGO Participation in UN World Conferences on the Environment, Human Rights, and Women. *World Politics*, 51(1), pp.1–35.
- Coff, R.W., 1999. When competitive advantage doesn't lead to performance: The resource-based view

- and stakeholder bargaining power. *Organization Science*, 10(2), pp.119–133.
- Deephouse, D.L., 2000. Media Reputation as a Strategic Resource: An Integration of Mass Communication and Resource-Based Theories. *Journal of Management*, 26(6), pp.1091–1112.
- Diani, M., 1995. *Green networks: a structural analysis of the Italian environmental movement*, Edinburgh: Edinburgh University Press.
- Diani, M., 2000. Social Movement Networks Virtual and Real. *Information, Communication & Society*, 3(3), p.386.
- Diani, M., 1997. Social movements and social capital: a network perspective on movement outcomes. *Mobilization: An International Quarterly*, 2(2), pp.129–147.
- Diani, M. & McAdam, D., 2003. *Social movements and networks: relational approaches to collective action*, New York: Oxford University Press.
- Doh, J.P. & Guay, T.R., 2006. Corporate Social Responsibility, Public Policy, and NGO Activism in Europe and the United States: An Institutional-Stakeholder Perspective. *The Journal of Management Studies*, 43(1), p.47.
- Dorobantu, S., Henisz, W.J. & Nartey, L.J., 2014. *Proactive stakeholder engagement, elite opinions, and stakeholders' first impressions of a firm*,
- Eesley, C. & Lenox, M.J., 2006. Firm responses to secondary stakeholder action. *Strategic Management Journal*, 27(8), pp.765–781.
- Freeman, L.C., 1979. Centrality in social networks conceptual clarification. *Social Networks*, 1(3), pp.215–239.
- Freeman, R.E., 1984. *Strategic management: a stakeholder approach*, Boston: Pitman.
- Frooman, J., 1999. Stakeholder Influence Strategies. *Academy of Management Review*, 24(2), pp.1991–205.
- Frooman, J. & Murrell, A.J., 2005. Stakeholder Influence Strategies: The Roles of Structural and Demographic Determinants. *Business & Society*, 44(1), pp.3–31.
- Gago, R.F. & Antolín, M.N., 2004. Stakeholder salience in corporate environmental strategy. *Corporate Governance*, 4(3), pp.65–76.
- Gargiulo, M., 1993. Two-step leverage: Managing constraint in organizational politics. *Administrative Science Quarterly*, 38(1), pp.1–19.
- Giugni, M.G., 1998. Was it worth the effort? The outcomes and consequences of social movements. *Annual Review of Sociology*, 24(1998), pp.371–393.
- Hadjikhani, A., Lee, J.W. & Ghauri, P.N., 2008. Network view of MNCs' socio-political behavior. *Journal of Business Research*, 61(9), pp.912–924.
- Hafner-Burton, E.M., Kahler, M. & Montgomery, A.H., 2009. Network Analysis for International Relations. *International Organization*, 63(03), p.559.
- Harrison, D. a. & Klein, K.J., 2007. What's the difference? Diversity constructs as separation, variety, or disparity in organizations. *Academy of Management Review*, 32(4), pp.1199–1228.
- Hartmann, J. & Uhlenbruck, K., 2015. National institutional antecedents to corporate environmental performance. *Journal of World Business*, 50(4), pp.729–741.
- Hawn, O. & Kang, H.-G., 2014. *The Market for Corporate Social Responsibility (CSR): How Industry Structure Determines CSR*,
- Henisz, W.J., 2013. Preferences , Structure and Influence : The Engineering of Consent. *Global Strategy Journal*, 359, pp.338–359.
- Henisz, W.J. & Zelner, B.A., 2005. Legitimacy, interest group pressures, and change in emergent institutions: The case of foreign investors and host country governments. *Academy of Management Review*, 30(2), pp.361–382.
- Henriques, I. & Sadorsky, P., 1996. The Determinants of an Environmentally Responsive Firm: An Empirical Approach. *Journal of Environmental Economics and Management*, 30, pp.381–395.
- Henriques, I. & Sadorsky, P., 1999. The relationship between environmental commitment and managerial perceptions of stakeholder importance. *Academy of Management Journal*, 42(1), pp.87–99.
- Hoffman, A.J., 1996. A Strategic Response to Investor Activism. *Sloan Management Review*, 37(2),

pp.51–64.

- Ioannou, I. & Serafeim, G., 2012. What drives corporate social performance? The role of nation-level institutions. *Journal of International Business Studies*, 43(9), pp.834–864.
- Jackson, G. & Apostolakou, A., 2010. Corporate social responsibility in Western Europe: An institutional mirror or substitute? *Journal of Business Ethics*, 94(3), pp.371–394.
- Jinnah, S., 2011. Climate Change Bandwagoning: The Impacts of Strategic Linkages on Regime Design, Maintenance, and Death. *Global Environmental Politics*, 11(August), pp.1–9.
- Julian, S.D., Ofori-Dankwa, J.C. & Justis, R.T., 2008. Understanding Strategic Responses to Interest Group Pressures. *Strategic Management Journal*, 29, pp.963–984.
- Keck, M.E. & Sikkink, K., 1999. Transnational advocacy networks in international and regional politics. *International Social Science Journal*, 51(159), pp.89–101.
- Kim, E.-H. & Lyon, T.P., 2015. Greenwash vs. Brownwash: Exaggeration and Undue Modesty in Corporate Sustainability Disclosure. *Organization Science*, 26(3), pp.705–723. Available at: [10.1287/orsc.2014.0949](http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=109512631&site=ehost-live)
- King, A.A. & Lenox, M.J., 2000. Industry Self-Regulation without Sanctions : The Chemical Industry’s Responsible Care Program. *Academy of Management Journal*, 43(4), pp.698–716.
- King, B.G., 2008. Model of Corporate Movement Activism. *Administrative Science Quarterly*, 53(3), pp.395–421.
- King, B.G., 2011. The Tactical Disruptiveness of Social Movements: Sources of Market and Mediated Disruption in Corporate Boycotts. *Social Problems*, 58(4), pp.491–517.
- King, B.G. & Pearce, N. a., 2010. The Contentiousness of Markets: Politics, Social Movements, and Institutional Change in Markets. *Annual Review of Sociology*, 36(1), pp.249–267.
- King, B.G. & Soule, S.A., 2007. Social movements as extra-institutional entrepreneurs: the effect of protests on stock price returns. *Administrative Science Quarterly*, 52(3), pp.413–442.
- Knoke, D., 1990. Politics in structural perspective. *Political Networks*, 61, pp.1–27.
- Larson, J. a & Soule, S. a, 2009. Sector-level dynamics and collective action in the united states, 1965-1975 *. *Mobilization: An International Journal*, 14(3), pp.293–314.
- Lee, M.P., 2011. Configuration of External Influences: The Combined Effects of Institutions and Stakeholders on Corporate Social Responsibility Strategies. *Journal of Business Ethics*, pp.281–298.
- Leetaru, K. & Schrodt, P. a, 2013. GDELT: Global Data on Events, Location and Tone, 1979-2012. *Annual Meeting of the International Studies Association*, pp.1979–2012.
- Mahon, J.F., Heugens, P.P.M. a. R. & Lamertz, K., 2004. Social networks and non-market strategy. *Journal of Public Affairs*, 4(2), pp.170–189.
- Maignan, I. & Ralston, D. a., 2002. Corporate Social Responsibility in Europe and the U.S.: Insights from Businesses’ Self-presentations. *Journal of International Business Studies*, 33(3), pp.497–514.
- Marquis, C. & Toffel, M.W., 2013. Scrutiny, Norms, and Selective Disclosure: A Global Study of Greenwashing. *11-115*, pp.1–48.
- Marwell, G., Oliver, P. & Pahl, R., 1988. Social Networks and Collective Action. *American Journal of Sociology*, 94(3), pp.502–534.
- Matten, D. & Moon, J., 2008. “Implicit” and “Explicit” CSR: A Conceptual Framework for a Comparative Understanding of Corporate Social Responsibility. *Academy of Management Review*, 33(2), pp.404–424.
- McAdam, D. & Paulsen, R., 1993. Specifying the Relationship Between Social Ties and Activism. *American Journal of Sociology*, 99(3), p.640.
- McDonnell, M.-H. & King, B., 2013. Keeping up appearances reputational threat and impression management after social movement boycotts. *Administrative Science Quarterly*, 58(3), pp.387–419.
- McWilliams, A. & Siegel, D., 2001. Corporate Social Responsibility: A Theory of the Firm Perspective. *The Academy of Management Review*, 26(1), pp.117–127.
- Mena, S. & Waeger, D., 2014. Activism for corporate responsibility: Conceptualizing private regulation opportunity structures. *Journal of Management Studies*, (November).

- Mitchell, R.K., Agle, B.R. & Wood, D.J., 1997. Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of Management Review*, 22(4), pp.853–886.
- Moe, T., 1990. The Politics of Structural Choice: Toward a Theory of Public Bureaucracy. In O. E. Williamson, ed. *Organization Theory*. New York: Oxford University Press.
- Muller, A. & Kolk, A., 2010. Extrinsic and Intrinsic Drivers of Corporate Social Performance: Evidence from Foreign and Domestic Firms in Mexico. *Journal of Management Studies*, 47(1), pp.1–26. Available at: <http://doi.wiley.com/10.1111/j.1467-6486.2009.00855.x>.
- Murillo-Luna, J.L., Garcés-Ayerbe, C. & Rivera-Torres, P., 2008. Why do patterns of environmental response differ? A stakeholders' pressure approach. *Strategic Management Journal*, 29(April 2004), pp.1225–1240.
- Neal, Z., 2013. Does World City Network Research Need Eigenvectors? *Urban Studies*, 50(June), pp.1648–1659.
- Oliver, C., 1991. Strategic Responses To Processes Institutional. *Academy of Management Review*, 16(1), pp.145–179.
- Petkova, A.P., Rindova, V.P. & Gupta, A.K., 2013. No News Is Bad News: Sensegiving Activities, Media Attention, and Venture Capital Funding of New Technology Organizations. *Organization Science*, 24(3), pp.865–888.
- Pfeffer, J., 1981. Management as symbolic action: The creation and maintenance of organizational paradigms. In L. L. Cummings & B. M. Shaw, eds. *Research in organizational behavior*. Greenwich, CT: JAI Press.
- Pfeffer, J. & Salancik, G.R., 1978. *The external control of organizations: A resource dependence perspective*, New York, NY: Harper & Row.
- Pollock, T.G. & Rindova, V.P., 2003. Media legitimation effects in the market for initial public offerings. *Academy of Management Journal*, 46(5), pp.631–642.
- Della Porta, D. & Diani, M., 2006. *Social movements: An introduction* 2nd. ed., Malden, MA, USA: Blackwell Publishing.
- Rowley, T., 1997. Moving beyond dyadic ties: A network theory of stakeholder influences. *Academy of Management Review*, 22(4), pp.887–910.
- Rowley, T. & Moldoveanu, M., 2003. Groups Act? an When Will Stakeholder Model of and Identity-Based Stakeholder Group Mobilization. *The Academy of Management Review*, 28(2), pp.204–219.
- Schurman, R., 2004. Fighting “Frankenfoods”: Industry Opportunity Structures and the Efficacy of the Anti-Biotech Movement in Western Europe. *Social Problems*, 51(2), pp.243–268.
- Sell, S.K. & Prakash, A., 2004. Using ideas strategically: The contest between business and NGO networks in intellectual property rights. *International Studies Quarterly*, 48(1), pp.143–175.
- Sikkink, K., 2009. The power of networks in international politics. In M. Kahler, ed. *Networked Politics: Agency, Power, and Governance*. Ithaca, NY: Cornell University Press, pp. 228–47.
- Soule, S.A., 2012. Social Movements and Markets, Industries, and Firms. *Organization Studies*, 33(12), pp.1715–1733.
- Tarrow, S., 1996. Reflection Making Social Science Work Across Space and Time : Work Putnam 's on Robert Making Democracy. *The American Political Science Review*, 90(2), pp.389–397.
- Tsebelis, G., 2002. *Veto Players: How Political Institutions Work*, Princeton, NJ: Princeton University Press.
- Weber, M., 1947. *Max Weber: The Theory of Social and Economic Organization*, New York, NY: Free Press.
- Williams, C.A. & Aguilera, R. V., 2008. Corporate Social Responsibility in a Comparative Perspective. In A. Crane et al., eds. *The Oxford Handbook of Corporate Social Responsibility*. New York: Oxford University Press, pp. 452–472.
- Wood, D.J., 1991. Corporate Social Performance Revisited. *Academy of Management Review*, 16(4), pp.691–718.
- Wry, T., Cobb, J.A. & Aldrich, H.E., 2013. More than a metaphor: Assessing the historical legacy of

- resource dependence and its contemporary promise as a theory of environmental complexity. *Academy of Management Annals*, 7(1), pp.441–488.
- Yang, X. & Rivers, C., 2009. Antecedents of CSR practices in MNCs' subsidiaries: A stakeholder and institutional perspective. *Journal of Business Ethics*, 86(SUPPL.2), pp.155–169.
- Zelner, B.A., Henisz, W.J. & Holburn, G.L.F., 2009. Contentious Implementation and Retrenchment in Neoliberal Policy Reform : The Global Electric Power Industry, 1989-2001. *Administrative Science Quarterly*, 54(3), pp.379–412.

TABLE 1: Variable Definition and Source

Variable	Measurement	Source
<i>Independent Variables</i>		
Stakeholder centrality (H1)	Sum of all stakeholder outgoing and incoming ties divided by outgoing and incoming ties of all actors (ties weighted by media mentions)	GDELT
Density of stakeholder network cooperative ties (H2)	Mentions-weighted cooperative ties between stakeholders as a ratio of number of possible ties, normalized by the density (calculated in the same manner) of all actors	GDELT
Stakeholder network heterogeneity (H3)	Count of unique actor types in the connected stakeholder network	GDELT
<i>Controls: Country</i>		
Anti-self-dealing index	Laws limit self-dealing of insiders (measured as of 2001)	La Porta et al. (2006)
Left/center ideology	Chief executive and largest party in congress have left/center political orientation (% of years between 1928 and 1995 during which both the the chief executive's party and the largest party in congress had left or center orientation)	Botero et al. (2004)
Absence of corruption	Inverse of average corruption score over the period 1996–2000.	World Bank
Union density	Employees are densely organized in unions (measured as of 1997)	Botero et al. (2004)
Power distance index	“The extent to which the less powerful members of organizations and institutions accept and expect that power is distributed unequally”	Hofstede (1997, 2001)
Individualism	“The degree to which individuals are integrated into groups”	Hofstede (1997, 2001)
Skilled labor availability	Skilled labor is readily available in a country (measured each year)	IMD World Competitiveness Report
Competition and regulation	Laws encourage competition in the country (measured each year)	IMD World Competitiveness Report
Country debt over assets	The average debt over assets ratio for all firms within a country-year pair (measured each year)	Worldscope
SRI index	Indicator variable for country-years where a socially responsible stock market index exists (measured each year)	World Federation of Exchanges
Basic infrastructure	Quality of basic infrastructure in a country (measured each year)	IMD World Competitiveness Report

TABLE 1 Continued: Variable Definition and Source

Variable	Measurement	Source
<i>Controls: Country continued</i>		
Balance of trade	(Exports-Imports)/GDP (measured each year)	IMD World Competitiveness Report
Trade	(Exports+Imports)/GDP (Measured each year)	IMD World Competitiveness Report
Market Capitalization	Log of total market capitalization	IMD World Competitiveness Report
Free Press Index	World Press Freedom Index - composite score of the legal, political and economic environment for press freedom (0 to 100 scale, where lower values indicate more press freedom)	Freedom House
<i>Controls: Firm</i>		
ROA	Net income over total assets (measured each year) - logged due to skewness	Worldscope
Volatility	Daily stock return volatility over the fiscal year (measured each year)	Worldscope
Market to book ratio	Market value of equity over book value of equity calculated at fiscal year-end (measured each year)	Worldscope
R&D expenses	Research and development expenses over sales (measured each year)	Worldscope
Firm size	Logarithm of total assets (measured each year)	Worldscope
Number of segments	Logarithm of number of four-digit SIC codes the company operates in (measured each year)	Worldscope
ADR company	Company trades an American Depositary Receipt (measured each year)	Worldscope
Closely Held Shares %	Percentage of shares held by investors owing more than 5% (measured each year)	Worldscope
Leverage	One minus the ratio of shareholder's equity over total assets (measured each year)	Worldscope

TABLE 2: Descriptive Statistics by Country ($N=20,047$)

Country	Firms	Obs.	CSP index	Stakeholder centrality	Density of stakeholder cooperative ties	Stakeholder network heterogeneity
Australia	277	1,186	42.60	0.0054	0.4362	5.50
Austria	14	89	60.90	0.0043	0.6181	1.60
Belgium	15	61	55.72	0.0045	0.4232	3.25
Brazil	33	86	52.38	0.0079	0.6504	5.14
Canada	221	1,052	39.80	0.0067	0.3201	6.00
Chile	20	81	44.10	0.0061	0.8403	1.43
China	56	195	33.93	0.0042	0.2220	7.89
Colombia	3	4	70.05	0.0033	0.1101	2.50
Czech Republic	4	18	58.18	0.0065	0.7883	3.57
Denmark	16	115	52.54	0.0077	0.4949	3.00
Finland	20	121	74.02	0.0075	0.4503	1.90
France	83	559	76.13	0.0069	0.6279	5.50
Germany	55	274	68.35	0.0044	0.5528	5.60
Greece	13	40	48.60	0.0065	0.5102	2.43
Hong Kong	132	650	35.13	0.0068	0.6908	1.56
Hungary	4	16	79.02	0.0077	0.3320	2.67
India	80	304	57.03	0.0065	0.5410	9.14
Indonesia	14	51	51.79	0.0072	0.3703	7.50
Ireland	13	77	41.21	0.0080	1.1917	3.60
Israel	13	47	47.97	0.0023	0.1320	5.20
Italy	34	211	52.95	0.0052	0.2830	3.10
Japan	412	3,172	52.75	0.0041	0.3104	5.20
Korea, South	90	289	61.67	0.0029	0.2748	3.40
Malaysia	40	152	42.55	0.0061	0.8454	4.17
Mexico	11	20	42.40	0.0045	0.1236	5.80
Netherlands	32	187	72.95	0.0052	0.6291	3.22
New Zealand	10	73	48.45	0.0051	0.5381	2.30
Norway	16	106	55.47	0.0052	1.4365	2.20
Peru	1	4	32.00	0.0053	0.1473	2.25
Philippines	20	69	36.63	0.0041	0.1193	4.67
Poland	20	69	41.15	0.0040	0.6264	2.83
Portugal	9	64	75.52	0.0044	0.5937	1.60
Singapore	46	310	37.74	0.0044	0.4464	1.80
South Africa	119	316	60.12	0.0108	0.3975	7.00
Spain	47	180	72.58	0.0049	0.1099	3.00
Sweden	19	123	66.88	0.0065	0.3150	2.20
Switzerland	35	202	58.87	0.0057	0.5561	3.40
Taiwan	118	436	38.21	0.0025	0.1643	2.20
Thailand	7	26	53.86	0.0058	3.2409	6.60
Turkey	23	94	53.92	0.0028	0.2341	5.83
United Kingdom	325	2,204	62.22	0.0051	0.3160	7.40
United States	1,046	6,714	45.82	0.0035	0.2338	11.50

TABLE 3: Summary Statistics and Correlation Matrix

	Mean	Std. Dev.	No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28		
CSP index	50.571	29.550	1	1.00																													
Stakeholder centrality (log)	-5.343	0.344	2	0.08	1.00																												
Density of cooperative ties (log)	-1.568	1.088	3	0.07	0.33	1.00																											
Stakeholder heterogeneity	7.663	4.141	4	-0.03	-0.11	0.14	1.00																										
Anti-self-dealing index	0.639	0.187	5	-0.11	0.16	0.00	0.12	1.00																									
Left/center ideology	0.433	0.287	6	-0.09	-0.12	-0.01	0.55	0.03	1.00																								
Absence of corruption	1.496	0.615	7	0.02	0.11	0.06	0.07	0.36	0.21	1.00																							
Union density	0.228	0.130	8	0.08	0.25	0.00	-0.45	-0.08	-0.24	0.35	1.00																						
Power distance index	46.373	13.740	9	-0.02	0.07	-0.06	-0.31	-0.12	-0.33	-0.72	-0.32	1.00																					
Individualism	70.417	24.736	10	0.01	-0.03	0.12	0.59	0.22	0.57	0.61	-0.10	-0.77	1.00																				
Skilled labor availability	6.332	0.932	11	-0.10	-0.38	-0.10	0.18	-0.28	0.25	0.09	-0.15	-0.05	0.06	1.00																			
Competition and regulation	6.178	0.675	12	0.02	0.18	0.15	-0.01	0.05	0.02	0.53	0.27	-0.43	0.28	0.08	1.00																		
Country debt over assets	2.380	4.303	13	-0.07	-0.31	-0.16	0.61	0.04	0.50	0.09	-0.36	-0.25	0.45	0.24	-0.20	1.00																	
SRI index	0.760	0.427	14	0.00	-0.27	0.00	0.46	0.15	0.03	-0.07	-0.21	-0.25	0.24	0.03	-0.05	0.29	1.00																
Basic infrastructure	14.254	12.398	15	0.11	0.28	-0.03	-0.32	-0.05	-0.43	-0.50	0.17	0.35	-0.41	-0.55	-0.32	-0.37	-0.04	1.00															
Balance of trade	-0.023	0.058	16	-0.01	0.02	0.06	-0.35	-0.29	-0.31	-0.05	0.36	0.17	-0.37	0.04	0.17	-0.25	-0.35	-0.02	1.00														
Trade	32.548	39.737	17	-0.07	0.21	-0.14	-0.47	0.33	-0.20	0.04	0.17	0.41	-0.52	-0.02	-0.05	-0.24	-0.35	0.08	0.01	1.00													
Market Capitalization	8.068	1.436	18	-0.07	-0.39	-0.03	0.71	0.08	0.40	0.11	-0.56	-0.29	0.55	0.40	-0.05	0.57	0.59	-0.53	-0.41	-0.47	1.00												
Free Press Index	22.198	11.264	19	-0.07	0.12	-0.04	-0.21	0.21	-0.19	-0.52	-0.17	0.72	-0.62	-0.27	-0.31	-0.22	-0.20	0.35	0.26	0.42	-0.38	1.00											
ROA (log)	1.636	1.025	20	-0.02	0.06	0.02	0.08	0.18	0.19	0.10	-0.02	-0.08	0.13	-0.07	0.03	0.06	0.00	-0.05	-0.10	0.07	0.01	0.02	1.00										
Volatility	28.518	9.516	21	-0.16	0.01	-0.02	0.00	0.05	0.03	-0.10	0.03	0.08	-0.10	-0.04	-0.12	0.00	0.06	0.09	0.00	0.12	-0.07	0.11	0.04	1.00									
Market to book ratio	2.721	7.338	22	0.11	0.05	-0.04	-0.09	0.15	-0.02	-0.21	-0.06	0.26	-0.24	-0.10	-0.18	-0.09	-0.06	0.11	0.02	0.19	-0.13	0.37	0.10	0.02	1.00								
R&D expenses	1.802	4.541	23	0.09	-0.11	-0.02	0.09	-0.06	0.04	0.02	-0.06	-0.06	0.06	0.13	0.00	0.10	0.09	-0.10	-0.01	-0.09	0.15	-0.09	0.11	0.12	0.00	1.00							
Firm size (log)	22.583	1.605	24	0.39	-0.10	-0.02	0.05	-0.19	0.05	-0.14	-0.12	0.11	-0.05	0.13	-0.07	0.05	0.00	-0.05	-0.03	-0.04	0.11	0.02	-0.45	-0.26	0.19	-0.10	1.00						
Number of segments (log)	1.132	0.662	25	0.22	-0.02	-0.01	-0.11	-0.18	-0.14	-0.15	0.02	0.15	-0.18	0.06	-0.04	-0.08	-0.01	0.09	0.07	0.02	-0.07	0.07	-0.18	-0.13	0.06	-0.11	0.32	1.00					
ADR company	0.151	0.358	26	0.26	0.14	0.02	-0.27	0.03	-0.24	-0.01	0.14	0.11	-0.19	-0.15	0.00	-0.22	-0.14	0.17	0.06	0.21	-0.27	0.12	-0.04	-0.04	0.17	0.00	0.21	0.12	1.00				
Closely Held Shares (%)	24.072	23.159	27	-0.09	0.14	-0.01	-0.36	-0.06	-0.24	-0.32	0.04	0.44	-0.47	-0.15	-0.17	-0.25	-0.22	0.30	0.13	0.34	-0.43	0.41	0.02	0.12	0.18	-0.09	-0.09	0.04	0.09	1.00			
Leverage	58.979	22.024	28	0.13	-0.03	0.00	0.01	-0.07	0.04	-0.02	0.00	-0.01	0.04	-0.01	-0.06	0.01	-0.02	0.04	-0.03	-0.07	0.01	-0.01	-0.43	-0.13	0.07	-0.29	0.49	0.22	0.04	-0.07	1.00		

TABLE 4: Ordinary Least Squares Regression Models

Dependent Variable	Model 1 CSP	Model 2 CSP	Model 3 CSP	Model 4 CSP	Model 5 CSP	Model 6 CSP	Model 7 CSP
Stakeholder centrality (log)	H1	2.326*** (0.468)			2.047*** (0.486)	2.015** (0.686)	2.112** (0.667)
Density of cooperative ties (log)	H2		0.173 (0.103)		-0.0624 (0.112)	0.111 (0.171)	-0.191 (0.144)
Stakeholder network heterogeneity	H3			0.281*** (0.056)	0.233*** (0.058)	0.230** (0.087)	0.262*** (0.077)
Anti-self-dealing index		-9.471** (3.005)	-11.14*** (3.018)	-9.623** (2.999)	-11.01*** (3.009)	-12.12*** (3.020)	-5.957 (4.107)
Left/center ideology		-11.04*** (1.849)	-10.90*** (1.843)	-10.95*** (1.850)	-11.52*** (1.849)	-11.34*** (1.853)	-8.570*** (2.393)
Absence of corruption		4.834*** (1.359)	5.277*** (1.363)	4.946*** (1.360)	5.694*** (1.375)	5.909*** (1.376)	8.963*** (1.699)
Union density		10.46* (4.570)	9.190* (4.573)	10.42* (4.566)	10.64* (4.568)	9.470* (4.580)	8.592 (5.159)
Power distance index (Hofstede)		0.315*** (0.063)	0.283*** (0.063)	0.312*** (0.063)	0.318*** (0.063)	0.290*** (0.063)	0.352*** (0.086)
Individualism index (Hofstede)		0.249*** (0.042)	0.225*** (0.042)	0.245*** (0.042)	0.228*** (0.042)	0.212*** (0.042)	0.235*** (0.050)
Skilled labor availability		-1.405*** (0.314)	-1.570*** (0.314)	-1.452*** (0.316)	-1.609*** (0.315)	-1.704*** (0.316)	-1.896*** (0.480)
Laws encouraging competition		-0.0356 (0.364)	-0.259 (0.360)	-0.0637 (0.364)	-0.00827 (0.363)	-0.200 (0.358)	-0.496 (0.533)
Country debt over assets		0.178*** (0.047)	0.203*** (0.047)	0.184*** (0.046)	0.188*** (0.047)	0.206*** (0.046)	0.0554 (0.064)
SRI index		2.868*** (0.662)	2.844*** (0.661)	2.789*** (0.657)	2.832*** (0.661)	2.847*** (0.657)	4.009*** (1.100)
Basic infrastructure		0.00613 (0.031)	0.00478 (0.031)	0.0121 (0.031)	0.0263 (0.031)	0.0199 (0.031)	0.0246 (0.045)
Balance of trade		-17.43** (6.620)	-19.84** (6.612)	-17.77** (6.604)	-18.11** (6.589)	-20.04** (6.588)	-18.58* (9.195)
Trade		-0.0684*** (0.018)	-0.0680*** (0.018)	-0.0671*** (0.017)	-0.0630*** (0.017)	-0.0643*** (0.017)	-0.0655** (0.020)
Market capitalization		-3.547*** (0.445)	-3.303*** (0.446)	-3.495*** (0.447)	-3.720*** (0.445)	-3.505*** (0.448)	-5.119*** (0.589)
Free press index		-0.0950 (0.054)	-0.0776 (0.054)	-0.0951 (0.054)	-0.0875 (0.054)	-0.0739 (0.054)	-0.177* (0.070)
ROA		0.934*** (0.176)	0.926*** (0.175)	0.939*** (0.176)	0.917*** (0.176)	0.914*** (0.175)	0.985*** (0.238)
Volatility		-0.183*** (0.037)	-0.182*** (0.037)	-0.184*** (0.037)	-0.184*** (0.037)	-0.183*** (0.037)	-0.151*** (0.045)
Market to book ratio		0.167*** (0.035)	0.165*** (0.035)	0.167*** (0.035)	0.168*** (0.035)	0.166*** (0.035)	0.0981 (0.052)
R&D expenses		0.103 (0.077)	0.106 (0.077)	0.106 (0.077)	0.106 (0.077)	0.108 (0.077)	0.262* (0.115)
Firm size		7.540*** (0.353)	7.547*** (0.353)	7.548*** (0.352)	7.543*** (0.352)	7.561*** (0.352)	8.298*** (0.400)
Number of segments		1.368** (0.422)	1.342** (0.421)	1.369** (0.421)	1.346** (0.421)	1.328** (0.420)	1.910*** (0.578)
ADR company		11.67*** (1.169)	11.51*** (1.168)	11.62*** (1.167)	11.60*** (1.166)	11.46*** (1.166)	10.10*** (1.523)
Closely held shares (%)		-0.0140 (0.010)	-0.0141 (0.010)	-0.0145 (0.010)	-0.0137 (0.010)	-0.0137 (0.010)	-0.00954 (0.013)
Leverage		0.0174 (0.017)	0.0184 (0.017)	0.0181 (0.017)	0.0176 (0.017)	0.0183 (0.017)	-0.0101 (0.023)
Constant		-109.8*** (10.700)	-92.88*** (10.996)	-109.4*** (10.678)	-107.8*** (10.680)	-93.64*** (10.995)	-105.4*** (14.104)
Observations		20047	20047	20047	20047	20047	9033
R-squared		0.441	0.444	0.443	0.444	0.445	0.457
Year fixed effects		Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects		Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects		No	No	No	No	No	No

*** p<0.001, ** p<0.01, * p<0.05. Robust standard errors in parentheses. Model 6 includes domestic firms; Model 7 includes firms with foreign assets (i.e. MNEs).

TABLE 5: Ordinary Least Squares Regression Models

Dependent Variable	Model 8 CSP	Model 9 CSP	Model 10 CSP	Model 11 CSP	Model 12 CSP	Model 13 Social Score	Model 14 Env. Score
Stakeholder centrality (log)	H1	1.608** (0.494)			1.530** (0.508)	1.354** (0.492)	0.815* (0.371)
Density of cooperative ties (log)	H2		0.0149 (0.104)		-0.162 (0.113)	0.129 (0.095)	-0.188 (0.106)
Stakeholder network heterogeneity	H3			0.210*** (0.058)	0.202*** (0.060)	0.221* (0.112)	0.342** (0.115)
Skilled labor availability		-0.846* (0.343)	-1.037** (0.347)	-0.852* (0.347)	-0.986** (0.343)	-1.105** (0.348)	-1.244** (0.412)
Laws encouraging competition		-0.143 (0.390)	-0.299 (0.383)	-0.146 (0.390)	-0.128 (0.390)	-0.251 (0.381)	0.977* (0.445)
Country debt over assets		0.231*** (0.046)	0.244*** (0.046)	0.232*** (0.045)	0.238*** (0.046)	0.245*** (0.046)	0.188*** (0.055)
SRI index		2.930*** (0.743)	2.840*** (0.739)	2.922*** (0.736)	2.898*** (0.742)	2.903*** (0.734)	4.043*** (0.819)
Basic infrastructure		-0.0549 (0.035)	-0.0529 (0.035)	-0.0543 (0.035)	-0.0362 (0.035)	-0.0413 (0.035)	-0.0355 (0.040)
Balance of trade		-7.307 (8.646)	-10.66 (8.679)	-7.344 (8.648)	-7.842 (8.656)	-10.61 (8.692)	-20.48* (9.508)
Trade		-0.0347 (0.037)	-0.0316 (0.037)	-0.0344 (0.037)	-0.0335 (0.037)	-0.0332 (0.037)	-0.0718 (0.038)
Market capitalization		0.549 (0.893)	0.622 (0.893)	0.547 (0.892)	0.450 (0.892)	0.547 (0.890)	0.101 (0.982)
Free press index		0.0425 (0.128)	0.0708 (0.129)	0.0425 (0.128)	0.0975 (0.131)	0.122 (0.133)	0.0662 (0.150)
ROA		0.602*** (0.177)	0.598*** (0.176)	0.602*** (0.176)	0.588*** (0.176)	0.582*** (0.176)	0.658*** (0.196)
Volatility		-0.148** (0.049)	-0.147** (0.049)	-0.148** (0.049)	-0.149** (0.049)	-0.147** (0.049)	-0.212*** (0.054)
Market to book ratio		0.112** (0.040)	0.111** (0.040)	0.112** (0.040)	0.113** (0.040)	0.113** (0.040)	0.121** (0.043)
R&D expenses		0.0164 (0.091)	0.0184 (0.091)	0.0166 (0.091)	0.0176 (0.092)	0.0177 (0.091)	0.0801 (0.111)
Firm size		3.151*** (0.618)	3.136*** (0.619)	3.149*** (0.619)	3.126*** (0.618)	3.138*** (0.620)	2.929*** (0.677)
Number of segments		0.889 (0.493)	0.876 (0.492)	0.889 (0.493)	0.873 (0.493)	0.861 (0.492)	0.576 (0.532)
Closely held shares (%)		-0.0100 (0.010)	-0.00954 (0.011)	-0.0101 (0.010)	-0.00968 (0.010)	-0.00887 (0.010)	-0.0168 (0.012)
Leverage		-0.0135 (0.020)	-0.0126 (0.020)	-0.0134 (0.020)	-0.0130 (0.020)	-0.0129 (0.020)	-0.0471* (0.021)
Foreign assets (%)		0.00163 (0.007)	0.000898 (0.007)	0.00162 (0.007)	0.00112 (0.007)	0.000562 (0.007)	-0.00106 (0.008)
Constant		-24.43 (15.054)	-14.15 (15.207)	-24.30 (15.123)	-24.32 (15.052)	-15.99 (15.253)	-8.366 (16.522)
Observations		20047	20047	20047	20047	20047	20047
R-squared (within)		0.189	0.190	0.189	0.190	0.190	0.134
<i>Year fixed effects</i>		<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
<i>Industry fixed effects</i>		<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>
<i>Firm fixed effects</i>		<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>

*** p<0.001, ** p<0.01, * p<0.05. Robust standard errors in parentheses. Model 13 is regressed on the firm's social score from ASSET4, and stakeholder measures include only social stakeholders (i.e., those with interested in labor and human rights). Model 14 is regressed on the firm's environment score from ASSET4, and stakeholder measures include only environmental stakeholders (i.e., those with interested in environmental issues).