**HEC MONTRÉAL**
École affiliée à l'Université de Montréal

# The Impact of Stakeholder Management on Corporate Reputation and Environmental Disclosure

**par**
**Yinglin Huang**

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Présentée par :

**Yinglin Huang**

a été évaluée par un jury composé des personnes suivantes:

Jacqueline Di Vito
HEC Montréal
Président-rapporteur

Claude Francoeur
HEC Montréal
Directeur de recherche

Stephen Brammer
Macquarie University
Membre du jury

Linda Thorne
York University
Évaluateur externe

Yves Plourde
HEC Montréal
Représentant du directeur de HEC Montréal

# Résumé

Dans cette thèse, nous étudions l'impact de la gestion des parties prenantes sur la réputation des entreprises et la qualité de leurs divulgations environnementales. De nos jours, les entreprises doivent, en plus de protéger les intérêts des actionnaires, tenir compte des intérêts de l’ensemble de leurs parties prenantes. Les bonnes pratiques de gouvernance impliquent maintenant de répondre à toutes les demandes des parties prenantes et de viser des relations harmonieuses avec toutes les parties prenantes et ainsi préserver la légitimité et la réputation de l’entreprise.

Dans le premier article, j'investigue ce qui force les entreprises à ne pas divulguer la totalité de leurs réalisations environnementales. Mes résultats montrent que pour assurer leur légitimité environnementale, les entreprises ne déclarent pas toutes leurs réalisations environnementales afin d’éviter des demandes additionnelles de la part de leurs parties prenantes et de préserver leur leadership moyennant un minimum d’effort. Cependant, ce comportement nuit à l'avancement des bonnes pratiques environnementales. Dans le but de satisfaire la demande d'informations des parties prenantes, un système de gouvernance environnementale interne efficace peut surveiller le comportement de sous-déclaration.

La première étude porte sur comment une bonne utilisation des médias sociaux est devenue primordiale pour les entreprises afin d’établir des relations harmonieuses avec les parties prenantes. En examinant le compte Twitter des entreprises du Standard & Poor's et en identifiant les stratégies que les entreprises utilisent pour communiquer avec leurs parties prenantes, j'ai constaté qu’une bonne gestion des médias sociaux peut améliorer la qualité de la communication et atténuer le risque réputationnel de l'entreprise.

Dans le troisième article, j'examine l'activisme social initié par des actionnaires. Ces militants soumettent des propositions pour améliorer le comportement social et environnemental des entreprises qu’ils ciblent. Lorsque leurs propositions sont ignorées par la direction de l'entreprise, les militants sociaux diffuseront leurs préoccupations à d'autres groupes d'actionnaires et formeront une coalition pour faire pression collectivement sur l'entreprise. Mes résultats montrent

que les entreprises qui ne sont pas proactives vis-à-vis ces demandes mettent éventuellement leur réputation en péril.

**Mots clés** : gouvernance d'entreprise, gestion des parties prenantes, réputation de l'entreprise, médias sociaux, greenwashing, brownwashing, activisme actionnarial

**Méthodes de recherche** : recherche quantitative, recherche longitudinale, analyse multivariée, méthode des moments généralisés (GMM), analyse en composantes principales

# Abstract

In this thesis, I investigate the impact of stakeholder management on corporate reputation and environmental disclosure. Firms have moved from focusing solely on the interests of the shareholders to taking care of all stakeholders' interests. Good governance practices now involve being responsive to all stakeholders' demands and aim for desirable stakeholder relationships, corporate legitimacy and superior corporate reputation.

In the first paper, I investigate what drives firms to under-report (brownwash) their environmental achievements. I find that firms do so to avoid escalated stakeholders' requests and preserve their leadership with minimum efforts. However, this behavior is detrimental to the advancement of good environmental practices. Aiming to satisfy stakeholders' information demand, efficient internal environmental governance system can monitor the under-reporting behavior.

In the second paper, I explore how social media has become a trend for firms to enhance firm-stakeholder relationship and achieve stakeholders' recognition. By examining Standard & Poor's 500 companies' Twitter account and identifying the strategies that firms employ to manage their stakeholders, I find that social media management raises the quality of corporate communication and the use of social networking strategy can effectively mitigate corporate reputational risk.

In the third paper, I examine social activism initiated by concerned shareholders. These activists make formal proposals to improve their targeted firm's social and environmental behavior. When their proposals are ignored by the firm's management, social activists will broadcast their concerns to other shareholder groups and build a coalition to collectively press the firm. I find that firms that respond in a reactive manner to these demands eventually put their corporate reputation at risk.



**Keywords**: corporate governance, stakeholder management, corporate reputation, social media, greenwashing, brownwashing, shareholder activism


**Research methods**: quantitative research, longitudinal research, multivariate analysis, Generalized method of moments (GMM), Principal component analysis

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## List of acronyms

| | |
|---|---|
| **SEC** | Securities and Exchange Commission |
| **CSI** | Corporate Social Irresponsibilities |
| **NGO** | Non-governmental Organizations |
| **GMM** | The Dynamic Panel System Generalized Method of Moment |
| **CSR** | Corporate Social Responsibility |
| **EMS** | Environmental Management System |
| **GRI** | Global Reporting Initiative |

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# General introduction

This doctoral thesis incorporates three independent papers in corporate governance on the topic of stakeholder management, corporate reputation and environmental disclosure. The papers are written to be published as a separate article in academic journals.

The first paper, *why do Firms Brownwash their Environmental Achievements*, examines the determinants of brownwashing, an underreporting behavior. Stakeholders of the firm are more and more concerned about the damage to the environment that is caused by corporations. With few mandatory regulations in place, stakeholders' pressures substitute the government's monitoring role to advocate corporate environmental commitment (Berchicci and King 2007). Failing to respond to the stakeholders' demands can seriously threaten organizational reputation and lower the perceived leadership in the public eyes. Some firms choose to over-report their environmental activities, i.e. greenwashing. On the other hand, good environmental performers who tend to lead their industrial sector and set the good practices that other firms imitate are influenced by stakeholders in a different fashion. When legitimate firms step up their standards, their peers tend to follow their footsteps to catch up (Nelson and Winter 1978, 1982; Rumelt, Schendel and Teece, 1991). Reputable firms are more salient than others and are expected to carry higher levels of responsibilities (George et al., 2016). To avoid this spiral of ever-growing needs for higher environmental investments, legitimate firms might want to refrain from disclosing their true activities and only reveal routinized information. Thus, they engage in brownwashing activities to maintain their environmental leadership status with minimum effort (Verrecchia, 1983, 2001). Brownwashing also reduces the probability that the additional disclosed information is used to challenge the firm's environmental activities and stimulate further stakeholders' demands.

The paper shows that corporate reputation and internal environmental governance mechanism are two factors that are associated with corporate brownwashing in opposite directions. Environmental governance mechanism, dedicated to the monitoring of environmental issues, is an important way of displaying firm's desire to contribute to environmental issues, integration of relevant concerns into the overall management strategies and addressing stakeholders' demands (Shwairef et al., 2019). It should lead reputable firms to be more transparent about their environmental activities.

The second paper, *the impact of social media management on corporate reputation*, explores how firms strategically employ social media strategies to interact with their stakeholders and how they reflect on firms' reputation. Stakeholders' perceptions of a firm's financial, social, and environmental behaviors determine its reputation (Barnett et al., 2006). It is of outmost importance that the board pay close attention to their stakeholders' perceptions and develop good relationships with them to mitigate their reputation risk.

The advent of social media makes it easier for firms to communicate with their stakeholders and express their corporate identity. This social media presence allows firms to be constantly aware of their stakeholders' requests, respond promptly to their critics and make the necessary adjustments to gain their approval and support (Coombs 2007; Liu et al. 2011). Firms construct their online identity through various communication strategies, namely stakeholder involvement strategy, social networking strategy and the certainty strategy, to align with stakeholders' perception. I argue that these communication strategies constitute an efficient way to manage a firm's identity and promote better corporate reputation.

Based on a set of 21,992,900 tweets covering 280 Standard & Poor's 500 companies, I find that the social networking strategies employed on the Twitter platform tend to foster a higher level of corporate reputation. By applying communal communication strategies in their social media

communications, firms can adapt their online corporate identity to their stakeholders' values and beliefs and improve their corporate reputation.

The third paper, *Does the way firm's respond to social activism affect their reputation*, examines how stakeholders may shape firms' business practices through one of the external corporate governance mechanisms, shareholder activism. In public traded corporations, shareholders are permitted to submit resolutions concerning the social and financial performance of the firm at the annual general meeting.

From the angle of corporate reputation, I investigate the influence of the managerial response to social activism and argue that social activists influence firm mainly through detecting firms' corporate social irresponsibilities (CSI) and shaming corporate reputation. Although I observe a negative relationship between managerial reactive response and corporate reputation. It is notable that the results are mainly driven by the reputational penalty raised from ignoring social proposals, the efforts to solve stakeholders' concerns merely reduce the reputational loss but achieve no reputational gains. The study sheds lights on how shareholder concerns expressed through social activism can have an impact on corporate reputation.

# Chapter 1 Why do Firms Brownwash their Environmental Achievements?


## Abstract

Several studies have investigated the factors that drive or curb greenwashing activities, but few have discussed the other side of the coin, brownwashing, another form of decoupling that is harmful for stakeholders. This study provides a theoretical framework of the brownwashing phenomenon, the under-reporting of environmental achievements, among firms that perform well environmentally. I hypothesize and test that industry leaders use brownwashing to avoid excessive stakeholders' attention and keep the stakeholders' expectation at the current level while preserving their leadership. Using a dataset covering 5,147 firm-year observations over the period of 2006 to 2017, this study shows that environmentally reputable firms tend to brownwash their environmental activities for strategic reasons. Internal environmental governance mechanisms aimed at monitoring the managers and increasing transparency to curb this phenomenon.

## 1.1. Introduction

On top of being profitable, firms are now asked to be good corporate citizens and protect the environment. Stakeholders of the firm are more and more concerned about the damage to the environment that is caused by corporations. This new paradigm has attracted the attention of scholars who have studied issues such as greenhouse gas emissions and reductions, waste disposal and the prevention of climate change (Tinker and Niemark, 1987; Gamble, Hsu, Jackson, and Tollerson, 1996; Kolk, 2003). With few mandatory regulations in place, stakeholders' pressures substitute the government's monitoring role to advocate corporate environmental commitment (Berchicci and King 2007). Failing to respond to the stakeholders' demands can seriously threaten organizational reputation and lower the perceived leadership in the public eyes.

According to Oliver (1991), firms tend to resort to decoupling to protect their legitimacy towards the environment. Greenwashing and brownwashing, both being the special cases of decoupling, occur when there is a gap between the symbolic and substantive actions of the firm. Walker and Wan (2012) define symbolic actions as the firms' mere claims concerning its performance while substantive actions are the actual implementation of these claims (Zajac and Westphal, 2004; Fiss and Zajac, 2006; Roulet and Touboul, 2015). For instance, concerning greenhouse gas emission, firms can either respond with symbolic actions, i.e., issue a policy for the relevant concern and claim to establish an environmental management system to enforce the policy, or by substantive actions, i.e., implement the policy or management system they already have in place.

Greenwashing occurs when firms choose to over-report their environmental activities.  In other terms, greenwashing refers to reporting symbolic actions that surpass the actual substantive actions (King and Lenox 2000; Rivera and DeLeon 2004; Delmas and Montes-Sancho, 2010). On the

other hand, when firms choose to underreport their substantive actions, they are said to be brownwashing (Oliver, 1991; Westphal and Zajac, 2001; Kim and Lyon, 2014).

Firms are prone to lose their legitimacy when they fail to meet up with the constantly changing stakeholders' expectations (Wang and Berens, 2015) and these legitimacy losses cannot be reversed in the short run (Ashforth, 1989). In the hope of repairing their impaired image, some firms engage in greenwashing activities. But firms that benefit from high levels of corporate legitimacy are inclined to do the opposite, i.e. brownwashing. These good environmental performers tend to lead their industrial sector and set the good practices that other firms imitate in order to create value, acquire their legitimacy and even pursue environmental reputation (Miles and Covin 2000; Aerts et al., 2006; Depoers and Jeanjean, 2012). When legitimate firms step up their standards, their peers tend to follow their footsteps to catch up (Nelson and Winter 1978, 1982; Rumelt, Schendel and Teece, 1991). Reputable firms are more salient than others and are expected to carry higher levels of responsibilities (George et al., 2016). To avoid this spiral of ever-growing needs for higher environmental investments, legitimate firms might want to refrain from disclosing their true activities and only reveal routinized information. This underreporting behavior is known as brownwashing. By disclosing the same level information as their peers, the leading firms can maintain their environmental leadership status with minimum effort (Verrecchia, 1983, 2001). It also reduces the probability that the additional disclosed information is used to challenge the firm's environmental activities and stimulate further stakeholders' demands.

Engaging in brownwashing is detrimental to the firm, to the industry in which it operates and to the society at large. Scholars document that stakeholders often lack sufficient information to distinguish between firms (Busch and Hoffmann 2009; Lyon and Maxwell 2011; Berrone et al., 2017; Saxton et al., 2019). Brownwashing makes the relevant environmental information, e.g.

corporate environmental goals, programs, and related activities, hard to find. The relevant disclosure that could serve the information demands of stakeholders is missing (Eberle et al. 2013; Arvidsson, 2010; Marais, 2012) and stakeholders are left in the dark. Furthermore, these good performers are guided by the environmentally conscious values and norms within the organization (Bansal and Hunter, 2003). When management brings up the idea of brownwashing, it contradicts with its current internal perceptions of environmental leader and creates tensions among different internal stakeholder groups as they hold divergent views on environmental responsibilities. In addition, once the approach is discovered, the discrepancies between firms' actions and communications will shatter stakeholders' trust in the firm (Bentele and Nothhaft 2011; Schultz et al., 2013). It puts firms in the danger of losing their corporate legitimacy and downgrading their hard-earned reputation. Last but not the least, as the advanced environmental knowledge are kept by these environmental leaders, their brownwashing activities impede the continuous improvement of environmental innovation and practices in their industries.

Brownwashing, a phenomenon that has not been researched as much as greenwashing, requires the attention of scholars to uncover whether or not firms have been excessively modest about their environmental achievements (Kim and Lyon, 2014; Carlos and Lewis, 2018). This study investigates what drives environmentally efficient firms to under-report their activities. This study shows that corporate reputation and internal environmental governance mechanism are two factors that are associated with corporate brownwashing in opposite directions. The monitoring role of internal governance mechanisms should lead reputable firms to be more transparent about their environmental activities.

Scholars have documented the important role of internal governance in monitoring firms' greenwashing activities (Bowen, 2014; Delmas and Burbano, 2011; Lyon & Montgomery, 2013).

I argue that brownwashing is another form of misleading disclosure that need the help of internal environmental governance practice.

## 1.2. Literature review

### *1.2.1. Greenwashing*

Firms signal the quality of their environmental efforts by issuing environmental reports, making publicity on their corporate websites, and disclosing their eco-certifications (Lyon and Montgomery, 2013). Non-governmental organizations (NGO) have criticized these voluntary disclosures by arguing that they serve the purpose of greenwashing (Kim and Lyon, 2011). US regulation is quite absent in this domain [1], Companies can overstate their environmental performance without any fear of being fined or face substantive legal actions.

Greenwashing has been widely discussed using different forms, for instance creating self-regulated systems to avoid mandatory regulation, disclosing positive information while hiding negative information or joining voluntary programs without making any major efforts to tackle environmental issues (Lenox, 2006; Glachant, 2007; Delmas and Montes-Sancho, 2010; Bromley and Powell 2012; Okhmatovskiy and David, 2012; Lyon and Montgomery, 2015). Scholars have defined greenwashing in several ways. Ramus and Montiel (2005) perceive greenwashing as the effort made by companies to present an environmentally responsible image by disseminating misleading information. Lyon and Montgomery (2015) see greenwashing as a broad concept that "encompasses a variety of modes of misleading information" (p2). In this study, following Walker

[1] According to Delmas and Burbano (2011), the only greenwashing restriction from federal regulation is product or service advertising that falls under Section 5 of the FTC act. However, the act only discovered 41 cases in during the period of 1990 to 2009.

and Wan (2012), I consider greenwashing as the symbolic actions that are not supported by corresponding substantive actions. In short, greenwashing is used as a corporate strategy to present a socially responsible image without real implementation (Laufer, 2003; Ramus and Montiel, 2005; Walker and Wan 2012; Roulet and Touboul, 2015).

As the number of firms who engage in greenwashing rises, so do the consumers' doubt and skepticism about the validity of the firms' environmental disclosures (Dauvergne and Lister 2010; Forbes and Jermier, 2012; Konefal, 2013). Consumers do not know whether the environmental claims are genuine or merely greenwashed. This erodes consumers' confidence and has a negative effect on the market for social responsible investments and sustainable products and services[2] (Delmas and Burbano, 2011).

*1.2.2. Brownwashing*

Firms that make strong environmental achievements might feel the need to withhold their achievements out of strategic concerns. These firms might engage in brownwashing, by hiding relevant environmental information and making modest claims about their environmental activities.

Ullmann (1985) argue that this strategy can be adopted to avoid the dissent of the investors about the important social and environmental investments that, from their point of view, do not contribute to shareholder value maximization. Bansal and Roth (2000) find that firms do not publicize their environmental efforts to avoid appearing to benefit from those environmental initiatives. In the same vein, Carrigan (1997) and Pope and Wæraas (2016) discover that although companies perform their social and environmental duties, they may not proceed to advertise it.

[2] According to Heidi tolliver- Higro (2009?) , the US green products and services market was estimated at $230 billion in 2009 and expected to grow to $845 billion by 2015.

Kim and Lyon (2014) find that low profitability can lead to brownwashing to hide environmental expenses and avoid investors' dissent. Carlos and Lewis, (2018) also stated that, in fear of being considered as hypocritical, organizations having a mixed environmental record may strategically not to publicize their environmental certification.

This paper examines how societal values and the need for maintaining reputable are associated with brownwashing. As reputable firms already possess stakeholders' approval, they have no pressing need to fully disclose their environmental achievements (Deegan et al., 2002; Bansal and Clelland, 2004). In this manner, they do not draw the attention of their competitors on their recent innovations. Brownwashing also help them avoid being confronted with higher stakeholder expectations that could induce additional environmental investments and refrain economic performance. The information they withhold can also be saved for future release to compensate for any upcoming potential bad news. In the following section, I present the theoretical framework and develop the hypotheses.

## 1.3. Theoretical framework and hypotheses development

Corporate legitimacy and corporate reputation are two important concepts employed by the social system to assess an organization (Deephouse and Carter, 2005). Legitimacy is "a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs and definitions" (Suchman, 1995, p574). Firms that have high levels of legitimacy gather social acceptance and corporate survival (Deephouse and Carter, 2005; Li, He, Liu and Su, 2017). Corporate reputation defines the disctinctivenss of the firm relative to its major competitors and reflects the perceptions held by the

firms' external stakeholders (Doh et al., 2010; Deephouse and Carter, 2005; Roberts and Dowling 2002).

Therefore, firms strive to portray themselves as legitimate and reputable to their stakeholders. To do so, they conduct ongoing organizational activities, which consist of convincing their stakeholders that their actions are congruent with the social values and are superior to their peers (Staw, 1980; Ashforth and Gibbs, 1990). According to Ashforth and Gibbs (1990), organizational efforts involve substantive and symbolic actions. In this paper, I use the imbalance between substantive and symbolic actions as proxy for greenwashing or brownwashing. I also discuss how firms use these strategies to achieve their corporate legitimacy and promote their corporate reputation (Ashforth and Gibbs, 1990; Lindblom, 1994; Ntim and Soonaroyen, 2013).

Firms defend their corporate legitimacy when it is threatened or challenged (Ashforth and Gibbs, 1990) and the less legitimate the organization is, the greater efforts it will take to regain it (Ashforth and Gibbs, 1990, p185). Since they do not perform well environmentally, the only way to recuperate their legitimacy in the short run, is to resort to greenwashing. Patten (2002) found that firms' bad environmental performance exposes them to public scrutiny and arouse stakeholder attention. Patten (2004) puts forward that firms engage in greenwashing activities to present a positive, more favorable image. Alrazi and Villiers (2010) find that these bad performers disclose significantly more environmental information compared to firms with good or neutral environmental performance. Greenwashing can be an efficient tool to legitimize poor environmental historical activities by deflecting stakeholder's attention from the issues involved and manipulating the stakeholder's perception (Lindblom, 1994; Patten, 2002).

Ashforth and Gibbs (1990) document that firms who benefit from stakeholder recognition in terms of their values and beliefs can merely focus on maintaining their legitimacy and minimize the

efforts they deploy to do so (O'Donovan, 2002). These firms' earned reputation is taken for granted and the legitimization process of providing environmental performance evidence is routinized. Strahilevitz (2003) finds that good corporate citizens may not communicate their accomplishments to their stakeholders as they already benefit from such a positive image that there is almost no room to push it further. I argue that this context sets the premise for under-reporting behavior.

Reputable firms are found to attract higher stakeholder attention and carry higher levels of responsibilities (Zavyalova et al., 2012; George et al., 2016). Stakeholders' requests are endless because they always come up with new demands as the social norms and beliefs evolve over time (Eccles et al., 2007, Sohn and Lariscy, 2015). Therefore, these good performers are held to constant higher expectations to excel in environmental performance. These expectations are elevated to such a high level that it can become out of reach for their organizational capacity (Oliver, 1991).

When firms reach the point where they cannot satisfy their stakeholder's demands, stakeholders may lose confidence which will downgrade the firms' reputation (Wartick and Mahon, 1994; McDonnell and King, 2014). Brownwashing can curb the escalating stakeholders' demands. Firms may alleviate stakeholder's expectations by hiding part of their activities from their stakeholders (Oliver, 1991; Meyer and Rowan, 1977).

Reputable firms can also hold their superior status in their industry by brownwashing. Numerous reporting guidelines and frameworks that have been introduced in different countries and sectors have made environmental disclosure hard to compare and assess (Willis, 2003; Graafland and Smid, 2016). This leaves room for illegitimate firms to imitate, the most frequently used tactics in the competitive process (Nutt, 1998). These firms mimic the good performers to pursue acceptance and relevance of their practices and to legitimize their environmental activities (Aerts et al, 2006). New information disclosure by reputable firms is followed by a mimicking behavior from their

peers. As there is a lack of surveillance, reputable firms can engage in seemingly plausible, underreported activities (Rezaee and Tuo, 2019). The less information they reveal, the less they will stimulate further stakeholders' expectations and leave the competitors in the dark (Verrecchia, 1983, 1990; Arya and Mittendorf, 2007). Reporting prudently about their environmental achievements also helps firms present a reliable and trustable environmental image. Once stakeholders identify corporate claims contradictory to their actions, the firms face the risk of being perceived as hypocritical (Bansal and Clelland, 2004; Carlos and Lewis, 2018). The stakeholders tend to stick to this belief even when the firms reveal authentic performance afterwards. (Nyhan and Reifler, 2010; Du, 2015; Du et al., 2010). Consequently, this motivates the firms who already possess a good reputation to not risk triggering stakeholders' suspicion and damaging their reputation. Reputable firms will most likely choose to report their environmental achievements in a conservative manner in fear of being categorized as hypocrite and raising the spectre of criticism (Oberholzer-Gee, Reinhardt, and Raabe, 2007). To secure their current environmental leadership and avoid excessive resource input, reputable firms may partially withhold their environmental achievements. Therefore, I hypothesize that:

H1: Firms who benefit from higher levels of corporate reputation are more likely to engage in brownwashing activities.

As it is the case for greenwashing, brownwashing decreases corporate transparency and obfuscates the information for stakeholders. Investors and creditors need precise corporate environmental information to assess how environmental risk can affect financial performance (Vasi and King, 2012). More and more customers select products or services from firms that are dedicated to preserving the environment (Park, 1999; Huang and Kung, 2010). Local communities where firms

operate are also interested in firms' environmental activities because it can directly affect their living environment (Marquis, Glynn and Davis, 2007). Corporate governance is the system that directs the companies to take their accountability to all their stakeholders and act in a socially responsible way (Sacconi, 2007; Solomon, 2007). As the protection of the stakeholders' interests, strong corporate governance help increase corporate disclosure and fill the information gap between managers and firms' stakeholders (Chen and Jaggi, 2000; Peasnell et al., 2005; Rankin et al., 2011). Extant literature suggests that firms with vigorous corporate governance practices, such as more non-executive directors on the board (Haniffa and Cooke, 2005), larger boards (Jizi et al. 2014), board members serving on multiple boards (Rupley et al., 2012) and government ownership (van der Laan Smith et al., 2005) are prone to integrate environmental issues into their business strategies, commit to green practices across all operations and offer more environmental disclosures to their stakeholders. (Milliken and Martins, 1996; Ibrahim and Angelidis, 1995; Liao et al., 2015).

Environmental governance mechanism, dedicated to the monitoring of environmental issues, is an important way of displaying firm's desire to contribute to environmental issues, integration of relevant concerns into the overall management strategies and addressing stakeholders' demands (Shwairef et al., 2019). As a substantive approach to promoting environmental management actions, environmental governance can satisfy stakeholders' information demands and protect a firms' environmental legitimacy (Peters and Romi 2014). It can also contribute to elevates both the quantity and the quality of the environmental disclosure (Adnan et al., 2018) and propel continuous improvements of the corporate environmental performance (Ashforth and Gibbs 1990; Rodrigue et al., 2013).

Most importantly, firms' sound environmental governance can play a crucial role in monitoring corporate brownwashing activities. When being internally influenced, firms are more likely to disclose, instead of withholding information (Zeng et al., 2012; Hyatt and Berente, 2017). The managers aiming for long-term organizational interests might curb brownwashing to satisfy stakeholders' information need, secure their environmental reputation and serve the greater good of protecting the natural environment. The conformity to stakeholders' values and beliefs occurs gradually within the firm and shape their behaviors toward the symbolic actions synchronizing with the substantive actions. The environmental governance system influences the brownwashing behavior in several ways.

First, the establishment of environmental governance system helps firm commit to the relevant issues, develop a vision to encompass environmental aspects and raise awareness among internal stakeholders. Integrating environmental issues into the internal business processes not only incorporates energy savings, pollution prevention and waste recycling, but also requires high level of corporate transparency and responsiveness to their stakeholders (Kammerer 2009; Amran et al 2014; Liao et al., 2015; Peters and Romi, 2014). They will set routinized internal control to monitor the reporting systems (Li et al., 2018). It is therefore highly probable that they will discover brownwashing activities when it takes place and request adjustments to close the gap between the symbolic and substantive actions of the firm.

Second, the environmental governance system attenuates the brownwashing activities by coordinating different departments to set the environmental agenda. The public relation department may promote firms' symbolic actions, such as marketing campaigns to impress their customers, while production department may prefer to avoid the costly environmental practices as the payback is intangible (Wickert et al., 2016). The governance system could influence the

different departments having different interests and priorities to compromise for the central environmental strategies. When they act in their own interests to engage in brownwashing activities, proper corporate governance can guide firm to align different departments' interests and be transparent in their environmental report.

Third, as the environmental awareness and concern for stakeholder issues grow inside the corporation, it cultivates an organizational culture of environmentally conscious logic (Hyatt and Berente, 2017). The transformed corporate values, together with the internal advocates, constitute the key elements supporting the implementation of the green practices (Bansal and Hunter, 2003). Firms that embrace environmental values and norms will be opposed to any strategies that increase the information asymmetry, which include underreporting behaviors.

Brownwashing tends to suppress the dissemination of the innovative knowledge from industry leaders to their peers and the advancement of corporate environmental practices. Under the monitoring effect of the environmental governance, firms are motivated to advance the current procedures and achieve continuous development of the green practices (Feng and Wang, 2016). The information released also signals the firm's credibility of corporate environmental activities and consolidates stakeholders' confidence in the firm (Delmas 2001; Bellesi et al. 2005; Boiral, 2007).

Thus, reputable firms may lessen their brownwashing activities in the presence of an efficient environmental governance to contribute to the society at large and earn stakeholders' recognition. Hence, the second hypothesis is as follows:

H2: Strong environmental governance system attenuates reputable firms' tendency to engage in brownwashing activities.

## 1.4. Methodology

The sample is composed of 5,459 firm year observations. To investigate our research questions, I use the dynamic panel system generalized method of moment (GMM) estimator to test the two hypotheses. It considers the endogeneity issues in the form of reversal causality in the model, since I cannot rule out the possibility that engaging in brownwashing promotes corporate reputation. The twostep system GMM model also enables us to estimate the brownwashing–corporate reputation relation while incorporating both past brownwashing activities and fixed effects.

$$Brownwash_{it} = \alpha + \beta_1\ Brownwash_{it-1} + \beta_2 Cor_Reputation_{it} + \beta_n Control_{it}$$

$$Brownwash_{it} = \alpha + \beta_1\ Brownwash_{it-1} + \beta_2 Cor_Reputation_{it} + \beta_4\ Cor_Rep_{it} \times\ Cor_Governance_{it}\ +\ \beta_n Control_{it}$$

*1.4.1. Dependent variable*

I measure brownwashing based on the method introduced by Walker and Wan (2012) and Roulet and Touboul (2015). As greenwashing is seen as the symbolic actions that are not covered by substantive actions, in the same spirit, brownwashing should be considered as the part where substantive actions surpass symbolic actions. The data of firms' symbolic and substantive actions is extracted from the Asset4 Database[3]. I include three scores from Asset4 relating to

[3] Asset4 is a Swiss-based extra-financial rating agency owned by Tomson Reuters. They are covering over 3200 firms worldwide and provide firms' rating or assessment scores from the perspective of economic, environmental, social and governance. The analysts compile these data from annual reports, CSR reports, NGO websites etc. Furthermore, they also gather data on firms'

environmental issues differentiating firms' substantive actions from their symbolic actions, i.e. resource reduction, emission reduction and environmental product innovation. $Brownwash_{it}$ takes the average value of the three.

*1.4.2. Independent variables*

The corporate reputation measure comes from Reprisk database. It is a business intelligent provider that evaluates the corporate reputational risk of different environmental, social and governance issues. The RepRisk index collects from over 80,000 media, stakeholder, and third-party sources and evaluates firms' poor working conditions, corruption, human rights violations, and environmental destruction.

The environmental governance is comprised of three components in this paper: whether the company integrates environmental issues into its corporate strategies (Integrated Strategy), develops environmental management system (Env Mgt) and has a corporate social responsibility (CSR) committee (CSR Committee), these moderator variables also come from Asset4 database. An efficient environmental governance requires integration of environmental aspect into day-to-day decision makings and corporate strategy, proper management systems in place to direct and reinforce green practices and then CSR committee playing its monitoring role at the board level.

Consideration and integration of environmental requirements into current corporate strategies is the first step of a robust environmental governance. It sets the foundation of balancing firms' economic, social and environmental interests (Lafferty and Hovden, 2003). By constantly

substantive actions (e.g., amount of $CO_2$ emissions reduced in the past year, number of injuries and fatalities at work) and symbolic actions (e.g., does the firm claim to have a policy for reducing environmental emissions? Does it claim to strive to improve its employee health and safety?).

embedding environmental aspects into current systems, it prevents subtle shift back to the original approach or a decoupling in the policy implementation process (Noci and Verganti, 1999; Pedersen and Neergaard, 2008). This way, firms are equipped with the underlying premise of a strong environmental governance that monitors the brownwashing activities.

An environmental management system (EMS) is recognized as a tool to assist firms to create and execute environmental goals, policies and indicators, as well as periodic inspections to protect the natural environment (Steger, 2000; Darnall et al. 2008; Feng et al. 2014). In response to various stakeholders' environmental concerns, it assists the internal accounting systems to serve the environmental reporting process. Under its instruction, firm can initiate green products or processes to obtain greater efficiencies and get opportunities for sustainable development.

Malmborg (2002) stress on the important role of EMS in enhancing the information exchange both within the organization and when it is being communicated to its communities. A successful EMS incorporates involving key stakeholders in their environmental activities and controlling the information transmitted to the stakeholders. EMS adopters are inclined to disclose more information to its stakeholders and hold up the veracity of the environmental reporting (Florida and Davison, 2001; Hershcovis et al., 2009). In the same vein, Rankin et al., (2011) find that voluntary greenhouse gas reporting is highly correlated with EMSs, especially EMS that is ISO 14001-certified, or use the Global Reporting Initiative (GRI). Therefore, EMS influence the process of environmental adaptation and communication to restrain brownwashing.

Last but not the least, as the central of the environmental governance system, the CSR/environmental committee motivates reluctant managers to acknowledge their environmental accountabilities and dedicates on policy-coordination (Collier, Ute 1997; Jaggi et al., 2018). Its responsibility also lies in imposing environmental objectives into the decision-making processes,

recommending expenditure level, overseeing environmental activities and preparing relevant reports (Mackenzie, 2007; Gregg, 2009). Hence, the CSR committee direct firm to target for higher corporate transparency and long-term environmental reputation, instead of the view held by the executive level, where managers withhold information to avoid the risk of exposing to excessive stakeholders' demands.

Overall, effective environmental governance should successfully advise managers to meet stakeholders' information demand and curb brownwashing activities.

### *1.4.3. Control variables*

To examine the determinants of firms' brownwashing activities, I first controlled for size (log of total assets from Compustat). It is documented as a proxy for corporate visibility which induce high stakeholder scrutiny (Adams and Hardwick 1998; Brammer and Millington, 2008; Walker and Wan, 2012; Kim and Lyon, 2014). The increased stakeholder attention could threaten corporate reputation and firms will thus make modest environmental disclosure.

A firm's proactive environmental disclosure may depend on the resources it has available to invest in environmental activities (Margolis, 2007; Perez-Batres et al., 2012). I use three variables (Return on Asset (ROA), Organizational Slack and Corporate Leverage) to proxy for firms' financial conditions (Waddock and Graves, 1997; Lee et al., 2013). I measure Organizational Slack by dividing the firm's current assets by its current liabilities (Bourgeois III, 1981). Corporate leverage is computed by total debts divided by total assets. A firms' institutional ownership, being sensitive to the firm specific environmental risk, presses firms to disclose more information (Shleifer and Vishny 1986). Thus, I control for institutional ownership to capture the influence of

its monitoring role on brownwashing activities. This proxy is collected from Osiris database. According to the legitimacy theory (Patten, 1992; Cho and Patten, 2007), poor environmental performers are expected to provide more extensive disclosures to offset their bad image in the face of the legitimacy threat. Thus, I control for firms' environmental performance. This measurement is also provided by Asset4 database, reflecting how well a company utilize its management practices to avoid environmental risks and generate long term sustainable development. I also control for industry, since different industries might have different environmental standards and different stakeholders' pressure (Walker and Wan, 2012). Finally, I include the control variables for each year in the sample to control for the systematic year effects.

## 1.5. Descriptive statistics and results

Table 1 presents the descriptive statistics. The median value for brownwashing is 2.36, indicating that more than half of the sample engage in brownwashing activities to some extent. The corporate reputation level has a mean of -8.259 and a median of -9. The CSR integrating into corporate policies and having a CSR committee have been implemented by more than half of the sample, since their mean is 0.55 and 0.52 respectively. Being left behind by other environmental governance mechanism, environmental management system is owned by simply 5% of the firms. The three are dichotomous variables and range from 0 to 1. The mean ROA is 5.29% and the mean size is 18576.33 (million of assets). The level of indebtedness is 59.98% of total assets on average while the mean of the environmental performance score is 54.83, which indicates that this characteristic is distributed uniformly across the firms of the sample.

[Insert Table 1 about here]

Table 2 presents the distribution by industry. The firms in our sample are mainly operating in Customer Discretionary (17.68%,), Industrials (15.15%) and Information Technology sectors (14.47%)[4]. And firms that operate in Financials and Real Estate only comprise 4.52% of the whole sample.

[Insert Table 2 about here]

Table 3 presents the correlation matrix. Generally, the low correlation coefficients suggest that the models do not suffer from multi-collinearity.

[Insert Table 3 about here]

Table 4 shows the results of the two models I tested. Model 1 show that corporate reputation is positively associated with brownwashing of environmental activities (coefficients are significant at the 1% level). I conclude that overall, reputable firms prefer to keep a low profile in order to avoid their stakeholders' attention and preserve their reputation as an environmental responsible firm.

In model 2, I use an interaction term between the level of corporate reputation and the presence of environmental governance to test the joint effect of these factors. The three governance mechanisms are positively associated with brownwashing. This result is mainly driven by disreputable firms, who use internal environmental governance to engage in impression management to achieve stakeholders' recognition. Their actions are merely ceremonial conformity to earn corporate legitimacy (Meyer and Rowan, 1977; Rodrigue et al., 2013). It also shows that reputable firms tend to engage less in brownwashing under the surveillance of the internal environmental governance mechanism. The premise of the brownwashing activities is they

[4] In untabulated tests that rule out the financial industry, I find all the results remain the same.

enjoy limited stakeholders' attention and routinized inspection since they already reap stakeholders' approvals. As the environmental governance promote corporate transparency and constant growth of environmental practices, they have to adjust their disclosure strategies accordingly.

Regarding the control variables, size is negatively correlated with brownwashing activities at the 1% (<0.000). As visible firms are more likely attract stakeholders' attention, they are less likely to engaging in brownwashing under the eyes of the public (Meznar and Nigh 1995, Delmas and Montes-Sancho 2010). Leverage is negatively associated with brownwashing activities. According to Hossain et al. (1994), high leveraged firms tend to reveal more information to accommodate creditors. I also find that high institutional ownership and better environmental performance is significantly associated with more brownwashing activities.

[Insert Table 4 about here]

## 1.6. Conclusion

I hypothesize and show that corporate reputation is associated to brownwashing. Firms that possess environmental leadership tend to brownwash their activities to avoid escalating demands from their stakeholders and preserve their leadership. This finding is in line with Bansal and Roth (2000) and Aguilera et al (2007), who argue that environmental leaders tend to refrain from fully disclosing their environmental achievements in order to avoid disrupting the existing industrial environmental standard and protect their legitimacy. This brownwashing behavior can be to the detriment of the firm's stakeholders and to society in general. Because they lack the proper expertise, unsophisticated stakeholders cannot discover firms' brownwashing activities. This leads them to misjudge the firms' real environmental achievements. More sophisticated users might have

the necessary expertise, but they can only uncover firms' real environmental activities by devoting much time and resources and making thorough analyses. In the end, all environmental achievements that industry peers are not aware of cannot be adopted by them, which is a loss for society in general.

I also show that internal environmental governance can be efficient at pressing firms to fully report their environmental achievements. The governance mechanism gradually influences the current industrial standards and introduces green norms and values to the firms' management team to cultivate proactive environmental practices and develop higher environmental standards (Marshall et al., 2005). Previous literature shows mixed results concerning the effects of the environmental governance (Vazquez-Brust et al., 2010; Rodrigue et al., 2013; Peters and Romi, 2014; Testa et al., 2015). In this paper, I argue that, when firms are environmental leaders, internal governance embed the environmental concerns at the management level, monitor firms' relevant reporting behaviors and reduce the corporate transparency.

This study is not free from limitations. It focuses on US data only. Future studies should take a more global approach. For instance, it is possible that brownwashing activities are less predominating in Europe since firms face higher pressure from their stakeholders.

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## Table 1.1 Descriptive statistics

| | Mean | Median | SD | Min | Max |
|---|---|---|---|---|---|
| **Brownwashing** | -0.87 | 2.36 | 14.27 | -57.66 | 51.97 |
| **Corporate reputation** | -8.59 | -9.00 | 12.87 | -58.00 | 51.00 |
| **Integrated Strategy** | 0.55 | 1.00 | 0.50 | 0.00 | 1.00 |
| **Env Mgt** | 0.05 | 0.00 | 0.22 | 0.00 | 1.00 |
| **CSR Committee** | 0.52 | 1.00 | 0.50 | 0.00 | 1.00 |
| **ROA** | 5.29 | 5.59 | 11.57 | -330.14 | 102.35 |
| **Size (Total assets)** | 18576.33 | 7377.39 | 34190.82 | 34.33 | 444097.00 |
| **Leverage** | 59.98 | 59.17 | 23.54 | 1.73 | 407.98 |
| **Organization slack** | 203.93 | 161.94 | 219.28 | 3.01 | 5697.51 |
| **Institutional ownership** | 13.75 | 9.94 | 13.35 | 0.01 | 99.80 |
| **Environmental performance** | 54.83 | 59.90 | 32.00 | 8.44 | 95.50 |

## Table 1.2 Distribution by industry

| *GIC* | Frequency | Percentage |
|---|---|---|
| ***Energy*** | 524 | 9.6 |
| ***Materials*** | 559 | 10.24 |
| ***Industrials*** | 827 | 15.15 |
| ***Consumer Discretionary*** | 965 | 17.68 |
| ***Consumer Staples*** | 391 | 7.16 |
| ***Health Care*** | 581 | 10.64 |
| ***Financials*** | 155 | 2.84 |
| ***Information Technology*** | 796 | 14.58 |
| ***Communication Services*** | 247 | 4.52 |
| ***Utilities*** | 323 | 5.92 |
| ***Real Estate*** | 91 | 1.67 |
| **Total** | 5459 | 100 |

## Table 1.3 Correlation Matrix

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1-Brownwashing** | 1 | | | | | | | | | | |
| **2-Corporate reputation** | -0.01 | 1 | | | | | | | | | |
| **3-Integrated Strategy** | -0.04 | 0.25 | 1 | | | | | | | | |
| **4-Env Mgt** | -0.04 | 0.02 | 0.17 | 1 | | | | | | | |
| **5- CSR Committee** | -0.02 | 0.29 | 0.5 | 0.15 | 1 | | | | | | |
| **6-ROA** | 0.01 | 0.01 | 0.01 | 0 | 0.03 | 1 | | | | | |
| **7-Size** | -0.01 | 0.51 | 0.36 | 0.09 | 0.41 | 0 | 1 | | | | |
| **8-Leverage** | -0.04 | 0.12 | 0.1 | -0.01 | 0.06 | -0.26 | 0.15 | 1 | | | |
| **9-Organization slack** | 0.01 | -0.12 | -0.09 | 0 | -0.06 | 0.04 | -0.24 | -0.36 | 1 | | |
| **10-Institutional ownership** | 0.01 | -0.07 | -0.11 | -0.02 | -0.14 | -0.03 | -0.11 | 0.03 | 0.03 | 1 | |
| **11-Environmental performance** | -0.04 | 0.32 | 0.67 | 0.2 | 0.62 | 0.03 | 0.45 | 0.14 | -0.11 | -0.16 | 1 |

**Table 1.4 GMM regressions**

| | Model 1 | Model 2a | Model 2b | Model 2c |
|---|---|---|---|---|
| Constant | | | | 12.2367 |
| | | | | (0.000)*** |
| Brownwashing$_{n-1}$ | 0.3832 | 0.3535 | 0.4076 | 0.3808 |
| | (0.000)*** | (0.000)*** | (0.000)*** | (0.000)*** |
| Corporate reputation | -0.0630 | -0.0584 | -0.0589 | -0.0616 |
| | (0.000)*** | (0.001)*** | (0.000)*** | (0.001)*** |
| Integrated Strategy | | -21.6877 | | |
| | | (0.000)*** | | |
| Corporate Reputation*Policy integrate esg | | 0.0843 | | |
| | | (0.008)*** | | |
| Env_mgt | | | -9.7553 | |
| | | | (0.000)*** | |
| Corporate_reputation* Env_mgt | | | 0.2556 | |
| | | | (0.000)*** | |
| CSR_committee | | | | -15.0294 |
| | | | | (0.000)*** |
| Corporate_reputation*CSR_committee | | | | 0.0758 |
| | | | | (0.008)*** |
| ROA | 0.0024 | 0.0044 | 0.0041 | 0.0073 |
| | (0.795) | (0.713) | (0.661) | (0.511) |
| Size | -4.7406 | -4.6842 | -4.6121 | -3.9314 |

| | | | | |
|---|---|---|---|---|
| | (0.000)*** | (0.000)*** | (0.000)*** | (0.000)*** |
| Leverage | -0.0328 | -0.0364 | -0.0391 | -0.0354 |
| | (0.000)*** | (0.001)*** | (0.000)*** | (0.000)*** |
| Organizational slack | -0.0005 | -0.0011 | -0.0004 | 0.0002 |
| | (0.616) | (0.274) | (0.653) | (0.889) |
| Institutional ownership | 0.1101 | 0.1299 | 0.1119 | 0.0929 |
| | (0.000)*** | (0.000)*** | (0.000)*** | (0.000)*** |
| Environmental performance | 0.4744 | 0.7127 | 0.4679 | 0.6021 |
| | (0.000)*** | (0.000)*** | (0.000)*** | (0.000)*** |
| Industry effect | Yes | Yes | Yes | Yes |
| Year effect | Yes | Yes | Yes | Yes |
| Number of instruments | 55 | 56 | 56 | 57 |
| F | 10.01 | 6.28 | 10.03 | 7.79 |
| Prob > F | 0.000 | 0.000 | 0.000 | 0.000 |
| Hansen test | 31.68 | 20.06 | 33.32 | 26.08 |
| Hansen test p value | 0.204 | 0.744 | 0.123 | 0.458 |
| N | 5459 | 5294 | 5118 | 5459 |

# Chapter 2 The impact of social media management on corporate reputation


## Abstract

Social media has become an important platform through which firms can foster and maintain close relationships with their stakeholders and attempt to manage their corporate reputation. This communication channel is gaining popularity due to its rapid impact and large reach. By applying sound communication strategies in their social media communications, firms are able to adapt their online corporate identity to their stakeholders' values and beliefs and consequently improve their corporate reputation. However, if online communications are not implemented properly, they have the potential to induce skepticism and disengagement from the stakeholders that could lead to a significant loss of reputation for the firm. Based on a set of 21,992,900 tweets covering 280 Standard & Poor's 500 companies, I test and find that firms who strategically communicate with their stakeholders using Twitter tend to benefit from a better reputation.

## 2.1. Introduction

Corporate reputation is now at the top of firms' governance agendas since the responsibility for reputation risk resides at the board of the organization (Deloitte, 2014). Boards of directors are well aware that their decisions could have an impact on their firm's reputation (Dowling, G. 2006). Reputational risk has become a corporate governance issue because it reflects the performance of the company's management team (Dowling, G. 2006).

Companies' decisions that are not well aligned with stakeholder expectations can be an important source of reputational risk (Dowling, 2006). Stakeholders' perceptions of a firm's financial, social, and environmental behaviors determine its reputation (Barnett et al., 2006). It is of outmost importance that the board pay close attention to their stakeholders' perceptions and develop good relationships with them to mitigate their reputation risk.

Traditionally, companies use the annual reports, corporate social responsibility (CSR) reports or press releases to communicate with their stakeholders. The advent of social media makes it easier for firms to communicate with their stakeholders and express their corporate identity. US companies extensively use social media such as Twitter, Facebook, and Instagram to interact with their stakeholders (Zhao and Rosson, 2009; Ehrlich and Shami, 2010; Riemer and Richter, 2010). This social media presence allows firms to be constantly aware of their stakeholders' requests, respond promptly to their critics and make the necessary adjustments to gain their approval and support (Coombs 2007; Liu et al. 2011).

While some scholars promote social media communication as an effective mean for firms to develop relationship with their stakeholders and gain their approval and support (Schultz et al.,

2013; Sundstrom and Levenshus, 2017). Another stream of studies argue that this new way of communication is simply an act of self-promotion and no concrete efforts are involved to solve stakeholders' concerns (Laufer, 2003; Porter and Kramer, 2006; Lyon and Montgomery, 2013).

In this study, I explore how firms strategically employ social media strategies to interact with their stakeholders and how they reflect on firms' reputation. I develop an empirical framework of stakeholder management through social media. By applying communal communication strategies in their social media communications, firms can adapt their online corporate identity to their stakeholders' values and beliefs and improve their corporate reputation. However, I find that firms fail to initiate dialogic communication with their stakeholders and even arise stakeholders' skepticism about the incentives behind it. I argue that when firms communicate with their stakeholder, they should put the focus more on the stakeholders, instead of promoting themselves.

Based on a set of 21,992,900 tweets covering 280 Standard & Poor's 500 companies, I find that the social networking strategies employed on the Twitter platform tend to foster a higher level of corporate reputation.

The paper is structured as follows. Section 2 presents the corporate reputation and its management. The sample and methodology are described in section 3. Section 4 explores the empirical evidence on the relationship between social media management and corporate reputation. Finally, I present our main conclusion in section 5.

## 2.2. Theoretical framework and hypothesis development

### *2.2.1. Stakeholder power*

Corporate reputation reflects the cognitive image held by the external constituents of a firm (Fombrun, 1996). The advent of the Internet has brought about new threats to organizations'

reputations mainly because, contrary to traditional means, it gives the users the power to easily gather a critical mass to make their demands and concerns heard (Flanagin and Metzger, 2001; Hunter et al., 2013). Stakeholders who have otherwise little power over firms' operations can fully use the online platform to voice their thoughts, gather supporters, and apply greater pressure on the firms (Ward and Ostrom, 2006). This reputational threat forces firms to reconsider how they communicate with their stakeholders and manage their perceptions (Dutton and Dukerich, 1991; Gioia and Thomas, 1996).

### *2.2.2. Stakeholder skepticism*

Communicating with stakeholders is a delicate process (Lyon and Montgomery, 2013; Etter et al., 2019). When communicating with their stakeholders, firms may fall in the trap of bragging about their realizations rather than addressing their stakeholder' concerns. This behavior increases stakeholders' skepticism as they suspect that firms' actions are dictated by self-serving motives (Morsing and Schultz, 2006; Du, Bhattacharya, and Sen, 2010; Kim and Ferguson, 2018). Consequently, the stakeholder's perceptions of the firm is altered negatively. According to Maignan and Ferrell (2004) and Zavyalova et al., (2016), stakeholders who identify with the firm are less subject to this type of skepticism.

### *2.2.3. Organizational identity*

Organizational identity is how an organization views itself and how it wants to be perceived by others. Firms gain corporate reputation not only by conducting socially responsible activities to affect stakeholders' interests, also by making substantial efforts to communicate and promote their

activities to their stakeholders and having them identify with the firm (Du et al., 2010; Walker, 2010; Pope and Wæraas, 2016; Kim and Ferguson, 2018). If a firm's behaviors are not acknowledged by its stakeholders and thus the firm's identity deviates from their values and beliefs, its corporate reputation will be threatened (Daft and Weick, 1984; Jackson and Dutton, 1988; Dutton et al., 1994; Scott and Lane, 2000). To appease their stakeholders and secure their reputation, firms need to constantly adjust their identity and improve their image (Bernstein, 1984; Bromley, 1993)

Some scholars perceive social media as the ideal channel for firms to communicate with their stakeholders interactively and in a timely manner and construct a favorable corporate identity (Kaplan and Haenlein, 2010; Li and Li, 2014; Huang-Horowitz and Freberg, 2016). When stakeholders detect an overlap between their own identity and the firm's, they cognitively link to the organization and see it as legitimate (Dutton et al., 1994; Brown, 1997; Bhattacharya and Elsbach, 2002). The general public usually do not proactively seek company's information. Independent channels like social media are more accessible by the general public and help firms reach to the stakeholders beyond their scope of influence (Dawkins 2004; Bhattacharya and Sen, 2010). Thus, firms can easily access a large number of stakeholders to promote their values and beliefs and adjust their identity (Etter, 2014; Lee et al., 2015). Through frequent interactions and ongoing adjustments of corporate identity, stakeholders will build a sense of belonging and approval of the organization (Mael and Ashforth, 2001), which sets the premise for a trusting and supportive relationship. Firms can thus achieve long-term benefits, such as a better access to vital information and a reduction of their reputational risk. For instance, in the event of an online crisis, loyal stakeholders will tend to defend the firm, blame external factors rather to the firm itself, and influence other stakeholders to diminish the negative effects (Fiske and Taylor, 2008). The good

stakeholder relationship achieved through online identity management can thus be substantiated as a tool to spread favorable information and protect firm reputation (Saxton, 1998).

### 2.2.4. *Corporate reputation management*

Stafford and Canary (1991) have put forward five generic ways of establishing favorable relationships with stakeholders, namely, assurance, positivity, openness, social networking, and task sharing. I argue that these communications constitute an efficient way to manage a firm's identity and promote better corporate reputation. Figure 1 shows the theoretical framework used in this study.

[Insert Figure 1 about here]

### 2.2.9. *Positivity*

Positivity refers to anything an organization does to make a relationship more enjoyable for the parties involved (Hon and Grunig, 1999). Positivity can be seen as the sentiment embedded in the firm's communications. While firms can choose different tones to communicate with their stakeholders, positive communications have been found to be associated with better corporate reputation (Tan et al., 2014, MacGregor et al., 2000).

In the online environment, individual stakeholders are vulnerable to provocation and incitement and can become irritated and decide to downgrade the firm's reputation based on their own subjective assessment. Online stakeholders often judge an issue based on the superficial cues and do not analyze the detailed information (Petty and Cacioppo, 1986; McElroy and Seta, 2003).

Communicating with a positive tone can smooth the interaction between the firm and its stakeholders and protect the organizational image.

However, another stream of research finds a negative link between positiveness and corporate reputation. Firms that use a positive tone in their communications could also do so to divert their stakeholders' attention and obfuscate negative news (Merkl-Davies and Brennan, 2007; Henry, 2008; Tan et al., 2014).

### *2.2.6 Openness*

Openness characterizes firms' interactive stakeholder communications in which both parties feel invited to share their thoughts and feelings (Hon and Grunig, 1999; Cho and Huh, 2010). Openness has been found to be fundamental in cultivating trust in both interpersonal and organizational relationships (Broom et al., 2000). Ki and Hon (2006) find that openness is the most efficient communication to promote close firm–stakeholder relationships. Thorson and Rodgers (2006) and Kelleher et al., (2006) obtain similar results for corporate websites and corporate blogs. The interactive, relational, and dialogical properties of social media allow firms to shift the paradigm of one-way asymmetrical information dissemination to a two-way symmetrical information exchange (Grunig, 2009). Two-way symmetrical communication has been recognized to make firms more responsive to their stakeholders' demands and foster excellence in communication management (Grunig and Hunt, 1984; Grunig and Grunig, 1992). The continuous interactions between the firm and its stakeholders allow the organizational identity to be constantly reinforced and facilitate its management (Van Riel, 2000). Firms who adopt an open communication tactic are assumed to positively influence their stakeholders' perception of the company's reputation (Eberle et al, 2013; Van Noort et al., 2012).

However, it is documented that firms or their CEOs are reluctant to communicate interactively in their social media, in fear of the uncontrolled information flow and possible negative comments (Kwoh and Korn, 2012; Porter et al., 2015). Even when they do implement it, the influence of the interactive communication is limited to a group of dedicated followers (Fieseler et al., 2010).

### *2.2.7. Social networking*

Social networking is about firms building connections with external groups that share common interests or goals, including customers, nonprofit environmental groups, community groups, media, and even government agencies (Coombs, 1998; Waters and Lord, 2009). Stakeholders who identify closely with the firm and its products can talk about their own experience to support the firm's promotional efforts and vouch for its corporate reputation. An extensive stakeholder network allows firms to widely publicize their activities and gather supportive reaction and feedback. It also enhances the firms' efficiency in creating a ripple effect by broadcasting the support of their network of stakeholders to convince new ones.

For instance, research has shown that, during a crisis, initial information is rapidly shared and discussed on these social networking sites (Lenhart, 2009; Smith, 2010). Along with the firms' simultaneous response activities, the firm's supporters will voluntarily generate positive word-of-mouth communications and add credibility to the reputation recovery efforts of the firm (Bhattacharya and Sen, 2010).

### *2.2.8 Task sharing*

The concept of task sharing refers to organizations collaborating and trying to solve their stakeholders' issues (Hon and Grunig, 1999). Researchers find that task sharing is a strong predictor of commitment and satisfaction in a relationship (Stafford and Canary, 1991; Canary and Stafford, 1994). For instance, task sharing can be about how firms engage stakeholders in their corporate activities to enhance employee welfare, initiate volunteer activities in local communities, and better understand customers' demands. Kim et al. (2015) find that disclosing this type of information tends to present firms' willingness to address stakeholders' concerns and enhance stakeholders' confidence in the organization's capacity. This way of communication is important to positively affect stakeholders' perceptions of a firm's reputation, because it increases the relevance of the efforts. Teaming up with their stakeholders to solve their problems creates value for the firm and makes the stakeholders appreciate the firm's dedication.

### *2.2.9. Assurance*

Communicating with assurance conveys that a firm's activities are legitimate (Hon and Grunig, 1999), which implies that its activities are in accordance with the norms and values of their embedding environment (Dutton, 1994; Earley, 1993). Hence, an assurance approach is bound to enhance favorable stakeholder perceptions and build a trusting relationship with the stakeholders (Elsbach, 1994; Suchman, 1995). But Vos (2009) argues that, when a firm is being too affirmative in its commitments, that is, claiming more than what is perceived as reasonable, stakeholders could suspect untruthfulness and react negatively.

In sum, online social media communications have the potential to build strong organizational identification and superior reputation (Ashforth and Mael, 1989; Dutton et al., 1994). In this study,

I examine how firms use online communication to influence their stakeholders' perceptions. Our basic hypothesis is as follows.

H1: Organizations that use sound social media communication with their stakeholders' benefit from better corporate reputation.

## 2.3. Methodology

I examine the social media communication tactics undertaken using corporate Twitter accounts. Twitter has been recognized as the most popular social media platform (Evans et al., 2011; Nielsen, 2011; Burson-Marsteller, 2012) on which to share corporate information and gain access to a large number of stakeholders. According to Saffer et al., (2013), Twitter enables firms to generate quality interactivity and build good stakeholder relationships. It is also very accessible to online users. The 140-character limit[1] of each tweet message makes this medium easy to use on mobile phones (Blankespoor et al., 2013). In addition, Twitter content can be easily disseminated on other channels, such as blogs, news articles, and corporate websites. Twitter differs from other social media platforms in the way that it expands the range of communication beyond the interpersonal network (Stieglitz and Krüger, 2011) and it has a wider scale of public exposure than its closest competitor, Facebook (Fischer and Reuber, 2011). It also allows interactions between a firm and its stakeholders to occur more quickly and dynamically. Furthermore, Twitter enables any stakeholder to start a conversation and follow the most recent communications initiated by a firm or any other stakeholder.

The information transmitted online through Twitter can easily become viral. When a user finds a tweet interesting, he can relay the information to followers by either "retweeting" or "replying."

When this procedure is repeated by many users, the information is said to have gone viral. Twitter democratizes stakeholders' communications with corporations and assists firms' stakeholder management process by swiftly spreading a firm's achievements. Since Twitter facilitates the transmission of corporate information, it also brings reputational risk to the firm (Qualman, 2010). Communications through Twitter cannot be controlled by the firm. Stakeholders can publish criticisms about the firm's activities that can be read by anyone who has access to the Internet. The ongoing discussion occurs online, with or without the firm's approval. The volume of information initiated by a firm's stakeholders on Twitter is so large that firms cannot fully control the information being transmitted to the public. Firms who attempt to deceive their stakeholders can easily end up being confronted by widespread disapproval when it is discovered. In this case, the stakeholders share emotion-carrying and, sometimes, biased contents to their followers, who again comment and forward it to a wider range of online users. It becomes part of the online ongoing discussion and firms' deceivable behavior becomes viral (Jenkins, 2006; Veil et al., 2012; Barros, 2014; Albu and Etter, 2016).

Strategically managing a corporate Twitter account can help a firm diminish the reputational risk by monitoring online stakeholders' tweets, reacting to negative comments, and addressing any crisis before further aggravation. This monitoring is under the control of organizations; it can be used by firms to present themselves in a more favorable light (Money et al., 2017). Moreover, firms' online supporters, such as their employees and identified stakeholders, can effectively defend the firms from unfair criticism (Gallicano, 2011). According to Kiousis et al. (2007), Twitter provides an excellent means for firms to respond to negative stakeholder reactions and address reputational threats. For instance, in a recent soap campaign[2], the company Dove provoked

wide criticism for being racially insensitive. To ease stakeholders' anger and save their corporate reputation, Dove reacted promptly by using Twitter to apologize and reassure their stakeholders.

Our initial sample covers all S&P 500 firms that own an official Twitter account. I use a scraping program based on API streaming to retrieve historical Twitter information during 2013. Our final sample includes 21,992,900 tweets covering 280 companies.

Scholars have found that reputable firms are more engaged in online social media communications (Lee et al., 2013; Huang-Horowitz and Freberg, 2016). These findings require that I control for endogeneity issues in the form of reversal causality in our model. I use the twostep dynamic generalized method of moments (GMM) to address the issue. Developed by Arellano and Bover (1995) and Blundell and Bond (1998), the GMM estimation method enables us to control for potential endogeneity issues by creating valid instruments (Zyglidopoulos, 2005).

$$C_Rep_i = \alpha + \beta_1 C_Rep_{i-1} + \beta_2 Comm_Strat_i + \beta_n Control_i$$

*2.3.1. Dependent variable*

Our corporate reputation measure ($C_Rep_i$) is taken from Reprisk database. The RepRisk index quantifies the reputational risk exposure caused by different environmental, social and governance issues. It gathers and analyzes negative incidents, criticism, and controversies about companies worldwide, and focuses on issues relate to health and safety, local pollution, social discrimination and corporate governance violations.

*2.3.2 Independent variable*

I examine the five basic types of online communications to promote positive corporate reputation using Twitter (Comm_Strat), namely assurance, positivity, openness, social networking, and task sharing (Stafford and Canary, 1991).

Positivity is associated with how joyful and entertaining a conversation is. Positive communications tend to impress stakeholders favorably (e.g., Smith and Taffler, 2000; Sydserff and Weetman, 2002). I measure positivity by the level of optimism detected by DICTION. Optimism is defined as "endorsing some person, group, concept or event, or highlighting their positive entailments" (Hart, 2001, p. 247). Openness refers to a firm's level of responsiveness to its stakeholders' demands. I measure openness by the number of a firm's replies to its stakeholders. The score is standardized by the number of tweets initiated by the firm.

Social networking is measured by the frequency of hashtags and hyperlinks used in the tweets initiated by the firm (Romero et al., 2011; Burton and Soboleva, 2011), standardized by the number of tweets initiated by the firm. Hashtags are used to identify a stream of tweets. They connect all relevant discussions and facilitate online communication by bringing together stakeholders interested in the same topics (Page, 2012). A hyperlink serves as a communicative and social tie between linked organizations (Park, 2003; Kim and Nam, 2012; de Bakker and Hellsten, 2013). If a firm direct their stakeholders to another site, it represents the symbolic meaning of validating the linked organizations, granting them legitimacy or endorsement (Kim and Nam, 2012). This allows firms to expand their social network more from a corporate level with their partner websites, news media or even the non-governmental organizations (NGOs). Moreover, organizations who have a strong social network may promote their online communication with their stakeholders by adding hyperlinks of external favorable news or complements from other influential organizations (Linvill et al., 2012).

Following Cho and Huh (2010), I use the number of tweets initiated by the firm to measure the concept of task sharing. Firms that engage resources to resolve stakeholder's concerns will likely use Twitter more often to communicate their actions to their stakeholders. They will also tend to initiate tweets to informally survey their stakeholders about issues they might face.

*2.3.3. Control variables*

I control for several variables that are known to be associated with corporate reputation. Larger organizations are deemed to benefit from superior reputations, because they are more visible and more transparent (Fombrun and Shanley, 1990; Deephouse and Carter, 2005; Hogarth et al., 2018). I measure size using the natural logarithm of total assets.

Past research has shown that better financial situations are associated with better corporate reputations (Fombrun and Shanley, 1990; Fryxell and Wang, 1994; Bear et al., 2010). Consequently, I control for financial performance. I measure financial performance by a firm's return on assets (Lee et al., 2013). It is adjusted for the median performance of the industry groups categorized by the GIC.

Highly leveraged firms tend to be perceived negatively by their stakeholders, which, in turn, affects their corporate reputation (Fombrun and Shanley, 1990; Ali et al., 2015). Leverage is measured by firm long-term liability divided by total assets.

Firms that are well governed and recognized as good corporate citizens benefit from a better reputation (Fombrun and Shanley, 1990; Turban and Greening, 1997; Walker, 2010). Firms' corporate governance, social performance and environmental performance scores are collected from the MSCI database.

The corporate social responsibility (CSR) reporting aims to address stakeholder groups' concerns and is associated with reputation enhancement (Cho et al., 2012; Perez et al., 2015; Axjonow et al., 2018). Therefore, I also control for the CSR reporting quality collected from the Sustainalytics database.

Finally, I consider the influence of firms' online presence with two control variables. First, the year of Twitter adoption, is the longer a firm has been present on Twitter, the more followers they may possess and the higher the influence they might have on their stakeholders. Second, I control for online stakeholders' retweeting activities. The number of retweets indicates how firm's communication resonates among its online stakeholders; this element is crucial in creating online influence (Walker and Rea 2014; Saxton et al., 2019). This variable is calculated using the natural logarithm of the total number of retweets of the firms' original tweets.

## 2.4. Descriptive statistics and results

Our sample is composed of 280 of the Standard & Poor's 500 firms for which I was able to recover the set of data necessary to perform the statistical tests. Table 1 presents the descriptive statistics. Current reputation varies from 0 to 63, with a mean of 21.70. The level of positivity in social media communications ranges between 43.98 and 82.75, with a mean of 52.62 and a median of 52.06. The level of assurance spans from 23.65 to 956.17 with a mean of 57.88. I use the number of the firms' replies to online stakeholders, to measure the openness communication. This variable ranges from 5 to 310,484 per year, with an average of 1,118. Although some companies are highly engaged with their stakeholders, half of them issue fewer than the median of 48 tweets. Task sharing measured by the number of firm's original tweets varies from 0 to 310,991 per year. For

the social network, 36% of firms' tweets use hashtags and 65% use hyperlinks to manage their stakeholder relationships. Firm size, measured by total assets, lies between .28 and 2,415,689. On average, firms have joined Twitter 4 years prior to the end of the sample period, 2015. I also observe an active stakeholders' retweets activities on Twitter as each firm receives on average 5,716 retweet and ranges from 0 to 173,237

[Insert Table 1 about here]

Table 2 presents the correlation matrix. Only social networking is negatively correlated with reputational risk. Generally, Table 2 suggests that the sample does not suffer from multicollinearity, as the correlation coefficients between the independent variables are fairly low; the maximum is 0.33.

[Insert Table 2 about here]

Table 3 shows the results of a principal component analysis of the six variables to measure online communication. The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy is found to be acceptable at 0.58, and the Bartlett's test of sphericity is significant ($p < .0001$), indicating the data is suitable to perform PCA. I retain the first two components with eigenvalue of 1.75 and 1.52 respectively. The third component with an eigenvalue of 0.84 only includes one variable, assurance.

The first principal component shows high factor loadings for three communication approaches (positivity, openness, sharing of tasks); following (Morsing and Schultz, 2006), I named this component "stakeholder involvement strategy" to represent the fact that firms address their stakeholder's concerns in a positive manner, engage in a dialogue with them and engage with their stakeholders to solve their issues. The second principal component is comprised of the two measurements of a firms' social networking strategies (hyperlink and hashtag). When hyperlinks

or hashtags are employed, communication exchange and information transfer occur between firms and their stakeholders to position them inside the firms' social network. The third principal component is the certainty strategy itself.

[Insert Table 3 about here]

Table 4 shows the results of the dynamic relation between the online communication strategies and firms' reputation using the two-step system GMM. Results show that the social networking is the only significantly strategy associated with lower levels of reputational risk (p=0.011). The other strategies do not yield significant reputational benefits. I also find that corporate environmental performance is significantly correlated with better reputation, which is consistent with previous literature (Brammer and Pavelin, 2006; Walker, 2010). Industry adjusted ROE are negatively correlated with reputational risk (p=0.036), indicating the profitable firms perform well in resource allocation and economic performance, which induce higher level of reputation (Fombrun and Shanley, 1990). The results also suggest that as firms' presence on Twitter increases, corporate reputation increases accordingly. However, larger firms and firms receiving more stakeholders' retweets face more reputational risk. The latter is consistent with the arguments that online stakeholders are often emotionally charged and, according to the negativity bias (Rozin and Royzman 2001), negative emotions drive news dissemination (Hansen et al. 2011; Lee et al., 2013). Hence, aside from gaining stakeholders' favorable perceptions, firms need to use their Twitter account to carefully monitor stakeholders' word-of-mouth (Eberle et al., 2013).

[Insert Table 4 about here]

In each firm-initiated tweet, one of the online communication strategies or a combination of them can be used. Scholars documents that, depending on their organizational resources and planning, firms sometimes employ more than one communication strategies (Kim and Rader, 2010). For

example, a tweet can contain assertive and positive tone and a hashtag at the same time. Hence, we did an additional test to examine how these strategies interact.

For the sake of brevity, in Table 5 I only present the marginally significant interaction between the stakeholder involvement and social networking strategies; other interactions being not statistically significant. Although model 1 does not show a significant result, model 2 shows a significant weakening effect (p value = 0.057) on reputational risk.  Model 2 uses a more robust approach than model 1. It adds the industry-median social, environmental and governance performance (SEGP) as additional instrumental variables in the GMM model (Cai et al., 2011; Harjoto and Jo, 2015). Using industry median SEGP is warranted by the fact that it is highly correlated with firm level SEGP and not correlated with firms' reputation.

This effect could be due to the fact that large number of tweets that tend to be self-promoting triggers stakeholders' skepticism and weakens the strength of the online community to promote firms' reputation (Du et al., 2010; Kim and Ferguson, 2018).

[Insert Table 5 about here]

## 2.5. Discussion and conclusion

To manage their corporate reputation, more and more companies open Twitter accounts to broadcast their responsible activities, enhance their visibility and gain their stakeholders' approval. In this study, I propose a theoretical framework to explain how stakeholder management using social media affects corporate reputation. I argue that online active communication towards stakeholders is crucial. Without this process, the stakeholders may not well acknowledge the company's endeavors, which refrains firm from enjoying the reputational benefits they should get

in return (Pomering and Dolnicar, 2009; Kim and Ferguson, 2018). Firms construct their online identity through various communication strategies, namely stakeholder involvement strategy, social networking strategy and the certainty strategy, to align with stakeholders' perception. By initiating hashtags, firms can diffuse information of their shared values to their online network and attract other stakeholders to join the community. Another element in social networking strategy, hyperlinks, positions the firms in a wider network of organizations and provide validity to firms' tweets from the external sources (de Bakker and Hellsten, 2013). This study puts forward two important findings. First, it shows that building an online community and having a "fan base", a social networking strategy, can facilitate the communication process and foster lower levels of corporate reputation risk.

Our second finding shows that using a stakeholder involvement strategy, namely communicating interactively, positively, and frequently with the stakeholders, is not associated with higher levels of firms' reputation. This can be explained in several ways. First, the stakeholder involvement strategy is not easy to implement (Lane, 2014; Seele and Lock, 2015). Firms mainly use their social media platforms to unilaterally diffuse information, rather than truly engaging with their stakeholders (Snider et al. 2003; Seele and Lock, 2015; Jahng and Hong, 2017); in our sample, half of the firms issue less than 48 replies per year (Table 1, median = 47.5). Not engaging face to face makes it hard to express sincere emotions and mutual respect (Lane, 2014), but is auspicious to sudden interruptions of dialogue because one of the parties can decide to be silent so easily (Brennan et al. 2013). Even when firms succeed in engaging with some stakeholders, it is often only with a specific group and the effect may not spread to other stakeholders of the firm (Fieseler et al. 2010).

Second, the misuse of the stakeholder involvement strategy can even create stakeholder skepticism and weaken the effect of the overall social networking strategy. The premise of a successful firm-stakeholder relationship relies on the firm delivering benefits that the stakeholders will appreciate and make them identify with the firm (Bhattacharya et al., 2009; Kirat, 2015). However, firms sometimes perceive online communications merely as symbolic, merely a way to legitimate their actions towards their stakeholders (Archel et al., 2011). In this perspective, stakeholders do not gain any substantial benefits from the communication. Firms' efforts to interact with them will be perceived as superficial and self-serving, which will make stakeholders not identify with the firm (Fein and Hilton 1994; Schlegelmilch and Pollach 2005); for instance, when bilateral communications are limited to surveys or polls that relate to corporate marketing strategies (Waters and Jamal, 2011).

This study makes several contributions to the literature. First, to our knowledge, I are the first to empirically examine the relationship between online stakeholder management strategies and corporate reputation in the Twitter setting. Limited empirical research has been done to examine the stakeholder engagement practices (Unerman, 2007; Rinaldi et al., 2014; Hörisch et al., 2015; Kaur and Lodhia, 2018). By collecting all the firms' and their stakeholders' tweets in the period from to 2012 to 2015, I find that a social networking strategy can be efficient in promoting firm-stakeholder relationship and gain reputational benefits. On the other hand, stakeholder involvement strategy has been underemployed, and when it is in place, because stakeholders are skeptical about firms' motives, it tends to weaken the effect of the social networking strategy. Second, I employ the GMM model and include additional instrumental variables to address any endogeneity issues and add validity to our results. Furthermore, our results are in accordance with the ideas of CCO (communication constitutes organizations) put forward by Schultz et al., (2013)

and Siano et al., (2017). These scholars argue that legitimacy is constituted and re-constituted in the communication process. Communications between firms and their stakeholders are not only the reflection of the firm's current and former practices, but also of their aspirations (Wehmeier and Schultz, 2011; Christensen et al. 2013). These communications form a crucial part of the stakeholder management practices and should not be seen as inferior to the "real actions" (Cho et al. 2012; Patten 2005). This study shows that firms can benefit from building a strong online community which should be seen as an important intangible asset that help them elevate their corporate reputation.

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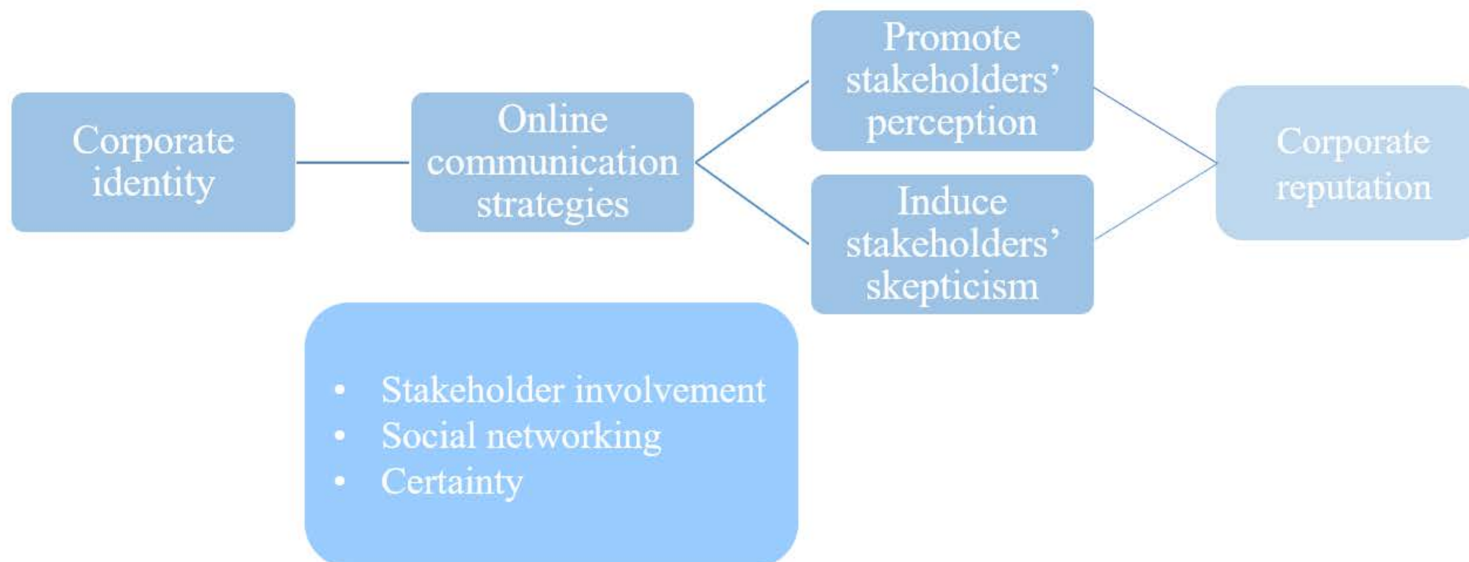
**Figure 1**

Process of Corporate Reputation Management through Social Media (Theoretical framework):



## Table 2.1 Descriptive statistics

| | Mean | SD | Max | P75 | Median | P25 | Min |
|---|---|---|---|---|---|---|---|
| **C_rep** | 21.70 | 14.59 | 63 | 25 | 22 | 14 | 0 |
| **Positivity** | 52.62 | 2.82 | 82.75 | 53.59 | 52.06 | 50.87 | 43.98 |
| **Certainty** | 57.88 | 77.39 | 956.17 | 47.21 | 44.39 | 42.28 | 23.65 |
| **No. of firms' replies** | 1118.27 | 9400.80 | 310484 | 324 | 47.5 | 5 | 0 |
| **Firms' total tweets** | 1698.82 | 9463.11 | 310991 | 1320 | 482 | 138 | 0 |
| **Firms hashtag activity** | 0.36 | 0.23 | 1 | 0.46 | 0.33 | 0.19 | 0 |
| **Firms hyperlink activity** | 0.65 | 0.27 | 1 | 0.87 | 0.69 | 0.47 | 0 |
| **Social_performance** | 58.72 | 10.38 | 90 | 66 | 58 | 51 | 32 |
| **Enviro_performance** | 56.69 | 12.91 | 95.11 | 66 | 56 | 47 | 24 |
| **Govern_performance** | 65.39 | 9.01 | 95 | 72 | 66 | 59 | 38 |
| **CSR reporting quality** | 0.30 | 0.46 | 1 | 1 | 0 | 0 | 0 |
| **ROE** | 28.30 | 313.21 | 7038.46 | 25.33 | 15.89 | 9.22 | -3432.72 |
| **Twitter adoption** | 4.01 | 1.76 | 8 | 5 | 4 | 3 | 0 |
| **Size** | 9.96 | 1.33 | 13.75 | 10.81 | 9.78 | 8.93 | 7.50 |
| **Leverage** | 63.97 | 20.24 | 124.48 | 78.06 | 64.00 | 50.41 | 15.48 |
| **Stakeholders' retweets** | 5716.49 | 14620.03 | 173237 | 4637 | 1000 | 258 | 0 |

# Table 2.2 Correlation matrix

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1-C_rep** | 1 | | | | | | | | | | | | | | | |
| **2-Positivity** | 0.13 | 1 | | | | | | | | | | | | | | |
| **3-Assurance** | 0.16 | 0.11 | 1 | | | | | | | | | | | | | |
| **4-Openness** | 0 | 0.33 | 0.14 | 1 | | | | | | | | | | | | |
| **5-Task_sharing** | 0.03 | 0.26 | 0.15 | 0.29 | 1 | | | | | | | | | | | |
| **6-S_net(hyperlink)** | -0.13 | -0.21 | 0.11 | 0.04 | -0.21 | 1 | | | | | | | | | | |
| **7-S_net(hashtag)** | -0.02 | 0 | 0.22 | 0.16 | 0.01 | 0.37 | 1 | | | | | | | | | |
| **8-CSR rep_quality** | 0.23 | 0.03 | 0.11 | -0.03 | 0.04 | -0.06 | 0.04 | 1 | | | | | | | | |
| **9-Govern_perfor** | 0.12 | 0.08 | -0.01 | 0.05 | 0.11 | -0.06 | 0.03 | 0.38 | 1 | | | | | | | |
| **10-Social_perfor** | 0.21 | 0.02 | 0 | -0.03 | 0.05 | -0.04 | 0 | 0.42 | 0.45 | 1 | | | | | | |
| **11-Environ_perfor** | 0.23 | 0.04 | 0.12 | -0.06 | 0.12 | -0.02 | 0.12 | 0.44 | 0.29 | 0.54 | 1 | | | | | |
| **12-Profitability** | 0 | 0.04 | 0 | -0.01 | 0.03 | -0.03 | -0.02 | 0 | 0.04 | 0.03 | 0.03 | 1 | | | | |
| **13-Twitte_adoption** | 0.12 | 0.13 | 0.02 | -0.12 | 0.23 | -0.14 | -0.09 | 0.11 | 0.07 | 0.17 | 0.13 | -0.01 | 1 | | | |
| **14-Size** | 0.56 | 0.04 | 0.21 | -0.05 | -0.02 | -0.04 | 0.05 | 0.29 | 0.21 | 0.26 | 0.34 | 0.03 | 0.09 | 1 | | |
| **15-Leverage** | 0.09 | 0.07 | -0.03 | 0.11 | 0.07 | -0.12 | -0.03 | 0.04 | 0.19 | 0.01 | 0 | 0.04 | 0 | 0.19 | 1 | |
| **16-Stake_retweets** | 0.24 | 0.19 | 0.12 | 0.02 | 0.72 | -0.19 | 0.05 | 0.1 | 0.01 | 0.1 | 0.19 | 0.05 | 0.4 | 0.14 | -0.03 | 1 |

## Table 2.3 Online communication strategy's principal component analysis

| | Component1 | Component2 | Component3 |
|---|---|---|---|
| **Positivity** | **0.52** | -0.07 | -0.26 |
| **Assurance** | 0.30 | 0.26 | **0.86** |
| **Openness** | **0.57** | 0.09 | -0.27 |
| **Sharing of tasks** | **0.52** | -0.22 | 0.16 |
| **Social networking hyperlink** | -0.13 | **0.67** | 0.00 |
| **Social networking hashtag** | 0.17 | **0.64** | -0.30 |
| **Eigen values** | 1.73 | 1.55 | 0.84 |

## Table 2.4 GMM regressions of online communication strategies on corporate reputation

| | Model 1 | Model 2 | Model 3 |
|---|---|---|---|
| **Constant** | -27.8878 | -29.8107 | -29.8578 |
| | (0.000)*** | (0.000)*** | (0.000)*** |
| **Stakeholder involvement strategy** | -0.2423 | | |
| | (0.559) | | |
| **Social networking strategy** | | -0.8843 | |
| | | (0.011)** | |
| **Certainty strategy** | | | -0.5220 |
| | | | (0.215) |
| **Corporate reputatio$_{n-1}$** | 0.3099 | 0.2673 | 0.3025 |
| | (0.000)*** | (0.001)*** | (0.000)*** |
| **Social Performance** | -0.3117 | -0.3573 | -0.3738 |
| | (0.267) | (0.197) | (0.186) |
| **Environmental performance** | -0.5465 | -0.5411 | -0.5484 |
| | (0.010)** | (0.008)*** | (0.010)** |

| | | | |
|---|---|---|---|
| **Corporate Governance** | -0.0705 | -0.0773 | -0.0824 |
| | (0.718) | (0.674) | (0.665) |
| **CSR reporting quality** | 1.2116 | 1.4880 | 1.4707 |
| | (0.329) | (0.228) | (0.246) |
| **Industry adjusted ROE** | -0.0021 | -0.0023 | -0.0020 |
| | (0.039)** | (0.036)** | (0.037)** |
| **Twitter adoption** | -0.4511 | -0.6690 | -0.3952 |
| | (0.128) | (0.025)** | (0.177) |
| **Size** | 4.5563 | 5.1076 | 4.8101 |
| | (0.000)*** | (0.000)*** | (0.000)*** |
| **Leverage** | 0.0034 | -0.0058 | 0.0003 |
| | (0.896) | (0.818) | (0.992) |
| **Stakeholders' retweets** | 0.8768 | 0.7874 | 0.8732 |
| | (0.000)*** | (0.000)*** | (0.000)*** |
| **Number of instruments** | 16 | 16 | 16 |
| **F** | 22.24 | 24.78 | 23.48 |
| **Prob > F** | (0.001)*** | (0.001)*** | (0.001)*** |
| **Sargan test** | 4.84 | 1.67 | 4.18 |
| **Sargan test p value** | 0.304 | 0.796 | 0.382 |

| | | | |
|---|---|---|---|
| **Hansen test** | 6.99 | 1.85 | 5.84 |
| **Hansen test p value** | 0.137 | 0.763 | 0.212 |
| **N** | 686 | 686 | 686 |

## Table 2.5 The interactions between online communication strategies on corporate reputation

| Dependent variable | Model 1<br>Reputation risk | Model 2<br>Reputation risk |
|---|---|---|
| **Constant** | -22.7063 | -22.7063 |
| | (0.000)*** | (0.000)*** |
| **Stakeholder involvement strategy** | -0.1499 | -0.2595 |
| | (0.736) | (0.524) |
| **Social networking strategy** | -1.1548 | -0.7043 |
| | (0.002)*** | (0.047)** |
| **Stakeholder involvement * Social networking** | 0.2449 | 0.2596 |
| | (0.100) | (0.057)* |
| **Corporate reputation$_{n-1}$** | 0.2757 | 0.4001 |
| | (0.000)*** | (0.000)*** |
| **Social Performance** | -0.3399 | -0.1975 |
| | (0.218) | (0.464) |
| **Environmental performance** | -0.5407 | -0.4747 |
| | (0.008)*** | (0.017)** |
| **Corporate Governance** | -0.0707 | 0.0195 |

| | | |
|---|---|---|
| | (0.704) | (0.920) |
| **CSR reporting quality** | 1.3676 | 0.8492 |
| | (0.269) | (0.511) |
| **Industry adjusted ROE** | -0.0023 | -0.0021 |
| | (0.042)** | (0.113) |
| **Twitter adoption** | -0.7040 | -0.6763 |
| | (0.019)** | (0.023)** |
| **Size** | 5.0040 | 3.8806 |
| | (0.000)*** | (0.000)*** |
| **Leverage** | -0.0039 | 0.0086 |
| | (0.878) | (0.749) |
| **Stakeholders'_retweets** | 0.7602 | 0.7358 |
| | (0.001)*** | (0.001)*** |
| **Number of instruments** | 18 | 33 |
| **F** | 22.20 | 22.34 |
| **Prob > F** | (0.001)*** | (0.001)*** |
| **Hansen test** | 2.07 | 20.97 |
| **Hansen test p value** | 0.724 | 0.338 |
| **N** | 686 | 686 |

# Chapter 3 Does the way firm's respond to social activism affect their reputation?

## Abstract

Shareholders who are concerned about firms' social and environmental performance can address their concerns by submitting a resolution at the annual general meeting. Corporate reputation is closely linked to the way these concerns are addressed. Superior corporate reputation can be achieved by satisfying stakeholders' demands and broadcasting these efforts. Conversely, reactive responses can induce discontent from the activist groups, disseminating their concerns to other stakeholders and harm the reputation of the firm. I argue that due to the power of negative events, reactive responses will dominate the effect, causing stakeholder dissent and destroying the hard-earned reputation of the firms. Relying on the attribution theory, I examine the allocating process of corporate social irresponsibilities using a sample of large US listed firms. Results show a clear positive link between reactive responses to social activist's demands and corporate reputational risk.

## 3.1. Introduction

Historically, corporate governance research has been widely focused on the internal corporate governance mechanisms[5] which are primarily dedicated to address principal-agent conflicts (Fama, 1980; Jensen, 1993). In more recent studies, scholars have started to focus on external corporate governance mechanisms to study how external parties such as rating agencies, analysts and social activists shape firms' business practices according to their concerns. The impact of social activism[6] on firms' decision-making process represents an important dimension of corporate governance (Parrino et al., 2018).

Social activists might be either company shareholders or other stakeholders who do not have any contractual or operational connection with the target firm. The main activist groups in play are [7]social responsible funds. These investors cater to investors who promote specific social objectives and invest in companies that follow ethical guidelines. In public traded corporations, shareholders are permitted to submit resolutions concerning the social and financial performance of the firm at the annual general meeting.

In this paper, from the angle of corporate reputation, I investigate the influence of the managerial response to social activism and argue that social activists influence firm mainly through detecting firms' corporate social irresponsibilities (CSI) and shaming corporate reputation. Although I observe a negative relationship between managerial reactive response and corporate reputation. It is notable that the results are mainly driven by the reputational penalty raised from ignoring social

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[5] Corporate governance includes both internal and external mechanisms. It is well documented that external corporate governance mechanisms mainly contain: the legal environment, the market for corporate control, external auditors, stakeholder activism, rating organizations, and the media (Aguilera, Desender, Bednar, & Lee, 2015).
[6] Shareholder activism: SEC adopted rule 14a-8 in 1942, which requires firms to include shareholder resolutions in their proxy statements. Based on this rule, shareholders are able to cast their influence on firms' performance and activities by submitting proposal.
[7]

proposals, the efforts to solve stakeholders' concerns merely reduce the reputational loss but achieve no reputational gains. The study sheds lights on how shareholder concerns expressed through social activism can have an impact on corporate reputation.

## 3.2. Literature review and hypotheses development

Shareholder activism has been defined as the attempt of changing management decisions without changing the ownership structure of the company (Gillan and Stark, 2007). Shareholders of listed companies can express their concerns by submitting a resolutions or proposals at the firm's annual general meeting. Historically, shareholder proposals have been primarily centered on corporate governance issues, such as executive compensation and board composition (Gillian and Stark, 2000). But during the last decade, shareholders have engaged in a new form of activism that aims at addressing issues about corporate social responsibility (Glac, 2014; Bauer et al., 2015). Sjöström (2008, p. 142) defined social shareholder activism as an attempt by the shareholders to press companies "to adopt a human rights policy, to issue a report on how it plans to mitigate risk pertaining to greenhouse gas emissions or to implement ethical codes of conducts for its supply chain". Social activism is focused on the broader impact of corporate behavior on society (Lee and Lounsbury, 2011). The shareholder proposals presenting addressed social and environmental issues have increased dramatically (Grewal et al., 2016; Matsusaka et al. 2016; Baloria et al., 2019). These proposals usually emanate from either religious organizations, non-profit organization or other types of socially responsible funds that promote specific social and environmental objectives (Logsdon and Van Buren, 2009; Goranova and Ryan, 2014; Sikavica et al. 2018).

Corporations can basically adopt two strategies to respond to their shareholder's social demands. They can either be proactive or reactive. Firms are said to be proactive when they acquiesce to the social activists' request. In this case, the activists eventually withdraw their demand. They will

agree to do so when the firm provides a thoughtful response and shows engagement (David, Bloom and Hillman, 2007; Bauer et al., 2015). In their study about climate change resolutions, Byrd and Cooperman (2014) find that companies that experience resolution withdrawals are more likely to take actions aimed at addressing the issues. After the withdrawal, the social activists will monitor the firms' progress on the issue they have raised and refile the resolution if they are not satisfied. However, the firms' efforts to address their stakeholders' concerns does not necessarily translate into a better corporate reputation. While a managerial proactive response can initiate good relationships with these activists, the firm's efforts to address the stakeholders' concerns are not necessarily known by the other stakeholders. Activists will not reinforce the proposals that have been resolved and they will not appear on the proxy statement. While this type of response prevents the potential expansion of stakeholder coalition, it also diminishes the salience of the event (Rehbein et al., 2004, 2013). The dedication involved in solving the social proposals is not publicized enough to bring any change to the collective stakeholders' perception of the firm's reputation.

On the other hand, reactive strategies include either omitting the resolution or letting the resolution go to a vote by all shareholders. A corporation can ask the US Securities and Exchange Commission (SEC) for a ''no-action letter'' which indicates that the SEC will not recommend enforcement action if the company omits the resolution from its proxy statement. This will often be the case when the firm challenges the legitimacy of the proposal (Hadani, 2016). However, this strategy bears an important risk. The SEC could refuse to issue the "no-action letter" and recommend enforcement. Omitting a resolution is considered the least responsive managerial strategy (David, Bloom, and Hillman, 2007; Eesley and Lenox, 2006). When the firm has no intention to address the issue and does not want to omit the resolution, the usual managerial

strategy is to add the resolution to the company's proxy statement and provide recommendations about how to vote (Rehbein et al., 2013). It is common that managers resist shareholder activists' demands and maintain their current strategy (David, Bloom, and Hillman, 2007; Reid and Toffel 2009). When this managerial response occurs, the unsatisfied stakeholders will fight for the requests by broadcasting their concerns, attracting more attention from other shareholder groups and building a coalition to collectively pressure the firm. This increases the negative publicity of the event and is bond to harm the hard-earned corporate reputation. Therefore, I identify that, in the social proposal context, corporate reputation is largely affected by the reactive managerial response.

In theory, social activism should lead firms to be more socially responsible or less irresponsible. However, past research about this link remains inconclusive (Schnietz and Epstein, 2005; Porter and Kramer, 2006; Sjostrom, 2008; Goranova and Ryan, 2014). On one side, Reid and Toffel (2009) find that firms targeted by environmental activists were more likely to adopt environmentally friendly strategies. Marquardt and Wiedman (2016) document that firms who are targeted to increase the gender diversity and the independence of the board improves these aspects in the following year. Grewal et al., (2016) find that social proposals are efficient in improving firms' relevant performance whether the issue is material or immaterial, according to the definition of Sustainability Accounting Standards Board (SASB). However, scholars argue that social and environmental proposals rarely receive the support of the majority shareholders because it is not perceived as directly linked with firm value (Thomas and Cotter, 2007; Rojas et al., 2009). Even when these proposals gain supports among shareholders and transform into corporate policies, it may be only symbolic changes, not substantive ones (Dhir, 2012). Firms can sometimes get away

with social activism by influencing the SEC decision making of "no-action letter" through their corporate political activities (Hadani et al., 2016).

Several studies have investigated the role of corporate reputation in how management responds to social activism. Firms that are more publicly visible are more likely to engage in negotiation with the sponsor of the resolution to avoid negative publicity and reputational loss (Rehbein et al., 2004). According to Hoffmann et al. (2016), corporate reputation is associated with the frequency and success of shareholder proposals. Cundill et al., (2018) point out that if stakeholders can mobilize enough power to threaten firms' reputation, firms are more inclined to negotiate with the stakeholder groups involved and try to have the resolutions withdrawn.

I argue that managerial response, especially reactive response, to the social activist's demands is highly correlated with the reputation of the firm. Corporate reputation is a valuable intangible asset, a source of demarcation and competitive advantage (Fombrun, 1996). Firms with strong corporate social responsibility (CSR) profiles can "generate reputational gains that improve a company's ability to attract resources, enhance its performance and build competitive advantage" (Fombrun and Gardberg, 2000, p. 85). As CSR and corporate social irresponsibility (CSI) are at the two ends of a continuum, firms who engage in CSI activities and ignore the stakeholders' requests can suffer from a loss of reputation (Karpoff et al, 2005; Sweetin et al, 2013; Grappi et al, 2013). CSI is defined by Jones et al (2009, p. 304) as "being reactive as opposed to proactive in addressing corporate issues and the ways and means by which they relate to wider society", which should incorporate managers' reactive response to their activists. In this paper, I discuss how activists attribute CSI to a firm.

Scholars suggest that instances of corporate irresponsibility are not necessarily associated with sharp reputational damages (Lange and Washburn, 2012; Jackson et al., 2014). Corporate

reputation is a sociological concept that is based on a cognitive representation of an organization's actions and results (Fombrun and Gardberg, 2000). Therefore, corporate reputation is influenced by how stakeholders define social irresponsibility and perceive irresponsible actions (Lange and Washburn, 2012). Stakeholders' social processes of evaluation and attribution of ethical issues are influenced by a range of factors including professional background and experience, media framing effects and moral intensity. Lange and Washburn (2012) propose a theoretical model to evaluate firms' CSI behaviors based on three elements: the undesirability of the effect, corporate culpability, and the non-complicity of the affected party. Basically, they argue that CSI depends on the stakeholders' perception that there has been a negative effect, that the corporation is culpable for this effect and that the affected party is not fully complicit in the effect.

The undesired effect is evaluated based on the extent the action deviates from the stakeholder's norms and standards and how it threatens them (Haidt and Bjorklund, 2008). Companies that do not address their stakeholders' concerns about social and environmental issues and provide reactive responses to their proposals do not meet stakeholder's standards (Clark and Crawford, 2012; Delmas and Toffel, 2008; Perrault and Clark, 2016) and therefore construct an undesired effect.

According to Godfrey et al., (2009), when stakeholders' requirements are disregarded, stakeholders perceive the firm as not contributing to social welfare (Sherry, 1983) and consider it immoral (Korten, 2001; Scott, 2003). Additionally, the decision of whether to address stakeholders' concerns on social and environmental issues or not is fully under the management's control. Managers carry total responsibility for disregarding stakeholders' concerns. Hence, moral responsibility and causality, the two condition that comprise the culpable behaviors are satisfied when management respond reactively to social proposals.

Affected party non-complicity is assessed on the basis of whether the affected party is in control of the negative effect or not (Lange and Washburn, 2012, p. 307). The affected party in this case involves the stakeholders who are asking the companies to address specific social and environmental issues and the other stakeholders that are affected by the issue of concern. They are victims of managerial irresponsibility and have no ability to influence managerial response.

In sum, I argue that reactive managerial responses to social activism leads to a perception of social irresponsibility on the part of the stakeholders which in turn leads to a loss of corporate reputation (Wagner, Bicen, and Hall, 2008). I thus expect that:

H1: Organizations that are reactive to social proposals are likely to incur reputational penalties.

## 3.3. Methodology

Due to the high persistency of the corporate reputation and the severely unbalanced dataset, the recently developed dynamic panel estimation (Bun and Kiviet, 2003; Bruno, 2005), the Least Square Dummy Variable Corrected (LSDVC) method is used to examine the hypothesis

$$C_Rep_i = \alpha + \beta_1 C_Rep_{i-n} + \beta_2 Cor_Response + \beta_n Control_i$$

### *3.3.1. Dependent variable*

I use the score provided by Reprisk[8] to measure corporate reputation (*C_Rep*), the larger the score is, the higher the corporate reputational risk.

[8] RepRisk provides reputational risk scores for over 60,000 public and private companies from a third party sources. These sources include online media, NGOs, newsletters and government bodies https://www.reprisk.com/content/static/reprisk-esg-business-intelligence-methodology-overview.pdf).

### *3.3.2. Independent variables*

Details of managerial response to shareholder proposals on social and environmental issues are taken from the ISS[9] database. To facilitate the interpretation, I create a dummy variable for managerial response and define proposal being omitted or going for a vote as 1 and withdrawn proposal as 1 (Cor_response). Due to the characteristics of shareholder proposal, companies can be attacked by multiple proposals covering different aspects of the social and environmental issues in one year. In this circumstance, I consider the weighted average value of the year.

### 3.3.3. Control variables

To examine the effect of managerial responses of shareholder social proposals on corporate reputation, I controlled for size, (log of market capitalization from Compustat), leverage, corporate social, environmental and governance performance (data from MSCI), firms' business ethics (data from MSCI) and financial performance (data from COMPUSTAT and CRSP).

## 3.4. Descriptive statistics and results

Table 1 presents the descriptive statistics. The current reputational risk varies from 1 to 44.68, with a mean of 18. Reactive response has a mean of 0.46 and median of 0.5, which reflects that more firms adopted reactive responses to the social activism demands than proactive ones. The average leverage is 10.26. Concerning the size, I observe a variance between 26.85 and 92.18, with an

[9] ISS : Institutional Shareholder Services Inc. It is a proxy advisory firm that advise hedge funds, mutual funds and similar organizations concerning shareholder votes. Additionally, it also provides database of shareholder proposal records and analyses corresponding score to academic researchers.

average of 61.25. Corporate financial performance, measured by ROA, has an average of 7.62. In the end, ESG, the combination of corporate social performance, environmental performance and corporate governance, lies between 43.20 and 69.75.

[Insert Table 1 about here]

Table 2 presents the correlation matrix. Generally, the correlation between the independent variables are low suggesting that the model does not suffer from multi-collinearity.

[Insert Table 2 about here]

Table 3 shows the results of the LSDVC estimators to test if reactive responses to the activist's demands result in higher reputational risk. I find that it is the case. To compare the relative performance of LSDVC, the results of the one-step system generalized method of moments (GMM) (model 1) and LSDV (model 2) is also presented. Th one-step system GMM, developed by Blundell and Bond (1998) shows a significant correlation at the 5% level (0.002). The model 2 shows that the results of the LSDV dynamic regression is also significant at the 5% level (0.046). Finally, a bootstrap procedure is conducted to estimate the variance covariance matrix of LSDVC. It iterates vcov(100) times to yield the results in Model 3. This implies that the effect of reactive managerial response can weakly punish firms for ignoring social activists' requests. Regarding the control variables, size and previous corporate reputational risk is also positively correlated with the corporate reputation.

[Insert Table 3 about here]

## 3.5. Conclusion

I test whether firm's reactive responses to stakeholder activism have an effect on corporate reputation. I rely on the attribution theory to explain how CSI rather than CSR, shape stakeholders' perception of firm's reputational risk. This paper finds that responding reactively to stakeholder activism by either omitting the resolutions or submitting them to a vote by the shareholders threatens firm's reputation. Although these activist groups who fill the proposals possess limited power, by coalition with other stakeholders and exposing firms' CSI activities to the public, they are able to shame corporate reputation.

This study made an effort to explore the relationship between social shareholder activism and corporate reputation using the attribution theory, which provide a theoretical contribution to an extent to the social activism literature. The findings are consistent with Clark et al. (2008) and Perrault and Clark (2016), which indicates the importance of corporate reputation in granting stakeholders the power to mobilize corporate change. Furthermore, the bias corrected LSDV model is employed to fit the characteristics of the dataset, which add validity to the results.

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# Table 3.1 Descriptive statistics

| | Mean | Median | SD | Min | Max |
|---|---|---|---|---|---|
| *Reputation* | 17.63 | 18.00 | 12.6 | 1 | 44.68 |
| *Reactive response* | 0.46 | 0.50 | 0.1 | 0.25 | 1 |
| *Leverage* | 10.26 | 60.20 | 0.52 | 9.43 | 11.2 |
| *Size* | 61.25 | 10.21 | 17.9 | 26.85 | 92.18 |
| *ROA* | 7.62 | 7.24 | 4.89 | 0.13 | 17.44 |
| *ESG* | 55.93 | 55.71 | 7.79 | 43.2 | 69.75 |

### Table 3.2 Correlation matrix

| | ***Reputational risk*** | ***Reactive response*** | ***Size*** | ***Leverage*** | ***ROA*** | ***ESG*** |
|---|---|---|---|---|---|---|
| Reputation risk | 1 | | | | | |
| Cor_ response | 0.22 | 1 | | | | |
| Size | 0.44 | 0.18 | 1 | | | |
| Leverage | 0.02 | 0.14 | 0.23 | 1 | | |
| ROA | 0.09 | 0.01 | 0.05 | -0.39 | 1 | |
| ESG performance | 0.1 | 0.04 | 0.21 | 0.06 | 0.05 | 1 |

## Table 3.3 The least squares dummy variable model

| | Model 1 | Model 2 | Model 3 |
|---|---|---|---|
| | Reputational risk | Reputational risk | Reputational risk |
| **Cor_response** | 1.251 | 0.923 | 0.941 |
| | (0.002) ** | (0.046) ** | (0.076) * |
| **Cor_response$_{t-1}$** | 0.437 | 0.064 | 0.241 |
| | (0.000) *** | (0.206) | (0.000) *** |
| **Size** | 1.25 | 10.062 | 8.348 |
| | (0.001) ** | (0.000) *** | (0.056) * |
| **Leverage** | -0.055 | 0.211 | 0.206 |
| | (0.056) * | (0.013) ** | (0.153) |
| **Industry adjusted ROA** | 0.130 | 0.170 | 0.164 |
| | (0.083) * | (0.110) | (0.446) |
| **ESG performance** | -0.209 | 0.396 | 0.295 |
| | (0.000) *** | (0.000) *** | (0.157) |
| **N** | 523 | 523 | 523 |
| **Number of instruments** | 40 | 40 | 40 |
| **Wald chi2** | 353.80 | 353.80 | 353.80 |
| **Prob > chi2** | 0.000 | 0.000 | 0.000 |

## General conclusion

The findings of this thesis contribute to several streams of the extant literature.

The first paper is in line with Bansal and Roth (2000) and Aguilera et al (2007), who argue that environmental leaders tend to refrain from fully disclosing their environmental achievements in order to avoid disrupting the existing industrial environmental standard and protect their legitimacy. Reputable firms are found to attract higher stakeholder attention and carry higher levels of responsibilities (Zavyalova et al., 2012; George et al., 2016). Brownwashing can curb the escalating stakeholders' demands. Firms may alleviate stakeholder's expectations by hiding part of their activities from their stakeholders (Oliver, 1991; Meyer and Rowan, 1977). The paper also finds that internal environmental governance can be efficient at pressing firms to fully report their environmental achievements. The governance mechanism gradually influences the current industrial standards and introduces green norms and values to the firms' management team to cultivate proactive environmental practices and develop higher environmental standards (Marshall et al., 2005).

I propose a theoretical framework to explain how stakeholder management using social media affects corporate reputation. I argue that online active communication towards stakeholders is crucial. Without this process, the stakeholders may not well acknowledge the company's endeavors, which refrains firm from enjoying the reputational benefits they should get in return (Pomering and Dolnicar, 2009; Kim and Ferguson, 2018).

I put forward two important findings. First, it shows that building an online community and having a "fan base", a social networking strategy, can facilitate the communication process and foster lower levels of corporate reputation risk. Second, it shows that using a stakeholder involvement

strategy, namely communicating interactively, positively, and frequently with the stakeholders, is not associated with higher levels of firms' reputation.

The third paper rely on the attribution theory to explain how CSI rather than CSR, shape stakeholders' perception of firm's reputational risk. It finds that responding reactively to stakeholder activism by either omitting the resolutions or submitting them to a vote by the shareholders threatens firm's reputation. Although these activist groups who fill the proposals possess limited power, by coalition with other stakeholders and exposing firms' CSI activities to the public, they are able to shame corporate reputation.