

# Normativity in Environmental Reporting: A Comparison of Three Regimes

Mohamed Chelli<sup>1</sup> · Sylvain Durocher<sup>2</sup> · Anne Fortin<sup>3</sup>

Received: 11 September 2015 / Accepted: 15 March 2016 / Published online: 24 March 2016  
© Springer Science+Business Media Dordrecht 2016

**Abstract** Normativity is assessed as we evaluate and compare the environmental reporting practices of a sample of French and Canadian companies through the lens of institutional legitimacy. More specifically, we examine how French and Canadian firms changed their reporting practices in reaction to the promulgation of laws and regulations in their respective countries, i.e., the NER and Grenelle II Acts in France, and National Instrument 51-102 and CSA Staff Notice NR 51-333, issued by the Canadian Securities Administrators. The firms' voluntary disclosures according to GRI guidelines are also investigated. Substantive legitimacy theory is used to explore the level of substantive disclosures provided by Canadian and French firms. The findings reveal that the French parliamentary regime is more successful than the Canadian stock exchange regulation in triggering environmental reporting, and that the GRI combined with local regimes prompts environmental disclosures. Notwithstanding the improvements in environmental reporting under all three regimes, a

very low level of substantive disclosure is noted in both countries.

**Keywords** Canada · Environmental reporting · France · Institutional legitimacy · Normativity · Substantive legitimacy

## Introduction

Corporate environmental scandals such as the BP oil spill in the Gulf of Mexico, the rampant pollution created by the fashion industry in China, and the devastating Montreal, Main & Atlantic Railway train explosion in Lac-Mégantic, Québec, Canada, are among the numerous events that continue to draw attention to corporate environmental responsibility. Democratic principles suggest that people are entitled to information about corporate activities that can potentially affect them (Gray 2013). Similarly, financial (Devinney 2009; Li and McConomy 1999) and non-financial (Deegan 2013) stakeholders such as governments, regulators, suppliers, creditors, customers, employees, communities, non-governmental organizations (NGOs), investors, and society in general (CGA Canada 2005; Desjardins and Willis 2011) rightfully want to know more about organizational activities that impact on the environment. Corporate environmental disclosure can potentially help stakeholders assess whether an organization operates in an acceptable or legitimate manner with respect to environmental matters, thus fulfilling its 'social contract' (Patten 1992; Shoker and Sethi 1974). Countries around the world adopt various regimes such as laws and security commission rulings to spur corporations to improve their environmental disclosures. The International Organization for Standardization, AccountAbility, the Global Reporting

---

✉ Anne Fortin  
fortin.anne@uqam.ca

Mohamed Chelli  
m.chelli@tbs-education.fr

Sylvain Durocher  
durocher@telfer.uOttawa.ca

<sup>1</sup> Toulouse Business School, Université de Toulouse, 20, Bd Lascrosses, BP 7010, 31068 Toulouse Cedex 7, France

<sup>2</sup> Telfer School of Management, University of Ottawa, 55 Laurier East, Ottawa, ON K1N 6N5, Canada

<sup>3</sup> Department of Accounting, Université du Québec à Montréal, C.P. 8888, Succ. Centre-Ville, Montreal, QC H3C 3P8, Canada

Initiative (GRI) and other international NGOs have also developed reporting guidelines (i.e., non-law regimes) to improve environmental reporting. However, a significant question remains: do corporations really comply with these various regimes?

Bebbington et al. (2012) demonstrate that while formal environmental reporting laws enacted by the State do not necessarily lead to normativity—i.e., when actors see rules as binding—informal reporting regimes developed by NGOs can achieve that purpose. For example, they found that power companies in Spain did not necessarily comply with state legislation on environmental reporting, whereas their UK counterparts implemented voluntary disclosure based on award criteria developed by the Association of Chartered Certified Accountants. The authors argue that formal legislation must be perceived by actors as appropriate and legitimate in order to be successfully implemented. These same qualities can also institutionalize informal guidelines. Deegan and Shelly (2014) demonstrate that corporations and industry associations tend to favour an anti-regulation approach, while environmental NGOs, consumer associations, employee groups and individuals prefer a form of government intervention that stimulates environmental reporting. Identifying the most successful type of regime remains an empirical question. Bebbington et al.'s (2012) paper opens the door to research that compares environmental reporting regimes and their ability to lead to normativity. Although environmental disclosure is essentially a voluntary activity wherever it is practiced, some countries have opted to officially regulate it while others have decided to rely on market mechanisms, such as stock exchange disclosure requirements, to trigger this form of reporting. The objective of this paper is to compare two countries that differ in that regard, namely France and Canada.

France is one of the nations that opted for official parliamentary legislation. In 2001, the French Parliament promulgated the New Economic Regulations (NER) Act, which came into effect in 2002 (Chelli et al. 2014). The regulations included article 116 on environmental disclosure, later to be replaced by the Grenelle II Act in 2010 (applicable in 2012), a national commitment to the environment that includes provisions for environmental disclosure (ORÉE 2013). Both laws carry no penalties for non-compliance. The French situation provides a unique opportunity to assess the success of a legislative regime that prescribes more extensive environmental disclosure but does not penalize non-compliance.

Canada, for its part, relies on market mechanisms. Although Canadian environmental reporting remains mainly a voluntary process, the Canadian Securities Administrators (CSA) has issued a few mandatory environmental disclosure requirements (ACCA 2013). In 2004,

the CSA released National Instrument 51-102 *Continuous Disclosure Obligations*, which includes a few broadly stated environmental disclosure requirements for financial impacts, liabilities, environmental policies, and risks. In late 2010, it issued CSA Staff Notice NR 51-333 *Environmental Reporting Guidance*, providing additional guidance on how to report items listed in NI 51-102. These requirements essentially entail lenient penalties for non-compliance. The Canadian situation thus provides a useful scenario for assessing the success of a stock exchange regime that stipulates environmental disclosure but is lenient in its penalties.

Our decision to compare France and Canada is motivated by our interest in contrasting two different types of regimes, one based on legislation and the other on market mechanisms. No study has yet compared these two countries in terms of corporate responses to local legislation/regulations on environmental reporting. A further goal was to investigate regimes that carry lenient penalties or no sanctions at all for non-compliance. If one or both regimes are found to result in a high level of normativity, that finding would suggest that monitoring mechanisms such as penalties for non-compliance are not a necessary condition of normativity. As regime theory suggests, normativity can ensue from practices that are not necessarily mandated and enforced by a hierarchical state (Bebbington et al. 2012). France and Canada may well mandate environmental reporting through legislation and securities commission rulings, but such soft law systems (Chelli et al. 2014)—characterized by the absence of rigid enforcement mechanisms—could nevertheless result in normativity. Our choice to focus on soft law regimes also leads us to include a totally voluntary regime in our investigation: The GRI reporting guidelines.

The GRI, a private, NGO located in Amsterdam, is a global sustainability leader that promotes the use of sustainability reporting as a way to enhance organizations' sustainability practices and help them engage in sustainable development. Since the late 1990s, the GRI has developed and disseminated voluntary environmental reporting guidelines (e.g., GRI 2013) to enhance the quality, comparability, thoroughness, and usefulness of sustainability reporting (Willis 2003). The well-diffused nature of the GRI guidelines provides a basis for assessing additional corporate voluntary disclosures reported over and above those required by legislation or securities commission regulations.

The objective of this paper is to make a comparative assessment of the normativity of three environmental reporting regimes—the French legislation, the Canadian security commission regulations, and the GRI reporting guidelines. Normativity is the state of compliance with rules (Bebbington et al. 2012). Because it can lend itself to

different perspectives, it is a productive concept to use, whether to focus on processes (how actors come to see rules as binding) or end results (how actors actually abide by the rules). Bebbington et al. (2012) examined the processes through which formal law and informal reporting regimes lead to normativity, while Chauvey et al. (2015) concentrated on end results and inferred normativity from corporate environmental disclosures. Like the latter, our study examines the end result—i.e., corporate reporting practices—to infer normativity in regard to the three above-mentioned regimes.

To examine corporate reporting practices, we draw on legitimacy theory, as others have done before us. Unlike most previous research, however, we interpret our findings in light of institutional and substantive legitimacy rather than from a strategic legitimacy perspective. As strategic legitimacy theory suggests, firms in environmentally sensitive sectors are expected to provide more environmental disclosures than those who operate in less environmentally sensitive industries. However, since our focus is corporate managers' level of compliance with specific environmental reporting regimes, we incorporate an institutional view of legitimacy to interpret disclosures provided in response to these regimes. Furthermore, considering that corporate environmental reporting is sometimes self-laudatory (Boiral 2013; Mobus 2005), we wish to go further than most previous research and incorporate a substantive view of legitimacy (Haji and Mohd Ghazali 2012; Hrasky 2012) to distinguish between symbolic and substantive disclosures. Although firms may provide the information required by legislation, rulings or guidelines, symbolism could be a factor in their reports to stakeholders. Symbolism aside, however, a substantive view of legitimacy is useful for the study of disclosures about specific corporate initiatives that have a positive environmental impact.

Our findings show that environmental reporting by French companies significantly improved after the promulgation of the NER and Grenelle II Acts and that by 2013, their level of compliance was fairly high (81.3 % of required items). Environmental reporting also significantly improved in Canada after the issuance of NI 51-102, but not after NR 51-333. Compliance with Canadian regulation is low (highest mean percentage of required items = 25.0 % in 2011). When comparing disclosures in relation to the required items under the French and Canadian regimes, it is clear that the French regime is more effective in leading to normativity. French and Canadian firms also provided additional voluntary disclosures in relation to the GRI guidelines, with the French firms showing greater conformity to their legislative regime than to the GRI guidelines (81.3 % vs. 58.3 % in 2013). The reverse is noted in Canada where the GRI guidelines seem to lead to greater normativity (31.6 % vs. 22.3 % in 2013). However, partial

conformity to the GRI guidelines acts in conjunction with the local regime in both countries to improve environmental reporting. Furthermore, although French firms provide more disclosures in general and more substantive disclosures than Canadian firms, the highest percentage of substantive disclosure in France in 2012, 4.2 %, was nonetheless very low.

This paper makes several contributions to the literature on corporate environmental disclosure. First, it offers a theoretical contribution by combining the concept of normativity and institutional legitimacy to examine environmental reporting. Second, it pursues the debate on normativity initiated by Bebbington et al. (2012) by comparing three different regimes. Comparative studies are scant and the very few that exist do not assess the normativity of the regimes investigated. Also, although many studies have used the GRI guidelines as a measure of environmental disclosure, none assessed normativity per se. Third, this study innovatively adopts an institutional and a substantive view of legitimacy to make sense of environmental reporting practices. Fourth, it is the first to suggest that non-law regimes can act in conjunction with regulations to trigger environmental reporting. In sum, it adds to the growing body of research on corporations' response to environmental reporting legislation (Bebbington and Thy 1999; Chelli et al. 2014; Larrinaga et al. 2002), while, more importantly, also contributing to an emerging body of research that compares responses to legislation and other voluntary regimes in different countries (Bebbington et al. 2012).

This research also has practical implications. Comparing environmental reporting practices under these three regimes can provide useful insights into the most effective way to trigger environmental reporting. Environmental reporting must improve in order for stakeholders to assess whether corporate activities are appropriate within their socially constructed system of values (Suchman 1995). It is also essential for NGOs' assessment of corporate environmental performance (Reid and Toffel 2009) and for government policy decisions (Reid and Toffel 2009).

The rest of the paper is organized as follows. The next section presents the study's theoretical framing based on normativity and legitimacy. It is followed by a section that briefly discusses the French laws, Canadian stock exchange regulations, and the GRI guidelines. The following section presents the methodology, followed by the presentation of our results. The last section further discusses our results and presents conclusions and areas for future research.

## Theoretical Framing

Our theoretical framing combines the concept of normativity and legitimacy theory (more specifically institutional legitimacy theory) to make sense of corporate

environmental reporting practices. We also draw on substantive legitimacy theory to extend our understanding of these practices.

### Normativity

In their seminal paper, Bebbington et al. (2012) define normativity in relation to actors coming to see rules as binding in the context of corporate reporting. Their concept is useful for making sense of corporate environmental reporting regimes because it can help explain how a community of corporate managers ends up conforming to a set of rules. The concept of normativity can be envisioned from different perspectives. In a process perspective (Bebbington et al. 2012), the emphasis is on how actors come to see rules as binding. In an end-results perspective (Chauvey et al. 2015), the emphasis is on actors abiding by the rules as demonstrated by their corporate communication practices. Bebbington et al. (2012) disagree with the environmental reporting literature's suggestion that only state legislation with enforcing mechanisms can correct deficient environmental reporting practices (e.g., Deegan and Rankin 1996, 1997; Gray et al. 1996; Mobus 2005; Owen et al. 1997). In their view, normativity is not necessarily under government monopoly. It is now produced by various agencies and actors. Bebbington et al. (2012) use regime theory, arguing that it “allows for multiple sources of normativity associated with practices that are not necessarily mandated and enforced by a hierarchical state” (p. 79). Regime theory states that regimes relate to implicit or explicit norms and decision-making procedures in a given area. Norms, which refer to converging expectations about recognized patterns of behaviour or practice, differ from legal rules, which are “found, defined and labelled” (p. 79). One basic tenet of normativity is that it can stem from law or less formal systems of rules.

France's NER Act and its subsequent Grenelle II Act, and the securities commission regulations in Canada, are examples of legal rules to which Bebbington et al. (2012) refer. Although these laws and regulations carry few or no penalties for non-compliance, they are nonetheless binding systems of rules to which corporate managers are expected to conform. The GRI voluntary reporting guidelines (e.g., GRI 2011, 2013), for their part, are an example of a non-law system of rules, in the words of Bebbington et al. (2012). It is an internationally recognized system (Bebbington et al. 2012) that sets forth one of the strictest set of voluntary reporting guidelines in the world (Boiral 2013). By 2016, the GRI sustainability disclosure database will contain more than 20,000 reports prepared according to the GRI framework by firms in over 90 countries (GRI 2016a, b).

Bebbington et al. (2012) contend that a study of normativity production can highlight why some regimes

“exert a pull towards compliance, while others do not” (p. 80). Our aim is to compare the normativity of three regimes not by investigating their respective processes, but by examining corporate response to their promulgation. We thus adopt an end-results perspective to normativity.

Our study combines normativity and legitimacy theory to interpret Canadian and French firms' compliance with three types of regime. We now explain how this combination enables a refined application of institutional legitimacy theory.

### Institutional Legitimacy

Previous research that used legitimacy theory to examine environmental reporting practices adopted a mainly strategic view of legitimacy to explain voluntary environmental disclosures (e.g., Chen and Roberts 2010; Moerman and Van der Laan 2005; Tilling and Tilt 2010). In these studies, legitimacy is considered to be a strategic resource (Dowling and Pfeffer 1975; Pfeffer and Salancick 1978) that managers try to extract from their environment to ensure organizational survival. Strategic legitimacy does not necessarily relate to the organization's actual behaviour, but rather is associated with society's collective perception about organizational behaviour (Deegan 2014). Legitimacy theory is a systems-based theory that helps researchers understand the role of corporate communications in the relationship between organizations, stakeholders, and society (Gray et al. 1996). Organizations have the right to exist only if society views their activities as legitimate and if their conduct meets societal expectations—in other words, if they fulfil their social contract (Deegan 2014; Gray et al. 1996; Shoker and Sethi 1974).

Corporate communications play a central role in stakeholders' perceptions of corporate legitimacy (Deegan 2014); for instance, changes in social awareness lead companies to use environmental disclosure as a legitimation tool to maintain societal support (Aerts and Cormier 2009; Branco et al. 2008; Brown and Deegan 1998; Deegan and Gordon 1996; Deegan et al. 2002; de Villiers and van Staden 2006; Islam and Deegan 2010; Neu et al. 1998). Similarly, companies that operate in sensitive environmental sectors (Campbell et al. 2003; Deegan and Gordon 1996; Moerman and Van der Laan 2005), organizations with poor environmental performance (Cho and Patten 2007; Cho et al. 2010, 2012; Deegan and Rankin 1996; Patten 2002), and companies subject to specific environmental regulation (Buhr 1998; Tilling and Tilt 2010) tend to provide more environmental information to manage their legitimacy. Corporate crises subsequent to environmental incidents also lead the companies directly involved (Cho 2009), as well as others in the same industry (Deegan et al. 2000; Patten 1992), to use environmental disclosure to manage their legitimacy.

Many authors recognize that there are two major views of legitimacy—a strategic view, as discussed above, and an institutional view (e.g., Ashford and Gibbs 1990; Beck et al. 2015; Chen and Roberts 2010; Deegan 2014; Gray et al. 1996; Suchman 1995). Whereas the former adopts the viewpoint of managers looking “outward” for societal support, the latter takes the perspective of society looking “in”, such as when external institutions shape and infuse organizations (Suchman 1995). As Chen and Roberts (2010, p. 655) stated:

From a societal perspective, institutional legitimacy is used to investigate what/which institutional structures and activities as a whole [...] have gained social acceptance. These established structures, activities, and procedures are used as the base line to evaluate whether the legitimacy-seeking organization adheres to these expectations, like legitimated institutions.

Institutional theorists contend that organizational dynamics are the result of social norms and beliefs to which managers comply to ensure organizational legitimacy and survival (Meyer and Rowan 1977; DiMaggio and Powell 1983). Isomorphic processes—coercive, mimetic and normative—influence managers to adopt organizational arrangements that conform to recognized institutional patterns (DiMaggio and Powell 1983) that represent socially constructed systems of values, norms, beliefs, and definitions (Suchman 1995).

Regulations on environmental disclosure is a type of institutional pattern—a coercive pattern—that constitute a socially constructed system of values and beliefs (Chelli et al. 2014) setting out the explicit terms of the social contract (Gray et al. 1996; Shoker and Sethi 1974). Institutional theorists rely on the notion of regulative legitimacy (Baum and Oliver 1991; Meyer and Scott 1983; Ruef and Scott 1998; Scott 1995) which is obtained by compliance or consistency with regulations (Zimmerman and Zeitz 2002). Considering that it may be difficult for managers to meet the information needs of all stakeholders (Williamson and Lynch-Wood 2008), managers could perceive legislation on environmental reporting as a well-balanced representation of stakeholders’ variable and subjective needs (Chelli et al. 2014). Conformity to legislation is an incentive for providing environmental disclosure (Deegan 2002) and signals adherence to established institutional logics (Meyer and Rowan 1977). Institutional legitimacy, particularly regulative legitimacy, is secured when corporations comply with legislation.

Bebbington et al.’s (2012) thesis about the normativity of non-law systems of rules offers innovative insights about institutional dynamics in the context of environmental reporting. On this basis, corporate managers may come to see the GRI guidelines just as binding as parliamentary

legislation or securities commission regulations that carry no penalties or lenient sanctions for non-conformity. The authors argue that the legitimacy of a system of rules has a strong impact on its resulting normativity. Given the legitimacy of the GRI guidelines (Brown et al. 2009; Waddock 2008), conformity to their content might be an incentive for providing environmental disclosure and signalling adherence to established institutional logics (Meyer and Rowan 1977). As Waddock (2008, p. 93) points out:

GRI, now the global benchmark for standardized ESG[environmental, social and governance]/non-financial reporting, is meant to be comparable to generally accepted accounting principles for financial reporting.

Although many studies have used part of the GRI guidelines to measure the extent of environmental disclosures (e.g., Clarkson et al. 2008), very few have examined the guidelines’ normativity per se. Furthermore, only a handful of studies examined corporate conformity to legislative environmental requirements. Partial compliance has been documented in Spain (Bebbington et al. 2012; Criado-Jiménez et al. 2008; Larrinaga et al. 2002; Llana et al. 2007) and the U.S. (Alciatore and Dee 2006). It is worth noting that these studies examined environmental reporting under mandatory *accounting* regimes, and interpret their findings in light of strategic legitimacy theory by showing, for instance, that managers tend to focus on positive rather than on negative mandatory requirements (Llana et al. 2007). Bebbington and Thy (1999) is one of the scant studies providing insights on environmental reporting under a non-accounting regulation regime. Examining reporting practices under the Danish Environmental Protection Act, they found that 90 % of firms provided, as required, a “green account” to local and government authorities. The fact that companies could be fined if they failed to comply with the legislation (International Institute for Industrial Environmental Economics 2002) might explain the high compliance rate. Chelli et al. (2014) also examined a non-accounting regulation regime. Using an institutional view of legitimacy, they documented that French firms increased the quality and quantity of environmental reporting over the 2001–2011 period, following the promulgation of the NER Act. Their results contradict Delbard (2008), who suggested debatable improvements. Albertini (2014) also documented improved environmental reporting by French companies subject to the NER Act during 2005–2010. Similarly, Chauvey et al. (2015) found significant increases in the space allocated to CSR disclosure by French firms from 2004 to 2010 but uncovered only some evidence of increased quality. Going one step further than Albertini (2014), Chelli et al. (2014) and Chauvey et al. (2015), we examine French companies’

reactions not only to the promulgation of NER, but also Grenelle II. We also look at Canadian companies' reaction to the promulgation of securities commission regulations to compare the normativity of both regimes. Under the institutional view of legitimacy, French corporations would be prompted to conform to NER and Grenelle II upon their promulgation even though they include no penalties for non-compliance. Canadian corporations would also be driven to conform to securities exchange regulations NI 51-102/NR 51-333 upon their enactment despite their soft penalties for non-conformity. An institutional view of legitimacy also predicts that French and Canadian firms would comply with the GRI guidelines. Our study therefore compares the normativity of environmental reporting regimes prevailing in both countries.

This type of comparison is scarce in the literature. Although Jindrichovska and Purcarea (2011) compared the environmental reporting practices of Czech and Romanian companies, Michelin (2011) compared those of Continental European, UK and US companies while Aerts et al. (2006) compared those of Canadian, French and German companies, they did not assess the extent to which companies complied with their respective legislations. Our study thus contributes to this emerging literature by comparing degrees of conformance to environmental reporting legislation in different countries.

Our combination of institutional legitimacy and normativity offers interesting insights for investigating scenarios involving a variety of reporting regimes. According to institutional legitimacy theory, to be considered legitimate in the eyes of stakeholders, corporate managers should be keen to disclose information required by legislation/regulations or the GRI guidelines. In so doing, they signal their adherence to established institutional logics. However, under institutional legitimacy theory, it is unclear which system—sanction-based, non-punitive, or voluntary reporting—most effectively leads to corporate environmental disclosure. Normativity, with its emphasis on regime theory, enables a closer look at the type of institutional logics or rules to which corporate managers eventually conform. All in all, we argue that normativity enables a refined application of institutional legitimacy theory.

In sum, the combination of the normativity and institutional legitimacy concepts enables us to analyse and contrast the environmental reporting practices of a sample of French and Canadian firms and to assess which regime is more effective in leading to normativity. To do so, we address the following research questions:

RQ1: Did environmental reporting by French companies increase after promulgation of the NER and Grenelle II Acts? Did French companies comply with these laws?

Do they provide additional voluntary disclosures aligned with the GRI guidelines?

RQ2: Did environmental reporting by Canadian companies increase after promulgation of CSA National Instrument 51-102 and CSA Staff Notice NR 51-333? Did these companies comply with the regulations? Do they provide additional voluntary disclosures aligned with the GRI guidelines?

RQ3: What type of regime is more effective in leading to normativity?

### Substantive Legitimacy

Although parliamentary legislation (Chelli et al. 2014), market mechanisms (ACCA 2013), and non-law regimes (GRI 2011, 2013) can lead to more extensive environmental disclosures, it remains unclear whether they actually lead to substantive environmental outcomes (Unerman and Chapman 2014). Legitimation efforts can be substantive and/or symbolic (Ashford and Gibbs 1990), but only a handful of studies have attempted to distinguish between substantive and symbolic communications. Kim et al. (2007) suggest that there are two approaches to corporate communications: a behavioural management approach, corresponding to a substantive approach, and a symbolic management approach. Milne and Patten (2002) also distinguish substantive from symbolic approaches to legitimation. A variety of corporate strategies can be used to gain, maintain, or repair legitimacy (Dowling and Pfeffer 1975; Lindblom 1994; Suchman 1995). Managers can substantively change organizational methods and outputs (substantive) or symbolically change perceptions about these methods and outputs (Cahan and van Staden 2009). Indeed, managers may undertake and describe activities that are merely window dressing or “greenwashing” to look good in the public eye on issues of sustainability but without making significant changes to their actual practices (Waddock 2008). In this respect, managers interviewed by O'Donovan (2002) mentioned that their disclosure decisions were motivated by intentions to foster favourable perceptions of the organization. Several instances of symbolic disclosures are documented in the literature. Boiral (2013) compared sustainability issues raised in the press and those covered in sustainability reports of 23 companies in the energy and mining sectors and concluded that these reports can be viewed “as simulacra that camouflage real sustainable-development problems, presenting an idealized version of company situations” (p. 1061). Driscoll (2006) demonstrated that Canadian forest companies use a hybrid mix of substantive and symbolic strategies to manage their legitimacy. Hrasky (2012) found that firms in carbon-intensive sectors provided a greater level of substantive

disclosures than those in less intensive sectors, the latter relying more heavily on symbolic disclosure. Several authors have discussed self-laudatory and symbolic environmental disclosure practices (e.g., Berrone et al. 2015; Deegan and Gordon 1996; Deegan and Rankin 1996; Li et al. 2015; Mobus 2005; Rodrigue et al. 2013).

Substantive legitimacy results when managers describe corporate initiatives that actually lead to specific positive environmental impacts (Haji and Mohd Ghazali 2012; Hrasky 2012). Although many authors recognize the potentially symbolic nature of environmental disclosure, scarcely any actually make this distinction in their study of environmental reporting. One exception is Hrasky (2012), who made this distinction in relation to a specific environmental issue, carbon footprint disclosures.

Our study thus contributes to the literature by incorporating a substantive view of legitimacy in its assessment of overall corporate environmental disclosure. It assesses not only the overall change in environmental disclosure in response to parliamentary legislations, stock exchange regulations, and the GRI guidelines, but also the general extent to which the French and Canadian firms provide substantive environmental disclosures. This leads to our fourth research question:

RQ4: Are the most substantive environmental disclosures produced by the French or the Canadian firms?

Before addressing our methodology, we present the background behind the promulgation of the French laws, the Canadian regulations, and the GRI guidelines.

### The French Laws, the Canadian Regulations, and the GRI Guidelines

In France, article 116 of the New Economic Regulations (NER), a law enacted in 2001, made it mandatory for all publicly listed companies to report on corporate social responsibility indicators, including about 25 relating to the environment. The purpose of these regulations was to compel French companies to inform their stakeholders about the social and environmental consequences of their activities, to enable comparisons between companies, and to lead French companies to adopt a more proactive approach to sustainable development even though the law did not mandate specific constraints in terms of standards or pollution thresholds (Albertini 2014; Delbard 2008). As Chelli et al. (2014) explain, article 116 was published in an era of strong international emphasis on improving environmental and social information, as reflected in the first GRI reporting guidelines (GRI 1997), the revised Organization for Economic Co-operation and Development (OECD) guidelines for multinationals (OECD 2000), and

the European Union's sustainable development strategy (CEC 2001). Typical of French-style "soft law", the NER Act does not clearly state specific sanctions for non-compliance (Delbard 2008).

Article 225 of Grenelle II significantly improved on NER by extending the reporting requirement to some non-publicly listed companies whose total revenues and number of employees exceeded predetermined thresholds. It modified and extended the list of information items to be reported and required the information to be audited by an independent party. The first draft of Grenelle II was published in 2008 and debated in 2009, resulting in the law's enactment in 2010. The first draft of the decree was published in March 2011 but the State Council decree that listed disclosure items was not adopted until 24 April 2012. Article 225 was to be implemented for fiscal years beginning after 31 December 2011 by firms reporting revenues of more than one billion euros and employing a labour force of more than 5000 employees. This legislation reflected the political will for integration in corporate reporting by requiring the inclusion of non-financial (environmental) information in the financial report (ORÉE 2013). Like the NER, Grenelle II does not carry penalties for non-compliance. As was likely the case for the NER (Chelli et al. 2014), the absence of enforcement mechanisms in Grenelle II is probably due to government bowing to corporate pressure.

In Canada, securities commissions require publicly traded companies to disclose environmental information as part of their continuous disclosure requirements. It is worth noting that there is no Canadian national securities regulator. Each of the 10 provinces and three territories assume their own responsibility for securities regulation. However, there is an umbrella organization called Canadian Securities Administrators (CSA) that works to improve, coordinate, and harmonize regulation of Canadian capital markets (CSA 2009).

In 2004, the CSA developed and issued National Instrument 51-102 *Continuous Disclosure Obligations* (CSA 2004), which is particularly relevant to environmental matters. It sets out rules and policies for financial statements, management discussion and analysis ("MD&A"), annual information forms ("AIFs"), material change reporting, information circulars, and other continuous disclosure-related matters (Pearson 2006). Some of these provisions broadly relate to disclosure of environmental information such as environmental policies, risk factors (including environmental risk), and impact of environmental protection requirements. As time passed, investors and other stakeholders expressed concerns about the adequacy of the disclosures, such as reporting material information on environmental matters in voluntary reports but not in securities regulatory filings, the fact that the

information provided was not always complete and comparable among issuers, use of boilerplate disclosure that provides non-significant information, and the fact that the information is not integrated into financial reporting (CSA 2010). In response to these concerns, CSA Staff Notice NR 51-333 *Environmental Reporting Guidance* was published in late 2010 to provide additional guidance on how to report items listed in NI 51-102 (CSA 2010).

In the Canadian context, non-compliance measures range from simple proactive letters requiring changes in the next filing to requests for re-filing certain continuous disclosure documents. Cases of critical deficiencies can lead to inclusion in the ‘default list’, release of a cease trade order, or application of enforcement mechanisms. In our view, given the broad nature of environmental disclosure requirements, it is reasonable to think that cases of severe deficiencies would be very uncommon. It is worth noting that continuous disclosure provided in response to National Instrument 51-102 and CSA Staff Notice NR 51-333 is not required to be audited by an independent auditor.

The GRI is the most influential institution in terms of environmental reporting worldwide (Brown et al. 2009; Etzion and Ferraro 2010; Milne and Gray 2013). Since the early 2000s, the GRI guidelines have been widely considered the best developed international framework for sustainability reporting (Brown et al. 2009). The guidelines were developed and have been updated based on input from thousands of experts in business, NGOs, and other types of organizations around the world (Waddock 2008). In 2013, about 80 % of the 5000 companies that reported on sustainability used the GRI’s framework. Although government departments and market authorities in 23 countries refer to the GRI guidelines in their policy and regulatory instruments (GRI 2014), corporate use of the guidelines is totally voluntary.

## Methodology

To meet our goal of examining the impact of parliamentary legislation and stock exchange regulations on environmental reporting practices, our data collection centred at least on a 3-year window surrounding the promulgation of the acts/regulations, ending with the most recent fiscal year prior to data collection (2013). More specifically, for French firms, the data were collected for 2001–2003 (NER effective in 2002) and 2007–2013 (Grenelle II was effective in 2012 but its first draft was published in 2008, debated in 2009 and adopted in 2010; the preliminary list of disclosure items was published in 2011 and subsequently confirmed in the decree adopted in 2012). For Canadian firms, the data were collected for 2003–2005 (NI 51-102

effective in 2004) and 2010–2013 (Staff Notice NR 51-333 effective in 2011). A total of 10 years of data was thus collected for each French firm and 7 years for each Canadian firm. Since our data collection involved detailed content analysis, cost constraints mandated limiting our sample to 40 firms. We were thus left with a total of 340 firm-years.

Our sample includes 20 French firms from various industry sectors listed on the SBF 120 stock market index. We identified 20 Canadian firms active in the same industry segments to ensure that their sustainability concerns were similar to those of the French firms. Most of the Canadian firms were listed on the S&P/TSX Composite Index. This approach enabled us to include large firms from both countries, of which equal proportions fell into environmentally sensitive and less sensitive sectors. Table 1 presents our sampled companies.

The first step in our content analysis was to determine which documents to analyse (Krippendorff 2013). Our first data source, annual reports, are appropriate for investigating environmental reporting for a variety of reasons (Unerman 2000): they lend a considerable degree of credibility to their content, are the sole source of information for a number of stakeholders, and are widely distributed. Second, we used stand-alone sustainability reports (Unerman 2000) given their widespread use as a source of information on corporate environmental impacts and performance. Lastly, we used the Annual Information Form (AIF) that Canadian firms prepare in response to securities commissions’ requirements. All these documents were generally publicly available on the companies’ websites or in the Canadian repository of documents for listed firms ([www.sedar.com](http://www.sedar.com)). In some cases, the firms provided the sustainability reports directly or confirmed that they had not published such a report for some specific fiscal years. In the end, we examined 682 documents.

Although recent studies (e.g., Moerman and Van der Laan 2005) looked at environmental information posted on corporate websites (other than the annual report, sustainability reports, and AIFs), we concentrated on the three above-mentioned sources for several reasons. Given the historical nature of our study, it was impossible to access the entire website content of the sampled companies for previous years. This omission should not have a significant impact because the information required under the NER Act must be disclosed in “management reports” (Chelli et al. 2014); arguably, the annual and/or sustainability reports. Environmental (non-financial) information required under Grenelle II should be disclosed in the document that contains the corporation’s financial information (ORÉE 2013); also usually the annual report. For Canadian firms, information was collected from the AIF—a document specifically demanded by the CSA. In fact, the



**Table 1** Sample of French and Canadian firms

French firms	Canadian firms	Industry sector	Environmental sensitivity <sup>a</sup>
Air France	WestJet Airlines Ltd	Airline	Higher
Air Liquide	Methanex	Industrial gases/chemicals	Higher
Alcatel	Blackberry Limited	Telecommunication equipment	Lower
Eurotunnel	Bombardier Inc.	Transportation	Higher
Cap Gemini	CGI Group Inc.	Technology	Lower
Danone	Saputo Inc.	Food producer	Lower
Dexia	Bank of Montreal	Bank	Lower
EDF	ATCO Group	Utility	Higher
Eiffage	SNC Lavalin Group	Construction	Higher
Eramet	Semafo Inc.	Industrial metals and mining	Higher
France Telecom	Telus Corporation	Telecommunications	Lower
Groupe Casino	Loblaw Companies Limited	Food retailer	Lower
Lafarge	International Forest Products Limited	Manufacturer of building materials	Higher
Lagardère	Quebecor Inc.	Media	Lower
LVMH	Gildan Activewear Inc.	Luxury goods	Lower
Michelin	Westport Innovations Inc.	Automobiles and parts	Lower
Nexans	Martinrea International Inc.	Electrical components and equipment	Higher
Sanofi	Nuvo Research Inc.	Pharmaceutical	Lower
Suez	Just Energy Group Inc.	Gas, water and multiutilities	Higher
Total	Suncor Energy Inc.	Oil and gas	Higher

<sup>a</sup> Mainly based on North American Industry Classification System (NAICS) codes of environmentally sensitive industries. Available at <http://www.partneresi.com/resources/naics-codes-effective-06-01-12.pdf> (accessed 5 May 2015)

Canadian regulations require companies to include their environmental information in either the Management Discussion & Analysis (MD&A) section of the annual report or in the AIF.

To assess the scope of corporate environmental reporting in these sources, we developed a scoring grid that comprised all items required by NER and Grenelle II, the Canadian securities regulations, and the GRI reporting guidelines. We used Version 3.1 of the GRI framework (GRI 2011) because Version 4 (GRI 2013) pertained only to the preparation of reports published after 31 December 2015. Although the GRI guidelines were amended again after the first version was updated in 1999 (Clarkson et al. 2008), we used version 3.1 for the sake of consistency and comparability in the data collection and analysis. Note that the GRI guidelines include general and specific standard environmental disclosure items, some similar to those required by NER and Grenelle II and Canadian stock exchange regulations. Our grid, which consists of 83 items, is far more comprehensive than other analyses in the rest of the literature, which examined as little as only a few items (e.g., O'Dwyer 2003) or no more than 50 or so items (e.g., Clarkson et al. 2008 and Du et al. 2014, used a 45-item grid). The maximum disclosure score for the 83 items is 90 since some items are worth 0–1, others 0–2, and yet others

0–3, depending on item type. The 0–1 dichotomy indicates the presence or absence of the item. The 0–2 grading corresponds to the absence (0), qualitative explanation (1) or quantitative details (2) of a specific item. The 0–3 grading pertains to items that include three subcomponents. Appendix 1 presents our scoring grid.

We use content analysis as the data generation method. Content analysis is a method of codifying the text of a document into various groups or categories based on selected criteria to permit further analysis (Milne and Adler 1999). Our aim is not so much to assess the quantity of the reporting but rather to investigate the disclosure of specific items. Whereas previous studies using legitimacy theory mainly counted the number of pages, sentences or words to measure the overall extent of environmental reporting (e.g., Deegan et al. 2002; Neu et al. 1998) or the extent to which information on a limited number of themes was disclosed (e.g., Branco et al. 2008; Islam and Deegan 2010; O'Dwyer 2003; van Staden and Hooks 2007), we performed a documentary analysis by reading the entire content of sustainability reports, annual reports and AIFs to identify environmental issues. This analysis involved using our detailed scoring grid to code the contents of these documents in order to infer the normativity of each regime. The coding exercise involved approximately 1400 h of work.

Care was taken to ensure that the coding was reliable and consistent (Milne and Adler 1999). In a first step, two coauthors simultaneously coded the same annual and sustainability reports of a French company. Discrepancies were resolved and the scoring grid refined after thorough discussions. This exercise was repeated for a number of reports until the coding became consistent and discrepancies were reduced to a minimum (less than 10 %). One of the coauthors involved in the first step completed the coding for the entire French sample while the other implemented the same pretesting approach with the third author and two accounting students until the same level of consistency was reached. The two students then completed the coding for the Canadian sample under the authors' close scrutiny. Frequent discussions took place to resolve any coding issues.

To answer RQ1, we assess whether a significant change occurred in the average NER and Grenelle II scores (see scoring grid—Appendix 1) following promulgation and then determine the percentage of items required that were actually disclosed. We identified changes in the average GRI score (see scoring grid—Appendix 1) for the period under study and the percentage of GRI items actually disclosed by the French firms.

The same approach was used to answer RQ2 in relation to the Canadian regulations and the GRI scores of the Canadian firms (see scoring grid—Appendix 1). To answer RQ3, we compare the NER/Grenelle II, Canadian regulations, and GRI percentage scores and their changes.

For RQ4, we measure the number of words related to substantive environmental disclosures, i.e., all text segments in the documents that both 1) describe initiatives and 2) set out their positive environmental impacts (Hrasky 2012). Although this measure cannot precisely capture a company's ability to reduce its environmental impacts, we expect that organizations would report any success in their environmental efforts. Our method is similar to Hrasky's (2012), which measured the relative number of "behavioural disclosures" (which we call substantive disclosures) in sustainability reports. These are sentences pertaining to internal or external corporate initiatives that were undertaken to reduce carbon footprints or to help others in that endeavour. However, instead of measuring sentences, which can vary in length depending on the publication format, we opted for a more accurate method by measuring the relative number of words. An example of substantive disclosure is found in the Telus 2012 Corporate Sustainability Report (p. 132):

In 2012, our team continued implementing energy efficient programs to reduce absolute energy consumption and GHG emissions. We implemented more than 100 energy reduction initiatives, resulting in an

annualized elimination of 42.7 GWh of energy waste. This reduction is the equivalent of carbon sequestered annually by 435,000 seedling trees or removing 3500 cars off the road. We achieved this result through the following energy reduction initiatives:

- Retired old network and IT equipment.
- Installed intelligent cooling solutions in major network buildings.
- Optimized equipment room air conditioning through control and equipment set-point adjustments.
- Consolidating office buildings through our Work Styles program.

We then compute a substantive environmental disclosure indicator consisting of the total number of words related to substantive environmental disclosure divided by the total number of words in the reports (i.e., the full sustainability report and the sections that related to environmental issues in annual reports and AIFs).<sup>1</sup> We then compare the average substantive environmental disclosure indicator for the Canadian and French firms.

Although the Canadian companies publish their reports in French, English or both, the indicators were computed on the basis of the French reports. To compare word counts for the French and English reports, we obtained the word count of the English and French versions of the sustainability reports of three Canadian companies over five different periods and computed a mean conversion ratio ( $1.22 \times \text{number of English words} = \text{number of French words}$ ).

Finally, non-parametric tests were conducted to assess whether variables such as governance, size, profitability, and leverage (Othman and Ameer 2009) affect the disclosure practices of Canadian and French firms. Company data were required to be presented on the same basis, i.e., the Canadian dollar. Since some Canadian companies presented their financial statements in US dollars and French companies presented them in euros, we used the end of year conversion rate for balance sheet data and the mean conversion rate for income statement data.

## Results

### Sample Characteristics

In terms of size, the French firms were larger than the Canadian companies (mean = C\$86.857 million vs.

<sup>1</sup> We used the number of words in the full sustainability report since some categories such as strategy and analysis, and keys impacts, risks and opportunities, might be dealt with in various sections of the report rather than in a dedicated section on environmental issues.

C\$38.581 million),<sup>2</sup> but this difference is not statistically significant (see Appendix 2). In addition, there is no statistically significant difference between debt to assets ratios or return on assets (ROA). Most French firms (16/20), versus half of the Canadian firms (11/20), prepared a separate sustainability report. Thirteen French firms and seven Canadian firms used the GRI guidelines.

## Analysis of Results

This section addresses each research question in turn.

### *French Parliamentary Regime (RQ1)*

Our first question and sub-questions ask whether environmental reporting by French companies increased after the promulgation of NER and Grenelle II (henceforth GRE2), whether the companies complied with the law, and whether they disclosed additional information as suggested by GRI guidelines. Table 2 presents the mean scores of French companies in relation to NER and GRE2 requirements. NER and GRE2 require disclosure of 24 and 27 information items respectively (see Appendix 1). Table 2 also presents the mean percentage of items disclosed in relation to the requirements of each regulation.

Overall, environmental reporting progressed substantially from 2001 to 2013. Indeed, from a mean score of 3, representing 12.5 % of items required under NER in 2001, French firms obtained a score of 21.95 in 2013 and covered 81.3 % of items required under GRE2.

Table 2 shows that in response to NER, environmental disclosures increased considerably from 2001 to 2002. The significant increase also noted between 2002 and 2003 shows that this impact was long-lasting. Although French firms greatly enhanced their environmental disclosure practices following the introduction of NER, they reported only an average of 34 % of the items legally required in 2003. This figure increased to 54.8 % in 2010, the year of the promulgation of GRE2, subsequently reaching 75.2 % in 2013 (not tabulated). The increase in the average percentage of required NER items between 2010 and 2013 is due to greater disclosure of items also required by GRE2 since there was no increase in items required only by NER (see columns 2 and 3 of Table 3 discussed below).

Similarly, GRE2 had a significant and positive effect on environmental disclosure. Firms had already begun incorporating GRE2 items in 2011 when the GRE2 preliminary list of items was published, resulting in a mean score of 17, as compared to 14.85 for 2010. The mean score also

significantly improved to 20.53 in 2012, the year GRE2 came into effect, but increased more moderately to 21.95 in 2013. French firms' disclosure percentage for required GRE2 items increased from 55 % in 2010 to 81.3 % in 2013.

In response to RQ1, we observe that the sample firms significantly increased their level of compliance with legislation over the years. In terms of normativity, we can conclude that the French parliamentary regime was generally successful in improving the environmental reporting practices of French firms.

Table 3 presents statistical information on items that differ between NER and GRE2. When NER came into effect in 2002, it contained six disclosure items not covered by GRE2 (see Appendix 1). However, they were not disclosed significantly more in 2002 than in 2001. A significant rise in disclosure occurred in 2003, but the mean score for these items (1.35) was low. Disclosure of NER items appears to have risen gradually from 2007 to 2009. A sharp increase happened in 2010 (2.30), ending up with a mean score of 2.47 in 2011 (*p* not significant), the last year before GRE2 came into effect, after which the items continued to be disclosed to about the same degree although no longer required. Conversely, GRE2 featured nine items not required by NER (see Appendix 1) but disclosed to some extent as far back as 2001 (mean = 0.65). Significant increases were noted in 2002 and 2003, due mainly to the adoption of GRI (or other) reporting guidelines (item 24 in Appendix 1), and disclosure of approaches to stakeholder engagement (item 27) and consideration of environmental issues in purchasing policy (item 83). The latter two items relate to actual policies followed by the firms in their activities which they choose to report on. The increase observed between 2003 and 2007 also relates to the disclosure of items mainly related to operational activities, e.g., partnership with or sponsorship of individuals or organizations (item 28), adaptation to climate change consequences (item 57), consideration of environmental issues in purchasing policy (item 83), and assurance of certain environmental disclosures (item 16). Subsequently, there was a gradual increase between 2007 and 2010 (*p* not significant) and a jump in 2011 (mean = 4.68) when the GRE2 preliminary list of items was published, after which another significant increase occurred in 2012 (mean = 6.16) when GRE2 came into effect. This was not followed by any significant increase in 2013. This analysis indicates that French firms disclose information even when not legally required to do so. We next examine the level of additional disclosure in relation to the GRI guidelines.

Using GRI guidelines as a benchmark, we note that environmental reporting by French firms increased steadily and significantly between 2001 and 2012 (Table 2), with the mean GRI score increasing from 6.15 to 35.26 for this

<sup>2</sup> Although we obtained several years of data for the firms in each country, only the descriptive data for 2013 is presented for expediency (see Appendix 2).

**Table 2** Environmental reporting—French firms

Year <sup>a</sup>	Mean NER score (SD)	Mean GRE2 score (SD)	Mean % items required <sup>b</sup>	$p^c$	Mean GRI score (SD)	Mean % items required <sup>b</sup>	$p^c$	Mean GRI score excluding NER/GRE2 items	Mean NER score excluding GRI items	Mean GRE2 Score excluding GRI items	$p^c$
2001	3.00 (4.39)		12.5		6.15 (8.43)	10.1		3.55	0.35		
2002	6.60 (4.56)		27.5	<b>0.003</b>	12.95 (9.34)	21.2	<b>0.002</b>	6.85	0.70		<b>0.035</b>
2003	8.15 (4.15)		34.0	<b>0.024</b>	16.40 (9.43)	26.9	<b>0.009</b>	9.00	0.90		0.271
2007	12.60 (4.75)	14.35 (4.97)	52.5 (NER)		21.60 (8.12)	35.7		11.00	1.45	3.80	
2008	12.45 (5.01)	14.40 (5.41)	51.9 (NER)	0.848 (NER)	22.65 (9.06)	37.1	0.089	12.15	1.30	4.05	0.257 (NER)
2009	12.85 (4.87)	14.90 (5.33)	53.5 (NER)	0.156 (NER)	22.95 (9.52)	37.6	0.634	12.10	1.45	4.15	0.180 (NER)
2010	13.15 (4.69)	14.85 (5.22)	54.8 (NER)	0.771 (NER)	27.70 (10.53)	45.4	<b>0.002</b>	16.05	1.35	4.00	0.564 (NER)
2011		17.00 (4.58)	63.0	<b>0.004<sup>d</sup></b>	30.74 (11.60)	50.4	<b>0.006<sup>e</sup></b>	17.63		4.84	<b>0.060<sup>f</sup></b>
2012		20.53 (3.88)	76.0	<b>0.000</b>	35.26 (9.63)	57.8	<b>0.000</b>	20.26		6.58	<b>0.001</b>
2013		21.95 (2.74)	81.3	<b>0.092</b>	35.58 (8.67)	58.3	0.697	19.89		7.16	0.163

$p \leq 0.10$  are highlighted in bold

<sup>a</sup>  $N = 20$  firms for 2001–2003 and 2007–2010;  $N = 19$  firms for 2011–2013 since Dexia was in financial difficulty and discontinued all environmental reporting in 2011

<sup>b</sup> Percentages of 24 items for NER, 27 items for GRE2, and 61 items for GRI

<sup>c</sup> Wilcoxon signed rank test comparing the scores for the current and preceding years, e.g., 2002 with 2001

<sup>d</sup> Score comparison between 2011 and 2010 for 19 firms (Mean GRE2 score in 2010 = 14.95)

<sup>e</sup> Score comparison between 2011 and 2010 for 19 firms (Mean GRI score in 2010 = 27.79)

<sup>f</sup> Score comparison between 2011 and 2010 for 19 firms (Mean GRE2 score excluding GRI items in 2010 = 4.00)

period for 10.1–57.8 % of the items suggested by GRI. In 2013, environmental disclosure seems to have plateaued compared to 2012, with disclosure of GRI items at 58.3 %. In terms of normativity, the GRI regime can thus be considered somewhat effective.

However, the average French disclosure scores for items contained in the GRI but not required by legislation, increased from 3.55 in 2001 to 19.89 in 2013 (Table 2). From an institutional legitimacy perspective, the GRI guidelines were somewhat successful in prompting French firms to provide additional disclosure.

To strengthen the conclusion for RQ1 that the French parliamentary regime was generally successful in improving the environmental reporting practices of French firms, the specific impact of the French legislation was

determined by excluding items that firms could have otherwise provided under the influence of the GRI. From the mean NER and GRE2 scores excluding GRI items (Table 2), it is clear that both legislations had a significant impact in the year that the law was first applied, i.e., 2002 for NER and 2012 for GRE2.

Institutional and strategic pressures alike can affect environmental reporting practices (Chelli et al. 2014; Suchman 1995). Given that firms in environmentally sensitive industries have been shown to strategically use environmental reporting to manage their legitimacy (Mormann and Van der Laan 2005), they could feel compelled to disclose additional environmental information in response to legislation and internationally recognized voluntary regimes. Half of the sampled firms operate in highly

**Table 3** Items differing between NER and GRE2—French firms

Year <sup>a</sup>	Items in NER not required by GRE2 <sup>b</sup> Mean (SD)	<i>p</i> <sup>c</sup>	Items in GRE2 not required by NER <sup>d</sup> Mean (SD)	<i>p</i> <sup>e</sup>
2001	0.55 (0.95)		0.65 (0.81)	
2002	1.05 (1.31)	0.102	1.50 (1.61)	<b>0.007</b>
2003	1.35 (1.14)	<b>0.034</b>	2.10 (1.86)	<b>0.054</b>
2007	1.85 (1.57)		3.60 (2.11)	
2008	2.00 (1.59)	0.257	3.95 (2.24)	0.163
2009	2.00 (1.59)	1.000	4.05 (2.01)	0.642
2010	2.30 (1.60)	0.271	4.00 (1.92)	0.891
2011	2.47 (1.54)	0.405 <sup>e</sup>	4.68 (1.15)	<b>0.019<sup>f</sup></b>
2012	2.53 (1.39)	0.666	6.16 (1.43)	<b>0.001</b>
2013	2.53 (1.78)	0.874	6.42 (1.12)	0.201

*p* ≤ 0.10 are highlighted in bold

<sup>a</sup> *N* = 20 firms for 2001–2003 and 2007–2010; *N* = 19 firms for 2011 to 2013 since Dexia was in financial difficulty and discontinued all environmental reporting in 2011

<sup>b</sup> Number of items in NER not required by GRE2 = 6

<sup>c</sup> Wilcoxon signed rank test comparing the scores for the current and preceding year, e.g., 2002 with 2001

<sup>d</sup> Number of items in GRE2 not required by NER = 9

<sup>e</sup> Comparison between 2011 and 2010 for 19 firms (Mean score in 2010 = 2.32)

<sup>f</sup> Comparison between 2011 and 2010 for 19 firms (Mean score in 2010 = 3.95)

environmentally sensitive industries (Table 1). Mann–Whitney tests indicate no significant differences (at *p* ≤ 0.05) for NER, GRE2 and GRI scores according to the environmental sensitivity of the industry. This suggests that institutional legitimacy theory offers a better explanation than strategic legitimacy theory of firms’ disclosure practices in the context of our study.

*Canadian Securities Commission Regulations (RQ2)*

Our second question and sub-questions ask whether environmental reporting by Canadian companies increased after promulgation of CSA NI 51-102 and CSA Staff Notice NR 51-333, whether the companies complied with the regulations, and whether they provided additional voluntary disclosures in accordance with GRI guidelines. Table 4 presents the mean scores of Canadian companies pertaining to the securities commission regulations requirements. Recall that NR 51-333 asks for additional clarification about items already required by NI 51-102. In

total, 24 information items are required under these regulations (see Appendix 1). Table 4 presents the mean percentage of items disclosed in relation to the requirements.

Canadian firms significantly increased their disclosures between 2003 and 2004 after enactment of NI 51-102 but posted a negligible decline in 2005. Although environmental disclosures significantly increased between 2005 and 2010, the mean score (hereafter “Canada score”) indicates a mere 1.5 increase. Staff Notice NR 51-333, effective in 2011, did not appear to have had any effect given that the mean scores do not vary significantly from 2010 onward. Compliance with Canadian regulation is low, with 25.0 % being the highest mean disclosure percentage for required items, noted for 2011.

In regard to RQ2, although the firms significantly increased their level of environmental disclosure after the first Canadian regulation was promulgated, the release of the second regulation did not trigger significant additional disclosures. In terms of normativity, the low level of overall disclosure leads us to conclude that the Canadian

**Table 4** Environmental reporting—Canadian firms

Year <sup>a</sup>	Mean Canada score (SD)	Mean % items required <sup>b</sup>	<i>p</i> <sup>c</sup>	Mean GRI score (SD)	Mean % items required <sup>b</sup>	<i>p</i> <sup>c</sup>	Mean GRI score excluding Canada items	Mean Canada score excluding GRI items	<i>p</i> <sup>c</sup>
2003	3.35 (2.25)	14.5		8.85 (7.29)	14.5		6.95	1.45	
2004	4.80 (3.62)	20.0	<b>0.015</b>	13.65 (11.35)	22.4	<b>0.003</b>	11.40	2.55	<b>0.007</b>
2005	4.45 (2.50)	18.5	0.676	12.40 (9.29)	20.3	0.916	10.05	2.10	0.201
2010	5.95 (2.44)	24.8	<b>0.026</b>	19.45 (10.45)	31.9	<b>0.000</b>	16.25	2.75	0.114
2011	6.00 (2.22)	25.0	0.714	21.75 (11.39)	35.7	<b>0.060</b>	18.45	2.70	1.000
2012	5.80 (2.04)	24.2	0.667	23.20 (10.64)	38.0	0.437	19.85	2.45	0.236
2013	5.35 (2.16)	22.3	0.102	19.25 (11.96)	31.6	<b>0.029</b>	16.35	2.45	1.000

*p* ≤ 0.10 are highlighted in bold

<sup>a</sup> N = 20 firms

<sup>b</sup> Percentages of 24 items for Canada score and 61 items for GRI

<sup>c</sup> Wilcoxon signed rank test comparing the scores for the current and preceding years, e.g., 2002 with 2001

market-based regime was unsuccessful in improving environmental reporting practices.

Using GRI guidelines as a benchmark, we conclude that environmental reporting by Canadian firms increased significantly in 2004, similarly to Canada scores (Table 4). Significant and marginally significant increases were also noted in 2010 and 2011 respectively. The highest mean score, 23.30, was reached in 2012. 2013 saw a significant decrease in disclosure of GRI items as well as a non-significant decrease in Canada scores. Note that in 2003, the percentage of GRI item disclosures was identical to the percentage of disclosures based on Canadian regulations (14.5 %). However, the former increased more substantially over the years, reaching 31.6 % in 2013, compared to 22.3 % for the latter.

Furthermore, Canadian firms' average scores for disclosure of GRI items excluding Canadian ruling items increased from 6.95 in 2003 up to 19.85 in 2012 and 16.35 in 2013 (Table 4). From an institutional legitimacy perspective, the GRI guidelines were successful in impelling Canadian firms to disclose additional information. In fact, for each year under study, the score increase for GRI items exceeded the increase prompted by Canadian regulations requirements. When considering the specific impact of the Canadian regulations by excluding items that firms could have otherwise provided under the influence of the GRI, we note that the regulations appear to have had a significant

impact only in the year in which they were first applied, i.e., 2004 (Table 4). Overall, the GRI guidelines generated more normativity than the securities commissions' regulations but the normativity level remains quite low.

Mann–Whitney tests indicate no significant difference (at *p* ≤ 0.05) between Canada and GRI scores according to the environmental sensitivity of the industry in question. As was noted for French firms, institutional legitimacy theory offers a better explanation of Canadian firms' disclosure practices (although normativity is much lower) than strategic legitimacy does.

#### *Comparative Normativity (RQ3)*

To answer our third research question about which regime is better at generating normativity, we compare statistics for the three regimes. Table 5 compares the mean percentage of items disclosed in accordance with the Canadian and French laws. The highly significant differences obtained for all years, with scores in favour of France, clearly indicate that the French regime is more effective at producing normativity. For instance, France achieved 81.3 % compliance in 2013 versus only 22.3 % in Canada.

According to Table 5, conformity to GRI guidelines is significantly higher in France. A comparison of GRI with the local regime in Canada shows that GRI guidelines lead to better normativity than the local regime in Canada. The

**Table 5** Normativity

Year <sup>a</sup>	Mean % items required France <sup>b</sup>	Mean % items required Canada <sup>b</sup>	<i>p</i> <sup>c</sup>	Mean % GRI items France <sup>b</sup>	Mean % GRI items Canada <sup>b</sup>	<i>p</i> <sup>c</sup>
2001	12.5			10.1		
2002	27.5			21.2		
2003	34.0	14.5	<b>0.000</b>	26.9	14.5	<b>0.007</b>
2004		20.0			22.4	
2005		18.5			20.3	
2007	52.5			35.7		
2008	51.9			37.1		
2009	53.5			37.6		
2010	55.0	24.8	<b>0.000</b>	45.4	31.9	<b>0.017</b>
2011	63.0	25.0	<b>0.000</b>	50.4	35.7	<b>0.020</b>
2012	76.0	24.2	<b>0.000</b>	57.8	38.0	<b>0.001</b>
2013	81.3	22.3	<b>0.000</b>	58.3	31.6	<b>0.000</b>

*p* ≤ 0.10 are highlighted in bold

<sup>a</sup> For France, *N* = 20 firms for 2001–2003 and 2007–2010; *N* = 19 firms for 2011–2013 since Dexia was in financial difficulty and discontinued all environmental reporting in 2011. For Canada, *N* = 20 firms

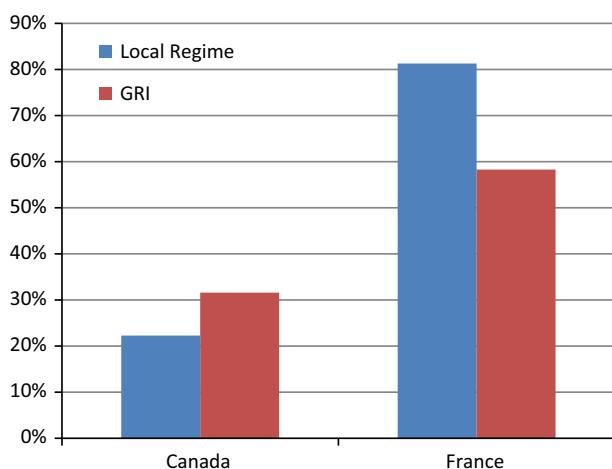
<sup>b</sup> Percentages of 24 items for NER (2001–2003; 2007–2009), 27 items for GRE2 (2010–2013), 24 items for Canada (2003–2013), and 61 items for GRI (2001–2013)

<sup>c</sup> ANOVAs comparing % items by country

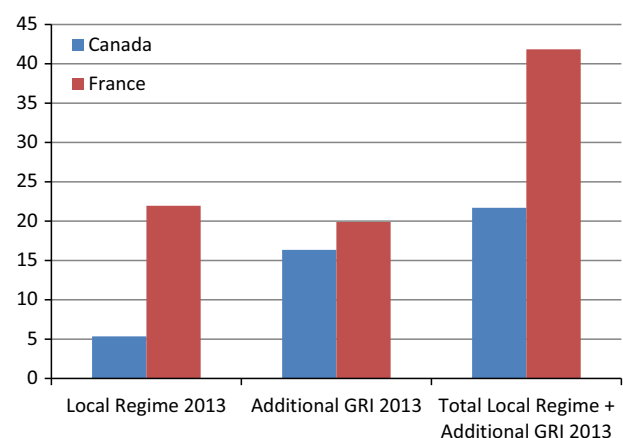
reverse holds true for France, where the local regime has a greater normative effect than the GRI guidelines (See Fig. 1). However, in both countries, companies disclose a fair amount of information in addition to those required by legislation. Mean scores of 6.95–19.85 (Table 4) and 3.55–20.26 (Table 2) are obtained for Canada and France respectively for disclosure in regard to GRI, over and above Canadian, and NER and GRE2 items. The highest marginal impacts, 19.85 for Canada and 20.26 for France, were both noted for fiscal 2012. GRI guidelines had a similar marginal impact on environmental disclosure in both countries in 2010–2013. The normative effect of the

GRI guidelines thus combines with effects from local regimes to trigger environmental disclosure (See Fig. 2).

A comparison of the mean results for French and Canadian firms’ disclosure of GRI items by section for 2013 reveals that French firms provide significantly more information than Canadian firms in most of the disclosure categories (Table 6). French firms disclose more information on organizational profile and awards, governance, stakeholder engagement, management approach to material environmental aspects, and several other environmental performance indicators (materials, energy, water, biodiversity, emissions, effluents and waste, and products and



**Fig. 1** Normativity level by country—year 2013



**Fig. 2** Local regimes, additional GRI items and total mean scores—year 2013

**Table 6** GRI items disclosed by category in 2013—comparison of French and Canadian firms

	Number of items in category	French firms <sup>a</sup> Mean score (SD)	Canadian firms <sup>a</sup> Mean score (SD)	<i>p</i> <sup>b</sup>
Strategy and analysis	4	1.37 (1.21)	0.80 (0.89)	0.103
Key impacts, risks, and opportunities	5	2.16 (1.21)	2.00 (1.17)	0.682
Organizational profile, assurance, and awards	2	1.79 (0.42)	0.95 (0.89)	<b>0.001</b>
Governance	4	2.89 (0.81)	1.80 (1.24)	<b>0.002</b>
Commitments to external initiatives	3	1.89 (1.05)	1.30 (1.22)	0.112
Stakeholder engagement	4	2.42 (1.07)	1.60 (1.23)	<b>0.033</b>
Management approach for material environmental aspects	3	2.79 (0.54)	1.70 (1.03)	<b>0.000</b>
Environmental performance indicators				
Materials	3	1.37 (1.01)	0.55 (0.83)	<b>0.009</b>
Energy	5	3.58 (1.35)	1.55 (1.47)	<b>0.000</b>
Water	4	1.89 (1.20)	0.80 (1.06)	<b>0.004</b>
Biodiversity	5	1.63 (1.42)	0.65 (0.88)	<b>0.015</b>
Emissions, effluents, and waste	13	8.21 (2.10)	3.35 (2.80)	<b>0.000</b>
Products and services	2	1.42 (0.51)	0.65 (0.59)	<b>0.000</b>
Compliance	2	0.84 (0.60)	1.15 (0.67)	0.141
Transport	1	0.16 (0.38)	0.15 (0.37)	0.947
Protection costs and investments by type	1	0	0	–
Total	61	35.58 (8.67)	19.25 (11.96)	<b>0.000</b>

*p* ≤ 0.10 are highlighted in bold

<sup>a</sup> For France, *N* = 19 firms. For Canada, *N* = 20 firms

<sup>b</sup> ANOVAs comparing mean items by country

services). These differences may be explained by GRE2's greater requirements, compared to Canada's, for organizational profile, assurance and awards, stakeholder engagement, materials, energy, water, biodiversity, and emissions, effluents and waste. There is no significant difference for disclosures about strategy and analysis, key impacts, risks and opportunities, commitments to external initiatives, compliance, transport, and protection costs. As Appendix 1 and Table 6 show, when GRE2 alone contains

a specific GRI disclosure category, French firms disclose significantly more information than Canadian firms in seven out of eight categories. When a disclosure category appears in none or both of GRE2 and the Canadian regulations, French firms disclose significantly more information than Canadian firms on about half of the seven categories.

In response to our third research question, we conclude that the French regime is more effective at producing



normativity than the Canadian regime and that in Canada, the GRI guidelines lead to better normativity than the securities commissions' regulations. Overall, the combination of the GRI guidelines' normative effects and those of both local regimes impel firms to disclose more environmental information.

#### *Substantive Disclosures by Canadian and French Firms (RQ4)*

Our fourth research question asks whether the French or the Canadian firms provided the most substantive environmental disclosures, i.e., descriptions of corporate initiatives that actually lead to specific positive environmental impacts. Table 7 presents mean data on total disclosure (total item scores and number of words), substantive environmental disclosures (number of words), and percentage of environmental substantive disclosures by French and Canadian firms. French firms' total environmental and substantive disclosure is significantly greater than that of Canadian firms. For example, in 2013, mean total disclosure of French firms was 55,539 words compared to 15,673 words for Canadian firms, and mean substantive environmental disclosure was 1902 and 190 words, respectively. The percentage of substantive environmental disclosure is significantly greater for French firms than for Canadian firms in 2003 and in 2011–2013. It therefore appears that the French regime leads to more total disclosure than Canadian regulations. Further, French firms provide a greater number of substantive disclosures than Canadian firms. However, the highest percentage of substantive disclosure in France, 4.2 % in 2012, is still quite low. This finding suggests that environmental reporting tends to be more symbolic than substantive. French and Canadian firms thus place greater importance on institutional rather than substantive legitimacy.

#### *Additional Analyses*

Non-parametric tests assessed whether variables such as governance, size, profitability, leverage (Othman and Ameer 2009), and international activities (i.e., the presence of significant foreign non-current assets) affect the disclosure practices of Canadian and French firms.<sup>3</sup> For these firms, no systematic relationships were found between NER, GRE2, Canada, or GRI scores and indebtedness (debts to assets), profitability (ROA), duality, percentage of independent board members, percentage of women administrators, and international activities (Spearman correlations or Mann–Whitney tests). NER, GRE2, Canada,

<sup>3</sup> For expediency, the results of all the tests that analysed scores according to various characteristics are not tabulated.

and GRI scores are unaffected by the industry's environmental sensitivity. Larger (Spearman correlations,  $p \leq 0.05$  for 2001–2010), cross-listed (Mann–Whitney tests,  $p \leq 0.05$  for all years except 2007–2009) French firms have higher GRI scores, but no systematic relationships were noted between these variables and NER and GRE2 scores. For Canadian firms, size is positively related to GRI scores for five out of 7 years (Spearman correlations,  $p \leq 0.05$ ), but not to Canada scores. Further, Canadian firms' Canada and GRI scores are not affected by cross-listed status.

French firms that publish a sustainability report have higher NER, GRE2, and GRI scores except from 2007 to 2009 (Mann–Whitney tests,  $p \leq 0.05$ ), but the increase becomes less significant in 2012 and 2013. Canadian firms that publish a sustainability report have higher GRI scores in all years ( $p \leq 0.01$ ) and higher Canada scores in 2004, 2005, 2011 (at  $p \leq 0.10$ ), and 2013 (at  $p \leq 0.05$ ). Use of the GRI guidelines has a significant positive effect on NER and GRE2 scores, except in 2013,<sup>4</sup> but no effect on Canada scores.

In a regression of size, cross-listed status, publication of a sustainability report, and country (Canada = 1) on GRI scores for 2003 and 2010 to 2013, the last two variables are consistently significant (at  $p \leq 0.05$  or 0.10) and exert positive and negative influences, respectively.

## **Discussion, Conclusions and Areas for Future Research**

Our comparison of France and Canada is motivated by our interest in contrasting two types of regimes, one based on legislation and the other on market mechanisms. A further goal was to investigate regimes that carry lenient penalties or no sanctions at all for non-compliance. The research shows that the French parliamentary regime, specifically the NER and Grenelle II Acts, resulted in greater normativity than the Canadian market-based regime, which uses stock exchange regulations to trigger environmental reporting. Therefore, when non-compliance carries few or no penalties, legislation by central government appears to be more successful than legislation by government agencies in generating corporate environmental reporting.

Our study inferred normativity by examining the end results of each regime in terms of corporate compliance. It did not investigate the processes that may or may not generate normativity. However, the various levels of normativity achieved under each regime might have been consistent with the level of debate about environmental reporting that occurred in each country. Stronger debate could possibly lead to greater legitimacy (Suchman 1995),

<sup>4</sup> No French firms used the GRI guidelines in 2001.

**Table 7** Total and substantive disclosure

Year <sup>a</sup>	Total item score France <sup>b</sup>	Total item score Canada <sup>b</sup>	<i>p</i>	Total disclosure France <sup>c</sup>	Total disclosure Canada <sup>c</sup>	<i>p</i>	Substantive disclosure France <sup>c</sup>	Substantive disclosure Canada <sup>c</sup>	<i>p</i>	% substantive disclosure France	% substantive disclosure Canada	<i>p</i>
2001	7.20 (9.27)			6255 (12,025)			119 (304)			9.3 (28.6)		
2002	14.85 (10.83)			11,390 (15,895)			170 (377)			1.0 (1.3)		
2003	18.85 (11.04)	11.40 (8.87)	<b>0.024</b>	19,933 (24,176)	3701 (7200)	<b>0.009</b>	367 (395)	36 (82)	<b>0.001</b>	3.0 (4.3)	0.9 (1.9)	<b>0.066</b>
2004		18.95 (16.75)			8333 (13,911)			56 (148)			0.5 (1.6)	
2005		16.70 (12.53)			5663 (9863)			55 (153)			0.8 (2.7)	
2007	26.20 (10.60)			32,357 (18,437)			694 (446)			2.1 (1.3)		
2008	27.30 (11.29)			38,856 (19,505)			846 (698)			3.5 (3.7)		
2009	27.65 (11.44)			33,271 (20,147)			779 (666)			2.8 (2.6)		
2010	32.35 (12.38)	24.55 (12.50)	<b>0.055</b>	47,217 (37,372)	12,990 (16,418)	<b>0.001</b>	1293 (809)	179 (372)	<b>0.000</b>	2.8 (1.6)	2.0 (4.6)	0.478
2011	36.74 (13.45)	27.55 (13.78)	<b>0.042</b>	54,631 (40,530)	18,003 (20,749)	<b>0.002</b>	1810 (1274)	207 (413)	<b>0.000</b>	3.8 (2.4)	1.0 (2.5)	<b>0.001</b>
2012	42.84 (11.58)	28.55 (12.24)	<b>0.001</b>	47,302 (26,804)	18,666 (19,541)	<b>0.001</b>	1833 (1325)	232 (563)	<b>0.000</b>	4.2 (2.6)	1.1 (2.1)	<b>0.000</b>
2013	44.21 (10.08)	24.50 (13.52)	<b>0.000</b>	55,539 (26,703)	15,673 (21,154)	<b>0.000</b>	1902 (1412)	190 (407)	<b>0.000</b>	3.4 (2.5)	1.4 (2.5)	<b>0.018</b>

$p \leq 0.10$  are highlighted in bold

<sup>a</sup> For France,  $N = 20$  firms for 2001–2003 and 2007–2010;  $N = 19$  firms for 2011–2013 since Dexia was in financial difficulty and discontinued all environmental reporting in 2011. For Canada,  $N = 20$  firms

<sup>b</sup> Total item score corresponds to the mean number of items (SD) disclosed according to the 83 items in the coding grid (maximum total score = 90)

<sup>c</sup> Total disclosure corresponds to the mean number of words (SD) related to environmental disclosure in the annual report and the annual information form, and all the words in the sustainability report. Substantive environmental disclosures correspond to the mean number of words (SD) related to substantive environmental disclosures in these same sources

and greater legitimacy to greater normativity (Bebington et al. 2012). Although the environmental content of article 116 of the NER was adopted without much discussion (Chelli et al. 2014), Grenelle legislation was altogether a different matter, generating extensive debate during the “Grenelle de l’Environnement”, a large multi-stakeholder forum on sustainability and public policies in France (Wolniak 2013). Civil society and business representatives debated long and hard before the bill was passed and incorporated into the French Commercial Code in July 2010 (Wolniak 2013). This larger debate about Grenelle II arguably explains why compliance rose after GRE2 to 81.3 % in 2013, compared to compliance with NER in 2003, at 34.0 %.

Environmental reporting in Canada is regulated by securities commissions, and although comments are solicited before new rules are issued, the debate is far less involved. Prior to the publication of NI 51-102—*Continuous Disclosure Obligations* by the Canadian Securities Administrators, the Ontario Securities Commission had received only 34 and 27 letters of comments respectively after the first and second requests for comments (OSC 2014). It is worth noting that NI 51-102 made only broad references to environmental issues. Some provincial securities commissions reacted to registrants’ poor levels of disclosure. The OSC consulted certain stakeholders as part of a sustainability reporting initiative and concluded that the current disclosure requirements were consistent with

those of other countries and only needed to be more thoroughly delineated (OSC 2009). As a result, Staff Notice NR 51-333 was published in 2010 to provide additional guidance on the items to be disclosed under NI 51-102. The fact remains that debate was far less heated in Canada, possibly explaining why the Canadian regime resulted in lower levels of normativity than the French laws.

Our study challenges accountants' perspective whereby market mechanisms, such as stock exchange disclosure requirements, are more effective than laws in increasing the quantity of environmental reporting (ACCA 2013). This position, adopted by the Association of Chartered Certified Accountants (ACCA), is based on the argument that laws mainly require companies to meet a minimum standard, while market mechanisms give companies the latitude to stand apart by exceeding established standards. Our study shows that Canadian firms do not meet even minimum standards. To pursue the matter further, or even challenge our findings, future research could compare the normativity levels of parliamentary and market-based regimes in other countries. For instance, the European Union is in the process of requiring large listed companies to report on the environmental impacts of their activities (Chaplier 2014) but will not sanction non-compliance. Once these requirements are officially promulgated, future research could assess normativity levels generated by this parliamentary legislation. Another option would be to compare the normativity generated by regimes with and without non-compliance sanctions to explore whether monitoring mechanisms affect corporate environmental reporting practices.

Cultural factors could also explain why French firms tend to comply with legislation/regulations better than Canadian firms. Future research could examine the role of cultural factors (Maon and Lindgreen 2015)—and even religious factors (Abdelzaher and Abdelzaher 2015)—in helping various regimes lead to normativity in environmental reporting.

Our findings build on Bebbington et al. (2012), who suggested that non-law regimes can lead to normativity. We found that non-law regimes can act in combination with regulations to trigger environmental reporting. Our analysis shows that Canadian firms more than doubled their environmental disclosures by conforming to some aspects of the GRI framework. French firms also increased their level of disclosure by incorporating certain features of the GRI framework into their disclosures in addition to information required by legislation. The marginal impact of GRI disclosure is significant for both countries. This suggests that a multiple-regime approach can be productive in improving corporate environmental reporting practices. Normativity can never be absolute under any single regime, and the solution might lie in compounding institutional

pressures. On this matter, future research could assess whether multinational companies subject to an amalgamation of local regimes tend to provide more environmental disclosures. Future research could also examine whether the confluence of local regimes (similar information required by various jurisdictions) leads to greater normativity.

We contribute to environmental reporting research by demonstrating that institutional legitimacy theory can help interpret issues in the field. Although previous research relied on a strategic legitimacy interpretation, an institutional view can explain why firms make environmental disclosures. Laws, as well as the GRI's well-respected guidelines—both of which arguably represent the expectations of various audiences in terms of environmental reporting—have prompted French firms to increase their environmental disclosures over time. Contrary to predictions from a strategic legitimacy standpoint, firms that operate in environmentally sensitive sectors do not disclose significantly more information than others. Future research could challenge or confirm our findings by replicating our study using a larger sample of French firms or firms in other countries that use parliamentary legislation to mandate disclosure.

In Canada, since disclosure trends did not differ whether firms operated in environmentally sensitive sectors, strategic legitimacy fails to explain their environmental reporting practices. However, institutional legitimacy theory partially explains these practices given that securities exchange regulations, in combination with the GRI guidelines, were shown to contribute to a significant increase in environmental disclosure; in the end, however, environmental disclosure levels still remain fairly low.

Although French and Canadian firms significantly increased their environmental disclosures in response to institutional pressures, the level of substantive disclosure remains very low. In this type of disclosure, firms explain how their environmental reporting initiatives positively affect environmental issues. This suggests that French legislation, Canadian stock exchange regulations, and the GRI voluntary framework tend to foster descriptions rather than tangible impacts. Substantive environmental disclosure could be a productive area for future investigation, and specifically for investigating the following questions: How could legislation be improved to trigger substantive disclosure? Which country is most successful in triggering substantive disclosures? What are the characteristics of firms that provide more substantive disclosures?

Our results are based on an analysis of the reporting practices of a small sample of fairly large Canadian and French listed firms operating in various industries for periods of up to 10 years. By focusing on specific industries over narrower time frames, future research could use

larger samples to challenge or confirm our findings and improve the generalizability of results. Additional generalizability could be obtained by research on the environmental reporting practices of smaller listed firms and private corporations.

Our method involved a documentary analysis to identify environmental issues in the entire content of sustainability reports, annual reports and AIFs. Our results do not control for any effect that the social and economic issues mentioned in these reports may have had on environmental indicators.

Although our study contributes to a burgeoning body of research that strives to distinguish symbolic from substantive environmental disclosures, our measure of substantive disclosure did not allow us to make this distinction based on the materiality of activities related to the words published in the reports or the quality of the impacts reported by companies. Future research could work on refining this measurement by taking these two factors into consideration. It could also take a critical approach and question the relevance of the items required by the laws,

regulations and guidelines examined herein, which we did not do.

Finally, we used the concept of normativity from the perspective of end results and inferred normativity by assessing whether Canadian and French corporations abided by the rules by providing the required disclosures. Future studies could examine normativity from the standpoint of processes. Interviews with representatives of Canadian and French firms and regulators in each country could be conducted to determine the process by which corporate managers may or may not view the rules as binding.

**Acknowledgments** The authors gratefully acknowledge the financial support of the Telfer School of Management Research Fund of the University of Ottawa, the Corporate Reporting Chair of the Université du Québec à Montréal, and the Université Fédérale Toulouse Midi-Pyrénées.

## Appendix 1

See Table 8.

**Table 8** Scoring grid

Item	GRI	NER	GRE2	Cda	Item	Value
Strategy and analysis						
1	1.1				CEO statement about relevance of sustainability	0–1
2	1.1				Effect of broader trends (macroeconomic, political)	0–1
3	1.1				Views on performance vs. targets	0–1
4	1.1				Main challenges/targets for next year	0–1
Key impacts, risks, and opportunities						
5	1.2			3	Risks and opportunities/impacts on sustainability/effects on stakeholders	0–1
6	1.2				Approach (policies) to prioritizing/facing risks and opportunities	0–1
7		4b	9	7b	Specific risks the policies are designed to address	0–1
8	1.2				Processes in place to address performance and changes (perf. evaluation)	0–1
9				4	Risks categorized: litigation, physical, regulatory, reputation, bus. model	0–1
10				1	Impacts of env. trends/uncertainties on revenues, expend. and cash flows	0–2
11				2	Impact of env. trends/uncertainties on financial condition and liquidity	0–2
12				8	(Potential) Impact of policies (see 6 and 7) on operations (cost if quant. avail)	0–2
13	1.2				Table: targets, performance, lessons learned for reporting period	0–1
14	1.2				Targets for next year related to risks and opportunities	0–1
Organizational profile, assurance, and awards						
15	3.13	1	6		Policy and current practice for seeking assurance (implicit when assurance report)	0–1
16			4–5		Assurance on environmental information and justification of exclusions	0–1
17	2.1				(Sustainability) awards (or inclusion in sustainability index)	0–1
Governance, commitments, and engagement						
Governance						
18	4.1	2	7	5	Governance structure and any responsibility for environmental performance	0–1
19	4.5				Linkage between compensation and environmental performance	0–1
20	4.8				Internal statements, mission, values, codes of conduct, principles	0–1

**Table 8** continued

Item	GRI	NER	GRE2	Cda	Item	Value
21	4.9			6	Procedure for overseeing management of environ. performance and risk	0–1
Commitments to external initiatives						
22	4.12				Adherence to externally developed environmental certification charters or principles	0–1
23	4.13				Membership in associations	0–1
24	Gen		1		Adoption of GRI (or other) reporting guidelines	0–1
Stakeholder engagement						
25	4.14				List of stakeholder groups engaged by the organization	0–1
26	4.15				Basis for identification and selection of stakeholders with whom to engage	0–1
27	4.16		3		Approaches to stakeholder engagement	0–1
28			2		Partnership with or sponsorship of individuals or organizations	0–1
29	4.17				Key topics and concerns that have been raised/organization response	0–1
Management approach to material environmental aspects						
30	5	4a	9	7A	Management approach for material environmental aspects (general)	0–1
31	5	3	8		Training on and awareness of environmental aspects	0–1
32	5				Procedures related to monitoring and corrective or preventive actions	0–1
Environmental performance indicators						
Materials						
33	Gen	19	24		Management approach to materials	0–1
34	EN1	18	23		Materials used by weight or volume	0–1
35	EN2				Percentage of materials used that are recycled input materials	0–1
Energy						
36	Gen	5	10		Management approach—energy (measures to improve energy efficiency)	0–1
37	EN3/4	6	11		Direct energy consumption by primary source (GRE2/NER: Energy consumption)	0–1
38	EN5				Energy saved due to conservation and efficiency improvements	0–1
39	EN6				Initiatives—energy-efficient products and services and energy savings	0–1
40	EN7				Initiatives to reduce energy consumption and reductions achieved	0–1
Water						
41	Gen				Management approach to water	0–1
42	EN8	7	12		Total water withdrawal by source (GRE2/NER: Water consumption)	0–1
43	EN9				Water sources (surface, ground, waste, municipal) significantly affected by water withdrawal	0–1
44	EN10				Percentage and total volume of water recycled and reused	0–1
45			13		Water supply according to local constraints	0–1
Biodiversity						
46	EN14	8	14		Management approach to biodiversity	0–1
47	EN11				Location and size of land adjacent or near protected or high diversity areas	0–1
48	EN12				Description of impacts on biodiversity in these areas	0–1
49	EN13				Habitats protected or restored	0–1
50	EN15				Number of IUCN Red List (or national list) species in habitats affected	0–1
Emissions, effluents and waste						
51	Gen	9	15		Measures to prevent, reduce and repair air discharges	0–1
52	Gen	12	18		Measures to prevent, reduce, and repair water discharges	0–1
53	Gen	13	19		Measures to prevent, reduce, and repair ground discharges	0–1
54	Gen	14	20		Measures to prevent, recycle, and eliminate waste	0–1
55	EN16/ 17	10	16		Total direct and indirect greenhouse gas emissions by weight	0–1
56	EN18				Initiatives to reduce greenhouse gas emissions and reductions achieved	0–1
57			17		Adaptation to climate change consequences	0–1
58	EN19				Emissions of ozone-depleting substances by weight	0–1

**Table 8** continued

Item	GRI	NER	GRE2	Cda	Item	Value
59	EN20	11			NOx, SOx, and other significant air emissions by type and weight	0–1
60		15			Air and ground emissions of substances that contribute to acidification, eutrophication, and photochemical pollution	0–1
61		16			Air and water emissions—toxic metals, carcinogenic and mutagenic substances	0–1
62	EN21				Total water discharge by quality and destination	0–1
63	EN22				Total weight of waste by type and disposal method	0–1
64	EN23				Total number and volume of significant spills	0–1
65	EN24				Weight of hazardous waste transported, imported, exported, or treated	0–1
66	EN25				Information on water bodies and habitats affected by water discharges	0–1
67		17	21		Consideration of noise pollution	0–1
68			22		Consideration of any other specific form of pollution	0–1
69			25		Land use	0–1
Products and services						
70	EN26				Initiatives to mitigate environmental impacts of products and services	0–1
71	EN27				% of products sold and packaging materials reclaimed by category	0–1
Compliance						
72	Gen	20			Management approach to ensure compliance with legislation	0–1
73	EN28	21			Total fines and non-monetary sanctions	0–1
74		22	26	9	Amount of environmental liabilities	0–1
75				10	Disc. commitments, events and uncertainties (ARO) likely to affect business	0–1
76				11	Amount of Asset Retirement Obligation (ARO)	0–1
77				12a	Disc. ARO (remediation costs, legislation compliance costs, current and future impact of costs) (value of 1 per element)	0–3
78				12b	Disc. ARO (asset, 5-year payments, ARO analysis as accounting estimate) (value of 1 per element)	0–3
Transport						
79	EN29				Environmental impact of transporting products, goods, and materials	0–1
Overall						
80	EN30	23		13	Environmental protection costs (expenditures) and investments by type	0–1
81				14	Anticipated trends in costs related to environ. requirements	0–1
82				15	Potential impact of these costs on financial and operational results	0–1
Other						
83		27			Consideration of environmental issues in purchasing policy	0–1
					Total overall score (max 90)	
					GRI total score (max 61)	
					GRE2 total score (max 27)	
					NER total score (max 24)	
					Canadian regulations total score (max 24)	

*GRI* Items from version 3.1 of GRI guidelines, *NER* items required by the New Economic Regulations Act, *GRE2* items required by Grenelle II Act, *Cda* items required by Canadian regulations

## Appendix 2

See Table 9.

**Table 9** Firm characteristics for 2013

	Assets (\$ million)	Debt/assets	ROA	Sustainability report	Use of GRI	Duality	% independent administrators	% women administrators	Cross-listed	Intern. activities
French firms										
Air France	37,257	.91	−.04	1	1	1	.43	.36	1	1
Air Liquide	36,776	.57	.09	1	1	0	.82	.18	0	1
Alcatel	32,089	.83	−.04	1	1	1	.91	.27	1	1
Cap Gemini	14,913	.56	.06	1	0	1	.67	.17	0	1
Casino	60,332	.63	.06	1	0	1	.43	.21	1	1
Danone	45,325	.65	.06	1	1	1	.62	.23	1	1
Dexia	326,713	.98	.00	0	0	0	.33	.11	1	1
EDF	376,342	.85	.03	1	1	1	.33	.28	0	1
Eiffage	40,120	.90	.04	0	0	1	.36	.27	0	1
Eramet	8734	.49	−.06	0	1	1	.35	.18	0	1
Eurotunnel	10,673	.66	.04	1	1	1	.18	.36	1	0
France Télécom	125,788	.69	.06	1	1	1	.47	.20	1	0
Lafarge	54,333	.55	.03	1	1	1	.60	.20	0	1
Lagardère	12,211	.65	.17	1	1	0	1.00	.41	0	1
LVMH	81,590	.50	.10	1	0	1	.50	.22	1	1
Michelin	31,775	.53	.08	1	1	0	.88	.25	0	1
Nexans	8003	.71	−.03	0	0	1	.57	.29	0	1
Sanofi	140,783	.41	.05	1	1	0	.69	.19	1	1
Suez	39,140	.74	.05	1	1	0	.24	.24	1	1
Total	254,251	.57	.11	1	0	1	.80	.33	1	1
Mean (SD) or <i>N</i>	86,857 (108,003)	.67 (.16)	.04 (.06)	16	13	14	.56 (.24)	.25 (.08)	11	18
Canadian firms										
Atco	16,010	.62	.08	0	0	0	.80	.20	0	0
Bank of Montreal	537,299	.94	.02	1	1	0	.92	.31	1	1
Blackberry	13,540	.28	−.09	1	1	0	.83	.17	1	1
Bombardier	31,230	.92	.03	1	0	0	.67	.20	0	1
CGI	10,879	.63	.07	0	0	0	.71	.14	1	1
Gildan	2101	.16	.17	1	1	0	.89	.11	1	1
Int Forest Products	824	.37	.06	0	0	0	.88	.00	0	1
Just Energy Group	1529	1.09	.45	0	0	0	.75	.13	0	1
Loblaw	20,759	.66	.06	1	0	1	.64	.14	0	0
Martinrea	1925	.71	.05	0	0	0	.88	.00	0	1
Methanex	4375	.54	.12	1	0	0	.82	.18	1	1
Nuvo	22	.45	−.45	0	0	1	.50	.10	1	1
Quebecor	9016	.81	.03	0	0	0	.89	.33	0	1
Saputo	5193	.56	.14	0	0	0	.82	.27	0	1
Semafo	604	.11	.01	1	0	0	.71	.00	1	1
SNC-Lavalin	11,772	.83	.02	1	1	0	.92	.25	0	1
Suncor	78,315	.47	.09	1	1	0	.93	.14	1	1
Telus	21,566	.63	.10	1	1	0	.92	.08	1	0

Table 9 continued

	Assets (\$ million)	Debt/assets	ROA	Sustainability report	Use of GRI	Duality	% independent administrators	% women administrators	Cross-listed	Intern. activities
Westjet Airlines	4143	.62	.10	0	0	0	.85	.08	0	0
Westport Innovations	523	.34	-.36	1	1	0	.89	.22	1	0
Mean (SD) or <i>N</i>	38,581 (118,716)	.59 (.26)	.03 (.18)	11	7	2	.81 (.11)	.15 (.10)	10	15
<i>p</i> (ANOVA or $\chi^2$ ) country comparison	.19	.23	.85	<b>.09</b>	<b>.06</b>	<b>.00</b>	<b>.00</b>	<b>.00</b>	.75	.21

## References

- Abdelzaher, D. M., & Abdelzaher, A. (2015). Beyond environmental regulations: Exploring the potential of “Eco-Islam” in boosting environmental ethics within SMEs in Arab Markets. *Journal of Business Ethics*. doi:10.1007/s10551-015-2833-8.
- Aerts, W., & Cormier, D. (2009). Media legitimacy and corporate environmental communication. *Accounting, Organizations and Society*, 34(1), 1–27.
- Aerts, W., Cormier, D., & Magnan, M. (2006). Intra-industry imitation in corporate environmental reporting: An international perspective. *Journal of Accounting and Public Policy*, 25(3), 299–331.
- Albertini, E. (2014). A descriptive analysis of environmental disclosure: A longitudinal study of French companies. *Journal of Business Ethics*, 121(2), 233–254.
- Alciatore, M. L., & Dee, C. C. (2006). Environmental disclosures in the oil and gas industry. *Advances in Environmental Accounting & Management*, 3, 49–75.
- Ashford, B. E., & Gibbs, D. W. (1990). The double-edge of organizational legitimacy. *Organization Science*, 1(2), 177–194.
- Association of Chartered Certified Accountants (ACCA). (2013). *Paragraph 47: International perspectives one year on*. London: The Association of Chartered Accountants.
- Baum, J., & Oliver, C. (1991). Institutional linkages and organizational mortality. *Administrative Science Quarterly*, 36(2), 187–218.
- Bebbington, J., Kirk, E. A., & Larrinaga, C. (2012). The production of normativity: A comparison of reporting regimes in Spain and the UK. *Accounting, Organizations and Society*, 37(2), 78–94.
- Bebbington, J., & Thy, C. (1999). Compulsory environmental reporting in Denmark: An evaluation. *Social and Environmental Accounting*, 19(2), 2–4.
- Beck, C., Dumay, J., & Frost, G. (2015). In pursuit of a “single source of truth”: From threatened legitimacy to integrated reporting. *Journal of Business Ethics*. doi:10.1007/s10551-014-2423-1.
- Berrone, P., Fosfuri, A., & Gelabert, L. (2015). Does greenwashing pay off? Understanding the relationship between environmental actions and environmental legitimacy. *Journal of Business Ethics*. doi:10.1007/s10551-015-2816-9.
- Boiral, O. (2013). Sustainability reports as simulacra? A counter-account of A and A+ GRI reports. *Accounting, Auditing & Accountability Journal*, 26(7), 1036–1071.
- Branco, M. C., Eugénio, T., & Ribeiro, J. (2008). Environmental disclosure in response to public perception of environmental threats: The case of co-incineration in Portugal. *Journal of Communication Management*, 12(2), 136–151.
- Brown, H. S., de Jong, M., & Lessidrenska, T. (2009). The rise of the Global Reporting Initiative: A case of institutional entrepreneurship. *Environmental Politics*, 18(2), 182–200.
- Brown, N., & Deegan, C. (1998). The public disclosure of environmental performance information—A dual test of media agenda setting theory and legitimacy theory. *Accounting and Business Research*, 29(1), 21–41.
- Buhr, N. (1998). Environmental performance, legislation and annual report disclosure: The case of acid rain and Falconbridge. *Accounting, Auditing & Accountability Journal*, 11(2), 163–196.
- Cahan, S. F., & van Staden, C. J. (2009). Black economic empowerment, legitimacy and the value-added statement: Evidence from post-apartheid South Africa. *Accounting and Finance*, 49(1), 37–58.
- Campbell, D., Craven, B., & Shrive, P. (2003). Voluntary social reporting in three FTSE sectors: A comment on perception and legitimacy. *Accounting, Auditing & Accountability Journal*, 16(4), 558–581.
- Canadian Securities Administrators (CSA). (2004). *National Instrument 51-102, Continuous Disclosure Obligations*. Retrieved May 13, 2015, from [https://www.osc.gov.on.ca/documents/en/Securities-Category5/rule\\_20040402\\_51-102-cont-disc-ob.pdf](https://www.osc.gov.on.ca/documents/en/Securities-Category5/rule_20040402_51-102-cont-disc-ob.pdf).
- Canadian Securities Administrators (CSA). (2009). *About CSA*. Retrieved May 13, 2015, from <https://www.securities-administrators.ca/aboutcsa.aspx?id=77>.
- Canadian Securities Administrators (CSA). (2010). *CSA Staff notice 51-333—Environmental reporting guidance*. Retrieved August 1, 2014, from [https://www.osc.gov.on.ca/documents/en/Securities-Category5/csa\\_20101027\\_51-333\\_environmental-reporting.pdf](https://www.osc.gov.on.ca/documents/en/Securities-Category5/csa_20101027_51-333_environmental-reporting.pdf).
- CGA Canada. (2005). *Measuring up: A study of corporate sustainability reporting in Canada*. Toronto: Certified General Accountants Association of Canada.
- Chaplier, J. (2014). EU to force large companies to report on environmental and social impacts. *Guardian Sustainable Business*. Retrieved November 26, 2015, from <http://www.theguardian.com/sustainable-business/eu-reform-listed-companies-report-environmental-social-impact>.
- Chauvey, J.-N., Giordano-Spring, S., Cho, C., & Patten, D. M. (2015). The normativity and legitimacy of CSR disclosure: Evidence from France. *Journal of Business Ethics*, 130(4), 789–803.
- Chelli, M., Durocher, S., & Richard, J. (2014). France’s new economic regulations: Insights from institutional legitimacy. *Accounting, Auditing & Accountability Journal*, 27(2), 283–316.
- Chen, J. C., & Roberts, R. W. (2010). Toward a more coherent understanding of the organization-society relationship: A theoretical consideration for social and environmental accounting research. *Journal of Business Ethics*, 97(4), 651–665.



- Cho, C. H. (2009). Legitimation strategies used in response to environmental disaster: A French case study of Total S.A.'s Erika and AZF incidents. *European Accounting Review*, 18(1), 33–62.
- Cho, C. H., Freedman, M., & Patten, D. M. (2012). Corporate disclosure of environmental capital expenditures: A test of alternative theories. *Accounting, Auditing & Accountability Journal*, 25(3), 486–507.
- Cho, C. H., & Patten, D. M. (2007). The role of environmental disclosures as tools of legitimacy: A research note. *Accounting, Organizations and Society*, 32(7–8), 639–647.
- Cho, C. H., Roberts, R. W., & Patten, D. M. (2010). The language of US corporate environmental disclosure. *Accounting, Auditing & Accountability Journal*, 35(4), 431–443.
- Clarkson, P. M., Li, Y., Richardson, G., & Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Accounting, Organizations and Society*, 33(4/5), 303–327.
- Commission of the European Communities. (2001). *A sustainable Europe for a better world. A European Union strategy for sustainable development*. COM (2001), 264 final. Bruxelles: European Commission.
- Criado-Jiménez, I., Fernández-Chulián, M., Husillos-Carqués, F. J., & Larrinaga-González, C. (2008). Compliance with mandatory environmental reporting in financial statements: The case of Spain (2001–2003). *Journal of Business Ethics*, 79(3), 245–262.
- de Villiers, C., & van Staden, C. J. (2006). Can less environmental disclosure have a legitimising effect? Evidence from Africa. *Accounting, Organizations and Society*, 31(8), 763–781.
- Deegan, C. (2002). The legitimising effect of social and environmental disclosures—A theoretical foundation. *Accounting, Auditing & Accountability Journal*, 15(3), 282–311.
- Deegan, C. (2013). Back to basics: What do we mean by environmental (and social) accounting and what is it for? A reaction to Thornton. *Critical Perspectives on Accounting*, 24(6), 448–458.
- Deegan, C. (2014). An overview of legitimacy theory as applied within the social and environmental accounting literature. In J. Bebbington, J. Unerman, & B. O'Dwyer (Eds.), *Sustainability accounting and accountability* (pp. 248–272). New York: Routledge.
- Deegan, C., & Gordon, B. (1996). A study of the environmental disclosure practices of Australian corporations. *Accounting and Business Research*, 26(3), 187–199.
- Deegan, C., & Rankin, M. (1996). Do Australian companies objectively report environmental news? An analysis of environmental disclosures by firms successfully prosecuted by the Environmental Protection Authority. *Accounting, Auditing & Accountability Journal*, 9(2), 50–67.
- Deegan, C., & Rankin, M. (1997). The materiality of environmental information to users of annual reports. *Accounting, Auditing & Accountability Journal*, 10(4), 562–583.
- Deegan, C., Rankin, M., & Tobin, J. (2002). An examination of the corporate social and environmental disclosures of BHP from 1983–1997: A test of legitimacy theory. *Accounting, Auditing & Accountability Journal*, 15(3), 312–343.
- Deegan, C., Rankin, M., & Voght, P. (2000). Firms' disclosure reactions to major social incidents: Australian evidence. *Accounting Forum*, 24(1), 101–130.
- Deegan, C., & Shelly, M. (2014). Corporate social responsibilities: Alternative perspectives about the need to legislate. *Journal of Business Ethics*, 121(4), 499–526.
- Delbard, O. (2008). CSR legislation in France and the European regulatory paradox: An analysis of EU CSR policy and sustainability reporting practice. *Corporate Governance*, 8(4), 397–405.
- Desjardins, J., & Willis, A. (2011). *Environmental and social issues briefing*. Toronto: The Canadian Institute of Chartered Accountants.
- Devinney, T. M. (2009). Is the socially responsible corporation a myth? The good, the bad, and the ugly of corporate social responsibility. *Academy of Management Perspectives*, 23(2), 44–56.
- DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(April), 147–160.
- Dowling, J., & Pfeffer, J. (1975). Organisational legitimacy: Social values and organisational behavior. *Pacific Sociological Review*, 10(1), 122–136.
- Driscoll, C. (2006). The not so clear-cut nature of organizational legitimating mechanisms in the Canadian forest sector. *Business and Society*, 4(3), 322–353.
- Du, X., Jian, W., Zeng, Q., & Du, Y. (2014). Corporate environmental responsibility in polluting industries: Does religion matter? *Journal of Business Ethics*, 124(3), 485–507.
- Etzion, D., & Ferraro, F. (2010). The role of analogy in the institutionalization of sustainability reporting. *Organization Science*, 21(5), 1092–1107.
- Global Reporting Initiative. (1997). *Sustainability reporting guidelines, version 1*. Amsterdam: Global Reporting Initiative.
- Global Reporting Initiative. (2011). *Sustainability reporting guidelines, version 3.1*. Amsterdam: Global Reporting Initiative.
- Global Reporting Initiative. (2013). *G4 sustainability reporting guidelines*. Amsterdam: Global Reporting Initiative.
- Global Reporting Initiative. (2014). Steps towards standardization. *GRI Newsletter*, June 4.
- Global Reporting Initiative. (2016a). *About GRI*. Retrieved March 4, 2016, from <https://www.globalreporting.org/Information/about-gri/Pages/default.aspx>.
- Global Reporting Initiative. (2016b). *Sustainability disclosure database*. Retrieved March 4, 2016, from <http://database.globalreporting.org/>.
- Gray, R. (2013). Back to basics: What do we mean by environmental (and social) accounting and what is it for? A reaction to Thornton. *Critical Perspectives on Accounting*, 24(6), 459–468.
- Gray, R., Owen, D., & Adams, C. (1996). *Accounting and accountability. Changes and challenges in corporate social reporting and environmental reporting*. Hemel Hempstead: Prentice-Hall.
- Haji, A. A., & Mohd Ghazali, N. A. (2012). The influence of the financial crisis on corporate voluntary disclosure: Some Malaysian evidence. *International Journal of Disclosure and Governance*, 9(2), 101–125.
- Hrasky, S. (2012). Carbon footprints and legitimation strategies: Symbolism or action? *Accounting, Auditing & Accountability Journal*, 25(1), 174–198.
- International Institute for Industrial Environmental Economics. (2002). *IIIEE report (2002)—Corporate environmental reporting—Review of policy action in Europe*. Retrieved July 28, 2014, from [http://www.enviroreporting.com/others/cer\\_europe.pdf](http://www.enviroreporting.com/others/cer_europe.pdf).
- Islam, M. A., & Deegan, C. (2010). Media pressures and corporate disclosure of social responsibility performance information: A study of two global clothing and sports retail companies. *Accounting and Business Research*, 40(2), 131–148.
- Jindrichovska, I., & Purcarea, I. (2011). CSR and environmental reporting in the Czech Republic and Romania: Country comparison of rules and practices. *Accounting and Management Information Systems*, 10(2), 202–227.
- Kim, J., Bach, S., & Clelland, I. (2007). Symbolic or behavioural management? Corporate reputation in high-emission industries. *Corporate Reputation Review*, 10(2), 77–98.

- Krippendorff, K. (2013). *Content analysis: An introduction to its methodology*. Newbury Park, CA: Sage Publications.
- Larrinaga, C., Carrasco, F., Correa, C., Llena, F., & Moneva, J. (2002). Accountability and accounting regulation: The case of the Spanish environmental disclosure standard. *European Accounting Review*, 11(4), 723–740.
- Li, J., He, H., Liu, H., & Su, C. (2015). Consumer responses to corporate environmental actions in China: An environmental legitimacy perspective. *Journal of Business Ethics*. doi:10.1007/s10551-015-2807-x.
- Li, Y., & McConomy, B. (1999). An empirical examination of factors affecting the timing of environmental accounting standard adoption and the impact on corporate valuation. *Journal of Accounting, Auditing and Finance*, 14(3), 279–313.
- Lindblom, C. K. (1994, April). *The implications of organizational legitimacy for corporate social performance and disclosure*. Paper presented at the Critical Perspectives on Accounting Conference, New York.
- Llena, F., Moneva, J. M., & Hernandez, B. (2007). Environmental disclosures and compulsory accounting standards: The case of Spanish annual reports. *Business Strategy and the Environment*, 16(1), 50–63.
- Maon, F., & Lindgreen, A. (2015). Reclaiming the child left behind: The case of corporate cultural responsibility. *Journal of Business Ethics*, 130(4), 755–766.
- Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 43(1), 1–18.
- Meyer, J. W., & Scott, W. R. (1983). *Organizational environments: Ritual and rationality*. Beverly Hills, CA: Sage.
- Michelon, G. (2011). Sustainability disclosure and reputation: A comparative study. *Corporate Reputation Review*, 14(2), 79–96.
- Milne, M. J., & Adler, R. W. (1999). Exploring the reliability of social and environmental disclosures content analysis. *Accounting, Auditing and Accountability Journal*, 12(2), 237–256.
- Milne, M. J., & Gray, R. (2013). W(h)ither ecology? The triple bottom line, the global reporting initiative, and corporate sustainability reporting. *Journal of Business Ethics*, 118(1), 13–29.
- Milne, M., & Patten, D. (2002). Securing environmental legitimacy: An experimental decision case examining the impact of environmental disclosures. *Accounting, Auditing & Accountability Journal*, 15(3), 372–405.
- Mobus, J. (2005). Mandatory environmental disclosures in a legitimacy theory context. *Accounting, Auditing & Accountability Journal*, 18(4), 492–517.
- Moerman, L., & Van der Laan, S. (2005). Social reporting in the tobacco industry: All smoke and mirrors? *Accounting, Auditing & Accountability Journal*, 18(3), 374–389.
- Neu, D., Warsame, H., & Pedwell, K. (1998). Managing public impressions: Environmental disclosures in annual reports. *Accounting, Organizations and Society*, 23(3), 265–282.
- O'Donovan, G. (2002). Environmental disclosures in the annual report: Extending the applicability and predictive power of legitimacy theory. *Accounting, Auditing & Accountability Journal*, 15(3), 344–371.
- O'Dwyer, B. (2003). The ponderous evolution of corporate environmental reporting in Ireland. Recent evidence from publicly listed companies. *Corporate Social Responsibility and Environmental Management*, 10(2), 91–100.
- Ontario Securities Commission (OSC). (2009). *OSC corporate sustainability reporting initiative*. Retrieved May 7, 2015, from [http://www.osc.gov.on.ca/documents/en/Securities-Category5/rule\\_20091218\\_51-717\\_mof-rpt.pdf](http://www.osc.gov.on.ca/documents/en/Securities-Category5/rule_20091218_51-717_mof-rpt.pdf).
- Ontario Securities Commission (OSC). (2014). *Comment letters for 51-102—Continuous disclosure obligation*. Retrieved May 7, 2015, from <https://www.osc.gov.on.ca/en/24177.htm>.
- ORÉE. (2013). Reporting extra-financier—Première année d'application de l'article 225 de la loi Grenelle 2—Bilan et perspectives. Retrieved July 23, 2014, from <http://cdurable.info/1ere-annee-d-application-de-l-Article-225-de-la-loi-Grenelle-2.html>.
- Organization for Economic Co-operation and Development (OECD). (2000). *OECD guidelines for multinational enterprises*. Paris: Organization for Economic Co-operation and Development.
- Othman, R., & Ameer, R. (2009). Corporate social and environmental accounting: Where are we heading? A survey of the literature. *International Journal of Disclosure and Governance*, 6(4), 298–320.
- Owen, D., Gray, R., & Bebbington, J. (1997). Green accounting: Cosmetic irrelevance of radical agenda for change. *Asia-Pacific Journal of Accounting*, 4(2), 175–198.
- Patten, D. M. (1992). Intra-industry environmental disclosures in response to the Alaskan oil spill: A note on legitimacy theory. *Accounting Organizations and Society*, 17(5), 471–475.
- Patten, D. M. (2002). The relation between environmental performance and environmental disclosure: A research note. *Accounting, Organizations and Society*, 27(8), 763–773.
- Pearson, D. A. (2006). *Raising the bar for CSR: Using regulatory tools for reporting to enhance corporate social responsibility activities*. Doctoral dissertation, Royal Roads University, Canada.
- Pfeffer, J., & Salancick, G. R. (1978). *The external control of organizations: A resource dependence perspective*. New York: Harper and Row.
- Reid, E. M., & Toffel, M. W. (2009). Responding to public and private politics: Corporate disclosure of climate change strategies. *Strategic Management Journal*, 30, 1157–1178.
- Rodrigue, M., Magnan, M., & Cho, C. (2013). Is environmental governance substantive or symbolic? An empirical investigation. *Journal of Business Ethics*, 114(1), 107–129.
- Ruef, M., & Scott, W. R. (1998). A multidimensional model of organizational legitimacy: Hospital survival in changing institutional environments. *Administrative Science Quarterly*, 43(4), 877–904.
- Scott, R. (1995). *Institutions and organizations*. Thousand Oaks, CA: Sage.
- Shoker, A. D., & Sethi, S. P. (1974). An approach to incorporating social preferences in developing corporate action strategies. In S. P. Sethi (Ed.), *The unstable ground: Corporate social policy in a dynamic society* (pp. 67–80). New York: Wiley.
- Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, 20(3), 571–610.
- Tilling, M. W., & Tilt, C. A. (2010). The edge of legitimacy: Voluntary social and environmental reporting in Rothmans' 1956–1999 annual reports. *Accounting, Auditing & Accountability Journal*, 23(1), 55–81.
- Unerman, J. (2000). Methodological issues—Reflections on quantification in corporate social reporting content analysis. *Accounting, Auditing and Accountability Journal*, 13(5), 667–681.
- Unerman, J., & Chapman, C. (2014). Academic contributions to enhancing accounting for sustainable development. *Accounting, Organizations and Society*, 39(6), 385–394.
- van Staden, C. J., & Hooks, J. (2007). A comprehensive comparison of corporate environmental reporting and responsiveness. *British Accounting Review*, 39(3), 197–210.

- Waddock, S. (2008). Building a new institutional infrastructure for corporate responsibility. *Academy of Management Perspectives*, 22(3), 87–108.
- Williamson, D., & Lynch-Wood, G. (2008). Social and environmental reporting in UK company law and the issue of legitimacy. *Corporate Governance*, 8(2), 128–140.
- Willis, A. (2003). The role of the global reporting initiative's sustainability reporting guidelines in the social screening of investments. *Journal of Business Ethics*, 43(3), 233–237.
- Wolniak, R. (2013). The role of Grenelle II in corporate social responsibility integrated reporting. *Manager*, 18, 109–119.
- Zimmerman, M. A., & Zeitz, G. J. (2002). Beyond survival: Achieving new venture growth by building legitimacy. *Academy of Management Review*, 27(3), 414–431.