On the search for mimetic patterns in environmental disclosure: An International Perspective

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Abstract

In this paper, we assert and test the proposition that environmental disclosure (ED) is structured by institutionalized myths and that is why ED is decoupled from environmental performance and media pressures. Focusing on firms from Canada, France and Germany, findings show that ED mimetic isomorphism for different topics varies among countries and by industry sensitiveness to environment. Results corroborate the institutional presumption that institutionalized myths vary among different contexts. Our findings also suggest that institutionalized ED structures may not reflect environmental performance, mimetic patterns being affected by environmental performance. However, the decoupling between ED mimetic isomorphism and environmental performance decrease when firms’ ED credibility is questioned by the media.

Keywords: Environmental disclosure, environmental performance, institutional theory, media exposure.
1. Introduction

In the last decade, we have seen an increasing number of empirical studies in corporate social responsibility disclosure (CSRD) and, more specifically, in environmental disclosure (ED). However, most of these studies measure the quantity and quality of environmental disclosures without analysing trends of different ED topics treated. Based on institutional theory, we assert that these issues may evolve and differ among countries and industries.

The decision to disclose a specific environmental issue depends on institutionalized beliefs. For Aoki (2001), institutions are equilibriums among institutional and technical pressures that evolve by the selection of a particular equilibrium among a multitude of possible equilibria. For the author, the nature of institutional arrangements is largely defined nationally.

In this paper, we test empirically the proposition that environmental disclosure is structured by institutionalized myths and that is why it is decoupled from environmental performance. Meyer and Rowan (1977) suggest both comparative and experimental studies examining the effects of variations in the structure of the environment on an organization’s structure. Specifically, in this paper, we analyze mimetic isomorphism in environmental disclosure of three countries: Canada, Germany and France; with the aim to highlight issues in institutionalized environmental disclosure in each country.

The investigation of corporate environmental disclosure (ED) of these three countries makes possible to assess the presumed differences between North American and continental European institutional contexts and the tendency towards institutional homogenization in Europe (i.e. two distinct countries). Based on institutional theory, we
argue that the choice of the ED topics to mimic vary according to different institutional pressures perceived by companies; in particular pressures from national institutions and industry institutions.

The current study responds to Boxenbaum and Jonsson (2008) call for empirical research linking isomorphism and decoupling to contribute reducing the gap between agentic and non-agentic approaches in institutional theory. Prior empirical research on environmental disclosure does not address specifically institutionalized structures. The most institutionalized subjects form common ED structures for companies in the same organizational field. Knowing these structures can guide the work for regulating and standardizing bodies. Institutionalized myths are the more legitimizing ones. By prioritizing the structures institutionalized by their context, firms can legitimize their activities at a lower cost. To prevent social objectives being left behind, there is a need for increasing the control of the environmental performance on these specific topics.

Our findings show that mimetic ED topics vary among countries and by industry sensitiveness to the environment. These results validate the institutional presumption that institutionalized myths vary among different contexts (Greenwood, Oliver, Suddaby, & Sahlin-Andersson, 2008). We also observe that institutionalized ED structures do not reflect environmental performance. These results, in a non-US context, complement and corroborate Cho, Patten, and Roberts (2006) findings that firms with poorer environmental performance engage in more environmental disclosure as a tactic to strategically manage public pressures.

Meyer and Rowan (1977) propose that this strategy of decoupling or loosely coupling is the best way for organizations to succeed and survive when institutional
pressures and technical requirements are in opposition. However, the decoupling between ED and environmental performance decreases, at least for the hard disclosure, when firms ED credibility is questioned by the media.

The paper is organized as follows. The next section provides a literature review and the development of hypotheses. The method section presents our empirical model, the sample description and variable measurement. Empirical results follow. The last section summarizes findings and their implications for future research.

2. Literature review and development of hypotheses

This paper draws on institutional theory. As explained by Boxenbaum and Jonsson (2008), institutional theory brings two essential propositions. The first one is that organizations need to adapt themselves to technical and institutional pressures. These institutional pressures concern what they believe the society expects from them. By complying with institutional pressures, in their search for legitimacy, organizational structures tend to institutional isomorphism (Boxenbaum & Jonsson, 2008). The second proposition is that when adaptations to institutional and technical pressures contradict each other, organizations may claim to adapt when they in reality do not, i.e. they decouple action from structure to preserve organizational efficiency (Boxenbaum & Jonsson, 2008).

Isomorphism is the phenomenon that forces organizations of the same organizational field, i.e. organizations that share the same institutions, to resemble each other by adopting the same institutionalized structures (Dimaggio & Powell, 1983). Institutional theory is the most appropriate theory to understand convergence and
divergence of corporate social responsibility (CSR) practices (Matten & Moon, 2008).

An institution is a self-sustaining system of shared beliefs about a salient aspect of the rules imposed by social consensus to rationalize the human exchanges and thus minimize the uncertainty they cause (Aoki, 2001; DiMaggio & Powell, 1983; North, 1990). Institutions are social constraints created endogenously during strategic interactions between agents (Aoki, 2001). They are in the minds of agents, and they are self-sustaining (Aoki, 2001). Then, the more a knowledge is taken for granted, the more it is institutionalized.

Greenwood, Oliver, Suddaby, and Sahlin-Andersson (2008) reviewed four sets of institutional studies. The first one shows that organizations are motivated to achieve legitimacy by adopting practices widely believed to be rational. To this set of studies, the diffusion of institutions among organizations involves two stages: the initial adoption of an idea to improve operations; and the adoption by the followers that by means of a mimetic process seek to secure social legitimacy by appearing like early adopters. The second set of institutional studies examines the proposition that institutionalized organizations converge around practices assumed to be rational because they provide legitimacy and become normatively expected within a network. The third set compares practices in different countries and suggests that distinct cultural values result in different organizational structures and behaviours. The fourth set of research explores the specific agents of diffusion of institutions between organizations; in particular professional networks, government agencies, management consultants, senior executives and employee expectations.
In the institutional perspective, organizations must respond to technical contingencies, things they have proposed to do, and to institutional contingencies, appropriate and socially legitimate ways to do it (Greenwood, Hinings, & Whetten, 2014). Institutional contingencies are prescribed by the sociocultural ideas, and beliefs become rationalized. As a result, organizations take the form of different arrangements (Greenwood et al., 2014). To the neo-institutionalism, these arrangements tend to become homogeneous. “New institutionalism has been informed by the homogenization of institutional environments across national boundaries and has indicated how regulative, normative, and cognitive processes lead to increasingly standardized and rationalized practices in organizations across industries and national boundaries. The key argument is that organizational practices change and become institutionalized because they are considered legitimate. This legitimacy is produced by three key processes: coercive isomorphism, mimetic processes, and normative pressures” (Matten & Moon, 2008, p. 411).

2.1 Country-level environmental disclosure differences

There are notable differences in social and environmental disclosures among countries. Maignan and Ralston (2002) compare the extent and content of web sites of 400 firms from the U.S., France, the Netherlands, and the U.K. to test the desirability and content of corporate social responsibility disclosure (CSRD). They find that firms in the four countries do not display the same level of enthusiasm to appear as socially responsible, and use diverse means to convey social responsibility images.
For Matten and Moon (2008), corporate social responsibility (CSR) empirically consists of communicating policies and practices that reflect the firm’s societal responsibility. Based on new institutional theory, Matten and Moon (2008) develop a theoretical framework to explain the historically more explicit CSR in the United States than in Europe and the shift from implicit to more explicit CSR among European corporations. They propose that differences in CSR among different countries are due to a variety of longstanding, historically entrenched institutions, and that the shift from implicit to more explicit CSR among European corporations is due to the global spread of CSR and its institutions beyond U.S. origins.

Many studies focused on identifying the main social and environmental indicators disclosed by companies in a given country.

In a literature review and a longitudinal study of UK corporate social and environmental disclosure, Gray, Kouhy, and Lavers (1995) show how UK CSR evolved from minimal and merely social disclosure to broader disclosure including environmental aspects between 1979 and 1991. They suggest that the subjects of CSR disclosure in the UK may change over time and depending on firms’ size. Neu, Warsame, and Pedwell (1998) show, based in a Canadian sample for the same period between 1982 and 1991, that Canadian firms’ environmental disclosure rise over time, size and relevant stakeholders interests. Authors show that firms manage impressions when multiple relevant publics exist with incommensurable interests, by accommodating environmental disclosures to the interests of the more salient stakeholders.

Thus, the subjects covered by CSR disclosure depend on the stakeholder power. However, through a content analysis of websites of "top firms" in the rankings of Forbes
top 50 U.S. firms and Forbes top 50 global, Snider, Paul, and Martin (2003) find that both samples of firms concentrate their attention on a similar group of stakeholders (customers, employees and owners) and approximately the same CSR issues. They find that the main CSR issues are: the value of goods and services for consumers; the diversity and the skill development and career enhancement for employees; and the use of honest, inclusive, and timely communications to stockholders. It is interesting to note that these similar aspects, covered in social and environmental disclosure, are social issues. At that point, it is relevant to ask if environmental disclosure is divergent between countries and if it tends to converge or to diverge.

Using a content analysis of annual reports Sen, Mukherjee, and Pattanayak (2011) analyze the environmental disclosure practices of 22 Indian core sector companies (Oil and petrochemicals, Mining and minerals, Steel and Cement). Authors have identified 15 themes based on previous empirical literature. They find that the majority of corporate environmental disclosure concerns the conservation of natural resources and that no information is disclosed about the legal proceedings for violating environmental laws, land rehabilitation and remediation, and noise emission information. The disclosed information is only positive or neutral and mostly qualitative.

Exploring environmental reporting policies of Australian corporations, Deegan and Gordon (1996) find that environmental disclosure in annual reports promotes companies positive aspects of their environmental performance, but fail to disclose negative aspects. Their results also show that environmental disclosure significantly increases over time and is positively associated with environmental lobby groups' concern about corporate environmental performance within particular industries.
Using a content analysis of Australian companies' annual reports disclosure related to corporate environmental policies, Tilt (2001) analyzes the relationship between corporate environmental policies and subsequent disclosure related to those policies in annual reports. She finds that the most important items included in corporate environmental policies are the involvement of staff and environmental objectives while in annual reports, the most important item is land remediation. Tilt (2001) suggests that Australian companies have corporate environmental policies similar to other Western countries but poorer reporting practices.

More recently Yusoff, Othman, and Yatim (2013) compare environmental disclosures made by Malaysian and Australian companies on other reports than annual reports through a content analysis. Authors find that environmental disclosure in both countries are mainly descriptive, qualitative and does not increase the level of information of annual reports. Furthermore, environmental disclosure practice in Australia are influenced by ISO14001 certification and industry membership while in Malaysia, practices are only influenced by ISO14001 certification (Yusoff et al., 2013).

Fatima, Abdullah, and Sulaiman (2015) show that environmental disclosure of Malaysian firms increase from 2005 to 2009 in seven categories: pollution abatement or environmental pollution control including key performance indicators (KPI); sustainable development reporting; environmental management; environmental objective, target and achievement; environmental-related financial information; stakeholder engagement; and other environmental-related disclosure. However, environmental disclosure concerning negative information and information relating laws and regulation, and land remediation and contamination does not increase.
Through a content analysis of corporate environmental disclosure in annual reports and presidents’ letters between 2005 and 2010 of the 55 largest French industrial firms, Albertini (2014) describes how environmental disclosure is used to report companies environmental strategies through indicators she classifies according to environmental commitment. The compliance strategy is measured by: the number of environmental penalties; the amount of energy and water consumption; the extent of waste management; and pollutant emissions on land, water and the air. The opportunistic strategy is measured by environmental awards, charter or sponsorship, and extra-financial rating. The proactive strategy is measured by the eco-conception of products, the modification of manufacturing processes, the implementation of EMS, ISO 14,001 certification, and extensive environmental reporting, innovation, and research. Albertini (2014) finds that environmental innovations are presented as a mean of increasing energy efficiency and of getting a competitive advantage in green market products, the environmental management system implemented by proactive companies allows them to improve their environmental performance, and that the economic situation significantly influences the way environmental issues are addressed.

Overall, disclosed environmental topics vary among countries according to the stakeholders concerns, and ED structures are different between countries and the environmental sensitiveness of industries. As organizations reflect institutionalized myths, we expect significant differences in mimetic behaviour among countries ED topics.
2.2 Country-level intuitional differences

Environmental disclosure aims to legitimize the firm’s activities (Cho & Patten, 2007). Legitimacy is the social perception of congruence between the organizational behaviour and the institutional environment (Suchman, 1995). Therefore, we can expect firms from different institutional contexts (e.g. countries) to show different structures of environmental disclosure.

Jorgensen and Soderstrom (2006) investigate how environmental disclosures vary under commercial and environmental laws across countries. They find that reported environmental disclosures vary with legal institutions, environmental regulation, and disclosure regulation. Authors also find that, relative to common law countries, civil law countries, mostly French civil law countries, have lower levels of reported environmental disclosures, environmental reporting regulation, and strength of auditing and accounting standards, while German origin countries have significantly higher levels of environmental regulation. These results are surprising for two reasons. First, there are more coercive and normative pressures to environmental and social disclosure in France and in Germany than in Canada (Cormier & Magnan, 2017). Second, European institutional compliance promote the congruence of environmental policies on European Union countries (Knill & Lehmkuhl, 2002).

Legal origin explains most institutional differences between countries because it proxies for religious and cultural differences (Beck, Demirgüç-Kunt, & Levine, 2003). Consequently, firms from different legal origin countries can disclose ED following different institutional patterns. For this reason, this study analyzes in depth the patterns of ED mimetic behaviour in three countries: Canada, France and Germany. Canadian legal
origin is common law, while that of France and Germany is civil law; the French civil law for France and the German civil law for Germany (La Porta, Lopez-de-Silanes, & Vishny, 1997).

In France and Germany, ED institutions are mostly coercive and normative, while in Canada they are mostly normative and mimetic (Cormier & Magnan, 2017). Specifically, in France and Germany, ED is mainly influenced by EU Regulations and directives and pressure groups demands, which are strictly enforced (Cormier & Magnan, 2017). On the other hand, Canadian ED is mainly voluntary (Cormier & Magnan, 2017).

2.3 Mimetic isomorphism

Institutions are regulative, normative or cultural cognitive and exert coercive, normative or mimetic pressures respectively, which incite firms behaviour to isomorphism (Scott, 1995). Coercive isomorphism occurs when organizations on which the company depends - especially the State - force other organizations to adopt operating procedures or legitimized rules and structures. Normative isomorphism arises mainly from professionalization (Dimaggio & Powell, 1983).

Mimetic isomorphism occurs when organizations face cognitive uncertainty (Dimaggio & Powell, 1983). According to Meyer and Rowan (1977), organizations face cognitive uncertainty when they must deal with contradictory institutionalized rules or myths. In those conditions, organizations adopt a mimetic behaviour by imitating other ones considered as more legitimate or better performers (Dimaggio & Powell, 1983) and by imitating themselves in a routine behaviour (Scott, 1995).
In their literature review, Boxenbaum and Jonsson (2008) notice that previous studies found that the spread of companies’ strategies through mimetic networks led to practice polymorphism, i.e. islands of homogeneity, bounded by common institutional and technical issues. Hence, an easy way to verify these islands of isomorphism on ED is by identifying firms’ common ED structures at country and industry level. This gives rise to our first two hypotheses.

**H1. There are country differences in mimetic behaviour among ED topics.**

**H2. Country differences in ED mimetic behaviour among topics vary between environmentally sensitive and less environmentally sensitive industries.**

In our study, we consider the four following industries to be environmentally sensitive: Construction; Manufacturing; Industrials; Mining, and Transportation and public utilities. Belonging to an environmentally sensitive industry may impede the effectiveness of a firm’s legitimacy-enhancement efforts and thus mimetic behaviour (Aerts and Cormier, 2009).

Mimetic isomorphism includes imitating the structures disclosed by the company in earlier periods by routine, and imitating the disclosure of other firms in the same organizational field when it is in a situation of cognitive uncertainty (Scott, 1995). For example, examining Portuguese bank branching decisions between 1988 and 1996, Barreto and Baden-Fuller (2006) find that legitimacy-based reference groups guide firms in their mimetic behaviour, that firms undertake imitation even against their own ex ante information, and that legitimacy-based imitation contributes negatively to firms’ profitability.
2.4 Decoupling

Boxenbaum and Jonsson (2008) highlight that organizations decouple their practices from their formal or espoused structures because they are pressured to adapt to institutions that may compete in inefficient organizations. Decoupling is a disconnection between organizational practice and organizational structure, where organizational practice is determined by perceived efficiency concerns and organizational structure results from institutional pressure for conformity (Meyer & Rowan, 1977). Consequently, organizations respect only superficially institutional demands by adopting institutionalized structures without implementing the related practices (Boxenbaum & Jonsson, 2008).

Empirical evidence concerning the relationship between environmental disclosure and environmental performance is still an unresolved issue. This occurs because environmental disclosure is a complex construct composed of many issues and different motivations. Environmental disclosure studies must consider this complexity by identifying whether ED measure allows observing only technical requirements, i.e. the ED reflecting environmental performance; if it allows observing only the ED reflecting institutional pressures; or both.

Based on a cross-sectional sample of 198 U.S. firms and using simultaneous equation models, Al-Tuwajri, Christensen, and Hughes (2004) find that good environmental performance is positively associated with good economic performance, and also with more extensive quantifiable environmental disclosures of specific pollution measures and occurrences.
Clarkson, Li, Richardson and Vasvari (2008) test two competing predictions: voluntary disclosure theory, predicting a positive association between environmental performance and the level of discretionary environmental disclosure; and socio-political theories implying that corporate disclosure is a function of social and political pressures facing the corporation, which predict a negative association. They find a positive relationship between environmental performance and the level of discretionary environmental disclosures for an American sample, consistent with voluntary disclosure theory. However, as they themselves explain, they measure ED with objective indicators difficult to mimic. This suggests that authors’ measure could capture technical performance disclosure more than an answer to institutional rules. Because technical and institutional pressures may be opposed (Boxenbaum & Jonsson, 2008; Meyer & Rowan, 1977), the ED resulting from institutional pressures may behave in a contrary way to ED resulting from technical performance. Thus, we expect the ED mimetic behaviour to be affected by the environmental performance. Hence, our third hypothesis.

H3. Country differences in ED mimetic behaviour among topics are affected by environmental performance.

However, gaining legitimacy without adapting requires that people trust that the organization does what it says it will (Boxenbaum & Jonsson, 2008; Meyer & Rowan, 1977). When institutional pressures lead to decoupling, organizations will do their best to avoid scrutiny or at least to control the process of scrutiny. Therefore, when their credibility is questioned by the media, firms must reduce their decoupling by diminishing their legitimization by their fit to institutionalized structures. Aerts, Cormier, and Magnan (2006) document that the media exposure is negatively related to ED mimetic behaviour.
Thus, we expect ED mimetic behaviour to be affected by the media exposure, mostly for soft disclosure that is easier to imitate. This gives rise to our last hypothesis.

**H4. Country differences in ED mimetic behaviour among topics are affected by environmental media exposure.**

### 3. Method

This study analyzes how the environmental content disclosed in the annual report, the annual information form and the corporate social responsibility report is mimicked at the international level by putting emphasis on individual ED topics.

To test our hypotheses, we identify structural differences in environmental disclosure at country and industry level for each environmental topic studied.

Mimetic isomorphism = Firm disclosure similarity / Prior year reference group similarity (i.e. Similarity = β Prior year reference group similarity; then, β = Similarity/Prior year reference group similarity).

Then, we test whether ED mimetic behaviour is a multidimensional construct for which different dimensions can behave differently according to the distribution of power between dominant institutions that shape the ED in a country. We perform factor analyzes on the whole sample for each country (H1), focusing on industries environmentally sensitive (H2), on firms with low environmental performance (H3), and those firms with high media exposure (H4).

### 3.1 Sample

The sample is composed of 239 Canadian firms (members of the S&P/TSX Index of the Toronto Stock Exchange), 120 French firms (members of the SBF120 Index of the
Paris Bourse) and 109 German firms (members of the DAX30, MDAX50 and TecDAX30 Indices of the Deutsche Bourse) from which the environmental content disclosed in the annual report, the annual information form and the annual corporate social responsibility report were collected for years 2012, 2013 and 2014. Firms belong to the following industries: Construction; Finance, insurance, real estate; Manufacturing; Mining; Retail trade; Services; Transportation and public utilities; and Wholesale trade.

The wish to highlight the structures of ED in different institutional contexts and in similar institutional contexts justifies the choice of these three countries. Comparative research in CSR has identified notable differences between North American and European firms (Matten & Moon, 2008). In Europe, institutions of the European Union aim at the institutional convergence among countries. The mimetic behaviour of sample firms allows assessing that differences in the mimetic isomorphism are explained by institutional differences.

3.2 Measurement of variables

*Mimetic isomorphism.* The dependent variables are institutionalized environmental issues, observed through the mimetic isomorphism in the disclosure of environmental topics. Empirical studies about mimetic processes have been criticized for including in their measure other institutional pressures, i.e. coercive and normative, and even the technical pressures rather than mimetic processes (Greenwood et al., 2008). However, that occurs because mimetic processes are the imitation of institutionalized rules. “Institutionalized rules are classifications built into society as reciprocated
typifications or interpretations. Such rules may be simply taken for granted or may be supported by public opinion or the force of law” (Meyer & Rowan, 1977, p. 341).

We calculate mimetic isomorphism in environmental disclosure topics by a similarity score as follows:

a) A dissimilarity score was determined for each environmental theme as

\[
DIS_{ij} = \frac{DIV(ED)_{ij} - M(ED)_{ij}}{SD(ED)_{ij}}
\]

Where DIS is the dissimilarity score and represents difference between environmental disclosures (ED) of the firm i and ED of other firms of the organizational field j (industry).

DIV is the total number of items disclosed by the company concerning each topic. To capture the ED institutionalized structure, every environmental item mentioned by the firm is included. Using a coding grid, each environmental item disclosed either in the annual report, the annual information form or the annual corporate sustainability report was coded 1 and 0 otherwise. There are 40 items (see appendix A) distributed in six topics: Expenditures and risks; Laws and regulations; Pollution abatement; Land remediation and contamination; Sustainable development; and Environmental management.

M and SD are respectively the mean and the standard deviation of the organizational field j, excluding the focal firm i.

b) A similarity score is calculated as

\[
SIM_{ij} = MAX(DIS)_{j} - DIS_{ij}
\]

Where SIM is the similarity score, measuring the similarity between disclosures of an environmental topic by the firm i compared to the rest of companies in its reference
group and MAX (DIS) j is the maximal dissimilarity score in the reference group (industry). The reference group is the organizational field, i.e. a group of firms that shares the same institutions. According to Scott (1995) the organizational field concept can by simplified by the more conventional concept of industry.

c) Mimetic isomorphism = Firm disclosure similarity / Prior year reference group similarity

The environmental disclosure data was collected using a coding grid developed by Cormier and Magnan (2015) (see appendix A) inspired on Wiseman (1982) index. Environmental information was identified by four coders. Cronbach alpha is 96%. Hence, the encoding of the ED appears to be reliable.

Since Wiseman (1982) who uses an indexing procedure to measure the content of environmental disclosure. This method has been used in many prior research. The method consists in dividing the environmental information into different categories. Wiseman (1982) categories are economic factors, laws and rules, decreasing pollution, lasting development, land restoration and environmental management. With the increasing of environmental disclosure standards over time, the number of topics and items inside topics has constantly increased.

The coding grid items come from ceremonial external evaluation agents, like the Global reporting initiative and previous research. “From an institutional perspective, then, a most important aspect of isomorphism with environmental institutions is the evolution of organizational language. Labels of the organization chart as well as the vocabulary used to delineate organizational goals, procedures, and policies are analogous to vocabularies of motive used to account for activities of individuals” (Meyer & Rowan,
Our coding grid is especially appropriate to observe the firm isomorphism with their institutional environment.

*Environmental performance.* We collect Environmental Performance from Bloomberg database. Bloomberg rates firms based on their disclosure of quantitative and policy-related ESG data, relying on different sources: annual reports, sustainability reports, press releases, direct communication with companies, including meetings, phone interviews, email exchanges and survey responses. Examples of issues treated are: environmental (environmental Policy, environmental management system, voluntary codes, product stewardship and life cycle assessment, sustainability investing – commitment to ecologically sustainable development, climate change risk, carbon emissions, toxic waste treatment, raw materials scarcity, water scarcity, air pollution, natural resources used, environmental opportunities.

*Environmental media exposure.* Media exposure is the number of news stories that refer to a particular firm’s environmental activities in a given year. Based on element included in our environmental disclosure grids used as keywords, we collected the number of articles related to environmental issues from ABI Inform, which provides access to corporate information.

4. Results

4.1 Descriptive statistics

Tables 1a and 1b provide descriptive statistics of the sample. Results show that environmental performance is higher in France and Germany while lower in Canada. This might be because material and mining sectors are very important in the Canadian
economy. Moreover, there are less coercive rules in Canada. We observe strong media pressures in Germany. Green political parties’ influence in Germany might explain this. Media pressures are much lower in Canada. There are more environmentally sensitive industries in Canada, which leads to lower environmental performance compared with France and Germany. We also observe that Laws and regulation, Land remediation, and Sustainable development show higher standard deviation, implying less mimetic behaviour for these categories of disclosure.

More precisely, Table 1b shows that choices of ED mimetic structures vary less in Canada than in European countries (lower standard deviation of total mimetic isomorphism). These recurring choices indicate a strong homogenization, i.e. more mimetic isomorphism in Canada. On the other hand, mimetic behaviour on Laws and regulations, Land remediation and contamination and Sustainable development lead to less isomorphism. The high standard deviations show that the number of imitated structures is greater for these three subjects in the three countries of the sample. These results corroborate Beckert (2010)’s propositions that mimetic behaviour can lead to both convergence and divergence of institutions.

[Insert Table 1]

4.2 Mimetic isomorphism by disclosure topics

Descriptive statistics presented in Tables 1a and 1b show mimetic isomorphism for each topic of disclosure. This corresponds to the quotient of firms’ Similarity divided by Prior year reference group similarity. In Table 2, we instead present correlations between firms’ similarity and prior year reference group similarity. This approach allows
for better observing differences in mimetic isomorphism for each topic than simply comparing means and standard deviations.

In general, we observe more ED mimetic behaviour in Canada (higher standardized coefficients - correlations), less in France, and still less in Germany. More precisely, Laws and regulations conformity and Environmental management ED are more mimicked in Canada, less in Germany and still less in France. This could suggest that these environmental topics aim for greater legitimacy when they are mimicked by Canadian firms than when they are mimicked by German or French firms. Based on Meyer and Rowan (1977) logic of confidence and good faith, it could mean that Canadians believe more corporate mimicked ED than other countries. Hence, Canadian firms are in a better position to decouple ED and environmental performance.

However, Expenditures and risks ED is more mimicked in Germany and France than in Canada. This topic is the most institutionalized one in Germany and France. In Canada, the most institutionalized topic is Environmental management. Canadian firms would seem to disclose Environmental management issues superficially and imitating other industry firms without the need of going deeper to assure legitimacy.

Land remediation and contamination disclosure is more mimicked in France, less in Canada, and not mimicked in Germany. In France, environmental inspectors, charge of enforcing environmental law, do exemplary work in site inspection. This leads French companies to increase their compliance with institutional constraints, which is reflected in their mimetic choices. In Germany, Land remediation and contamination disclosure does not seek to meet institutional pressures. Since it is hard disclosure, and hence costly
to mimic, German Land remediation and contamination ED seems to reflects the firm technical requirements regarding this issue.

Pollution abatement is more mimicked in France, less in Canada and still less in Germany. Sustainable development disclosure is more mimicked France, less in Germany and not mimicked in Canada. In general, Sustainable development mimetic coefficients are the lowest. This suggests that this topic is the less institutionalized one in Canada and in France. In Germany, the less institutionalised topic is Land remediation and contamination ED.

Overall, hard disclosure topics are less mimicked than soft disclosure topics in Canada, especially for Environmental management, unlike European countries whose firms mimic more the hard ED topic than the soft disclosure. Looking for legitimacy, firms attempt to increase their homogenization with institutionalized myths regarding a particular topic. This seems to happen with Environmental management ED in Canada while German and French firms would feel that their stakeholders are more convinced by Expenditures and risks disclosure to fit with institutional requirements.

These results are in line with the first hypothesis; that there are significant differences on ED topics’ mimetic behaviour between countries.

[Insert Table 2]

4.3 Multivariate results

4.3.1 Mimetic isomorphism patterns – Factor analyses (H1)

To identify patterns in mimetic isomorphism among ED topics, we perform factor analyses. Results presented in Table 3 show that ED mimetic isomorphism is a multidimensional construct. Therefore, when studying the ED in its integrality, we
neglect the variability among factors. The saturation point is set at 0.45 (correlations > 0.45) to ensure that each disclosed topic is well correlated with its factor.

The combination of different mimicked topics in the same factor suggests that mimetic behaviour aims to satisfy constraints of the same institutional pressures. As expected and shown in Table 3, dimensions vary by country (H1). Institutions in each country have different ED interests, which shapes the ED structure. Results show three main factors in each country, i.e. three main institutional powers over ED. According to Kostova (1997), country-level institutional profile contains three dimensions: the country's government policies, constituting a regulatory dimension; the value systems, i.e. the normative dimension; and the widely shared social knowledge, i.e. the cognitive dimension. These profiles must be measured with regard to specific domains. Consistent with Kostova (1997), Table 3 highlights three different institutional powers in each country.

In Canada, the first institutional power requires the adequacy of the disclosure on Expenditures and risks and Sustainable development according to its requirements. The second institution or set of institutions concerns constraints on Laws and regulations conformity, Pollution abatement and Environmental management disclosures. This institutional power encourages the fit of Pollution abatement and Environmental management disclosures with institutionalized structures of ED in the country that encourages companies to mimic these aspects, but discourages mimetic behaviour on Laws and regulations conformity disclosures. The ED on this topic must be in line with the technical performance of the firm. The last institutional power monitors compliance
with the institutionalized rules on Land remediation and contamination disclosure. Unlike France and Germany, Canadian institutions influence each ED topic.

In France, the first institutional coercive power leads firms to homogenize by ED mimetic behaviour on Expenditures and risks and Pollution abatement. The second institutional power requires the fit of Laws and regulations conformity disclosure with the institutionalized requirements. The last institutional power asks for the respect of institutional disclosure requirements on Environmental management, which leads companies to imitate these topics while there are pressures on firms to reduce mimetic behaviour on Sustainable development ED. Land remediation and contamination disclosure is not shaped by institutional pressures, then their disclosure would depend more on the technical performance of the firm.

In Germany, the most important institutional power monitors the institutional adequacy of the same subjects monitored by the most important institutional power in France, i.e. Expenditures and risks and Pollution abatement. The second institutional power lead firms to homogenize by mimitism on their ED on Land remediation and contamination disclosures and pressures for the reduction of Environmental management disclosures mimetic behaviour. The last institutional power induces firms to homogenize their disclosure on Laws and regulations conformity, leading companies to mimetic behaviour. Institutional pressures do not shape sustainable development disclosure, and then their disclosure would reflect the technical performance of the firm.

[Insert Table 3]
4.3.2 Differences in mimetic isomorphism patterns – Institutional constraints

The interaction of often contradictory technical and institutional constraints shapes organizational structures (Meyer & Rowan, 1977; North, 1990; Aoki, 2001), including ED structures, and thus ED mimetic patterns. Therefore, the analysis of mimetic reaction of firms when their environmental technical requirements are higher (environmentally sensitive industries) when they have more incentives to decouple their ED from their environmental performance (low environmental performance), and when collective opinion imposes new ED institutionalized constraints (high media exposure).

Results presented in Table 4 show that patterns of mimetic isomorphism adopted by firms in each country differ according to the variations in the most important institutional and technical pressures affecting their survival. In line with Aoki’s (2001) explanations, it is possible to observe that firms adapt their mimetic behaviour according to the possibilities left by institutional pressures that affect them.

In Canada, these adaptation options are higher than in Europe. Canadian firms apply mimetic behaviour to decouple all ED topics except Laws and regulations conformity information, on which firms tend to disclose their specific detailed information. European firms apply mimetic behaviour to decouple a less number of ED topics. Forced to disclose more specific information, they have lower possibility to meet competing demands of stakeholders and satisfy both technical and institutional needs when they are divergent. Their country’s institutional pressures inhibit French firms’ mimetic behaviour on Land remediation and contamination and Sustainable development ED and German firms’ mimetic behaviour on Sustainable development and Environmental management.
Canadian firms from environmental sensitive industries tend to less mimic Expenditures and risks ED, but compensate by a higher level of mimetic behaviour on Laws and regulations conformity ED with the aim to demonstrate their adequacy to institutionalized rules. Contradictory ED mimetic pressures on Land remediation and contamination and Environmental management (the latest from the media exposure) lead Canadian firms to decrease mimetic behaviour on some aspects of these topics. When Canadian firms’ environmental performance is poor, they are forced to reduce their mimetic behaviour in favor of more technical information about Pollution abatement and to stop mimetic behaviour of Land remediation and contamination, especially when the media monitor them.

Despite the institutional convergence that is supposed to have brought European Union institutions, it is possible to observe that firms of the two countries do not have the same reaction to these institutions. Unlike Germany, in France there is an alignment between formal and informal institutional demands as shown by the mimetic reaction of firms to environmental media pressures. Contrary to German firms, French firms with low environmental performance are forced to be more precise on their Expenditures and risks ED.

European formal institutional convergence is shown through the mimetic behaviour of environmental sensitive firms. French and German firms from environmental sensitive industries are forced to less mimetic behaviour concerning Laws and regulations conformity, face contradictory mimetic demands on Land remediation and contamination disclosure, and must adjust more their soft disclosure to institutionalized ED structures. As Canadian firms, poor environmental performance
European firms need to be less mimetic and to disclose more technical issues concerning Pollution abatement efforts. European firms do it to a lesser extent, remaining mimetic in some Pollution abatement required structures.

[Insert Table 4]

Differences between the total and sensitive industries columns provide evidence that there are significant differences between industries more or less environmentally sensitive on ED topics’ mimetism in each country, which is consistent with the second hypothesis. Differences between the total and the low environmental performance mimetic behaviour suggest that firms with low environmental performance in the three countries apply the decoupling strategy mimicking easy to mimic topics, as soft disclosure, to legitimize and ensure their survival. These results are consistent with the third hypothesis. Finally, differences between the total and the high media exposure firms’ mimetic behaviours suggest that firms change their mimetic behaviours to respond to media pressures, which is in line with our fourth hypothesis.

To be more specific, these results are detailed below. Table 5, panels A, B, and C show mimetic tendencies of firms in each country under different technical and institutional pressures. Panel A of Table 5 shows mimetic tendencies when firms’ technical requirements concerning environmental disclosure are higher. Panel B shows mimetic tendencies when they have more incentives to decouple their ED from their environmental performance because their environmental performance is poor. Panel C shows mimetic tendencies when collective opinion, expressed by the media, imposes new ED institutionalized constraints.
4.3.2.1 Mimetic isomorphism for environmentally sensitive industries (H2)

Panel A of Table 5 shows mimetic patterns specifically for environmentally sensitive industries. Unlike the rest of firms, firms from environmentally sensitive industries receive contradictory institutional pressures in the three countries concerning Land remediation and contamination ED. Some institutional powers ask for more rigorous fit with institutionalized rules of ED, which encourages firms’ mimetic behaviour, while other institutional powers encourages firms to apply them as a guide to disclose their technical specificities, which discourages firms’ mimetic behaviour on this topic. The same phenomenon is observed in Canada with Environmental management ED. These results confirm the institutional theory proposition that firms face conflicting demands of two types, conflicting institutional demands, and technical requirements opposing institutional demands (Boxenbaum & Jonsson, 2008; Meyer & Rowan, 1977).

In Canada, the mimetic behaviour for environmentally sensitive industries firms change concerning all topics except for Pollution abatement and Sustainable development disclosures. Canadian institutions put pressures on environmentally sensitive industries to not imitate institutionalized ED structures on Expenditures and risks, Land remediation and contamination, and Environmental management; but to apply them as a guide to disclose their technical specificities. However, unlike the rest of the firms, Canadian environmentally sensitive firms mimic Laws and regulations conformity disclosure, possibly as a way to showing that while their actions may be environmentally damaging, they are endorsed by law.

In France, the mimetic behaviour of environmentally sensitive industries firms differs from the rest of firms’ mimetic behaviour concerning Laws and regulations
conformity, Land remediation and contamination, and Sustainable development issues. French institutions appear to discourage mimetic behaviour on Laws and regulations conformity disclosure by environmentally sensitive firms; asking them for details that are more technical. Land remediation and contamination issues do not seem to be institutionalized in France. Only firms from environmentally sensitive industries receive both, institutional pressure to disclose the subject following a certain structure, and technical pressures specific to their activities that avoid them from disclosing information similar to other firms ED.

Environmentally sensitive firms in France do not mimic sustainable development disclosure. While the rest of firms address their own specific technical issues, environmentally sensitive firms prefer to avoid the subject, suggesting that the ED concerning this subject is closely monitored in France, which avoid French firms to mimic the topic as a way to legitimize their activities without really implementing the required actions.

In Germany, Sustainable development disclosure is only institutionalized for environmentally sensitive firms. Two different institutional powers exert pressure to ensure that German environmentally sensitive firms respect ED requirements on Sustainable development disclosure, which encourages mimetic behaviour on this topic. The mimetic behaviour of firms from German environmentally sensitive differs from other firms concerning Laws and regulations conformity, Land remediation and contamination, Sustainable development, and Environmental management ED. German institutional powers lead to less mimetic behaviour in Laws and regulations conformity and Land remediation and contamination disclosures by monitoring that firms from
environmentally sensitive industries disclose more of their technical aspects to justify their performance. In Germany, the main institutional power put pressures on environmentally sensitive industries to imitate institutionalized ED structures on Environmental management while the rest of firms are encouraged to disclose their specific ways to deal with this issue. This suggests that Environmental management institutions are perceived in Germany as the most efficient way to manage environmental issues.

In summary, panel A of Table 5 shows significant differences between industries more or less environmentally sensitive on ED topics’ mimetic behaviour in each country, which is consistent with the second hypothesis.

[Insert Table 5]

4.3.2.2 Mimetic isomorphism for low environmental performers (H3)

Panel B of Table 5 shows factors influencing the ED mimetic behaviour for low environmental performers firms. In all three countries, institutional powers require companies with low environmental performance to be more specific than others regarding Pollution abatement by disclosing the technical reasons that led to this performance. This subject seems to be globally considered as the main issue of sustainable development. Therefore, institutional powers of each country ensure that firms cannot decouple their performance in this aspect of their ED. Table 6 shows Pollution abatement ED negative mimetic tendencies in Canada, France and Germany when firms’ environmental performance is poor. The main institutional power of each country asks for more non-institutionalized information concerning Pollution abatement,
i.e. more details about firms’ technical issues explaining their environmental performance.

In Canada, mimetic behaviour seems not to be possible regarding Pollution abatement and Land remediation and contamination disclosure. To mimic these categories of hard information is costly; hence, firms cannot decouple it. Canadian firms with poor environmental performance seem unable to follow Land remediation and contamination ED institutionalized rules. Then, they prefer not to mimic this topic, but without disclosing technical details. In quest of legitimacy, Canadian poor environmental performers firms increase mimetic behaviour on Laws and regulations conformity disclosure to better fit with ED institutional requirements on this topic. It means that Canadian firms decouple their ED from their environmental performance concerning Laws and regulations conformity disclosure.

European firms’ legitimacy strategy of poor environmental performers firms is different. French and German low environmental performers firms use soft disclosure to legitimize their actions. French poor environmental performers firms decouple their Sustainable development disclosure from their environmental performance. They increase mimetic behaviour on Sustainable development disclosure to better fit with ED institutional requirements on this topic to increase their legitimacy. In Germany, poor environmental performing firms increase mimetic behaviour on Environmental management disclosures to better respect institutional constraints and thus legitimize their activities. However, unlike poor environmental performing German firms, poor environmental performing French firms are more specific about their Expenditures and risks ED, suggesting their good faith and their efforts to improve their performance.
Panel B of Table 5 shows that firms with low environmental performance in the three countries apply the decoupling strategy to legitimize and thus ensure their survival. This is in agreement with Patten's research that ED is more a tool of legitimacy than a representation of the company's environmental performance (see Cho & Patten, 2007; Patten, 1991, 1992, 2002). Institutional powers of each country leave firms with different decoupling possibilities, which give different patterns of ED in each country. These results are consistent with the third hypothesis that there are differences in the mimetic behaviour of countries ED depending on environmental performance.

4.3.2.3 Mimetic isomorphism for high environmental media exposure (H4)

Panel C of Table 5 shows factors influencing the ED mimetic behaviour for firms most exposed to media concerning environmental issues. Results show that media pressures differ from institutionalized pressures in Canada and Germany whereas in France they are similar (similar results than in Table 3). This would imply that French ED institutional powers reflect the interests of the French society.

Environmental management seems to be a controversial ED subject. In Canada and in Germany, public opinion is divided concerning mimetic behaviour on Environmental management. One institutional power requests that these topics be disclosed under current institutionalized rules while another institutional power opposes it. This power struggle suggests an evolution of constraints towards a new institutional structure concerning these topics in Canada and Germany.

Compared to total sample firms in the country, Canadian and German firms that receive more media attention change some mimetic behaviours. To convince their stakeholders, Canadian firms with high media exposure decrease mimetic behaviour on
Environmental management ED to disclose more detailed technical Environmental management ED. German firms respond to media pressures by increasing they fit of soft disclosure with the country institutional demands through mimetic behaviour.

When German firms are challenged by media exposure, they stop mimetic behaviour on Pollution abatement disclosure and respond with Sustainable development and Environmental management disclosures. Sustainable development and Environmental management disclosures are soft disclosure and therefore easier to mimic. By mimicking soft disclosure, German firms increase their adequacy with various institutional requirements and legitimate their actions.

These results corroborate two important institutional proposals. The first one, highlighted by the mimetic behaviour of Canadian firms face to growing institutional pressures, is that decoupling is a good strategy to meet conflicting technical and institutional demands (Meyer & Rowan, 1977). However, firms must prioritize the decoupling of easy-to-mimic ED to show their good faith and increase their credibility. This is not possible when ED structures are imposed. Thus, European firms are less able to respond to emerging institutional demands. The second corroborated institutional proposition, highlighted by the mimetic behaviour of German firms face to growing institutional pressures, is that imposed institutions could fail when they contradict socially shared beliefs (Aoki, 2001). Results show that the impact of media pressures to mimic various ED topics differ in each country. This is in line with the fourth hypothesis.

5 Discussion and conclusion

This paper investigates variations in corporate environmental disclosure structures among three countries to highlight their institutional differences. Results show that
Canada has more institutionalized environmental disclosure issues, followed by France, and Germany (Table 2). In more institutionalized environments, organizations have more chance to succeed and survive (Meyer & Rowan, 1977). Table 1b shows that mimetic behaviour for some topics leads to more ED country isomorphism while others lead to less ED country isomorphism since sometimes, the number of imitated models increases (greater variability of imitated structures to disclose the subject) and in others cases the number of imitated models decreases. These observations support the institutional proposition that mimetic behaviour is not always the synonym of isomorphism (Beckert, 2010; Boxenbaum & Jonsson, 2008). The existence of multiple institutionalized models concerning the disclosure of Laws and regulations can be explained by different coercive approaches of each country. The existence of multiple institutionalized models concerning Land remediation and contamination can be explained by the existence of contradictory institutions concerning the ED of this topic in each country. The existence of multiple institutionalized models concerning Sustainable development may be because it is soft disclosure; thus reflecting more personal interpretations of institutionalized myths.

Table 3 results show that institutional powers are more influential in shaping ED structures in France, followed by Germany and less influential in Canada. In European countries, the respect of institutionalized rules on Laws and regulations conformity disclosed issues is the most important stakeholder concern for ED. In Canada, institutional power is more dispersed and focuses on different issues at the same time, but to a lesser extent than in Europe. Combining results from Table 2 and Table 3, it is possible to conclude that in Canada, ED issues are more institutionalized than in Europe,
but that happens with less effort from the part of institutional powers. This suggests that institutionalized structures of ED in Canada emerge rather spontaneously whereas in Europe they are imposed. In France and Germany, coercive isomorphism pressures lead firms to mimic their ED while in Canada mimetic behaviour would be more voluntary.

Factor analyses show that the structure of the ED is determined by three institutional powers. Consistent with Scott (1995), it is possible to presume that it is the coercive, normative and cultural-cognitive pillars. We call for future research to identify each one of them and determine which one is the most influential in each country.

Results are consistent with our hypotheses. Tables 2 and 3 results are consistent with the first hypothesis, that there are significant differences on ED topics’ mimetic behaviour between countries. Panel A of Table 5 results show that there are significant differences between industries more or less environmentally sensitive on ED topics’ mimetic behaviour in each country, which is consistent with the second hypothesis. Results presented in panel B of Table 5 are consistent with the third hypothesis that there are differences in the mimetic behaviour of countries ED depending on environmental performance. Finally, consistent with the fourth hypothesis, results from panel C of Table 5 show that the impact of media pressures to mimic ED topics differ in each country.

Our results highlight the existence of institutional differences between homogenous institutional contexts. ED is highly institutionalized by country. Therefore, as Aoki (2001) suggests, national institutional pressures play a crucial role in defining the different structural arrangements taken by organizations. Then, institutional isomorphism should not be presumed without verifying that dominant institutional powers are similar. However, looking at the behaviour of European institutional powers, one might
investigate whether these institutional differences are under pressure to disappear. Future research can empirically test whether the global trend of ED institutions is towards convergence or divergence and investigate consequences of this trend to organizations.

Overall, environmentally sensitive industries receive more institutional pressures on their ED and these pressures are more contradictory compared with non-sensitive industries. Companies in the three countries take advantage of conflicting or weak institutional demands to decouple their ED from their true environmental performance and only disclose technical details when they receive additional pressures, for example through environmental media exposure. These results confirm Meyer and Rowan (1977) decoupling proposition. Decoupling is an effective way for firms to respond to conflicting demands arising from their institutional context and technical requirements. However, to succeed, stakeholders must believe in the good faith of firms, and firms must avoid the control of their performance such as media monitoring (Boxenbaum & Jonsson, 2008; Meyer & Rowan, 1977).

The positive relationship between poor environmental performance and mimetic behaviour on some specific ED topics in each country suggest that ED institutions are not fully implemented by firms. On one hand, this could be seen as a good thing because firms can achieve legitimacy through espoused action, i.e. respecting ED structures, but remaining efficient through actual action, thus enhancing their survival prospects (Boxenbaum & Jonsson, 2008). On the other hand, it suggests that social objectives motivating the emergence of these institutional demands have not been yet achieved.

European countries, especially France, seem to be in a better position to align technical and institutional requirements. However, European coercive pressures on firms
to enforce their social mandates seem less effective than Canadian institutions. This confirms institutional premises proposing not to impose institutional changes, but to encourage their emergence by the dissemination of ideas favorable to change (Aoki, 2001; North, 2010). As expressed by North (2010, p.157) “The artifactual structure that defines the performance of an economy comprises interdependent institutions; changing just one institution in an attempt to get the desired performance is always an incomplete and sometimes a counter-productive activity”.

Future research may investigate the relationship between the alignment of institutional and technical environmental pressures and the environmental leadership of organizations. If this relation is incompatible, is decoupling the best firms’ strategy to survive and succeed or is Meyer and Rowan (1977) proposition - that decoupling is the most reasonable way to deal with contradictory pressures of institutional environment and technical requirements - in itself a myth?

Overall, hard disclosure topics are harder to mimic. Thus, soft disclosure is more used for legitimation, allowing the disclosure of superficial structures without referring to the firm environmental performance. If the media closely monitor the company, soft disclosure does not convince stakeholders. Environmental media exposure is effective to encourage companies to abandon their institutionalized structures to disclose environmental outputs resulting from their technical specificities. In sum, this study shows the interest of studying the structural variations of the ED by institutional context. Each country and each industry has different ED priorities depending on the level of institutionalization of myths about a given subject in the perception of the most important stakeholders.
Appendix A – Environmental disclosure grid

1. **Expenditures and risks**
   - Investments
   - Environmental operational costs
   - Future investments
   - Future environmental operating costs
   - Financing for investments
   - Environmental debts
   - Risks provisions
   - Litigations provisions
   - Provision for future expenditures

2. **Laws and regulations**
   - Litigations, actual + potential
   - Fines
   - Orders to conform
   - Corrective actions
   - Incidents
   - Future Legislations and regulations

3. **Pollution abatement**
   - Emission of pollutants
   - Discharges
   - Waste management
   - Control of installations and processes
   - Compliance status of facilities
   - Noise and odours
   - Energy consumption/conservation

4. **Sustainable development**
   - Natural resource conservation
   - Recycling
   - Life cycle information

5. **Land remediation and contamination**
   - Sites
   - Remediation efforts
   - Potential liability- remediation
   - Implicit liability
   - Spills

6. **Environmental management**
   - Environmental policies or company concern for the environment
   - Environmental management system
   - Environmental auditing
   - Environmental goals and targets
   - Environmental awards
   - Department, group, service affected to the environment
   - ISO 14000
   - Involvement of the firm to the development of environmental standards
   - Involvement to environmental organizations (industry committees, etc.)
   - Joint projects with other firms on environmental management.
References


<table>
<thead>
<tr>
<th>Table 1a. Descriptive statistics - Total sample</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
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<td>17.732</td>
<td>0.775</td>
<td>71.32</td>
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<td>10.561</td>
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<td>124</td>
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<td>0.499</td>
<td>0</td>
<td>1</td>
</tr>
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<td>Mimetic isomorphism - Total</td>
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<td>0.106</td>
<td>0.735</td>
<td>1.277</td>
</tr>
<tr>
<td>-Expenditures and risks</td>
<td>1.006</td>
<td>0.221</td>
<td>0.201</td>
<td>2.707</td>
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<tr>
<td>-Laws and regulations</td>
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<td>0.416</td>
<td>0.012</td>
<td>2.767</td>
</tr>
<tr>
<td>-Pollution abatement</td>
<td>1.012</td>
<td>0.143</td>
<td>0.493</td>
<td>1.662</td>
</tr>
<tr>
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<td>1.048</td>
<td>0.691</td>
<td>0.025</td>
<td>4.741</td>
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<td>0.978</td>
<td>0.405</td>
<td>0.001</td>
<td>2.275</td>
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<tr>
<td>-Environmental management</td>
<td>0.995</td>
<td>0.221</td>
<td>0.416</td>
<td>2.601</td>
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<table>
<thead>
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<th>Table 1b. Descriptive statistics – By country and topic</th>
</tr>
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<tr>
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<tr>
<td>-------------------------------------------------------</td>
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<tr>
<td>Mean (Std Dev)</td>
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<td>Environmental performance</td>
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<td>Environmental media exposure</td>
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<tr>
<td>Environmentally-sensitive industries</td>
</tr>
<tr>
<td>Mimetic isomorphism-Total</td>
</tr>
<tr>
<td>Expenditures and risks</td>
</tr>
<tr>
<td>Laws and regulations</td>
</tr>
<tr>
<td>Pollution abatement</td>
</tr>
<tr>
<td>Land remediation and contamination</td>
</tr>
<tr>
<td>Sustainable development</td>
</tr>
<tr>
<td>Environmental management</td>
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Table 2. Mimetic isomorphism tendencies (standardized coefficients - correlation between similarity and prior year reference group similarity)

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<tr>
<th></th>
<th>Total</th>
<th>Canada</th>
<th>Germany</th>
<th>France</th>
</tr>
</thead>
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<tr>
<td><strong>Total disclosure</strong></td>
<td>0.852***</td>
<td>0.914***</td>
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<td><strong>Hard disclosure</strong></td>
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<tr>
<td>Expenditures and risks</td>
<td>0.773***</td>
<td>0.512***</td>
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<td>0.553***</td>
<td>0.336***</td>
<td>0.293***</td>
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<td>Pollution abatement</td>
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<td>0.419***</td>
<td>0.378***</td>
<td>0.448***</td>
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<td>Land remediation and contamination</td>
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<td>0.100</td>
<td>0.495***</td>
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<td><strong>Soft disclosure</strong></td>
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<tr>
<td>Sustainable development</td>
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<td>0.038</td>
<td>0.227***</td>
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<td>0.396***</td>
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Table 3. Principal component factor analyses on mimetic components (varimax rotated)

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<th>France</th>
<th>Germany</th>
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<tr>
<td></td>
<td>Factor1</td>
<td>Factor2</td>
<td>Factor3</td>
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<td>conformity</td>
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<td></td>
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<tr>
<td>Pollution abatement</td>
<td>0.48</td>
<td>0.60</td>
<td>0.52</td>
</tr>
<tr>
<td>Land remediation</td>
<td></td>
<td>0.54</td>
<td>0.68</td>
</tr>
<tr>
<td>and contamination</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Sustainable development</td>
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<td>-0.66</td>
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<td>Environmental management</td>
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<tr>
<td>Eigenvalue</td>
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<td>0.56</td>
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<td>0.70</td>
<td>0.73</td>
<td>0.68</td>
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Table 4. Summary of principal component factor analyses on mimetic components - Canada/France/Germany - Environmentally-sensitive industries / Low environmental performance / High environmental media exposure

<table>
<thead>
<tr>
<th>C = Canada</th>
<th>F = France</th>
<th>G = Germany</th>
<th>Total</th>
<th>Sensitive Industries</th>
<th>Low environmental performance</th>
<th>High media exposure</th>
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<td>Expenditures and risks</td>
<td>C+</td>
<td>F+</td>
<td>G+</td>
<td>C-</td>
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<td>C-</td>
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<td>G+</td>
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<td>F+</td>
<td>G+</td>
<td>F+</td>
<td></td>
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<td>Land remediation and contamination</td>
<td>C+</td>
<td>Fx</td>
<td>G+</td>
<td>C-</td>
<td>F+</td>
<td>G+</td>
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<td>Sustainable development</td>
<td>C+</td>
<td>F-</td>
<td>Gx</td>
<td>C+</td>
<td>Fx</td>
<td>Gx</td>
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<td>Environmental management</td>
<td>C+</td>
<td>F+</td>
<td>G-</td>
<td>C+</td>
<td>F+</td>
<td>G-</td>
</tr>
</tbody>
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x : No mimetism
+: Increasing ED mimetism
- : Increasing technical ED
Table 5. Principal component factor analyses on mimetic components (varimax rotated) - Environmentally-sensitive industries / Low environmental performance / High environmental media exposure

<table>
<thead>
<tr>
<th>Panel A</th>
<th>Environmentally-sensitive industries</th>
<th>Canada</th>
<th>France</th>
<th>Germany</th>
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<tr>
<td></td>
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<td>Factor2</td>
<td>Factor3</td>
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<td>Pollution abatement</td>
<td>-0.53</td>
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<td>0.55</td>
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<tr>
<td>Land remediation and contamination</td>
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