



**MONTCLAIR STATE**  
UNIVERSITY

Montclair State University  
**Montclair State University Digital  
Commons**

---

Department of Accounting and Finance Faculty  
Scholarship and Creative Works

Department of Accounting and Finance

---

1-1-2014

## Effect of Stakeholders' Pressure on Transparency of Sustainability Reports Within the GRI Framework

Belen Fernandez-Feijoo  
*University of Vigo*

Silvia Romero  
*Montclair State University, romeros@mail.montclair.edu*

Silvia Ruiz  
*University of Vigo*

Follow this and additional works at: <https://digitalcommons.montclair.edu/acctg-finance-facpubs>



Part of the [Accounting Commons](#), [Corporate Finance Commons](#), and the [Finance and Financial Management Commons](#)

---

### MSU Digital Commons Citation

Fernandez-Feijoo, Belen; Romero, Silvia; and Ruiz, Silvia, "Effect of Stakeholders' Pressure on Transparency of Sustainability Reports Within the GRI Framework" (2014). *Department of Accounting and Finance Faculty Scholarship and Creative Works*. 53.  
<https://digitalcommons.montclair.edu/acctg-finance-facpubs/53>

This Article is brought to you for free and open access by the Department of Accounting and Finance at Montclair State University Digital Commons. It has been accepted for inclusion in Department of Accounting and Finance Faculty Scholarship and Creative Works by an authorized administrator of Montclair State University Digital Commons. For more information, please contact [digitalcommons@montclair.edu](mailto:digitalcommons@montclair.edu).

# Effect of Stakeholders' Pressure on Transparency of Sustainability Reports within the GRI Framework

Belen Fernandez-Feijoo · Silvia Romero ·  
Silvia Ruiz

Received: 23 September 2012 / Accepted: 10 May 2013 / Published online: 24 May 2013  
© Springer Science+Business Media Dordrecht 2013

**Abstract** Transparency is a quality of corporate social responsibility communication that enhances the relationship between the investors and the company. The objective of this paper is to analyze if the transparency of the sustainability reports is affected by the relationship of companies in different industries with their stakeholders. If this were the case, it would indicate that the pressure of significant stakeholders determines the required level of transparency of the reports. We find that the pressure of some groups of stakeholders (customers, clients, employees, and environment) improves the quality of transparency of the reports. We extend previous research by studying the effect of stakeholder group pressure on transparency when reporting sustainability. Our results show that transparency is affected by ownership, along with size and global region.

**Keywords** Corporate social responsibility · Global Reporting Initiative · Information system for sustainability · Stakeholders pressure · Sustainability report · Transparency

## Abbreviations

AS Assurance statement  
CSR Corporate social responsibility  
GRI Global reporting initiative

IA In accordance  
SR Sustainability report

## Introduction

Corporate social responsibility (CSR) reporting is a communication tool companies use to convey a transparent image. It is also a tool available for managers to assess the continuous improvement in non-financial areas. Transparency is a concept linked in general to reporting, and in particular to sustainability reports (SR) (Kaptein and Van Tulder 2003). Organizations are continuously highlighting the need of transparent reporting to stakeholders and to the society in general (van Riel 2000). As part of the CSR communication strategy, each company determines the required level of transparency, which depends on the pressure of specific stakeholders in the industry. For example, oil companies were among the first groups to report on environmental issues, which labeled them as cautious with the environment (Aerts and Cormier 2009; Campbell 2003; Deegan and Gordon 1996).

Different perspectives have been used to study the informativeness and transparency of SR. Among them, the influence that industry has on CSR reporting has been extensively approached (Fifka 2011). In most of the reviewed studies the variable industry is used to identify inter-sectoral differences, revealing higher CSR disclosures in some industries over others (Sweeney and Coughlan 2008; Kolk and Perego 2010). In others, industry is used to analyze the differences or analogies within a sector (Campbell 2003; Morhardt 2010). Campbell (2006) highlights the effect of industry and its level of self-regulation

---

B. Fernandez-Feijoo · S. Ruiz  
Universidade de Vigo, Vigo, Spain  
e-mail: belen@uvigo.es

S. Ruiz  
e-mail: sblanco@uvigo.es

S. Romero (✉)  
Montclair State University, Montclair, NJ, USA  
e-mail: romeros@mail.montclair.edu

on CSR reporting, and Amran and Haniffa (2011) propose that the attitude towards CSR in a company will provoke a mirror effect on other companies in the same industry.

Within the development of the stakeholder theory, Freeman (1984) assesses the existence of a relationship between firms and different groups besides the stockholders. He posits that these stakeholders can almost always affect or be affected by the actions of the firm. Furthermore, Carroll (1991, 43) states “there is a natural fit between the idea of corporate social responsibility and an organization’s stakeholders.” Hence, we can expect an effect on CSR due to the strength and commitment of the main stakeholders in an industry, and that is the purpose of this paper.

Our approach is novel due to the creation of four categories of industries based on the pressure of four main groups of stakeholders (customers, employees, environment, and investors), to study the relationship between these groups and CSR transparency. Data were collected from the global reporting initiative (GRI) database. The GRI is “a non-profit organization that promotes economic, environmental, and social sustainability. GRI provides all companies and organizations with a comprehensive sustainability reporting framework that is widely used around the world” (Global Reporting Initiative 2011). The information reported by participating companies is accessible via the GRI website, in a spreadsheet format. It includes companies in different countries, with different sizes, and classified by industry. We collected data from the whole set of companies in selected countries located in different geographical areas and with different cultural characteristics.

The paper is broken down into five sections after this introduction. We start with the literature review, the presentation of our research hypotheses, the methodology, and the results. The final section covers the conclusions, the research limitations and draws some lines for future research.

## Literature Review

### CSR Reporting and Transparency

Transparency is a key condition for CSR reporting (Global reporting Initiative 2011; Kaptein and Van Tulder 2003; Dubbink et al. 2008; Williams 2005), but, at the same time, formal CSR reporting is a vehicle to improve transparency (DeTienne and Lewis 2005; Quaak et al. 2007). In order to develop a measure of CSR transparency, we focus our literature review on previous research identifying characteristics to qualify and quantify it. A summary of these characteristics is presented in Table 1.

Among the literature and rules defining transparency, the GRI standards define several principles related to the

content of the report with the purpose of enhancing the quality of the SR and its transparency. These principles are: balance, comparability, accuracy, timeliness, clarity, and reliability. Joseph (2012) highlights the importance of having sustainability well-grounded not only on rules but also on principles. These principles should recognize transparency as a key feature. Williams (2005) defines transparency using three properties: relevant, timely, and reliable information. Dubbink et al. (2008) argue that transparency enhances efficiency and innovation. They identify three criteria for the evaluation of transparency policies: efficiency (positively associated with quality of information), freedom, and virtue. Only the first of these criteria is deeply analyzed in the paper, where the authors identify procedural standards for measuring transparency in social reports.

Bushman et al. (2004) define transparency as the availability of firm-specific information to those outside the firm. They measure corporate transparency using three components: corporate reporting, private information acquisition and communication, and information dissemination. They disaggregate corporate transparency into two factors: financial transparency, understood as intensity and timeliness of financial disclosure, and governance transparency, as intensity of governance disclosure. Using data from several countries, the authors find a correlation between governance transparency and countries legal/judicial regime, and between financial transparency and political economy. Bhat et al. (2006) use the measure developed by Bushman et al. (2004) at a country level, and conclude that governance transparency is significantly associated with analyst forecast accuracy, especially when there is less financial transparency and a weak level of legal enforcement.

Looking at transparency representation, Dando and Swift (2003) posit that increasing levels of disclosure per se cannot be understood as more transparent reporting. They argue that higher levels of transparency can be associated with more confidence on the organization’s commitment to sustainability. This confidence is achieved though the existence of independent assurance rather than increased level of disclosure. They find that “responsiveness, learning, innovation, and performance improvement are critical links between transparency and accountability” (2003, 199). They also point out the importance of developing standards to fulfill the need for transparent and trustable information, coinciding with Christensen (2002). Fombrun and Rindova (2000) observe communication with stakeholders as the right way to achieve transparency.

Eccles et al. (2012) analyze the effect of sustainability of corporate culture on the behavior and performance of firms. They identify two groups of companies: those that have a long time adoption of sustainability policy (high

**Table 1** Principal contributions to transparency in SR

Reference	Goal	Characteristics
Global reporting Initiative (2011)	SR quality and transparency	Balance, comparability, accuracy, timeliness, clarity, and reliability
Dubbink et al. (2008)	Transparency in social reports	Completeness, inclusivity, relevance/evolution, comparability, comprehensibility/clarity, timeliness/evolution, public disclosure, verifiability, external verification, impartiality, attention for sustainability, process governance, organizational embedment, consistency, continuous improvement, and information quality/reliability
Williams (2005)	Organizational transparency through communication strategies	Relevant, timely and reliable information.
Bushman et al. (2004)	Corporate transparency reporting	Financial disclosure intensity, governance disclosure intensity, accounting principles, timeliness of financial disclosure, and audit quality of financial disclosure
Dando and Swift (2003)	Transparent reporting for sustainability	Existence of independent assurance, existence of standards
Fombrun and Rindova (2000)	Transparent reporting for sustainability	Communication
Eccles et al. (2012)	To measure transparency	Nonfinancial versus financial keywords ratio; sustainability report covers global activities; social data integrated in financial reports; and environmental data integrated in financial reports

sustainability firms) and those that have not adopted such a policy (low sustainability firms). Among other variables, they measure transparency through the emphasis that companies give to their non-financial information compared to the financial information. This measure is calculated using the Bloomberg ESG disclosure score, Thomson Reuters ESG disclosure score, non-financial versus Financial keywords ratio, if sustainability report covers or not global activities, Social data integrated in financial reports, and environmental data integrated in financial reports. They conclude that companies with a long time adoption of sustainability policy are more transparent than those with no sustainability policy.

The literature reviewed shows the inexistence of an objective and unique way to measure transparency, but reliability, communication intensity and timeliness are the most often used.

### Stakeholder Theory and CSR Reporting

Freeman (1984) popularized the concept of stakeholder to introduce a new paradigm in strategic management. His definition of stakeholder focuses on the inter relationship between the organization and different groups, like customers, employees, suppliers, shareholders, community, environment, etc. Some implications of his theory are that companies must manage their relationships with those groups (Elijido-Ten et al. 2010), and that CSR reporting, as a strategic tool, must consider key stakeholders (Nielsen and Thomsen 2007). Snider et al. (2003) posit that stakeholder theory is the adequate framework to evaluate CSR reporting. In the same argumentation line, Ullmann (1985)

uses this theory to explain the quantity and quality of CSR disclosure, and identifies three dimensions: stakeholder power, strategic posture, and economic performance. Roberts (1992) used Ullmann's model to explain social responsibility disclosure, and found association between the dimensions in the model and the levels of corporate social disclosure. Prado-Lorenzo et al. (2009) analyze the effect of shareholder power and disperse ownership structure on CSR disclosure. They use 99 CSR reports of non-financial Spanish firms quoted on the Spanish continuous market. They find that CSR reporting is associated with certain stakeholders (government and creditors), and with the strategic attitude of the firm. Prado et al. use a measure of CSR reporting, named "practices in corporate social reporting" (PCSR). This measure is broken down into three components: validation, information disclosed, and GRI format. Validation is linked to certification and verification, information disclosed identifies firms that do not follow a recognized standard model, and GRI format is related to the presentation of CSR report in accordance with GRI guidelines, but without certification. They find that the presence of the dominant shareholder has a positive effect on the adoption of GRI guidelines. They conclude that the effect of stockholder power is very limited in relation to CSR practices.

### Industry and CSR Reporting

During the last decades of the previous century, the industries most frequently studied were those that were environmentally sensitive, because of their higher levels of disclosure. Deegan and Gordon (1996) analyze if

environmental disclosure is correlated with certain industries, as well as the changes in disclosure practices during the period 1980–1991. Using a sample of 25 firms from Australia, they find an increase in voluntary CSR reporting in that period. This change in CSR reporting coincides with the increase on the number of members in the main environmental groups of pressure (e.g., Greenpeace). Their results support the view that environmental disclosure is used to legitimize the operation of the firms in sensitive environmental industries. Other authors use the concept “high-profile industries” as a broader concept than environmentally sensitive sectors. They apply this definition to those sectors where companies have public pressure, consumer visibility, high level of political risk, or concentrated intense competition (Paten 1991; Roberts 1992; Hackston and Milne 1996).

Sweeney and Coughlan (2008) use the content in annual and CSR reports of 28 FTSE4Good firms of different sectors, to identify the primary and secondary stakeholder in each industry. They find that in financial services, the primary stakeholders are the employees, and the secondary is the community. In Pharmaceutical-medicals, the primary stakeholder is the community, and the secondary are the employees. They found no main group of interest in Pharmaceutical-health and beauty and Retail. For Telecommunication, the primary stakeholders are the customers and the secondary are the employees. Finally, the environment is the primary stakeholder for Automobile and Oil and Gas, with no clear evidence on the secondary stakeholder.

Using 267 corporations from the Stockholm Stock Exchange and all state-owned corporations, Tagesson et al. (2009) find a correlation between industry and quantity of some types of disclose. They find that the raw material industry provides more environmental information; the consumer goods industry discloses more information related to ethical issues; the IT industry discloses very little information in general, and that the financial industry discloses the least information about human resources. Similar results are presented in Gamerschlag et al. (2011) using data from 20 big listed companies in Germany for the period 2005–2008. They find that companies under pressure of environmental groups disclose more environmental information; those in the consumer industry and energy supplying industries disclose more in all CSR issues, and companies in the services sector disclose less information.

Based on a sample of 50 US firms excluding financial services, investment funds and trust, Holder-Webb et al. (2009) find differences in frequency and intensity of the CSR reporting in the five industries identified. They find that Pharmaceutical companies disclose more frequently and intensively with respect to community, also to diversity and human resources. This result is explained by the fact

that this is an R&D intensive industry and its main stakeholder is their human capital. In terms of frequency, CSR reporting in manufacturing companies is oriented toward health and safety. The most relevant matter in the SR of firms engaged in production of intellectual property is related to employees. In the case of companies in the extractive natural resources, as agriculture, forestry or petroleum, and natural gas, the SR is focused on environmental matters.

## Hypotheses Development

Previous research found a relationship between industry and CSR reporting (Alali and Romero 2012; Andrikopoulos and Diakidis 2007; Brennan and Hourigan 2000; Kolk and Perego 2010; Simnett et al. 2009). Other studies found a relationship between some industries and the pressure of specific stakeholders (Adams et al. 1998; Deegan and Gordon 1996; Hackston and Milne 1996). Also, Prado-Lorenzo et al. (2009) applied stakeholder theory to find evidence of the relationship between the content of the SR and the firm membership to a particular industry in which there is strong pressure from one or more stakeholders.

Extending that literature, we analyze how the pressure of the stakeholders affects the transparency of CSR reporting. Our research question asks if the pressure of the primary stakeholders in an industry affects the levels of transparency of companies in that industry. To test it, we categorize industries using the institutional perspective of legitimacy, and the stakeholder theories (Sweeney and Coughlan 2008; Branco and Rodrigues 2008). With this criterion, we distinguish four categories: environmentally sensitive industries; companies in industries well-known by consumers, which were labeled in literature as “Consumer proximity” industries (Branco and Rodrigues 2008); industries with high-investor pressure; and industries with high-employee pressure.

The hypotheses are therefore stated as follows:

**H1** Companies in environmentally sensitive industries present CSR reports with higher levels of transparency than companies in non-environmentally sensitive industries

**H2** Companies in industries with high consumer proximity present CSR reports with higher levels of transparency than companies in industries with low consumer proximity

**H3** Companies in industries with high pressure from investors present CSR reports with higher levels of transparency than companies in industries with low pressure

**H4** Companies in industries with high pressure from employees present CSR reports with higher levels of

transparency than companies in industries with low pressure

## Research Method

### Sample

We collected data from all the CSR reports registered in GRI from the different countries selected for our study. The information includes companies with different sizes, and classified by industry. We collected data between 2008 and 2010, when the G3 standard was applicable, although some firms continued presenting their reports with the G2 guidelines. We selected this period because it includes a large number of SR, when compared to previous years. The sample, described in Table 2, includes selected countries, chosen due to their location in different geographical areas and with different cultural characteristics (data accessed on August 24th 2011). 50.9 % of the companies in the sample are listed in stock exchange markets. The data are classified in 38 industries and four geographical regions by GRI.

Our sample includes data from the GRI reports because it is considered to be the main framework for sustainability reporting (Brown et al. 2009; Dentchev 2004; Manetti and Becatti 2009; Nikolaeva and Bicho 2011). The GRI database includes the date when the report was added to the list; name of the organization; report title; publication year; guidelines followed (G1, G2, G3); application level (in G3: Undeclared, A, B, C, with or without AS); status (declaration level); country; OECD membership; region; sector; report address. Among these variables, application level, declaration level, and existence of AS can be linked to the quality of the reports (Fonseca 2010; Fernández-Feijóo et al. 2012).

The application level defines the extent of coverage of the GRI reporting framework. The G2 standard (which was used until 2008) defines three levels—from best to worst—In accordance (IA), Content index and Reference only. The G3 standard, which was used in our sample frame,

identifies—from best to worst—A, B, and C. Companies reporting with the highest application levels (IA and A) provide more information.

The declaration level indicates if the application level is certified by a third party, checked by GRI, or self-declared; hence, the first two categories imply that an independent verification about the application level exists.

The content of the SR may or may be not assured by a third party that issues an AS, since this attestation is not mandatory; therefore, this is a mechanism of credibility and transparency for the stakeholders. It represents the answer to the demands from stakeholders and reinforces the reliability of the companies and the GRI (Grushina 2011).

### Variable Definition

#### *Dependent Variable—Transparency*

Many characteristics of the variable transparency were reported in previous research, as discussed in the literature review. These characteristics can be classified in different groups, which define our selection of variables. First of all, there are some characteristics that are intrinsic to the requirements of the GRI, for example standardization and comparability, which are present in all the submissions and hence, do not discriminate. Second, there is a group of characteristics with no data available in the GRI database, for example timeliness and audit quality of financial disclosure, which can therefore not be included in the model. Finally, there is a third group of characteristics with data available and discrimination characteristics, which are included in our model.

Based on the aforementioned discriminating characteristics, the dependent variable “Transparency” is obtained using a dimension reduction with a Principal component analysis from the following four variables:

1. Frequency of CSR reporting: Measures how many times (in percentage with respect to the total possible) each company presented a SR during the period of evaluation. Publishing CSR reporting is used as criteria of transparency in Dubbink et al. (2008). Frequency of the report may also be used as an indicator of disclosure intensity, which is related to corporate transparency as well (Bushman et al. 2004). Higher frequency of SR is linked to higher communication and the nonfinancial versus financial keywords ratio; both of them linked with transparency of the SR (Fombrun and Rindova 2000; Eccles et al. 2012). This variable varies between 0 and 1.
2. Level of application: This variable is a proxy for completeness, relevance/evolution and public

**Table 2** Sample description

Country	N	Region and %
United States of America	242	North America (23.1)
Denmark (15); Finland (36); Germany (88); Norway (19); Portugal (40); Spain (229); Sweden (92)	519	Europe (49.6)
Brazil	160	South America (15.3)
Japan	126	Asia (12)
Total	1,047	(100)

Countries and regions

disclosure, linked to transparency (Dubbink et al. 2008). According to Eccles et al. (2012), a high level of application means more communication of global activities, which is linked to SR transparency. It measures the number of times each company presents IA or A level, maximum level for both G2 and G3 guidelines, respect to the number of SR presented. The value of this variable varies between 0 and 1.

3. Declaration of the level: This variable is considered as a proxy for reliability and verifiability, both linked to transparency (Global reporting Initiative 2011; Dubbink et al. 2008). It indicates how many times, with respect to the number of SR presented, the level of application is verified by a third party or checked by the GRI. It does not involve verification of content. The variable varies from 0 to 1.
4. Assurance of SR: The existence of an independent assurance is a mechanism of credibility and transparency (Kaptein and Van Tulder, 2003; Dubbink et al. 2008; Williams 2005; Bushman et al. 2004 and Dando and Swift 2003); hence, the inclusion of AS makes the SR more transparent. This variable is measured by the number of times that a company presents an AS of the SR respect to the number of SR presented. The assurance engagement implies a verification of the SR content. Its value ranges from 0 to 1.

The result of the Principal component analysis is presented in Table 3 [Kaiser–Meyer–Olkin (KMO) 0.702 and sphericity Bartlett’s test significance 0.000].

The principal component analysis deals one component, which measures the Transparency of the reports. We use the output variable from the statistic process to represent our dependent variable, which ranges from  $-0.98304$  to  $2.03668$ .

### Independent Variables

We collected data about the industry of each company from the GRI database, which identifies 38 different sectors. Given that our focus is not on the industry but on the relationship between stakeholders and industry, we further create four dichotomist variables considering the possible

**Table 3** Principal component analysis

Component matrix <sup>a</sup>	Component 1
% Frequency	0.434
% Assurance	0.861
% GRI_plus_3p	0.821
% LevelA_IA0810	0.799

Extraction method: principal component analysis

<sup>a</sup> 1 components extracted

pressure on each sector of four groups of stakeholders (customers, employees, environment, and investors) as follows:

- a. Customer proximity industries: This variable adopts a value of 1 if the company belongs to an industry well-known for the general public as a consumer of its products or services. It includes energy utilities, financial services, food and beverage products, health-care, household and personal products, retailers, telecommunications, textiles and apparel, waste management, and water utilities. These industries were proposed by Sweeney and Coughlan (2008) and Branco and Rodrigues (2008). We include in this classification other industries meeting the same criteria: commercial services, consumer durables, media, tobacco, tourism/leisure, toys, and universities as well. For all the other industries the variable adopts a value of 0.
- b. Employee-oriented industries: We define this variable using size of a company as proxy for pressure from the employees (Aldama et al., 2009; Ellis, 2009; Haski-Leventhal, 2012; Wei et al., 2009). Huang and Kung (2010) assess that in reference to environmental disclosure, employees in large companies are, in general, more organized and it is more likely that their opinions will be considered at a managerial level. As these authors affirm, the larger the number of employees, the higher degree of transparency they will demand. GRI ranges company size in three categories: 1, small and medium; 2, big; and 3, multinational. Our variable assumes a value of 1 if the company has high pressure from employees, meaning that it is a big or multinational company, and 0 for small and medium companies.
- c. Environmentally sensitive industries: This variable adopts a value of 1 if the activities of the company have an important impact on the environment (extractive or high pollution industries), following Tagesson et al. (2009), Gamerschlag et al. (2011) and Branco and Rodrigues (2008). These industries are: agriculture, automotive, aviation, chemical, construction, construction materials, energy, energy utilities, forest and paper products, logistics, metal products, mining, railroad, waste management, and water utilities. For all the other industries the variable adopts a value of 0.
- d. Investor-oriented industries: This variable adopts a value of 1 if the company is in an industry with high level of pressure from their investors (Collins, 2010). It includes industries in which more than 50% of companies are traded in the stock exchange. We include financial services as well, because it includes cooperatives and savings companies that are not

traded, but have the pressure of the partners (Chih and Chen 2010). This industries are: automotive, aviation, chemicals, computers, conglomerates, construction, construction materials, consumer durables, energy, energy utilities, financial services, healthcare products, household and personal products, media, metals products, real estate, retailers, technology hardware, telecommunications, textiles and apparel and toys. For all the other industries the variable adopts a value of 0.

*Control Variables*

The model includes three control variables. The variable region indicates the geographical area of the company. It adopts a value of 1 if North America; 2 if Europe; 3 if South America and 4 if Asia. Kolk and Perego (2010), Adams (2002), Kolk (2008) and Wilmshurst and Frost (2000) found a positive correlation between country and CSR reporting. Similarly to Monteiro and Aibar-Guzmán (2010), we use the variable quoted which adopts a value of 1 if the company is traded in the stock exchange, and 0, otherwise. Finally, following Fifka (2011), we included the variable size. This variable is defined based on the GRI classification and adopts a value of 0 for small and medium, and 1 for large and multinational companies.

**Model**

The tests of the hypotheses search if the pressure of different groups of stakeholders has an effect on transparency. Following Prado-Lorenzo et al. (2009), we test the contribution of both the independent and the control variables, to the explanation of transparency, the dependent variable. Four linear regressions are run:

Regression 1 :

$$T = \alpha_0 + \alpha_1CPI + \alpha_2Reg + \alpha_3Quo + \alpha_4Size + \varepsilon_i$$

where *T* is transparency; CPI is consumer-proximity industries; Reg is region; Quo is quoted variable; and Size is size.

Regression 2 :

$$T = \alpha_0 + \alpha_1EOI + \alpha_2Reg + \alpha_3Quo + \varepsilon_i$$

where *T* is transparency; EOI is employee-oriented industry; Reg is region and Quo is quoted variable.

Regression 3 :

$$T = \alpha_0 + \alpha_1ESI + \alpha_2Reg + \alpha_3Quo + \alpha_4Size + \varepsilon_i$$

where *T* is transparency of SR; ESI is environmentally-sensitive industries; Reg is region; Quo is quoted variable; and Size is size.

Regression 4 :

$$T = \alpha_0 + \alpha_1IOI + \alpha_2Reg + \alpha_3Quo + \alpha_4Size + \varepsilon_i$$

where *T* is transparency; IOI is investor-oriented industry; Reg is region; Quo is quoted variable and Size is size.

**Results**

The results for the control of collinearity are presented in Table 4. The explanatory power of the models increases from 27 to 50 %, when the independent variables are added.

The result of the test of the hypotheses is included in Table 5. All four hypotheses are supported, indicating that there is a positive and significant effect of the main stakeholders in an industry on the levels of CSR transparency. This result holds for the four groups of stakeholders.

**Table 4** Collinearity control

	Model 1		Model 2		Model 3		Model 4	
	Beta	Sig.	Beta	Sig.	Beta	Sig.	Beta	Sig.
Constant	0.121	0.257	0.033	0.769	-0.016	0.884	-0.079	0.490
Reg	-0.084	0.013	-0.076	0.024	-0.081	0.015	-0.081	0.015
Quo	-0.303	0.000	-0.286	0.000	-0.347	0.000	-0.350	0.000
Size/EOI	0.248	0.009	0.234	0.014	0.186	0.051	0.164	0.086
CPI	-	-	0.163	0.009	0.150	0.015	0.217	0.001
IOI	-	-	-	-	0.226	0.001	0.201	0.003
ESI	-	-	-	-	-	-	0.182	0.008
R <sup>2</sup>	0.27		0.33		0.44		0.50	
F	9.662	0.000	9.662	0.000	9.583	0.000	9.206	0.000



**Table 5** Test of hypotheses

	Unstand. coefficients		Stand. coefficient Beta	<i>T</i>	Sig. (2 tail)
	B	Std. error			
Regression 1					
(Constant)	0.033	0.111		0.294	0.769
CPI	0.163	0.062	0.081	2.636	0.009
Reg	-0.076	0.033	-0.069	-2.266	0.024
Quo	-0.286	0.065	-0.143	-4.394	0.000
Size	0.234	0.095	0.080	2.474	0.014
Regression 2					
(Constant)	0.121	0.106		1.133	0.257
EOI	0.248	0.095	0.085	2.611	0.009
Reg	-0.084	0.033	-0.077	-2.500	0.013
Quo	-0.303	0.065	-0.151	-4.668	0.000
Regression 3					
(Constant)	0.099	0.107		0.928	0.354
ESI	0.120	0.064	0.058	1.885	0.060
Reg	-0.086	0.033	-0.079	-2.573	0.010
Quo	-0.314	0.065	-0.157	-4.826	0.000
Size	0.233	0.095	0.080	2.451	0.014
Regression 4					
(Constant)	0.062	0.107		0.582	0.561
IOI	0.236	0.067	0.115	3.529	0.000
Reg	-0.088	0.033	-0.081	-2.655	0.008
Quo	-0.365	0.067	-0.183	-5.459	0.000
Size	0.196	0.095	0.067	2.056	0.040

The significance reported in Table 5 is 0.06 or better (2 tailed) for all the variables. However, since our tested hypotheses are directional, the level of significance is 0.03 or better.

The positive sign of the coefficients shows that the four groups of stakeholders (customers, employees, environment, and investors) affect positively the transparency of sustainability reporting, hence the higher the pressure, the higher the level of transparency.

Regression 1 shows that the membership to a well-known-by-consumer industry increases the level of transparency of the CSR reports. The public perception of companies CSR and its effect on consumer behavior has been extensively studied in marketing (Battacharya and Sen 2004; Becker-Olsen et al. 2006; Klein and Dawar 2004; Mohr et al. 2001; Sen et al. 2006; Sen and Battacharya 2001). Given that there is a reported demand on CSR, companies in industries with closer proximity to customers may be trying to improve their brand image by increasing the transparency of their reports.

The positive correlation between the pressure of employees and CSR reporting transparency is tested in Regression 2. Our result confirms that the larger the number of employees, the higher degree of transparency they will demand, according to Huang and Kung (2010).

Given that companies with greater pressure of the employees are larger, they have resources to provide reports on sustainability more often and with higher levels of disclosure.

Regression 3 confirms that companies in environmentally sensitive industries present higher levels of transparency in their SR, as found in previous studies (Alali and Romero 2012; Araya 2006). This increase in the levels of transparency might result from the desire to mitigate the public perception of the greater impact on the environment the industry has.

Finally, companies with high pressure from investors present CSR reports with higher transparency, as shown in the results from regression 4. This result indicates the existence of pressure from the financial markets to increase the confidence level of investors by increasing the levels of reporting transparency.

Our results indicate that investors as well as employees have the highest level of influence in CSR reporting transparency as stakeholders, while environment presents the lowest one. The four regressions also show the significance of all control variables, region, size, and quoted. The coefficient for quoted is negative, indicating that after controlling for size and region, quoted companies are less transparent than those not publicly traded. This result is

revealing because most of the research is done using traded companies due to the easiest availability of the data. However, this result might be produced by the composition of the sample. Europe has the largest number of companies, and also this region has the lowest rate of quoted companies (32.4 %). We have found no references to previous research comparing public and private companies.

The variable region adopts a value of 1 if North America; 2 if Europe; 3 if South America and 4 if Asia. The significant and negative relationship shows that companies in the first two regions are more transparent than companies in the last two regions. This result is consistent with the evolution of CSR reporting in these regions showed in KPMG (2008). As expected, size has a significant and positive effect on transparency.

## Discussion and Conclusions

In this paper, we analyze the effect that the pressure of stakeholders in an industry has on CSR transparency. We collect data from 1,047 companies from the GRI database, for the period 2008–2010. The sample includes data from companies that are listed and not listed in the stock exchange. Data are initially classified in 38 industries and four geographical regions by GRI. The dependent variable Transparency is the result of a Principal component analysis test on four variables: frequency of SR in the period, application level of GRI guide, external declaration for the application level, and existence of AS. Transparency is tested using four variables defined as the result of the industry categorization that reflects the existence or not of stakeholder pressure. The four categories are: impact on customers, employees, environment, and investors. We include in the analysis three control variables: region, quoted, and size.

Industry is usually reported as affecting CSR disclosure, especially in industries with environmental impact. We confirm that effect in the environmental variable, but we contribute to previous knowledge by including other categories of stakeholders that are usually not considered. In fact, our results support that environmental-sensitiveness has less influence on CSR transparency than investors and employees. This result extends to consumers as well. Our results suggest the importance of external pressures as a driver for transparency in CSR reporting.

In this paper we consider CSR transparency in different countries, chosen by the importance of their CSR reporting according to GRI standards. Some of these countries are developed (e.g., USA and Japan), others are considered environmentally conscious (e.g., Sweden and Finland), Brazil is a growing economy, and Spain has had a huge development of CSR in recent years. Other companies are

in developing countries. We select this mixture to try to obtain a global overview of the reporting practices, recognizing that the no inclusion of more countries may be considered as a limitation of the paper.

Future research can be focused on the theoretical justification of our result considering approaches such as stakeholder theory and legitimacy theory, to understand the role that stakeholders play on information systems for sustainability.

## References

- Adams, C. A. (2002). Internal organisational factors influencing corporate social and ethical reporting. Beyond current theorizing. *Accounting, Auditing and Accountability Journal*, 15(2), 223–250.
- Adams, C. A., Hill, W. Y., & Roberts, C. B. (1998). Corporate social reporting practices in Western Europe: Legitimizing corporate behaviour? *British Accounting Review*, 30(1), 1–21.
- Aerts, W., & Cormier, D. (2009). Media legitimacy and corporate environmental communication. *Accounting, Organizations and Society*, 34, 1–27.
- Alali, F., & Romero, S. (2012). The use of the internet for corporate reporting in the mercosur (Southern Common Market). The Argentina case. *Advances in International Accounting*, 28(1), 157–167.
- Aldama, L. R. P., Amar, P. A., & Trostianki, D. W. (2009). Embedding corporate responsibility through effective organizational structures. *Corporate Governance*, 9(4), 506–516.
- Amran, A., & Haniffa, R. (2011). Evidence in development of sustainability reporting: A case of a developing country. *Business Strategy and the Environment*, 20(3), 141–156.
- Andrikopoulos, A., & Diakidis, N. (2007). Financial reporting practices on the internet: The case of companies listed in the cyprus stock exchange. Available at SSRN: <http://ssrn.com/abstract=999183> or <http://dx.doi.org/10.2139/ssrn.999183>. Accessed 12 Aug 2007.
- Araya, M. (2006). Exploring terra incognita: Non-financial reporting in corporate Latin America. *The Journal of Corporate Citizenship*, 21, 25–38.
- Battacharya, C. B., & Sen, S. (2004). When, Why, and How consumers respond. “Doing better at doing good.”. *California Management Review*, 47(1), 10.
- Becker-Olsen, K. L., Cudmore, B. A., & Hill, R. P. (2006). The impact of perceived corporate social responsibility on consumer behavior. *Journal of Business Research*, 59(1), 46–53.
- Bhat, G., Hope, O.-K., & Kang, T. (2006). Does corporate governance transparency affect the accuracy of analyst forecasts? *Accounting and Finance*, 46, 715–732.
- Branco, M. C., & Rodrigues, L. L. (2008). Factors influencing social responsibility disclosure by Portuguese companies. *Journal of Business Ethics*, 83(4), 685–701.
- Brennan, N., & Hourigan, D. (2000). Corporate reporting on the internet by Irish companies. *The Irish Accounting Review*, 7(1), 37–68.
- Brown, H. S., de Jong, M., & Levy, D. L. (2009). Building institutions based on information disclosure: Lessons from GRI's sustainability reporting. *Journal of Cleaner Production*, 17(6), 571–580.
- Bushman, R. M., Piotroski, J. D., & Smith, A. J. (2004). What determines corporate transparency? *Journal of Accounting Research*, 42(2), 207–252.

- Campbell, D. (2003). Intra- and inter-sectoral effects in environmental disclosures: Evidence for legitimacy theory? *Business Strategy and the Environment*, 12(6), 357–371.
- Campbell, J. L. (2006). Institutional analysis and the paradox of corporate social responsibility. *American Behavioral Scientist*, 49(7), 925–938.
- Carroll, A. B. (1991). The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. *Business Horizons*, 34, 4–39.
- Chih, H., & Chen, T. (2010). On the determinants of corporate social responsibility: International evidence on the financial industry. *Journal of Business Ethics*, 93(1), 115–135.
- Christensen, L. T. (2002). Corporate communication: The challenge of transparency. *Corporate Communications*, 7(3), 162–168.
- Collins, L. (2010). Platform play. *Engineering and Technology*, 5(18), 60–63.
- Dando, N., & Swift, T. (2003). Transparency and assurance: Minding the credibility gap. *Journal of Business Ethics*, 44, 195–200.
- Deegan, C., & Gordon, B. (1996). A study of the environmental disclosure practices of Australian corporations. *Accounting and Business Research*, 26(3), 187–199.
- Dentchev, N. A. (2004). Corporate social performance as a business strategy. *Journal of Business Ethics*, 55, 397–412.
- DeTienne, K. B., & Lewis, L. W. (2005). The pragmatic and ethical barriers to corporate social responsibility disclosure: The Nike case. *Journal of Business Ethics*, 60(4), 359–376.
- Dubbink, W., Graafland, J., & Van Liedekerke, L. (2008). CSR, transparency and the role of intermediate organizations. *Journal of Business Ethics*, 82(2), 391–406.
- Eccles, R., Ioannou, I., & Serafeim, G. (May 9, 2012). The impact of a Corporate Culture of Sustainability on Corporate Behavior and Performance. Harvard Business School, Working paper 12-035.
- Elijido-Ten, E., Kloot, L., & Clarkson, P. (2010). Extending the application of stakeholder influence strategies to environmental disclosures: An exploratory study from a developing country. *Accounting, Auditing and Accountability Journal*, 23(8), 1032–1059. <http://dx.doi.org/10.1108/09513571011092547>.
- Ellis, A.D. (2009). The impact of corporate social responsibility on employee attitudes and behaviours. Academy of Management 2009 Annual Meeting: Green Management Matters, AOM.
- Fernández-Feijoo, B., Romero, S., & Ruiz, S. (2012). Measuring quality of sustainability reports and assurance statements: Characteristics of the high quality reporting companies. *International Journal of Society Systems Science*, 4(1), 5–27.
- Fifka, M.S. (2011). Corporate responsibility reporting and its determinants in comparative perspective: A review of the empirical literature and a meta-analysis. *Business Strategy and the Environment*. Published online in Wiley Online Library ([wileyonlinelibrary.com](http://wileyonlinelibrary.com)).
- Fombrun, C. J., & Rindova, V. P. (2000). The road to transparency: Reputation management at royal dutch/shell. In M. Schultz, M. J. Hatch, & M. H. Larsen (Eds.), *The expressive organization* (pp. 77–96). Oxford: Oxford University Press.
- Fonseca, A. (2010). How credible are mining corporations' sustainability reports? A critical analysis of external assurance under the requirements of the international council on mining and metals. *Corporate Social Responsibility and Environmental Management*, 17(6), 355–370.
- Freeman, R. E. (1984). *Strategic management. A stakeholder approach*. Boston: Pitman.
- Gamerschlag, R., Möller, K., & Verbeeten, F. (2011). Determinants of voluntary CSR disclosure: Empirical evidence from Germany. *Review of Managerial Science*, 5(2), 233–262.
- Global Reporting Initiative, GRI (2011). Sustainability Reporting Guidelines, G3.1.
- Grushina, S.V. (2011). Evolution of a design for communication: The case of the global reporting initiative sustainability reporting guidelines. Dissertation Graduate School-New Brunswick Rutgers, New Jersey. <http://hdl.rutgers.edu/1782.1/rucore10001600001.ETD.000063415>. Accessed 6 June 2012.
- Hackston, D., & Milne, M. J. (1996). Some determinants of social and environmental disclosures in New Zealand companies. *Accounting, Auditing and Accountability Journal*, 9(1), 77–108.
- Haski-Leventhal, D. (2012). Employee engagement in CSR: The case of payroll giving in Australia. Corporate social responsibility and environmental management. Published online in Wiley Online Library ([wileyonlinelibrary.com](http://wileyonlinelibrary.com)). doi: 10.1002/csr.1287.
- Holder-Webb, L., Cohen, J. R., Nath, L., & Wood, D. (2009). The supply of corporate social responsibility disclosures among US firms. *Journal of Business Ethics*, 84, 497–527.
- Huang, C., & Kung, F. (2010). Drivers of environmental disclosure and stakeholder expectation: Evidence from Taiwan. *Journal of Business Ethics*, 96(3), 435–451.
- Joseph, G. (2012). Ambiguous but tethered: An accounting basis for sustainability reporting. *Critical perspectives on Accounting*, 23, 93–106.
- Kaptein, M., & Van Tulder, R. (2003). Toward effective stakeholder dialogue. *Business and Society Review*, 108, 203–224.
- Klein, J., & Dawar, N. (2004). Corporate social responsibility and consumers' attributions and brand evaluations in a product-harm crisis. *International Journal of Research in Marketing*, 21(3), 203–217.
- Kolk, A. (2008). Sustainability, accountability and corporate governance: Exploring multinationals reporting practices. *Business Strategy and the Environment*, 17(1), 1–15.
- Kolk, A., & Perego, P. (2010). Determinants of the adoption of sustainability assurance statements: An international investigation. *Business Strategy and the Environment*, 19(3), 182–198.
- KPMG (2008). International Survey of Corporate Social Responsibility Reporting 2008. Amsterdam. [www.kpmg.com](http://www.kpmg.com). Accessed 15 Jan 2011.
- Manetti, G., & Becatti, L. (2009). Assurance services for sustainability reports: Standards and empirical evidence. *Journal of Business Ethics*, 87(Suppl. 1), 289–298.
- Mohr, L. A., Webb, D. J., & Harris, K. E. (2001). Do consumers expect companies to be socially responsible? The impact of corporate social responsibility on buying behavior. *Journal of Consumer Affairs*, 35(1), 45–72.
- Monteiro, S. M. S., & Aibar-Guzmán, B. (2010). Determinants of environmental disclosure in the annual reports of large companies operating in Portugal. *Corporate Social Responsibility and Environmental Management*, 17(4), 185–204.
- Morhardt, J. E. (2010). Corporate social responsibility and sustainability reporting on the internet. *Business Strategy and the Environment*, 19, 436–452.
- Nielsen, A. E., & Thomsen, C. (2007). Reporting CSR: What and how to say it? *Corporate Communications*, 12(1), 25–40.
- Nikolaeva, R., & Bicho, M. (2011). The role of institutional and reputational factors in the voluntary adoption of corporate social responsibility reporting standards. *Journal of the Academy of Marketing Sciences*, 39, 136–157.
- Paten, D. M. (1991). Exposure, legitimacy, and social disclosure. *Journal of Accounting and Public Policy*, 10, 297–308.
- Prado-Lorenzo, J., Gallego-Alvarez, I., & Garcia-Sanchez, I. M. (2009). Stakeholder engagement and corporate social responsibility reporting: The ownership structure effect. *Corporate Social Responsibility and Environmental Management*, 16(2), 94–107.
- Quaak, L., Aalbers, T., & Goedee, J. (2007). Transparency of corporate social responsibility in Dutch breweries. *Journal of Business Ethics*, 76(3), 293–308.

- Roberts, R. W. (1992). Determinants of corporate social responsibility disclosure: an application of stakeholder theory. *Accounting, Organizations and Society*, 17(6), 595–612.
- Sen, S., & Bhattacharya, C. B. (2001). Does doing good always lead to doing better? Consumer reactions to corporate social responsibility. *Journal of Marketing Research*, 38, 225–243.
- Sen, S., Bhattacharya, C. B., & Korschun, D. (2006). The role of corporate social responsibility in strengthening multiple stakeholder relationships: A field experiment. *Journal of the Academy of Marketing Science*, 34(2), 158–166.
- Simnett, R., Vanstraelen, A., & Chua, W. F. (2009). Assurance on sustainability reports: An international comparison. *Accounting Review*, 84(3), 937–967.
- Snider, J., Hill, R., & Martin, D. (2003). Corporate social responsibility in the 21st century: A view from the world's most successful firms. *Journal Business Ethics*, 48, 175–187.
- Sweeney, L., & Coughlan, J. (2008). Do different industries report corporate social responsibility differently? An investigation through the lens of stakeholder theory. *Journal of Marketing Communications*, 14(2), 113–124.
- Tagesson, T., Blank, V., Broberg, P., & Collin, S. O. (2009). What explains the extent and content of social and environmental disclosures in corporate websites: A study of social and environmental reporting in Swedish listed corporations. *Corporate Social Responsibility and Environmental Management*, 16, 352–364.
- Ullmann, A. A. (1985). Data in search of a theory: a critical examination of the relationships among social performance, social disclosure, and economic performance of US firms. *The Academy of Management Review*, 10(3), 540–557.
- van Riel, C. B. M. (2000). Corporate communication orchestrated by a sustainable corporate story. In M. Schultz, M. J. Hatch, & M. H. Larsen (Eds.), *The expressive organization* (pp. 157–181). Oxford: Oxford University Press.
- Wei, Y., Egri, C.P. & Lin, C. Y. (2009). Do corporate social responsibility practices make a difference in Eastern and Western contexts? Academy of Management 2009 Annual Meeting: Green Management Matters, AOM 2009.
- Williams, C. C. (2005). Trust diffusion: The effect of interpersonal trust on structure, function, and organizational transparency. *Business and Society*, 44(3), 357–368.
- Wilmshurst, T. D., & Frost, G. R. (2000). Corporate environmental reporting: A test of legitimacy theory. *Accounting Auditing and Accountability Journal*, 13(1), 10–26.