

Mandatory Disclosure about Environmental and Employee Matters in the Reports of Italian Listed Corporate Groups

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ABSTRACT This paper analyses the impact of Italian Legislative Decree 32/2007 - following the 2003/51 European Directive - and the disclosure of environmental and employee matters in terms of overall volume, completeness of information, presence of bad/good news and target-oriented information. Content analysis has been applied to all Italian corporate groups that made public both the consolidated annual report and the stand-alone social and environmental report in 2005 and in 2010, for a total of ninety-six reports.

The results show that despite the overall increase in sentences devoted to environmental and employee matters, the completeness of the information has not substantially improved, indicating that the 2007 regulation has been ineffective. The Italian experience could provide useful insights for European regulators. Such insights may inform policy recommendations to design a mandated social and environmental accountability process with the potential of providing information to societal stakeholders while facilitating accountability.

Keywords: environmental and employee matters, consolidated annual reports, social and environmental reports, content analysis, Italian listed companies.

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1. Introduction

Recently, the European Commission has begun facing the urgent challenge of regulating social and environmental matters for large companies and groups (European Directive 2014/95/EU of 15 November 2014). The regulation seeks to improve the transparency of European companies by compelling them to disclose information on policies, risks and outcomes regarding environmental matters as well as social and employee-related aspects. This regulation is intended to be flexible, allowing companies to provide integrated information in the annual and stand-alone reports while adopting the European or national guidelines they consider most appropriate.

This legislative process began in 2003 with the release of Directive 2003/51/EC regarding non-financial disclosures in companies' annual reports and consolidated annual reports. Prior to 2003, the European Commission encouraged organizations to disclose information beyond 'the financial aspects of the company's business'. As such, the Commission expected that a company's development, performance and position could be viewed through the lens of environmental and social aspects (article 9, 2003/51/EC). Some European countries (Spain, France, Portugal, Finland, Sweden and Denmark) have adopted this European recommendation by obliging companies to deliver information about social and environmental matters in their annual reports.

In this regard, Italy adopted the 2003/51/EC European Directive with Legislative Decree 32/2007 (D.Lgs. 32/2007, hereafter). This 2007 legislation represents the first Italian decree to recommend the provision of employee and environmental information through consolidated annual reports. The inclusion of this information recognizes the increasing importance of social and environmental accounting (SEA) and non-financial information (i.e. environmental, social and governance - ESG issues), both of which may represent a significant portion of corporate value.

It is helpful to analyse Italy's implementation of 2003/51/EC in order to uncover possible successful approaches for future application of the most recent 2014/95/EU regulation. Indeed, the two regulations are similar in scope – to promote and enhance companies' disclosure of social and environmental information – but quite different in focus and application. The 2003/51/EC regulation and the related Italian D.Lgs. 32/2007 were quite broad and unfocused, failing to explicitly consider the role of stand-alone social and environmental reports; the recent 2014/95/EU better defines social and environmental issues and considers the possibility of omitting these issues from the consolidated annual report when a stand-alone social and environmental report is present. Because of the differences between the 2003 and 2014 EU regulation, this paper considers the 2007 Italian regulation as a case that promotes a better understanding of the potentiality of the more recent 2014 EU regulation. It does so by analyzing aspects that have not functioned properly in Italy within the 2007 regulation; it also investigates how the recent 2014 EU regulation can be considered a step forward in promoting the disclosure of non-financial information in order to measure, monitor and manage companies' performance and impacts on global society.

Several studies in the SEA literature have investigated the role of social and environmental mandatory disclosure (Larrinaga et al. 2002; Mobus 2005) and voluntary disclosure (Kolk 2005; KPMG 2011). Such studies have attempted to understand if regulation can ameliorate the lack of neutrality and objectivity characterizing voluntary disclosure (Adams 2004; Deegan and Rankin 1996; Gray 2006). The debate about voluntary and mandatory disclosure and the role of regulation in SEA remains necessary and timely (Jeffrey and Perkins 2013; Parker 2014). Indeed, on one hand, many scholars have affirmed that compulsory social and environmental disclosure is the most appropriate approach (Jeffrey and Perkins 2014; Hibbitt and Collison 2004; Bebbington and Thy 1999; Owen et al. 1997). Meanwhile, several other studies have demonstrated that many companies fail to comply with the standard or law despite mandatory disclosure (Criado-Jimenez et al. 2008; Adams et al. 1995 Larrinaga et al. 2002; Day and Woodward 2004; Llana et al. 2007). When they do comply, the quality of the social and environmental disclosure tends to be fairly low.

Despite the increasing number of contributions to this topic, most of the research focuses on the reports' legal compliance (Criado-Jimenez et al. 2008; Larrinaga et al. 2002). Such efforts fail to consider companies' overall disclosures on social and environmental issues. They also lack analysis of the disclosures' nuances, such as completeness in terms of descriptive/quantitative information, bad/good news and past/target-oriented issues. Moreover, most researchers consider the annual report to be the most important document, leading to a dearth of investigations that consider annual reports and stand-alone social and environmental reports together (Adams et al., 1995; Gray et al., 1995).

In order to contribute to this academic debate, this paper has a twofold purpose: first, it aims to empirically verify if and how the information about environmental and employee matters has changed from 2005 to 2010, both in annual reports and in social reports; this analysis includes overall volume, completeness of information, presence of bad/good news and target-oriented information. Second, the paper investigates the extent to which Italian D.Lgs. 32/2007 explains the variability of the provided environmental and employee information.

From a methodological point of view, this paper uses a regression model to develop a content analysis (Krippendorff, 1980) of ninety-six reports (24 consolidated annual reports and 24 stand-alone social and environmental reports) in 2005 and 2010. The results show that despite the overall increase in sentences devoted to environmental and employee matters, the completeness of the information has not substantially improved, indicating that the 2007 regulation has been ineffective.

The paper is organized as follows. The next section introduces the EU regulations from 2003 to 2014 and their implementation in Italy. Then, the literature review presents information regarding SEA studies and the voluntary/mandatory disclosure debate. The fourth section presents the hypotheses for this research. The fifth section describes the sample of Italian listed companies and introduces the content analysis performed on the consolidated annual reports and stand-alone social and environmental reports. Section six illustrates the empirical evidence and discusses the findings. The paper concludes with final remarks and policy implications.

2. The EU regulations from 2003 to 2014 and their implementation in Italy

The most important European initiative regarding accounting for environmental issues dates back to 1992 when the European Commission published the program, 'Towards Sustainability' (2001/453/EC). This program primarily discussed how companies report on financial aspects relating to the environment and recognized that traditional financial reporting should include more about corporate performance. Additional information would increase the reliability of accounting and financial data, making it more valuable for assessing firm value and management performance.

After this initiative, in May 2001, the European Commission provided recommendations regarding the recognition, measurement and disclosure of environmental issues in companies' annual reports. The document clearly recognized two major issues: first, different stakeholders – regulatory authorities, investors, financial analysts and the general public – may consider the environmental information disclosed by companies to be inadequate or unreliable because of the lack of explicit rules and standards. Second, by adopting stand-alone environmental reports, firms in most European countries are expanding both the quantity and the quality of their environment-based information disclosures (KPMG, 2011).

Therefore, the European Commission encouraged stand-alone environmental reports and annual reports to be more consistent, cohesive and closely associated. In light of this development, the European Commission's Recommendation 2001/453/EC of 30 May 2001 ensured that 'environmental disclosures are incorporated in the annual accounts and annual reports in a way that complements the more detailed and wide-ranging separate environmental reports' (2).

This approach confirms the progressive IFRS inability (especially pertaining to IAS 1, 8, 32 and 39) to reflect corporate responsibility measures in financial accounts and the urgent need for regulatory authorities to recognize the impossibility of continuing to rely on separate reports without knowing how environmental disclosures affect companies' overall performance.

In 2003, the European Commission launched Directive 2003/51/EC that, consistent with the Commission Recommendation 2001/453/EC of 30 May 2001, promotes a 'fair review' of financial, social and environmental aspects of companies, aspects necessary for understanding any company's

development, performance or position. In detail, the European Directive 2005/51/EC introduced many new features regarding the drawing up of business reports, including the point of view of non-financial indicators: ‘both financial and, where appropriate, non-financial key performance indicators relevant to the particular business, including information relating to environmental and employee matters must be included in the consolidated annual reports in order to enable a balanced and comprehensive analysis of the development and performance of the business’ (Directive 2003/51/EC, 4).

The European Directive 2003/51/EC was introduced in Italy with Legislative Decree 2 February 2007, n.32 (D.Lgs. 32/2007, hereafter). This decree was a first step in satisfying the need for disclosures regarding non-financial performance indicators. In detail, this Italian legislative decree obliges consolidated annual reports to include information regarding environmental and employee matters. However, it does not add any specific instructions regarding how to interpret the concept of ‘environment’ and ‘employee’. Many questions have therefore remained open and unsolved: which kind of information about environmental and employee matters must be disclosed? How much detail is required? The Italian regulation does not provide any additional information to better guide companies in more broadly disclosing non-financial information within consolidated annual reports. In addition, professional accountants have discussed how to interpret the Italian regulation, and they referred to the previous European Recommendation 2001/453/EC of 30 May 2001, suggesting ‘an analysis of the environmental and social aspects necessary to understand the development, performance or position of a company’ (Sirimarco, 2007, 50). They also make reference to other kinds of reporting, such as stand-alone social and environmental reporting, which are specifically designed to provide more effective information to various stakeholders.

Italy’s application of European Directive 2003/51/EC to non-financial information regarding environmental and employee matters has remained ambiguous because of the broad and vague nature of the law. Adding to this ambiguity is the inability of accounting professionals to better detail the directive’s content. While D.Lgs. 32/2007 represents the first Italian regulation to recommend the provision of employee and environmental information within consolidated annual reports, the European

Commission has advanced measures to improve the transparency of the social and environmental information provided by companies in all sectors. With Directive 2013/0110, the European Parliament and the Council presented a proposal regarding the disclosure of nonfinancial and diversity information for certain large companies and groups.

After a long process of consultation with other stakeholders, they recognized that ‘only a limited number of EU large companies regularly disclose non-financial information, and the quality of the information disclosed varies largely, making it difficult for investors and stakeholders to understand and compare companies’ position and performance’ (European Commission, 2013/0110, 2). In essence, they propose requiring certain large companies to disclose relevant non-financial information in order to allow investors to better evaluate sustainability and long-term performance across companies in Europe.

This proposal would also maintain a flexible and non-intrusive approach in order to allow companies to adopt their preferred national or international reporting frameworks. The proposal further intends to solve the problem of fragmentation in legislative frameworks across Europe by allowing European countries to privilege different methods of disclosure and to require certain kinds of companies to provide such information (Firoz and Ansari 2010).

On 15 November 2014, the European Parliament recognized the importance of businesses disclosing information on social and environmental matters and approved Directive 2014/95/EU regarding disclosure of non-financial and diversity information by certain large undertakings and groups.

Compared to Directive 2003/51/EC, Directive 2014/95/EU is clearer, focusing on enhancing the consistency and comparability of social and environmental information throughout EU companies in order to reduce fragmentation. Therefore, 2014/95/EU better describes the kinds of social and environmental matters that have to be detailed (i.e., gender equality, working conditions, social dialogue, respect for worker’s rights, respect for trade union rights, health and safety at work, land use, water use and greenhouse gas emissions). It also leaves room for member states to exempt organizations that have a stand-alone social and environmental report that covers the same topics, in essence providing a specific non-financial report.

Italy has not yet adopted this recent EU directive, which differs in two primary ways from the previous 2003/51/EC. First, Directive 2014/95/EU exemplifies a set of social and environmental items that should be included within the non-financial disclosure, therefore providing companies a clear guide for discharging accountability. Second, it explicitly recognizes the remarkable development of stand-alone social and environmental reports in EU member states, therefore allowing national governments the freedom to provide some exemptions on the basis of their national contexts.

To date, Italy has not adopted this recent directive 2014/95/EU; Italian companies have to comply with the previous 2003/51/EC. Therefore, D.Lgs. 32/2007 represents the first Italian regulation to promote the presence of extra-financials information in the consolidated reports of corporate groups (Sirimarco, 2007).

3. Empirical Research on Regulated Social and Environmental Matters

Information with regard to social and environmental matters can be voluntary or mandatory. By definition, ‘voluntary [...] disclosures, primarily in annual reports, are a communication mechanism by which firms attempt to satisfy external pressures to conform to socially acceptable norms, perhaps substituting this communication mechanism for any substantive behavioural performance’ (Mobus 2005, 495). By comparison, mandatory disclosures occur when firms comply with the requirements established by law.

Scholars in accounting agree that voluntary disclosure is characterized by a lack of completeness, accuracy, neutrality and objectivity because it depends upon the managers’ intentions (Adams 2004; Beets and Souther 1999). Beets and Souther (1999) further criticize voluntary disclosure by arguing that it differs significantly from company to company, thereby confounding comparability. Researchers also question the credibility of these reports because they are not always verified by independent third parties. With regard to social and environmental matters, there is evidence that voluntary social and environmental information fails to enhance disclosures, presenting a high degree of incompleteness (Adams 2004). Scholars have thus suggested that the discharge of accountability requires regulation

(Jeffrey and Perkins 2014; Bebbington and Thy 1999; Owen et al. 1997). Accepting this perspective, numerous countries have introduced such regulations for social and environmental accounting in consolidated annual and/or stand-alone social and environmental reports. More specifically, some European countries, such as Spain, France, Portugal, Finland, Sweden and Denmark (see Hibbitt and Collison 2004), have modified their accounting regulations to align with the European Recommendation (2001/453/EC), introducing an obligation for companies to report on environmental matters in their annual reports.

In the Spanish case, Criado-Jimenez et al. (2008) followed up on Larrinaga et al. (2002), investigating the introduction of the 2002 ICAC standard that obliged organizations to make environmental disclosures in their financial statements. Criado-Jimenez et al. (2008) indicate that the volume and quality of disclosure increased (especially relating to bad news) despite a considerable level of non-compliance (approx. 84%). Similarly, Llena et al. (2007) note a considerable increase in environmental disclosure in fifty-one Spanish firms investigated between 1992-1994 and 2001-2002, but the degree of compliance remained heterogeneous, and the information reported (especially in 2001-2002) was generic and positively biased.

In the UK, Adams et al. (1995) found that 11 out of 100 listed companies failed to report on equal opportunity; the general level of disclosure was also very low. Day and Woodward (2004) demonstrated that only 58% of 100 large UK London Stock Exchange listed companies furnished details according to the 1985 Company Act. This study exposes a high degree of non-compliance with the statutory requirements and raises questions about the symbolic rather than substantive intent of making organizations accountable.

Bebbington and Thy (1999) demonstrate that 83% of Danish companies have a high degree of compliance with the law, thus noting the positive outcomes of the mandatory Danish Environmental Protection Act; however, the remaining literature shows disappointing results when evaluating the compulsory regulation of social and environmental matters. Therefore, more work is required to evaluate and understand the effectiveness of social and environmental regulation in terms of the volume and

‘quality’ of reporting (Bebbington and Thy 1999). Such research should pay particular attention to various countries and reporting media (Criado-Jimenez et al. 2008).

4. Hypotheses Development

In light of the aforementioned studies, we intend to investigate the effects of the Italian regulation on mandatory disclosure in consolidated annual reports and to verify if such variations correspond to stand-alone social and environmental reports. Therefore, our first hypothesis states the following:

H1: After the 2007 regulation, the volume of disclosures about environmental and employee matters will increase.

For the purpose of this study, the analysis of the overall extent of disclosure is insufficient because volume-based evaluation may be misleading (Unerman 2000; Toms 2002). Thus, we also aim to investigate the extent to which the introduction of such regulation on environmental and employee matters enhances the *completeness* of the reported information in terms of the presence of descriptive or numerical information, the presence of *good/bad* news and the presence of *target-oriented* information.

3.1. Narrative vs Quantitative Information

Following Guthrie and Parker (1990), we intend for this hypothesis to investigate the dominance of either narrative or quantitative disclosure. We agree with Al-Tuwaijri et al. (2004) who assert that ‘quantitative disclosures are more objective and informative to stakeholders than qualitative information’ (454). We consider numerical information more complete than simple descriptive and narrative details. However, several studies demonstrate that reports usually contain more narrative and descriptive disclosure than quantitative/numerical information.

Robertson and Nicholson (1996) show that fund managers and analysts perceive quantified environmental information to be more important than non-quantified information. The analysis clearly demonstrates that numerical information adds value to environmental disclosures. Previous studies, however, highlight the ubiquitous presence of narrative information. Kolk (2005) points out that ‘there

is a clear move towards reporting on the societal aspects, but so far, this has implied more the expression of concerns, intention and policies than the actual measurement of corporate behaviour and/or impacts' (288). In other words, little numerical information is provided, leading to more narrative and descriptive disclosures.

Because introducing regulation should enhance the quality of disclosure and reduce manipulative intentions (Mobus 2005), we expect Italian companies to reduce mention statements and increase descriptive and numerical information following Italian Legislative Decree 32/2007.

H₂: After the 2007 regulation, there will be a significant decrease of mention statements in favour of a significant increase in the amount of numerical information.

4.2. Bad and Good News

Confirming that firms tend to be self-laudatory in their disclosure practices, studies on environmental disclosures reveal that information unfavourable to a company's image goes underreported or remains completely absent in corporate reports (Guthrie and Parker 1990; Deegan and Gordon 1996). Guthrie and Parker (1990) provide evidence that the majority of bad news disclosures for US companies was prompted by private regulation in the form of professional accounting standards (FASB) and audit standards (AICPA).

Deegan and Rankin (1996) have demonstrated how private sector organizations in Australia fail to report 'bad news'; indeed, 'organizations appear reluctant to provide any information within their annual reports about any negative environmental implications of their operations' (59). They conclude that 'annual reports that omit particular environmental information, or provide it in a biased manner, are misleading in that they do not provide a full picture of the operations of the business for the period under review' (62).

Deegan and Gordon (1996) note that, in the absence of regulation, companies are less objective in their disclosures practices and tend to provide information that is favourable to their corporate image. In theory, regulation should reduce the opacity of bad news regarding environmental and employee matters

(Larrinaga et al. 2002, 724); however, the introduction of such regulations in Spain did not lead companies to report more bad news (733).

Because Italian Legislative Decree 32/2007 does not specify the information that has to be reported with regard to employee and environmental matters, it enables various forms of disclosures. Therefore, from 2005 to 2010, we expect there to be no significant differences in terms of bad news information disclosed both in consolidated annual reports and stand-alone social and environmental reports.

H₃: After the 2007 regulation, there will be a significant increase (decrease) in bad (good) news reported.

4.3. Target-Oriented Information

Finally, as suggested by Hasseldine et al. (2005), the measurement of social and environmental disclosure should also include the use of target references to outcomes. The authors adapted Toms' (2002) model and developed a 5-point scale that attributes a higher score when future quantified information is defined (but not published) or when sentences refer to the implementation of targets and quantified results (published). According to Hasseldine et al. (2005), companies that disclose environmental information also consider target references and provide numerical information, thus receiving a higher score than other companies.

In this sense, the presence of target-oriented information as well as information about past events could reveal if companies are employing the stand-alone social report and the financial-consolidated report not only as a form of performance monitoring, but also as a strategic tool for organizational planning (Riccaboni and Leone 2010). As argued by Bebbington (2007, 6), 'If organizations are seeking to report on their contribution to sustainable development, one may expect that there are some internal mechanisms which guide their activities toward this goal.'

On the basis of these premises, the fourth hypothesis has been developed as follows:

H₄: After the 2007 regulation, there will be a significant increase of target-oriented information and past information about environmental and employee matters.

5. Research Design

5.1. Sample

According to the Italian D.Lgs. 32/2007, from 1st January 2008, the consolidated annual reports of corporate groups must include information regarding environmental and employee matters; however, the Italian law fails to provide any details regarding the kind of information that has to be reported (Sirimarco, 2007). Professional accountants therefore suggest consideration of other reports, such as the stand-alone social and environmental report. The sample used in this paper thus consists of Italian corporate groups that provided the consolidated annual report and the stand-alone social and environmental reports both in 2005 (before the 2007 regulation) and in 2010 (after the 2007 regulation) (see Table 1 for a better description of the different names/labels for these reports).

In order to identify the Italian listed corporate groups, we analysed the CONSOB website. CONSOB is the National Commission for Companies and Stock Markets (Commissione Nazionale per le Società e la Borsa), the public authority responsible for regulating the Italian securities market. In October 2011, there were 264 listed corporate groups in Italy, and 24 of them had both a consolidated annual report and a stand-alone social and environmental report both in 2005 than in 2010, for a total of 96 reports.

We decided to focus on 2005 and 2010 reports - instead of developing a longitudinal content analysis from 2005 to 2010 - for many reasons. First, since the law was introduced on 1st January 2008, we analysed the two years before and after its introduction. Second, in the data from 2005 to 2010, some companies may not have delivered every year's stand-alone social and environmental report. Third, the analysis of the 96 reports included in this paper has been carried out manually, although labour-intensive and time-consuming, it allows researchers to conduct a more thorough and in-depth analysis (Brennan et al. 2009). Finally, other researchers had focused on social and environmental matters in Italy in 2005 (Andreas 2007; Pesci and Andrei 2011), thus providing a basis for comparison and trend analysis.

[Insert here Table 1]

5.2. Content Analysis

Content analysis enables the researcher to collect large amounts of textual information and systematically identify its properties (Krippendorff 1980). From a methodological viewpoint, many studies in both financial accounting and environmental-social disclosures adopt an analytic content approach (see Parker 2014). For the purpose of this study, we performed an extent-based content analysis. Focusing on the amount of information, we aimed ‘to quantify the extent of reporting on a specific issue using various measures such as words, sentences or pages’ (Hooks and van Staden, 2011, 200).

The debate regarding the most appropriate unit of measurement remains open (Unerman 2000; Hooks and van Staden 2011; Pesci and Costa 2014). Unerman (2000) notes a number of possibilities when quantifying a text: i) the number of documents containing a particular category of disclosure; ii) the number of characters; iii) the number of words; iv) the number of sentences; v) the number or proportion of pages; and vi) the proportion of volume. Some scholars consider words to be the most appropriate units of measurement because more detail can be achieved using this measure (Deegan and Gordon 1996; Zeghal and Ahmed 1990). Other scholars (Milne and Adler 1999; Hooks and van Standen 2011) prefer sentences both as a unit of coding and as a unit of measurement because it diminishes the number of problems associated with reliability. However, when adopting sentences, the analysis does not consider different grammatical choices, thus disregarding the length of each sentence (Hooks and van Staden 2011). In order to resolve this issue, Beattie and Thomson (2007) propose the use of text units for both coding and measure disclosure. Text units refer to pieces of information within the context of the sentence; therefore, within a sentence (from dot to dot), it is possible to identify different sub-categories. For the purpose of this paper, we adopted text units as both coding units and units of measurement (Pesci and Costa 2014; Milne and Adler 1999).

We selected the categories used in the analysis for the environmental and employee issues based on the G3 Sustainability Reporting Guidelines developed by the GRI-Global Reporting Initiative (G3, 2011).

We made this selection due to the complete absence of guidelines in the Italian D.Lgs. 32/2007 (Sirimarco, 2007). However, whenever both the consolidated annual report and the stand-alone social and environmental reports included further information not provided in the G3 guidelines, we adopted an emergent coding (Haney et al., 1998) in order to cover each of the areas of the disclosure regarding employee and environmental matters. At the end of the coding process, we defined 11 categories for the environment (8 GRI and 3 emerging codes) and 11 for the employee (5 GRI and 6 emerging codes), as described in Tables I and II in the Appendix.

In order to guarantee reliability (Unerman 2000; Gray et al. 1995), we carried out a pilot test on a few corporate social reports. We used at least three coders and re-analysed discrepancies between them to resolve differences (Milne and Adler 1999).

5.3. Variables

We selected four main variables for the content analysis of environmental aspects and employee issues. The *volume of the disclosure* (VOLUME) was measured by the number of text units referring to all social and environmental indicators presented in the consolidated financial and social-environmental social reports.

The second variable investigated the *completeness of disclosure* (COMPLETENESS) in order to measure how listed corporate groups discharge accountability. By adopting a scoring system, several studies have attempted to build a measure of disclosure more complete and comprehensive than simple binary code (present or absent) (Hooks and van Staden 2011). However, other researchers criticize these approaches, arguing that this kind of scoring may increase the subjectivity of the content analysis (Botosan 2004). For this reason, this paper employs an extent-based content analysis and divides the volume into levels of detail for the information: mention, description or evaluation. The completeness variable is not a score-point system, but simply measures how many text units are presented vaguely (mention), descriptively and exhaustively (description), or numerically (evaluation).

Consistent with other studies (Deegan and Ranking 1996; Deegan and Gordon 1996; Guthrie and Parker 1990), we have also evaluated whether Italian listed corporate groups present *information which is favourable (or not) to their corporate image* (GOOD and BAD NEWS). For this reason, we investigated the number of text units that contribute to improving corporate image and reputation by presenting initiatives that positively affected the environment and employees. We have also considered bad news by analysing how many corporate groups devoted text units to negative impacts on environmental or employee matters. Previous studies have demonstrated that companies are usually more likely to disclose details on social and environmental issues that present them in a positive light (Guthrie and Parker 1990; Deegan and Gordon 1996; Criado-Jimenez et al. 2008). Companies generally do not provide ‘bad news’ about their activities (Guthrie and Parker 1990), and if they do, ‘bad news’ is presented less than half as often as ‘good news’ (Criado-Jimenez et al. 2008).

Finally, we have also considered whether the reported information refers to the past, the present or the future in an attempt to understand *if listed corporate groups use these issues for prospective purposes* (TARGET-ORIENTED INFORMATION). Hasseldine et al. (2005) have provided insight into the importance of using targets to monitor outcomes for SEAR information; therefore, this paper distinguishes between disclosures of environmental and employee matters based on time: giving past information (past), reporting on the year of reference (present), or forecasting the future (future).

For some brief examples of the variables used in the analysis, please refer to Table 2.

[Insert here Table 2]

5.4. Regression Model

For the purposes of this study, we have analysed the main drivers of disclosure for environmental and employee matters, both in consolidated annual reports and in stand-alone social and environmental reports. We have conducted a detailed investigation into how much the 2007 regulation may explain differences in social and environmental accountability in Italian listed groups.

The following regression model has been employed:

$$Y_{i,t} = \beta_0 + \beta_1 REGUL_{i,t} + \beta_2 SECTOR_{i,t} + \beta_3 BOTH_{i,t} + e_{i,t} \quad [A]$$

where:

$Y_{i,t}$ is the dependent variable referring to the different variables (mention, description, evaluation, good news, bad news,¹ past, present and future) both for environmental and employee matters.

$REGUL_{i,t}$ is a dummy variable indicating the regulation. $REGUL_{i,t} = 0$ before regulation (2005) and $REGUL_{i,t} = 1$ after regulation (2010).

$SECTOR_{i,t}$ is a dummy variable indicating the activity sector of the group, which could be sensitive or not sensitive to the environment. $SECTOR_{i,t} = 0$ if it is not an environmentally impactful sector, and $SECTOR_{i,t} = 1$ if it is an environmentally impactful sector.

$BOTH_{i,t}$ is a dummy variable indicating the combined effect of the regulation and sector of activity. $BOTH_{i,t} = 0$ if either the regulation or sector of activity has no impact on the Y variable and $BOTH_{i,t} = 1$ otherwise.

$e_{i,t}$ is the term error.

If the regulation has no impact on the companies' disclosure, general model [A] could be simplified in model [B] as follows:

H₀: $REGUL_{i,t}$ and $BOTH_{i,t} = 0$

$$Y_{i,t} = \beta_0 + \beta_2 SECTOR_{i,t} + e_{i,t} \quad [B]$$

¹ Neutral news was not considered in the regression model because it was not relevant for the analysis.

We compare the two models by applying Pearson's correlation and the F test to the tested regressions in order to investigate whether the regulation was a significant driver in changing the social and environmental disclosures of Italian companies from 2005 to 2010.

6. Findings and Discussion

6.1. Environmental and Employee Information for Italian Listed Corporate Groups

Table 3 shows the overall number of text-units presented both in stand-alone social and environmental reports and in consolidated annual reports in 2005 and 2010 by considering the different sub-categories within the environmental and employee matters. Overall, 21,820 text-units have been manually analysed (9,168 in 2005 and 12,652 in 2010), and most of the disclosures regarding social and environmental matters were located within the stand-alone social and environmental reports (80% in 2005 and 83% in 2010).

The analysis reveals an increase of 38% between 2005 and 2010 in the overall volume of disclosure; this increase varied in the stand-alone report (+43%) and the consolidated annual report (+20%).

In considering the two main areas of investigation – employee and environmental matters – the analysis shows that these two dimensions are equally important. In 2005, 4,512 text-units (49% of the overall disclosures that year) referred to environmental matters, and 4,656 text-units (51%) concerned employee matters. In 2010, 6,485 text-units (51% of the overall disclosures that year) referred to environmental matters, and the remaining 6,167 (49%) covered employee matters.

Table 3 clearly shows that some sub-categories are dominant within each category, with some variation between the consolidated annual report and the stand-alone social and environmental report. In general, with reference to environmental concerns, companies disclose more on emissions and energy (both in 2005 and in 2010). With regard to employee matters, companies provide more information regarding training and education programs as well as their internal policies.

[Insert here Table 3]

Tables 4, 5 and 6 show the number of text-units devoted to each of the variables identified for analysis, including completeness, bad/good news and target information.

By analysing the completeness of environmental and employee themes, Table 4 shows that, from 2005 to 2010, both numerical and descriptive information has increased. In more detail, the number of *quantitative* issues increased from 1,814 in 2005 to 2,673 in 2010, and the number of *descriptive* issues increased from 6,006 to 8,686. Differences also emerge when considering environmental and employee matters separately. With regard to environmental issues, the analysis reveals that, from 2005 to 2010, this information improved in terms of completeness because companies provided an increasing number of quantitative (+4%) and descriptive (+4%) information instead of vague and mentioned (-7%) details. By comparison, the analysis regarding employee matters shows that more text-units were devoted to explaining the impact of companies' internal policies on the workers; however, these narratives remained primarily descriptive in nature (70% in 2010).

Therefore, in analysing the completeness of the data, the research shows that, generally speaking, disclosures became more complete from 2005 to 2010; however, the impact of these changes has been stronger for environmental matters.

[Insert here Table 4]

By analysing the presence or absence of good and bad news, this study is consistent with other research (Guthrie and Parker 1990; Deegan and Gordo 1996; Criado-Jimenez et al. 2008). Italian listed companies are indeed more likely to give accounts of good news (6% in 2010) instead of bad news (0.6% in 2010). Table 5 shows that from 2005 to 2010, both good news and bad news slightly decreased, but there was a large difference between them: bad news continued to be underrepresented both in consolidated annual reports and in social and environmental reports. Contrarily, good news was depicted in 6% (in 2010) of the total disclosures and was more apparent in the consolidated annual reports.

The data also show differing patterns for environmental and employee matters. Generally speaking, in 2005, bad news disclosures were mostly made in regards to employee issues (55% of the total bad news in 2005); in 2010, there was more bad news related to the environment (53%).

[Insert here Table 5]

Finally, the analysis of target-oriented information in Table 6 shows that companies tend to focus their reports on the present year with less attention to previous years (17% in 2005 and 16% in 2010) and target-oriented news (4% in 2005 and 3% in 2010).

This trend is most evident in stand-alone social and environmental reports rather than in consolidated annual reports. As suggested by Riccaboni and Leone (2010), companies remain unable to reach their full potential of embedding social and environmental issues within their management control systems (MCSs) because these formal tools are often exclusively focused on financial issues.

By comparing environmental and employee matters, Table 6 shows that few differences emerge between the two areas of disclosure.

[Insert here Table 6]

6.2. Pearson's Correlation and Regression Analysis

The analysis shows that there are no significant linear relationships between the examined variables and the 2007 regulation. Taking into account the interaction between the two mentioned variables (activity sector sensitivity and 2007 regulation), we obtain some positive significant relationships.

[Insert here Table 7]

After applying Pearson's correlation coefficient, we may investigate the activity sector sensitivity impact (as an independent variable) by applying regression models [A] (Table 8) and [B] (Table 8) to the completeness, good/bad news and target-oriented information.

[Insert here Table 8 and 9]

Tables 8 and 9 indicate how well we have explained the dependent variables in terms of three independent variables: the 2007 regulation, the environmentally impactful sector and their interaction. The R-squared is not high, which means that the model does not fit the data well. The ANOVA table indicates that there is a significant linear relationship between the dependent variable and the explanatory variable (we have a significant linear equation because the p-value is equal to 0.000). We used an F test to test the null hypothesis that there would be no linear relationship, and we compared the two previously-described models [A] and [B]. We have evidence that there is a significant linear relationship with a significance value (Prob>F) of less than 0.05.

Moreover, looking at the columns entitled t and Sig., we see that all regressions indicate that model B fits the data because the environmental impactful sector of activity better explains the variations in the extent of disclosure about employee and environmental matters from 2005 to 2010.

7. Concluding Remarks

This paper provides an opportunity to reflect on environmental and employee matters in both the consolidated annual reports and stand-alone social and environmental reports of Italian listed companies from 2005 to 2010. It also has investigated whether or not the new Italian D.Lgs. 32/2007 explains these changes.

Italian D.Lgs. 32/2007 introduced European Directive 2003/51/EC in Italy, representing the first national attempt to compel corporate groups to include information regarding environmental and employee matters in their consolidated annual reports. The broadness and vagueness of this Italian regulation

makes its application burdensome and informally allows companies to omit social and environmental information within a unique report, leaving them separate (Sirimarco 2007).

By considering both consolidated annual reports and stand-alone social and environmental reports, our analysis reveals that, from 2005 to 2010, companies disclosed more regarding their environmental and employee impacts. We observed an increase of +38% in overall disclosure and an improvement in terms of information completeness. Indeed, the amount of both descriptive and quantitative information increased from 2005 to 2010 (+4% and +1% respectively), while the number of the vaguest sentences decreased (-5%). Such information remained anchored to portraying a positive view of the company (Guthrie and Parker 1990; Deegan and Gordon 1996; Criado-Jimenez et al. 2008) through the presence of more good news (6%) than bad news (0.06%). Finally, companies did not integrate information regarding social and environmental concerns within their strategy and management control systems because these tools have minimal ability to provide a complete overview of the future impact of business activities (future-oriented information was 3% in 2010).

The analysis also shows differences between the two main areas of investigation, the environment and employee matters. Both are equally represented in corporate groups' overall disclosures, but there were differences in terms of the kind of disclosures. Environmental disclosures significantly improved from 2005 to 2010 in terms of completeness; there were more disclosures in 2010, and they were more detailed and quantitative. Moreover, in 2010, there were more bad and good news reports regarding the environment compared to employee matters.

In order to better understand the meaning of this change, our research investigated the role of regulation in increasing these disclosures. The regression analysis shows that Italian D.Lgs. 32/2007 cannot be considered responsible for these changes.

Why has the Italian regulation been ineffective in promoting this change? What other factors could be influencing it?

In order to answer the first question, further research could investigate the relationships and dynamics between the regulation and the institutional context of this country. To this ends, we also encourage

future researchers to develop a longitudinal analysis – addressing one of the limitations of the current research – and to better explore the relationship between different kinds of reports.

Previous studies have provided various explanations for why regulations sometimes do not provide the expected outcome (Jeffrey and Perkins 2014; Adams 2004; Larrinaga et al. 2002; Bebbington and Thy 1999; Owen et al. 1997). Here, we would like to suggest two possibilities for the Italian case, both of which require further investigation. First, mandatory social and environmental disclosure could have been perceived as mere administrative reform rather than institutional change (Larrinaga et al. 2002; Owen et al. 1997). In this sense, when a stakeholder engagement process is lacking, authors observe administrative reform rather than institutional transformation (Bebbington and Thy, 1999; Larrinaga et al., 2002).

In the Italian case, the complete absence of stakeholder dialogue, together with the ambiguity of D.Lgs. 32/2007, prevents increased transparency in social and environmental information and increased company awareness regarding impacts on society.

In more detail, our analysis has revealed that D.Lgs. 32/2007 is incapable of introducing an integration process for financial, environmental and employee concerns into Italian corporate groups' operations and strategies. As Sirimarco (2007) posited, the potential of considering a plethora of additional relevant information to enrich the effectiveness of disclosure has been reduced to a 'mere annex' to consolidated financial statements.

These circumstances lead us to believe that Italian D.Lgs. 32/2007 is far from an institutional reform; it requires more stakeholder dialogue and engagement to facilitate a fair process of accountability.

Second, in order to avoid mandated regulation being perceived as a 'top-down' process of formal standard setting and legal enforcement, Jeffrey and Perkins (2014) suggest a hybrid approach that 'combines a dialogical process based on broader participation, representation of and respect for divergent views and outcomes that are designed to reflect these divergent views for determining disclosure metrics combined with mandated disclosure' (16).

In light of these reflections, we perceive that Italy remains far from acknowledging the importance of stakeholder engagement in designing legislative processes. In Italy, a passive approach to regulation prevails (Sirimarco, 2007), according to which regulators decide and companies oblige. On the contrary, the European working group on the disclosure of non-financial information recognized the importance of creating a dialogue with stakeholders and designing regulations on the basis of their suggestions. In 2013, the working group declared that ‘the current approach to the disclosure of non-financial information in the Accounting Directives has not been sufficiently effective. A majority of stakeholders consulted considered that the obligation set by the Accounting Directives lacks clarity and may prejudice legal certainty. Clearer requirements and stronger focus on topical issues important for the company’s long-term success are therefore necessary’ (European Commission, 2013/0110, 2). As a consequence of this stakeholder engagement process, the recent 2014/95/EU made steps in this direction. Compared to 2003/51/EC, it is more focused and detailed, compelling organizations to provide a list of specific social and environmental information that has emerged during the previous ten years of stakeholder dialogue. What can be learnt from this paper is that the top-down approach adopted in Italy lacked a clear objective, content and stakeholder dialogue/process; these shortcomings may have caused the regulation to be ineffective and counterproductive. Further, the European community has to monitor the implementation process for its European Directive for member states: each member state has to replicate the collaborative and constructive approach that has been adopted elsewhere in Europe.

The second question this paper leaves open relates to other factors that may have influenced changes in disclosures between 2005 and 2010 in Italy. The results show that environmental disclosure has increased and improved more than employee disclosure. By reading the European legislative process guiding the European Commission’s recent Directive 2014/95/EU, it is possible to observe that the Commission focused on the environment beginning with the 1992 ‘Toward Sustainability’ document and continuing to the 2001 Recommendation (30 May 2001). The European Commission was convinced that ‘an enhanced attention to financial aspects could contribute to achieving the goals of the programme;

ensuring that environmental expenditures and risks are taken into account could increase the company's awareness of environmental issues' (point 1, 2001/453/EC).

We believe that this initial focus on environmental aspects could partially explain why Italian companies enhanced their disclosure on environmental concerns rather on employee matters. The process of increasing European companies' awareness of social and environmental impacts initially focused on climate change and environmental protection; this concentration potentially could have affected the environmental culture and sensitivity in which companies operate.

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Tables and Figures

Table 1. The sample

ID	Name of the corporate group	Sector of activity	Stand-alone social and environmental report (2005)		Stand-alone social and environmental report (2010)		Consolidated annual report (n. of pages)	
			<i>Name of the Report</i>	<i>n. pages</i>	<i>Name of the report</i>	<i>n. pages</i>	2005	2010
1	Acegas	Public Utilities	Bilancio Integrato	109	Bilancio Integrato	229	135	56
2	Acea	Public Utilities	Bilancio di Sostenibilità	275	Bilancio di Sostenibilità	183	152	480
3	Autogrill	Travel and Leisure	Rapporto di Sostenibilità	162	Rapporto di Sostenibilità	107	226	207
4	Banca Popolare Milano	Banking	Bilancio Sociale	179	Bilancio Sociale	156	262	484
5	Banca Carige	Banking	Bilancio Sociale	62	Bilancio Sociale	88	308	601
6	Banca Credito Valtellinese	Banking	Bilancio Sociale	97	Rapporto Sociale	164	452	445
7	Banca Monte Paschi Siena	Banking	Bilancio Socio-Ambientale	162	La Responsabilità Sociale del Gruppo	120	412	783
8	Banca Nazionale Lavoro	Banking	Bilancio della responsabilità sociale	194	Bilancio Sociale	149	423	292
9	Banca Popolare Etruria	Banking	Bilancio Sociale	114	Bilancio Sociale	176	317	481
10	Buzzi Unicem	Construction	Bilancio di Sostenibilità	92	Bilancio di Sostenibilità	112	97	168
11	Cattolica Assicurazioni	Insurance	Bilancio Sociale	104	Bilancio Sociale	185	62	272
12	Edison	Energy	Rapporto sulla Sostenibilità	79	Rapporto di Sostenibilità	104	88	100
13	Enel	Energy	Bilancio di Sostenibilità	168	Bilancio di Sostenibilità	318	238	352
14	Fiat	Automotive	Rapporto di Sostenibilità	170	Bilancio di Sostenibilità	210	278	164
15	Fondiarria - Sai	Insurance	Rendiconto Sociale	169	Rendiconto Sociale	195	339	410
16	Hera	Public Utilities	Bilancio di Sostenibilità	191	Bilancio di Sostenibilità	198	341	418
17	Indesit company	Products to people	Rapporto sulla Sostenibilità	66	Bilancio di Sostenibilità	58	112	89
18	Italcementi	Public Utilities	Sustainable Development Report	57	Sustainable Development Report	77	323	343
19	Pirelli	Automotive	Bilancio di Sostenibilità (estratto BI)	70	Bilancio di Sostenibilità	123	289	263
20	Sabaf	Tecnology	Bilancio Integrato	124	Rapporto annuale	101	88	81
21	Telecom	Telecommunications	Bilancio di Sostenibilità (estratto BI)	81	Bilancio di Sostenibilità	174	406	504
22	Unicredit	Banking	Bilancio Sociale Ambientale	152	Bilancio di Sostenibilità	92	452	300
23	Unipol gruppo finanziario	Banking	Bilancio Sociale di Gruppo	249	Bilancio di Sostenibilità	223	139	180
24	IREN (Aem Torino 2005)	Public Utilities	Bilancio di Sostenibilità	137	Bilancio di Sostenibilità	194	278	283
	Total number of pages			3,263		3,736	6,217	7,756

Table 2. Variables employed in the analysis

<i>Variable</i>	<i>Category</i>	<i>Example</i>
Completeness	Mention	'In almost all municipalities, the cleanliness of the public environment is also guaranteed.'
	Description	'All operations follow established procedures in accordance with the company doctor, the Internal Service for Prevention and Protection and Health Services Company experts responsible for the area. Technicians are always consulted, especially in non-conventional cases.'
	Evaluation	'In 2005, more than 120,000 hours of training have been provided to staff, with a total investment of about € 2.9 m.'
Good/Bad News	Good News	'The commitment to organizational and educational issues has been positively reflected in accidents: in 2005, the number of accidents in the unit of Trieste was 39 compared to 58 in 2004 (-32.75%), with a net improvement over the previous year in the frequency index and the severity of injuries.'
	Neutral News	'Employees who work in network construction are professionally trained and in possession of licenses and certificates of competency and qualification.'
	Bad News	'As a consequence of an improvement in the frequency, there is a significant worsening in severity in the cement sector (+24%). This sector reported fewer injuries, but they were, on average, more severe.'
Target-Oriented Information	Past	'The volume of gas injected into the system in Trieste in 2005 was approximately 179.3 million cubic meters, an increase of 3.9% over the previous year.'
	Present	'Workers with a part-time contract – 50% (14 of 26) of whom are employed at headquarters – are in no way discriminated against in the continuation and development of their careers for the type of contract adopted.'
	Future	'Reducing emissions in the atmosphere of corporate fleets (through methane, biodiesel, hybrid, etc.): Target: 20% of vehicles should reduce environmental impact by 2009.'

Table 3. The overall volume of disclosures on employees and the environment by year and type of report

	2005			2010		
	Social Report	Consolidated annual report	Total	Social Report	Consolidated annual report	Total
ENVIRONMENT						
Materials	155	97	252	257	31	288
Energy	413	46	459	810	166	976
Water	188	3	191	336	9	345
Biodiversity	65	0	65	153	12	165
Emmissions	718	85	803	1,339	110	1,449
Products and services	56	16	72	138	97	235
Compliance	49	0	49	88	2	90
Transport	98	0	98	213	3	216
Overall	215	72	287	299	80	379
Quality	225	60	285	207	97	304
General aspect	1,453	498	1,951	1,449	589	2,038
Total	3,635	877	4,512	5,289	1,196	6,485
EMPLOYEE						
Emplpoyment	284	98	382	366	158	524
Labor/management relations	307	23	330	489	22	511
Occupational health and safety	439	46	485	746	138	884
Training and education	716	298	1014	1082	330	1,412
Diversity and equal opportunity	189	3	192	422	3	425
Development politics	901	83	984	1,237	77	1,314
Social initiatives	275	287	562	294	172	466
Communications	490	103	593	414	77	491
Company's climate	98	0	98	102	0	102
Questions of law	16	0	16	38	0	38
Total	3,715	941	4,656	5,190	977	6,167
Total volume	7,350	1,818	9,168	10,479	2,173	12,652

Table 4. The extent of completeness

<i>Completeness</i>		<i>Mention</i>		<i>Description</i>		<i>Evaluation</i>		<i>Total</i>	
		2005	2010	2005	2010	2005	2010	2005	2010
Environment	Social reports	350 10%	265 5%	2,417 66%	3,512 66%	868 24%	1,512 29%	3,635 100%	5,289 100%
	Consolidated annual reports	384 43%	315 26%	488 56%	879 74%	5 1%	2 0,2%	877 100%	1,196 100%
	∑	734 16%	580 9%	2,905 64%	4,319 68%	873 19%	1,514 23%	4,512 100%	6,485 100%
Employees	Social reports	252 7%	292 6%	2,525 68%	3,740 72%	938 25%	1,158 22%	3,715 100%	5,190 100%
	Consolidated annual reports	362 38%	421 43%	576 61%	555 57%	3 0%	1 0%	941 100%	977 100%
	∑	614 13%	713 12%	3,101 67%	4,295 70%	941 20%	1,159 19%	4,656 100%	6,167 100%
Total	Social reports	602 8%	557 5%	4,942 67%	7,252 69%	1,806 25%	2,670 25%	7,350 100%	10,479 100%
	Consolidated annual reports	746 41%	736 34%	1,064 59%	1,434 66%	8 0%	3 0%	1,818 100%	2,173 100%
	∑	1,348 15%	1,293 10%	6,006 65%	8,686 69%	1,814 20%	2,673 21%	9,168 100%	12,652 100%

Table 5. The extent of bad and good news

<i>Bad and Good News</i>		<i>Neutral</i>		<i>Bad</i>		<i>Good</i>		<i>Total</i>	
		<i>2005</i>	<i>2010</i>	<i>2005</i>	<i>2010</i>	<i>2005</i>	<i>2010</i>	<i>2005</i>	<i>2010</i>
Environment	Social reports	3,475 96%	4,985 94%	18 1%	28 1%	142 4%	276 5%	3,635 100%	5,289 100%
	Consolidated annual reports	652 74%	927 78%	11 1%	13 1%	214 24%	256 21%	877 100%	1,196 100%
	Σ	4,127 91%	5,912 91%	29 1%	41 1%	356 8%	532 8%	4,512 100%	6,485 100%
Employees	Social reports	3,612 97%	5,068 98%	30 1%	20 0%	73 2%	102 2%	3,715 100%	5,190 100%
	Consolidated annual reports	698 74%	778 80%	6 1%	16 2%	237 25%	183 19%	941 100%	977 100%
	Σ	4,310 93%	5,846 95%	36 1%	36 1%	310 7%	285 5%	4,656 100%	6,167 100%
Total	Social reports	7,087 96%	10,053 96%	48 1%	48 0%	215 3%	378 4%	7,350 100%	10,479 100%
	Consolidated annual reports	1,350 74%	1,705 78%	17 1%	29 1%	451 25%	439 20%	1,818 100%	2,173 100%
	Σ	8,437	11,758	65	77	666	817	9,168	12,652
		92%	93%	0.7%	0.6%	7%	6%	100%	100%

Table 6. The extent of target-oriented information

<i>Target-oriented information</i>		<i>Past</i>		<i>Present</i>		<i>Future</i>		<i>Total</i>	
		<i>2005</i>	<i>2010</i>	<i>2005</i>	<i>2010</i>	<i>2005</i>	<i>2010</i>	<i>2005</i>	<i>2010</i>
Environment	Social reports	225	374	3,270	4,764	140	151	3,635	5,289
		6%	7%	90%	90%	4%	3%	100%	100%
	Consolidated annual reports	551	734	255	391	71	71	877	1,196
		62%	61%	29%	32%	8%	6%	100%	100%
	Σ	776	1,108	3,525	5,155	211	222	4,512	6,485
		17%	17%	78%	79%	5%	3%	100%	100%
Employees	Social reports	162	240	3,413	4,749	140	201	3,715	5,190
		4%	5%	92%	92%	4%	4%	100%	100%
	Consolidated annual reports	643	685	266	282	32	10	941	977
		68%	70%	28%	29%	3%	1%	100%	100%
	Σ	805	925	3,679	5,031	172	211	4,656	6,167
		17%	15%	79%	82%	4%	3%	100%	100%
Total	Social reports	387	614	6,683	9,513	280	352	7,350	10,479
		5%	6%	91%	91%	4%	3%	100%	100%
	Consolidated annual reports	1,194	1,419	521	673	103	81	1,818	2,173
		65%	65%	29%	31%	6%	4%	100%	100%
	Σ	1,581	2,033	7,204	10,186	383	433	9,168	12,652
		17%	16%	79%	81%	4%	3%	100%	100%

Table 7. Pearson correlation

		Regulation	Sector	Both	Report	Mention	Description	Evaluation	Good	Bad	Past	Present	Future
Regulation	Pearson Corr.	1	,000	,447**	,000	-,019	,188	,131	,095	,040	,112	,145	,035
	Sign. (2-tailed)		1,000	,000	1,000	,855	,066	,205	,356	,698	,278	,158	,734
Sector	Pearson Corr.	,000	1	,632**	,000	,357**	,267**	,278**	,311**	,395**	,434**	,222*	,245*
	Sign. (2-tailed)	1,000		,000	1,000	,000	,008	,006	,002	,000	,000	,030	,016
Both	Pearson Corr.	,447**	,632**	1	,000	,222*	,304**	,268**	,276**	,228*	,419**	,241*	,058
	Sign. (2-tailed)	,000	,000		1,000	,030	,003	,008	,007	,026	,000	,018	,571
Report	Pearson Corr.	,000	,000	,000	1	,111	-,682**	-,679**	,187	-,167	,398**	-,730**	-,315**
	Sign. (2-tailed)	1,000	1,000	1,000		,281	,000	,000	,068	,103	,000	,000	,002
Mention	Pearson Corr.	-,019	,357**	,222*	,111	1	,271**	,257*	,704**	,389**	,617**	,268**	,304**
	Sign. (2-tailed)	,855	,000	,030	,281		,008	,011	,000	,000	,000	,008	,003
Description	Pearson Corr.	,188	,267**	,304**	-,682**	,271**	1	,909**	,298**	,386**	,093	,970**	,482**
	Sign. (2-tailed)	,066	,008	,003	,000	,008		,000	,003	,000	,368	,000	,000
Evaluation	Pearson Corr.	,131	,278**	,268**	-,679**	,257*	,909**	1	,203*	,452**	-,045	,960**	,503**
	Sign. (2-tailed)	,205	,006	,008	,000	,011	,000		,048	,000	,661	,000	,000
Good	Pearson Corr.	,095	,311**	,276**	,187	,704**	,298**	,203*	1	,309**	,761**	,205*	,225*
	Sign. (2-tailed)	,356	,002	,007	,068	,000	,003	,048		,002	,000	,045	,027
Bad	Pearson Corr.	,040	,395**	,228*	-,167	,389**	,386**	,452**	,309**	1	,189	,407**	,327**
	Sign. (2-tailed)	,698	,000	,026	,103	,000	,000	,000	,002		,065	,000	,001
Past	Pearson Corr.	,112	,434**	,419**	,398**	,617**	,093	-,045	,761**	,189	1	-,071	,166
	Sign. (2-tailed)	,278	,000	,000	,000	,000	,368	,661	,000	,065		,490	,106
Present	Pearson Corr.	,145	,222*	,241*	-,730**	,268**	,970**	,960**	,205*	,407**	-,071	1	,436**
	Sign. (2-tailed)	,158	,030	,018	,000	,008	,000	,000	,045	,000	,490		,000
Future	Pearson Corr.	,035	,245*	,058	-,315**	,304**	,482**	,503**	,225*	,327**	,166	,436**	1
	Sign. (2-tailed)	,734	,016	,571	,002	,003	,000	,000	,027	,001	,106	,000	

** . The correlation is 0.01 significant (2-tailed)

* . The correlation is 0.05 significant (2-tailed)

N = 96

Table 8. Regression analysis: Model A

Model A									
R	.359								
R-squared	0.129								
R-squared corrected	0.101								
Standard deviation	212.16809								
N	96								
	REGULATION			SECTOR			BOTH		
	Beta	t	Sig.	Beta	t	Sig.	Beta	t	Sig.
OVERALL VOLUME	0.113	0.95	0.345	0.241	1.755	0.083	0.112	0.725	0.47
MENTION	-0.024	-0.199	0.842	0.35	2.543	0.013	0.011	0.07	0.944
DECSRIPTION	0.132	1.098	0.275	0.188	1.351	0.18	0.126	0.812	0.419
EVALUTAION	0.093	0.763	0.447	0.224	1.599	0.113	0.085	0.542	0.589
GOOD NEWS	0.055	0.455	0.65	0.254	1.351	0.18	0.09	0.58	0.563
BAD NEWS	0.085	0.73	0.467	0.459	3.401	0.001	-0.101	-0.669	0.505
PAST-ORIENTED	0.006	0.053	0.958	0.284	2.187	0.031	0.237	1.628	0.107
PRESENT-ORIENTED	0.105	0.857	0.393	0.166	1.169	0.245	0.089	0.559	0.577
TARGET-ORIENTED	0.16	1.317	0.191	0.421	3.001	0.003	-0.28	-1.781	0.078

Table 9. Regression analysis: Model B

Model B			
R	.312		
R-squared	0.097		
R-squared corrected	0.088		
Standard deviation	213.66911		
N	96		
	SECTOR		
	Beta	t	Sig.
OVERALL VOLUME	0.312	3.184	0.002
MENTION	0.357	3.705	0
DECSRIPTION	0.267	2.69	0.008
EVALUTAION	0.278	2.803	0.006
GOOD NEWS	0.311	3.175	0.002
BAD NEWS	0.395	4.171	0
PAST-ORIENTED	0.434	4.668	0
PRESENT-ORIENTED	0.222	2.208	0.03
FUTURE-ORIENTED	0.245	2.445	0.016

Appendix

Table I. The area of disclosure for environment

<i>ID</i>	<i>Area</i>	<i>Description</i>
1	Materials	see GRI – G3
2	Energy	see GRI – G3
3	Water	see GRI – G3
4	Biodiversity	see GRI – G3
5	Emissions, Effluents and Waste	see GRI – G3
6	Products and Services	see GRI – G3
7	Transport	see GRI – G3
8	Overall	see GRI – G3
9	Quality and Certifications	It refers to information regarding environmental certificates or quality assurance.
10	General Aspects Related to the Sector of Activity ²	It refers to information that does not measure the impact of activities on the environment, but simply describes some activities.
11	Other	Residual aspects

² Please note that category n. 10 of environmental aspects refers to all the information about the environment that does not directly or indirectly deal with the environmental impact of the companies' activities but simply describes environmental activities.

Table II. The area of disclosure for human resources

ID	Area	Description
1	Employment	see GRI – G3
2	Labour/Management Relations	see GRI – G3
3	Occupational Health and Safety	see GRI – G3
4	Training and Education	see GRI – G3
5	Diversity and Equal Opportunity	see GRI – G3
6	Development Policies	It refers to policies and initiatives devoted to promoting the advancement of careers in the company.
7	Social Initiatives	It refers to initiatives that deal with sports, activities, health projects and family activities for the employee.
8	Communication	It refers to all forms of internal communication developed in favour of the employee.
9	Company Climate	It refers to employee satisfaction about the climate of the company.
10	Question of law	It refers to legal controversies between the company and the employees.
11	Other	Residual aspects