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To be, or not to be, that is the Question. Is Sustainability Report Reliable?

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Abstract
The reliability of sustainability report is important for accounting companies' performance to stakeholders. The issues covered in a sustainability report inform stakeholders of the company sustainability strategies and practices. However, the drawing up of the sustainability report involves the risk of misleading communications for green washing purposes. This topic is much discussed in the scientific literature but, to date, without or with insufficient support of quantitative analyses. This paper focuses on the corporate policies of CO2 reduction, for investigating the existing relations between the reported environmental performance of companies and their CO2 emissions. In order to test the possible subsistence of the green washing practices, the sustainability reports of a sample of 50 Italian companies are analysed. Particularly, the number of environmental indicators of the sustainability reports have been compared with the environmental performance (CO2 emissions) of the companies for investigating if the accuracy and completeness of the sustainability reports are associated with actual sustainable corporate strategies and practices.

Keywords: sustainability report; greenwashing; CO2 emissions; GRI

1. Introduction

Environmental pollution and the related climate change are increasingly becoming two important issues to consider for citizens, governments and international organizations. Consequently, the emergence and consolidation of these two issues determines, in the business world, a growing attention to the environmental impacts of corporate activities by the main companies' stakeholders. Accordingly, a growing number of companies are committed to report their environmental impacts to stakeholders.
The sustainability report is the main document through which companies disclose information about their environmental impacts and performance. Nowadays, sustainability reports are spreading as a shared reporting system and several companies, recognizing that sustainability is an important aspect of their economic activity, are moving towards an integrated reporting system, through which illustrating their strategy, performance and visions both in the short and in the long run.
Nevertheless, the spread of sustainability reports is accompanied by the lack of homogenous regulatory references and standards for sustainability reporting. As a result, there is a problem of reliability and truthfulness of the information provided by companies in these documents. The Global Reporting Initiative (GRI), a multi-stakeholder forum on sustainability disclosure, aims to overcome this gap (GRI 2011) and provides "the de facto global standard" (KPMG, 2011) for reporting information on material impacts related to economic, environmental and social areas of the companies.

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There are two alternatives ("Core" or "Comprehensive") for preparing a GRI report, depending on the extent of disclosures included in the report. GRI Standards, or parts of them, can also be used as guidelines, without preparing a report in accordance with the Standards (i.e. "GRI-referenced" report). The versatility of GRI and the three different reporting approaches ("Core", "Comprehensive" or "GRI-referenced" report) it offers, raises the following research question: is it possible that the comprehensiveness of the sustainability report is not related to environmental performances? Particularly, could the completeness of the sustainability report, measured by the number of environmental indicators, be a display of corporate greenwashing practices by companies?
Greenwashing is a gap between representational and substantive actions aimed to create a "green reputation" through corporate disclosure for satisfying stakeholder sustainability requirements, but without any material initiative (Siano et al., 2017). Up to now only one study investigates whether GRI reporting completeness is related to sustainability performance and/or to greenwashing by analysing CO_2 emissions (Belkhir et al., 2017).

2. Environmental Performance and CO_2 Emissions

More than 160 countries signed the Kyoto Protocol on 11 December 1997. It was the first international agreement to set mandatory limits on GHG emissions, meaning greenhouse gas. The target was an overall reduction of 5.2% in the period 1990-2012. The countries would contribute depending on their income and degree of industrialization. Developed countries have been subjected to compulsory quantified objectives, while developing counties have been expected to simply strengthen national policies on awareness of the environmental problem.
To obtain a greater flexibility in the implementation, the Emissions Trading mechanism was created: those countries that succeed in exceeding the reduction goal of emissions can "sell" the surplus to other countries subject to limits. EC Directive 2003/87 (European Union ET Scheme – EU ETS) regulates the trading of GHG emission "allowances" (Council of the EU, 2003). The Union Registry for Emissions Trading is a registry established to ensure centralized management at European level of the exchange of environmental allowances issued under the EU Emissions Trading Scheme (EU ETS). The European Union Emissions Trading Scheme (EU ETS) was the first GHG emissions trading program and remains the most important in the world. The scheme was launched in 2005 as a tool to counter global warming and as one of the main pillars of the European Union's climate policy. The EU ETS involves all 28 member countries of the European Union, as well as Iceland, Norway and Liechtenstein. Installations regulated by the EU ETS account for almost 50% of CO_2 emissions in the European Union and 40% of its total greenhouse gas emissions. In a given period, each plant subject to Kyoto Protocol can emit atmospheric gases not exceeding an upper limit. If the plant emits a quantity below the limit, the company can sell the unused allowance for CO_2 emissions. On the other hand, if the plant exceeds the limit, the company can purchase allowances without receiving sanctions. The system thus outlined is based on strong economic incentives by which companies are encouraged to invest in programs aimed at reducing the level of emissions and represents the most cost-effective system for reducing GHG emissions, without significant intervention by public authorities.

The ETS have exceeded expectations: European emissions of GHGs declined by 18%, instead of the prevised goal of 8%, in the period 1990-2012. The 20-20-20 Climate and Energy Package (Council of the EU, 2009a; 2009b; 2009c; 2009d; 2009e) defines for the 2013-2020 period the following goals: a reductions of 20% in GHGs from 1990 levels; an improvement of 20% in energy efficiency; the target of 20% of renewable energy in total EU consumption. In 2016, started the new procedure for legislating the objectives to be reached by 2030 (40% reduction in GHG emissions and a 27% increase in renewable and energy efficiency).

3. The Sample

The initial sample of Italian companies that was initially considered in this work includes 237 companies registered in the Union Registry for Emissions Trading. We considered a six-year period from 2008 to 2013. Most companies are "big emitters" with more than 25,000 tons of CO_2-equivalent a year and they are part of the regulated market, where emission reporting is mandatory. Instead, about a third of the observed sample has an annual emission below the threshold value of ETS regulation but are present on the emissions trading market as volunteers. The companies are from 41 industrial sectors of the ATECO 2007, a classification created by the Italian National Institute of Statistics (ISTAT), according to the Statistical Classification of Economic Activities of the European Union, aimed to systematize and standardize the definitions of economic and industrial activities in the EU Member States (Di Pillo et al., 2017). The initial sample was then reduced to 50 companies belonging to 21 ATECO sectors, selecting only those companies that publish a sustainability report.

4. Dataset

The absolute values of the total CO_2 emission data, expressed in tonnes, are unsuitable to compare the environmental performance of companies belonging to different industries, characterized by different output and consequently by a different size. In order to compare companies of different sizes with regard to their environmental performance is necessary a normalization of the CO_2 emission data. The best normalisation factor is the output production data, but these data were not available. For this reason, we used the companies' turnover as a proxy of the production outputs and we calculated the CO_2 emissions in kg per euro of turnover.

In this study, we aim to understand if the completeness of the sustainability report, measured by the number of environmental performance indicators, can be considered a reliable detector of a corporate sustainable conduct or if it could conceal greenwashing practices. We investigate this relationship concentrating our study on the environmental dimension of the sustainability report. For this reason, the initial sample of 237 companies was reduced to those 50 companies that published a sustainability report in the period 2008-2013. We centre our analysis on environmental performance indicators, considering only quantitative indicators (e.g. CO_2 emissions).

We focus our attention on the quantitative nature of the information provided in the sustainability report, considering that companies often fail to provide numerical,

quantitative measures in relation to their performance, merely reporting qualitative information. The companies' tendency to omit quantitative information is evidenced by numerous studies, among which Adams et al. (1995), Beck et al. (2010) and Guthrie et al. (2008). Other studies (e.g. Chapman and Milne, 2004) underline the importance of the "coverage range" of the indicators (i.e. the number of sustainability aspects on which information is provided) as good practice for sustainability reporting. In particular, Bouten et al. (2011) develop a framework based on content analysis aimed at assessing the level of comprehensiveness of a sustainability report. With the term comprehensiveness, the authors indicate the exhaustiveness of the reporting on the various aspects of sustainability. According to the authors, it is misleading to talk about the comprehensiveness of a sustainability report without considering the report 'completeness', meaning the number of quantitative indicators provided by the single company.

Then, the study of the level of exhaustiveness of the environmental dimension of the sustainability report must deal with the quantitative information provided for each environmental aspect in terms of environmental performance indicators. It must be inferred only from the overall quality of the sustainability report (Bouten et al., 2011).

The environmental dimensions of the analysed sustainability reports present various quantitative indicators about emissions: CO_2 emissions, NOx emissions, SO_2 emissions, total GHG emissions, COV emissions, CH_4 emissions, dioxin emissions, heavy metal emissions and particulate matter emissions. Other disclosed environmental indicators of a quantitative nature are: electricity consumption, waste, water withdrawal, water discharge, water consumption, recycled water, investments for improving environmental performance, raw materials, energy efficiency, biodiversity, spills, fuel consumption, fossil fuels, steam, additives and asbestos abatement.

5. Results

Using the percentage variation of the normalized CO_2 emissions in the period 2008-2013, we classify the 50 companies in two categories depending on the positive or negative environmental performance:

- Category 1 (cat 1 in Fig. 1) is characterized by a percentage decrease associated with a positive environmental performance; 30 out of 50 companies of the sample belong to this category.
- Category 2 (cat 2 in Fig. 1) is characterized by a percentage increase associated with a negative environmental performance; 20 out of 50 companies of the sample belong to this category.

Figure 1 represents how many companies described quantitatively each environmental indicator in their sustainability reports. It is evident that the most disclosed environmental indicator is CO_2 emissions. This result validates the choice of CO_2 emissions as a variable to measure environmental performance. The validity of this choice for environmental performance assessment is strengthened by the reliability of the source of the CO_2 emission data, i.e. the Union Registry for Emissions Trading of the European Community.

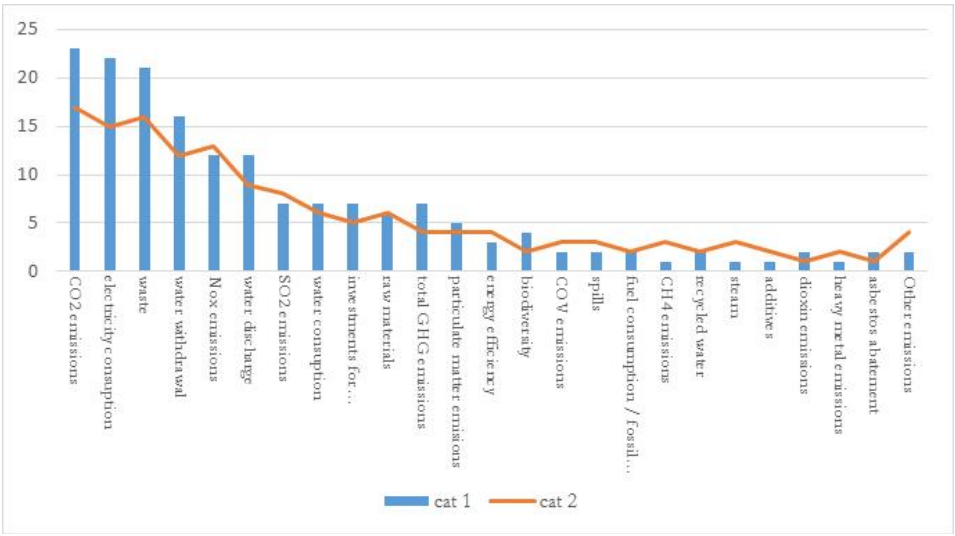

Figure 1: Number of companies for each environmental indicator

Nevertheless, the Figure 1 does not allow a reliable observation of the relationship between the number of disclosed indicators and the environmental performance (i.e. belonging to one of the two categories). Since the number of companies in the two categories is different (30 in the first category and 20 in the second one) is then necessary to normalize the results.

Figure 2 shows the percentage of companies belonging to each category that disclosed each environmental indicator.

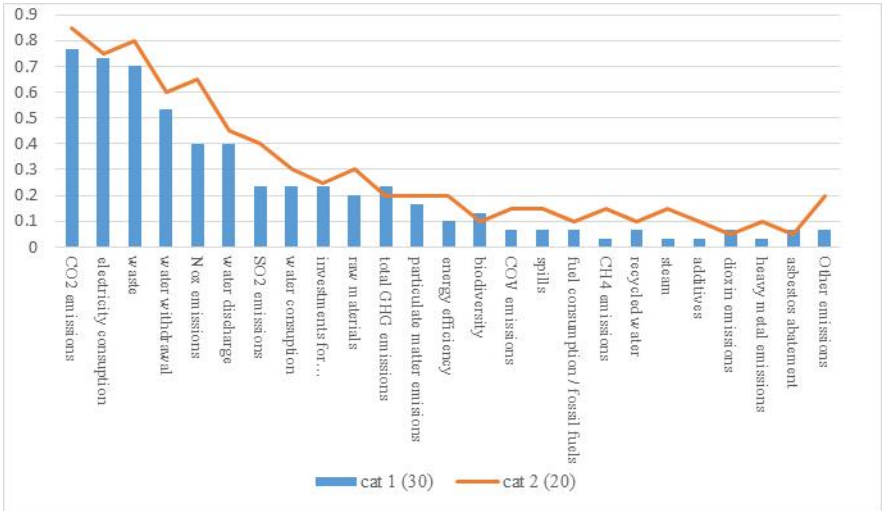

Figure 2: Percentage of companies for each environmental indicator

Figure 2 shows that the negatively performing companies (cat 2) are the ones that publish the largest number of indicators. Indeed, for each indicator (with the exception

of two, where the results are nearly identical), the percentage of companies of category 2 is greater than the percentage of companies of category 1. This result evidences that the completeness of a sustainability report does not necessarily correspond to a real commitment to a sustainable behaviour. Actually, Figure 2 presents a less than constructive scenario since the less-performing companies are those who are committed to realize the richer report.

Conclusions

This study explores the argument that the completeness of sustainability reports can hide an impression management strategy used by companies. By reporting a higher number of environmental indicators, companies can pursue a greenwashing strategy aimed to obfuscate their scarce commitment in sustainability and to manage stakeholders' perceptions for their own benefits. Particularly, the completeness of sustainability reports can reflect opportunistic behaviours on the part of the companies, resulting in the information overload toward stakeholders. Such information overload could be aimed to hinder stakeholders to understand poor environmental performance and to allow companies to be accredited toward their stakeholders.

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