Sustainability Disclosure after a Crisis: 
A Text Mining Approach

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ABSTRACT

This research investigates what happens to sustainability disclosure in the light of an industrial disaster. Drawing from legitimacy theory, the disaster is treated as a moment of crisis, in which the relationship of trust between the company and its stakeholders suffers and has to be reconstructed to legitimise the company’s operations once more. While past studies revealed an increase in corporate disclosure after a disaster, the authors’ results highlight a different behaviour. The analysis focuses on six companies involved in industrial disasters with a global media coverage, before and after the event. The sample includes, among others, Tepco for the leakage of nuclear material from the Fukushima power plant and Carnival Cruise Corporation in relation to the sinking of the Costa Concordia. Findings obtained using text mining techniques suggest that there is a tendency to reduce the quantity of information provided in the year of the disaster, which represents a precise managerial strategy aiming to avoid further drops in corporate legitimacy.

KEYWORDS
Crisis, Global Reporting Initiative (GRI), Industrial Disaster, Legitimation Theory, Sustainability Disclosure, Text Mining

INTRODUCTION

Traditional accounting and reporting models based on financial disclosure have long been criticised, as they offer an incomplete image of the company, without any of its social and environmental responsibilities (Atkinson, Balakrishnan, Booth, & Cote, 1997; Carnegie & Napier, 2010). The need to overcome traditional accounting is demonstrated by the development of new forms of reporting which represent the company as a whole, such as the corporate social responsibility (CSR) report, the sustainability report and the integrated report. As far as research on CSR is concerned, conventional
financial accounting is too limited compared to the overall information needs of the company (Parker & Guthrie, 1993).

Introducing the triple bottom line (TBL), Elkington (1997) identifies corporate information responsibilities not only in terms of economic value but also environmental and social values; the concept of TBL is based on the idea of sustainable development. Deegan and Rankin (1996, p. 61) noted, “…a company or a community to be sustainable (a long-run perspective), it must be financially secured (as evidenced through such measures as profitability), it must minimise (or ideally eliminate) its negative environmental impact, and it must act in conformity with society’s negative”. As the concepts of sustainability and TBL spread, different standards of integrated reporting have appeared, fully representing the company’s dimensions of sustainability.

Why do companies disclose the strategies they aim to pursue through the dissemination of their accountability practices?

Even though there is no one generally accepted theory to explain CSR disclosure practices, according to some authors the legitimacy theory is that most commonly used in relation to sustainability reports (Campbell, Craven, & Shrives, 2003). Gray, Kouhy, and Lavers (1995), describe how this theory has an advantage over the others, as it involves the disclosure of the strategies that companies can adopt to legitimise themselves. If companies legitimise their existence also and above all through sustainability reports, what does it happen to reporting in the case of an extremely negative event that implies their direct responsibility in the generation of industrial disasters?

This work aims to investigate what happens to sustainability disclosure in the light of industrial disaster events caused by industrial corporations, either by chance, negligence or carelessness, which cause serious damage, injury, death or a hazard for the environmental ecosystem. By analysing the sustainability disclosure of six companies involved in industrial disasters given global media coverage, including British Petroleum and the sinking of the Deep Horizon, Tepco and the leakage of nuclear material from the Fukushima power plant, the Carnival Cruise Corporation and the sinking of the Costa Concordia, we aim to understand if there are any differences in how they disclose sustainability before and after the event. In this analysis the negative event is treated as a moment of crisis, in which the relationship of trust between the company and its stakeholders suffers a crisis and has to be reconstructed to legitimise the company’s operations once more. The theoretical basis of this research is presented in the second paragraph. The third paragraph introduces the concept of text mining, a text analysis method used to automatically detect hidden information in data and create interpretations or analytical models that explain trends in text data. The results of the analysis of thirty reports are presented in paragraph 4. The final paragraph refers to the evidence obtained from the data analysis, the practical implications, the limitations of the study and the possible future developments of the research.

LITERATURE REVIEW

The study of voluntary corporate communication concerning social and environmental aspects is covered mainly by so-called Social and Environmental Accounting Research (Gray, 2010), tracing two main areas of neo-institutionalist research: the stakeholder theory and the legitimacy theory (Freeman, 2010; O’Donovan, 2002; Suchman, 1995). While fairly similar and often used in a complementary manner (Deegan, 2002), the two theories contain different elements. The first explains corporate disclosure in the light of the will of the organisation and its managers to be ‘accountable’ towards stakeholders, while the second ascribes the disclosure of socio-economic information to the external pressure society places on companies, which must thus activate communication strategies in order to acquire, maintain or reconquer the legitimacy of their operations (Cho & Patten, 2007; Darrell & Schwartz, 1997). Both theories are socio-political, as they concern the relationship between companies and members of external society, recognising that companies influence and are influenced by the
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