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Disentangling the determinants of the response and the publication decisions: The case of the Carbon Disclosure Project

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ABSTRACT

Firms' decisions to prepare and to publish private information are key issues in disclosure research. The Carbon Disclosure Project (CDP) provides a unique setting that allows us to examine the determinants of these two sequential disclosure decisions, first to respond to the CDP questionnaire and second to publish this response. We apply a sequential logit approach to analyze a panel dataset that contains 11,187 firm-year observations across 60 countries from 2006 to 2010. Our results indicate that the determinants of the response decision differ from the determinants of the publication decision. Specifically, the response decision is related to the available financial resources, the existence of a certified environmental management system and the publication of corporate social responsibility reports (preparation costs), whereas the publication decision is associated with the environmental performance and the nature of the competitive environment (proprietary costs). Furthermore, our findings suggest that the voluntary disclosure perspective dominates the legitimacy perspective, explaining the association between environmental performance and the publication decision. However, for carbon-intensive industries, our results indicate that both theoretical perspectives complement each other. Our analysis provides a better understanding of firms' response and publication decisions.

1. Introduction

To provide its various services, Google operates data centers the operation and cooling of which consume large amounts of energy. Energy consumption is considered a key to decoding Google's operations. In September 2011, Google revealed information on its energy consumption and greenhouse gas (GHG) emissions for the first time in its history (Hoelzle, 2011). Breaking this "wall of silence worthy of a government security agency" (Glanz, 2011) with regard to such climate change-related information represented a major change in Google's disclosure policy. In *The New York Times*, Glanz (2011) speculated on the reasons for Google's former reluctance to disclose this type of information. First, competitors could indirectly derive information about the growth and efficiency of Google's operations from its energy consumption and GHG emissions. Second, Google might have feared criticism from environmental protection organizations regarding its energy consumption.

This example illustrates that managers may possess superior information regarding environmental issues, such as energy consumption and GHG emissions, but do not always disclose such information. Because information on the environmental

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impact of a firm's operations might be useful in valuing the firm's future prospects (e.g., De Klerk et al., 2015; Dhaliwal et al., 2012; Griffin et al., 2016; Matsumura et al., 2014; Wiseman, 1982), managers face demands from different stakeholders for such information (Clarkson, 1995; Cormier et al., 2005; Guenther et al., 2016; Kock et al., 2012). Some firms decide to adhere to the stakeholders' demands and voluntarily provide such information while others do not.

In exploring the (dis)incentives for voluntary disclosure, we consider a firm's disclosure policy in terms of sequential strategic decisions (Beattie, 2014). In this paper, we do not analyze the decision regarding the disclosure level (e.g., Al-Tuwaijri et al., 2004; Clarkson et al., 2008), but explicitly focus on two essential sequential disclosure decisions that a firm's management must take before determining the level of disclosure: (i) the decision whether to collect and process information (i.e., the response decision), and (ii) whether to publish this information (i.e., the publication decision). With a few exceptions (e.g., Bouten et al., 2012), researchers have so far not taken account of the underlying complexity of disclosure decisions. As a result, empirical evidence regarding the determinants of a firm's disclosure decisions is ambiguous (e.g., Gray, 2013; Gray et al., 2001). In this paper, we suggest that different determinants are associated with the response and publication decisions.

An important stream of social and environmental accounting research has examined the determinants of voluntary disclosure decisions with a particular focus on the association between environmental disclosure, environmental performance, and economic performance (Unerman and Chapman, 2014). Prior research has adopted different theoretical perspectives, such as the voluntary disclosure perspective or the legitimacy perspective.

The Carbon Disclosure Project (CDP), one of a firm's voluntary environmental disclosure channels, provides a unique setting that allows us to examine sequential disclosure decisions. The CDP sends questionnaires to firms around the globe to collect information on GHG emissions and related issues such as emission reduction activities and efforts.[1] Managers face two sequential decisions. First, they must decide whether to collect the information requested, complete the questionnaire, and return it to the CDP (i.e., the response decision). This decision is only associated with preparation costs because a firm's responses are not automatically published. Second, managers must choose whether their response will be made publicly available (i.e., the publication decision), resulting in proprietary costs.

We use the occurrence of the response and the publication as proxies for the disclosure decisions. To the best of our knowledge, prior studies have not differentiated clearly between preparing and publishing information. Thus, current research might misinterpret the significance of the determinants of disclosure decisions (Bouten et al., 2012; Gray, 2013). Moreover, Gray et al. (2001) suggest that the failure to distinguish between voluntary and mandatory disclosure and between disclosures concerning social or environmental issues might also explain the inconclusive results of prior studies. Thus, we focus on the CDP questionnaire to analyze only one specific channel of voluntary environmental disclosure. The CDP questionnaire is particularly suitable for a cross-country study because it provides a globally consistent, though voluntary, disclosure standard. Furthermore, GHG emissions have a broadly similar impact anywhere in the world and thus allow the application of similar accounting mechanisms (Unerman and Chapman, 2014). Furthermore, previous empirical environmental disclosure studies are rather restricted with respect to firm size, industry composition, and country composition (e.g., Al-Tuwaijri et al., 2004; Clarkson et al., 2008). We extend prior evidence by employing a longitudinal research design (i.e., from 2006 to 2010) for a diverse sample of firms from carbon-intensive and non-carbon-intensive industries and from 59 countries. Our final sample consists of 11,187 firm-year observations for 3992 firms.

Our results contribute to accounting research in two major respects. First, we extend the literature on the decision to disclose or withhold information, a "quintessential accounting problem" (Verrecchia, 1990). For the first time, we distinguish between sequential disclosure decisions (Beattie, 2014), i.e., the response decision, which entails preparation costs, and the publication decision, which entails proprietary costs. The empirical evidence on the determinants of disclosure decisions is largely inconclusive (Beyer et al., 2010; Gray et al., 2001). Prior studies appear to take it for granted that a firm must first collect data internally to provide environmental disclosures. When prior studies have analyzed the publication decision, they have compared those firms that do publish to a mixture of firms that collect the necessary information but decide against its publication and firms that do not collect the necessary information at all. For this environmental disclosure setting, our results allow us to identify the determinants of the response and publication decisions at the level of the individual firm and its industry while controlling for countries. Indeed, we reveal that the financial resources available, the existence of a certified environmental management system (EMS), and the publication of corporate social responsibility (CSR) reports are determinants of the response decision but not of the publication decision. Furthermore, we extend current research by demonstrating that voluntary environmental disclosures are associated with proprietary costs. In addition to environmental performance, the nature of the competitive environment is associated with the publication decision.

Second, we contribute to a key issue in environmental accounting research by further disentangling the complex relationships between environmental performance and related disclosure activities (Bebbington and Larrinaga-Gonzalez, 2008; Unerman and Chapman, 2014). Both the voluntary disclosure perspective and legitimacy perspective aim for the publication of information. Whereas the voluntary disclosure perspective points to a positive relationship, the legitimacy perspective suggests a negative relationship (Clarkson et al., 2008, 2011b). Prior empirical research provides mixed results on both the existence and direction of this relationship (e.g., Al-Tuwaijri et al., 2004; Clarkson et al., 2008, 2011b; Patten, 2002).

[1] This study examines the firms' disclosure decisions using the questionnaire from the CDP's climate change program. Therefore, we use the terms "CDP climate change program" and "CDP" interchangeably.

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