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An inside perspective on carbon disclosure

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Abstract Part of the underlying vision of CDP (formerly the Carbon Disclosure Project) is to enhance firms' climate change strategies by encouraging them to measure their emissions and corresponding risks and opportunities. Drawing on interviews with 38 firms in seven countries that disclose to CDP, we found that the benefits firms experience from the measurement and disclosure process are more diverse in nature than expected. They can be both operational and strategic, and internal as well as external. From our analysis of the firms' experiences, we draw several implications for managers. First, managers should beware of various biases that may inhibit investments in profitable emission reduction opportunities. Second, participating in a disclosure-oriented process can be beneficial, even for a firm that ultimately decides not to disclose. Third, when disclosing greenhouse gas-related information, managers need to address multiple groups of stakeholders, not just investors. Fourth, when searching for emission reduction opportunities and in organizing the disclosure process, managers should not neglect opportunities that exist elsewhere in the supply chain.

1. Behind the scenes of carbon disclosure

One often hears this mantra: What gets measured, gets managed. For instance, Epstein's (1996) argument for full environmental cost accounting hinges on the notion that measurement leads to improved management. This principle can be applied to sustainable business, wherein an increasing number of frameworks and platforms aim to encourage firms to measure and report more sustainability-related information. Founded in 2001, The Global Reporting Initiative encourages firms to measure and communicate information about their performance and impact in four dimensions (economic, environmental, social, and governance) and provides a framework of guidelines to facilitate reporting. The recent Sustainability Accounting Standards Board aims to help publicly listed firms provide information that is more useful to investors on those same four dimensions in a way that is aligned with a company's mainstream financial report.

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The CDP, founded as the Carbon Disclosure Project in 2000, started with the goal of encouraging firms to disclose more information about their exposure to climate change. This asks firms to not only measure and disclose their own greenhouse gas (GHG) emissions as well as those in their broader supply chain, but also asks them questions about their climate change risks, strategies, and actions. CPD acts "on behalf of 827 institutional investors with US $100 trillion in assets" (CDP, 2017), with thousands of companies participating, including 81% of the largest public companies around the world. CDP has since broadened its scope to cover water, forests, and land use.

In this article, we provide an inside perspective on participating firms' experiences with the measurement and disclosure process associated with CDP. To do so, we worked closely with CDP to interview 38 companies in seven countries that participated in the CDP process. We asked the firms why they participated in the CDP disclosure process, what strategies they implemented in order to reduce their greenhouse gas emissions, what emission reductions and other benefits they experienced, and whether those benefits were greater or smaller than expected. The firms we spoke to reported operational as well as strategic benefits, partly as an immediate result of the measurement process and resulting implementation of projects and partly due to the subsequent disclosure. We summarize these benefits in a simple framework to highlight that managers should be aware of this variety of unexpected outcomes related to the measurement and disclosure process. Although we cannot deduce from our sample whether the average firm will experience such greater-than-expected benefits, we can conclude that such benefits, when they occur, are more diverse than often realized. From this observation, we draw implications for managers considering or participating in a measurement and disclosure-focused effort such as the one organized by CDP.

2. Background and literature on carbon disclosure

Founded as a nonprofit organization in the U.K. in 2000, CDP sent its first letter to the chairpersons of the FT500 Global Index companies in 2002 and published its first report based on 221 responses in 2003 (CDP, 2003). By 2013, 403 of the companies in the FT500 Global Index responded, in addition to many other firms. The questionnaire has evolved over time, from seven simple questions in 2003 (CDP, 2003, p. 69)—including a single question on actual emissions ("What is the quantity of annual emissions of the main greenhouse gases produced by your operations [. . .]?)"—to a much more lengthy and sophisticated questionnaire, asking about emissions from various sources within the firm and within the broader supply chain and whether those emissions are externally verified, and whether there had been actions taken to reduce emissions.

CDP has compiled the quantitative and qualitative disclosures in a database since 2005, explicitly referring to the distinction introduced in the Greenhouse Gas Protocol between Scope 1, Scope 2, and Scope 3 for the first time in 2006 (CDP, 2006). Scope 1 refers to direct emissions from fuel combustion and manufacturing activities; Scope 2 refers to indirect emissions resulting from electricity purchases; and Scope 3 refers to emissions embedded in other inputs, such as purchased components and services, travel, commuting, and more. By 2013, the responding FT500 Global firms reported Scope 1 emissions of over 3 billion tons of CO_2-equivalent GHG emissions (CO_2e) and Scope 2 emissions of over 500 million tons.

CDP offers firms assistance with completing the survey. It has offices in a number of countries and their local representative serves as the main contact with the participating companies. That individual faces the task of encouraging as many companies as possible to respond as completely as possible. Companies that do not respond or decline to participate are listed in CDP's annual reports, but there is no evidence of a direct consequence—from investors, customers, or elsewhere—for non-participation. Lee, Park, and Klassen (2015) found some evidence that the stock market in Korea responded negatively to CDP disclosures, though that effect was mitigated by more frequent carbon communication. Stanny (2013) found that firms disclose the least amount of information possible to avoid scrutiny, often responding to the questionnaire but not releasing emission amounts or accounting methods. Stanny concluded that mandatory GHG reporting should be considered in order to increase the total emissions reported. This contrasts with Kalkanci, Ang, and Plambeck (2013), who, based on experiments of how consumers respond to various levels of disclosure, found that mandatory disclosure may lessen a firm's incentive to actually reduce emissions relative to a voluntary mechanism.

This article contributes to the emerging literature on sustainability reporting and disclosure to CDP by providing a perspective on the disclosure process from a sample of responding companies and by highlighting the diversity of benefits reported.