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Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis

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Abstract

Previous empirical evidence provides mixed results on the relationship between corporate environmental performance and the level of environmental disclosures. We revisit this relation by testing competing predictions from economics based and socio-political theories of voluntary disclosure using a more rigorous research design. In particular, we improve on the prior literature by focusing on purely discretionary environmental disclosures and by developing a content analysis index based on the Global Reporting Initiative sustainability reporting guidelines to assess the extent of discretionary disclosures in environmental and social responsibility reports. This index better captures firm disclosures related to its commitment to protect the environment than the indices employed by prior studies. Using a sample of 191 firms from the five most polluting industries in the US, we find a positive association between environmental performance and the level of discretionary environmental disclosures. The result is consistent with the predictions of the economics disclosure theory but inconsistent with the negative association predicted by socio-political theories. Nevertheless, we show that socio-political theories explain patterns in the data ("legitimization") that cannot be explained by economics disclosure theories.

Introduction

An unresolved research issue in environmental accounting is the empirical association between the level (i.e., amount) of corporate environmental disclosures and corporate environmental performance (Al-Tuwaijri, Christensen, & Hughes,

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2004; Hughes, Anderson, & Golden, 2001; Patten, 2002). Accounting standard setters and securities regulators are increasingly being made aware of deficiencies in corporate environmental disclosures (Beets & Souther, 1999; Chan-Fishel, 2002; Franco, 2001). The results of previous studies on the relation between corporate environmental performance and environmental disclosure in financial reports have been mixed. Patten (2002) attributes the failure to find a significant and consistent relation between environmental performance and environmental disclosure to problems in the research designs of existing research. These problems include failure to control for other factors associated with the level of environmental disclosure, inadequate sample selection, and inadequate measures of environmental performance and disclosure.

This study seeks to revisit the relation between environmental performance and the level of environmental disclosure using a more rigorous research design. We test two competing predictions about the level of voluntary environmental disclosures. Voluntary disclosure theory (Dye, 1985; Verrecchia, 1983) predicts a positive association between environmental performance and the level of discretionary environmental disclosure. The notion is that superior environmental performers will convey their "type" by pointing to objective environmental performance indicators which are difficult to mimic by inferior type firms. Inferior performers will choose to disclose less or to be "silent" on their environmental performance, thus being placed in a pool of firms where investors and other users ascribe the "average type" to that pool. What sustains this partial disclosure equilibrium is proprietary costs associated with disclosure about environmental performance (Verrecchia, 1983) and uncertainty as to whether the firm is informed regarding its type (Dye, 1985).

Socio-political theories including political economy, legitimacy theory, and stakeholder theory (Patten, 2002), on the other hand, predict a negative association between environmental performance and the level of discretionary environmental disclosures. These overlapping theories suggest that social disclosure is a function of social and political pressures facing the corporation. To the extent that poor environmental performers face more political and social pressures and threatened legitimacy, they will attempt to increase discretionary environmental disclosures to change stakeholder perceptions about their actual performance. Thus, we have competing directional predictions from alternative theories, and the observed direction of association between environmental performance and the level of discretionary disclosures will eliminate one of the two predictions.

The predictions of the above theories relate to discretionary, not mandatory, environmental disclosures. Previous studies assessed environmental disclosures mainly from annual reports and other regulatory filings such as 10 Ks and many of those studies rely on a Wiseman (1982) based content analysis index to measure the extent of environmental disclosures. The Wiseman index focuses on the financial consequences of corporate environmental activities and puts more weight on quantitative disclosures. Using this measure, poor environmental performers may actually have higher disclosure scores than good performers because they have greater exposures and must discuss any material financial information in their regulatory filings such as annual reports and 10 Ks. This may partially explain the inconclusive findings in the previous literature and why Patten (2002) finds a negative relation between environmental disclosure and a toxics release inventory (TRI) based environmental performance indicator.[1]

In collaboration with an environmental disclosure expert, we develop a content analysis index based on the global reporting initiative guidelines (GRI) to assess the level of discretionary environmental disclosures in environmental and social responsibility reports or similar disclosures provided on the firm's web site. This index differs from Wiseman (1982) index, previously used in the literature, because we focus on firm disclosures related to its commitment to protect the environment. Our index potentially allows investors, regulators, and

[1] Patten (2002) was aware of the problem of non-discretionary disclosures in annual reports and dropped litigation disclosures as a partial attempt to deal with this (see p. 768).