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Voluntary disclosure theory and financial control variables: An assessment of recent environmental disclosure research

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ABSTRACT

A growing number of environmental disclosure studies are using financial control variables based on arguments from the voluntary disclosure theory (VDT). The VDT justifications for these controls are based on assumptions that disclosure is used as a tool for reducing information asymmetry between managers and investors. Given the findings reported in a broad sample of legitimacy-based environmental disclosure studies, we question whether the disclosures are primarily aimed at the market, and as such attempt to assess evidence to date on the relation between VDT financial control variables and differences in environmental disclosure. Based on a review of thirteen recent environmental disclosure studies including VDT financial control variables in their analyses, we fail to find, with the exception of firm size, evidence suggesting any systemic associations. Further, we assess whether including VDT financial control variables changes the inferences on the relation between environmental performance and environmental disclosure in one recent legitimacy-based study (Cho & Patten, 2007) and find that even with the controls, a negative association between performance and disclosure still exists. Overall, we question the need for VDT financial control variables in environmental disclosure research, but encourage further exploration of the relations using more consistent measures and media of disclosure.

1. Introduction

A considerable body of research over the past two decades focuses on corporate environmental disclosure and what drives differences in the information provision across firms, industries, or time (e.g., Deegan & Gordon, 1996; Gao, Heravi, & Xiao, 2005; Gray, Kouhy, & Lavers, 1995; Guthrie, Cuganesan, & Ward, 2008). Many of the investigations rely upon statistical models to determine the significance of various factors posited to influence the disclosure (see, e.g., Aerts & Cormier, 2009; Brown & Deegan, 1998; Patten, 2002a, 2002b; Wilmshurst & Frost, 2000, although also see Cho, 2009; O'Donovan, 2002; Laine, 2009 for examples of other approaches). However, as noted by Kadera and Mitchell (2005, p. 273), "model specification is a ubiquitous challenge in the social sciences" and has led to, among other things, concerns with the use of control variables in empirical analyses. Within the social and environmental accounting domain, a growing number of environmental disclosure studies adopt arguments from the economics-based voluntary disclosure theory (VDT) literature as justification for the inclusion of financial control variables in the explanatory models used (e.g., Bewley & Li, 2000; Clarkson, Li, Richardson, & Vasvari, 2008; Cormier & Magnan, 1999; Magness, 2006). Starr (2005, p. 360) argues that the inclusion of control variables in empirical models should be based on good theoretical reasons and only after "fairly extensive preliminary data analysis reveals. . . the form of the relationship." In spite of this, we are aware of no attempts to date to assess either the theoretical justifications

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for the application of VDT arguments to the use of financial control variables in environmental disclosure research or the strength of the proposed relations.

A careful review of the articles forming the foundation for the VDT arguments (Dye, 1985; Lang & Lundholm, 1993; Verrecchia, 1983) indicates that all specifically address disclosure as a tool of communication to market participants and none specifically addresses the provision of environmental information. As such, if corporate environmental disclosure is made primarily to reduce information asymmetries between managers and investors, the application of VDT to this practice would be warranted. However, social–political theories of disclosure (see Gray et al., 1995) argue that instead of informing shareholders, corporate social and environmental disclosure is used more as a tool of impression management to reduce the exposures companies face owing to social and political pressures (Patten, 1991; Walden & Schwartz, 1997). As noted by Deegan (2002, 2007) and others, there is considerable empirical support for these social–political arguments. As such, we question the applicability of VDT as justification for the use of financial control variables in corporate environmental disclosure research.

In order to assess evidence to date on the relation between VDT financial control variables and corporate environmental disclosure we review the findings from thirteen recent environmental disclosure studies that include VDT variables in their models. With the exception of firm size, we find no consistent patterns of a significant relation between the financial control variables and environmental disclosure. We next investigate whether omission of VDT financial control variables in one specific legitimacy-based research study, Cho and Patten (2007), may have led to erroneous inferences regarding the relation between environmental performance and environmental disclosure. Using data from Cho and Patten (2007) supplemented with VDT financial control variables used by Clarkson et al. (2008), we find that, consistent with the results originally presented by Cho and Patten (2007), environmental performance continues to exhibit a significant negative relation to disclosure. Thus, the differences in relation between environmental performance and environmental disclosure reported by Cho and Patten (2007) and Clarkson et al. (2008) do not appear to be due to VDT financial control variables.

Overall, we fail to find meaningful evidence supporting the need for VDT financial control variables in environmental disclosure research. It is important to note that we are not dismissing VDT as a basis for trying to understand corporate environmental disclosure. It is plausible that some firms with superior but publicly unobservable environmental performance may wish to signal this to their stakeholders. The issue we are raising is that VDT-based models seem to have been adapted from the financial disclosure literature without careful consideration of whether the control variables relevant to that body of work are equally as relevant in explaining disclosure targeted at a different stakeholder group. Indeed, our results suggest these variables may not be relevant. However, we concede that the body of work to date, particularly due to differences in environmental disclosure measures used and the media of disclosure examined, as well as differences across country and time in the samples investigated, may not be sufficient to uncover existing systemic relations. As such, additional research focusing on consistency between these factors should be encouraged. We begin our examination with a review of the accounting articles that principally support the VDT arguments.

2. The foundations of VDT

VDT-based research is rooted in the financial disclosure literature. As noted by Healy and Palepu (2001, p. 420), voluntary disclosure research "focuses on the information role of financial reporting for capital markets. . . [and] supplements the positive accounting literature by focusing on stock market motives for accounting and disclosure decisions." They further note (p. 420) the explicit assumption within this research that "even in an efficient capital market, managers have superior information to outside investors on their firms' future performance." Given imperfect accounting regulation and auditing, managers have an incentive to manage their financial performance reporting "for contracting, political, or corporate governance reasons" (Healy & Palepu, 2001, p. 420). Within the financial reporting domain, VDT-based research attempts to determine what factors drive differences in financial reporting quality and has examined the quality of this reporting relative to the issuance of new capital (Healy, Hutton, & Palepu, 1999), global diversification (Cahan, Rahman, & Perrera, 2005), and board composition (Lim, Matolcsy, & Chow, 2007) among many other issues. Given the breadth of VDT research in the financial reporting arena, it is perhaps not surprising that the theory has also been adapted to explorations of environmental disclosure.

Three primary studies – Verrecchia (1983), Dye (1985), and Lang and Lundholm (1993) – form the foundation for VDT's application to the environmental disclosure area.[1] Both Verrecchia (1983) and Dye (1985) explore the choice to voluntarily disclose (or withhold) information through formal analytical modeling. In essence, Verrecchia (1983, p. 182) shows that due to the existence of proprietary costs associated with information disclosure, traders are unable to interpret non-disclosure as unambiguously 'bad news.' As such, there exists a threshold level of disclosure that is increasing in proprietary cost. Dye (1985, p. 125) further suggests that in the case of non-disclosure, "investors may be uncertain about the nature of the information a manager possesses." Thus, Lang and Lundholm (1993, p. 249) conclude that "in the face of adverse selection. . .

[1] Certainly, authors of VDT-based environmental disclosure studies use other economics-based accounting articles as support for arguments and/or variables in their models. For example, Clarkson et al. (2008) cite Healy and Palepu (2001), Cormier and Magnan (1999) rely on Scott (1994), and Magness (2006) includes reference to Gibbins, Richardson, and Waterhouse (1990). It is the widespread use of Verrecchia (1983), Dye (1985), and Lang and Lundholm (1993) that leads us to classify them as the primary foundation articles.