The Relationship between Sustainability Performance and Sustainability Disclosure – Reconciling Voluntary Disclosure Theory and Legitimacy Theory

EXECUTIVE SUMMARY

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Journal of Accounting and Public Policy, forthcoming

The article is available at:

http://www.sciencedirect.com/science/article/pii/S0278425416300333

ABSTRACT

The relationship between sustainability performance and sustainability disclosure remains ambiguous, both theoretically and empirically. Voluntary disclosure theory would suggest that the relationship should be positive, whereas legitimacy theory points toward a negative relationship. However, the empirical evidence regarding this relationship is mixed, which indicates that the two theories are not necessarily contradictory but that they are instead two sides of the same coin. This paper refines the theoretical reasoning associated with the two theories and provides empirical evidence for their reconciliation by moving the focus of inquiry from the quantity of sustainability disclosure toward its quality. Our results reveal that – consistent with voluntary disclosure theory – superior sustainability performers choose high-quality sustainability disclosure to signal their superior performance to the market. In addition, based on legitimacy theory, poor sustainability performers prefer low-quality sustainability disclosure to disguise their true performance and to simultaneously protect their legitimacy. The results remain robust to various additional analyses. Thus, the paper indicates that the two theories dovetail with one another by redirecting the focus toward the quality of sustainability disclosure.

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1. Introduction

Previous research has not yet established a consistent understanding regarding the relationship between sustainability performance and sustainability disclosure. In essence, two theoretical concepts are involved. On the one hand, *voluntary disclosure theory* predicts that a company with good sustainability performance is incentivized to disclose information regarding its performance to increase its market value. This stream of research posits a positive relationship between sustainability performance and the quantity of sustainability disclosure (i.e., superior sustainability performers disclose more). On the other hand, *legitimacy theory* argues that companies employ sustainability disclosure to improve the public perception of their sustainability performance (Deegan, 2002). Researchers therefore interpret a negative relationship between sustainability performance and the quantity of sustainability disclosure (i.e., poor sustainability performers disclose more) as an indication of the applicability of legitimacy theory (Cho et al., 2012; Patten, 2002). Thus, these two theories yield opposing predictions regarding the relationship between sustainability performance and sustainability disclosure, and the mixed empirical results from prior studies have not yet clarified this relationship (Al-Tuwaijri et al., 2004; Cho and Patten, 2007; Clarkson et al., 2008; de Villiers and van Staden, 2006).

Recent research has therefore inquired whether these two theories are not mutually exclusive but are instead two sides of the same coin and has found some preliminary evidence to justify this line of analysis. We follow this approach and switch the focus of inquiry from the *quantity* of sustainability disclosure to the *quality* of sustainability disclosure. We posit two hypotheses to test the applicability of voluntary disclosure theory and legitimacy theory separately. On the one hand, we expect to find a positive relationship between a firm's sustainability performance and high-quality sustainability disclosure. This hypothesis reflects the underlying reasoning of voluntary disclosure theory that a company with superior sustainability performance voluntarily discloses sustainability information to increase its market value (Clarkson et al., 2008). We argue that this reasoning applies primarily to high-quality sustainability disclosure because only high-quality disclosure allows outside investors to assess a company’s true sustainability performance. On the other hand, we expect to find a negative relationship between a firm's sustainability performance and low-quality sustainability disclosure. Legitimacy theory suggests that particularly poorly performing companies use sustainability disclosure as a legitimation strategy to influence public perceptions of their sustainability performance (Deegan, 2002; O'Donovan, 2002; Sethi, 1978). We argue that these companies prefer to disclose low-quality information – information that is opaque, incomplete or superficial – to obscure their poor sustainability performance while simultaneously attempting to maintain legitimacy.

2. Research Design

Our analysis is based on the disclosure provided by 195 listed European companies for the reporting year 2011. With respect to the *measurement of corporate sustainability disclosure quality*, we draw on the disclosure of fourteen environmental and social key performance indicators.[1] For each performance indicator, we define high-quality disclosure as the disclosure of numerical data on a company-wide level that fulfill or exceed the minimum requirements derived from the GRI sustainability reporting guidelines version G3.1. If these requirements are not fulfilled and any other information regarding the respective indicator is provided, one point is awarded for low-quality disclosure. When there is no information at all, the item is classified as not reported. We include sector-specific adjustments for high-quality requirements in the environmental category to account for industry-specific variations in the relevance of specific disclosure items. For each firm, we derive a high-quality (low-quality) disclosure score that is calculated as the sum of all high-quality (low-quality) disclosure items scores.

Regarding the *measurement of sustainability performance*, we follow the call of previous research (Hong and Andersen, 2011) for the development of an improved measure of sustainability performance. Our measurement scheme consists of four environmental (energy consumption, water withdrawal, greenhouse gas emissions, waste) and four social per-

[1] The environmental disclosure items include materials used, energy consumption and renewables, water withdrawal, greenhouse gas emissions, ozone-depleting substances and other air emissions, water discharge, and waste. The social disclosure items include workforce, employee turnover, collective bargaining agreements, safety and health, training, discrimination, and child, forced, and compulsory labor.

formance indicators.[2] We directly refer to the data provided by the respective company and, if necessary, extrapolate the data to the entire corporation. Note that performance indicators may contain valid values even when the corresponding disclosure items are of low quality. The original data for each indicator are arranged by industry groups and then winsorized within each industry group at the top and bottom tails at a 10% level to limit the influence of outliers. Next, all values are transformed into a continuous [0, 1] scale per industry group by assigning "0" to the worst and "1" to the best performance indicator values and by rescaling all other values proportionally. Our final sustainability performance score is calculated as the arithmetic mean of the means of the environmental and social performance indicators.

3. Results

The relationship between sustainability disclosure quality and sustainability performance is assessed by running multiple regression analyses that account for a number of control variables. The results of our baseline model support our notion that rather than being competitive and mutually exclusive, the two theories instead simultaneously explain the reporting quality of sustainability information. More precisely, the results reveal that superior sustainability performers choose high-quality sustainability reporting to signal their superior performance to the market. On the other hand, poor sustainability performers provide low-quality sustainability information to disguise their true performance while simultaneously attempting to maintain their legitimacy.

We perform several model variations and supplemental analyses to investigate the robustness of our findings. Since the truthfulness of disclosure is a critical assumption of our research design, we first check the sensitivity of our findings with respect to this assumption. In this regard, external assurance is an important mechanism to ensure the correctness of the disclosed information (O'Dwyer, 2011). The high proportion of firms with external assurance in our sample (68 percent) therefore does not indicate that there are major concerns with respect to this assumption. Assuming that untruthful disclosure is more likely among firms without external assurance, we rerun the regression analyses for the subsamples of firms that obtain

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[2] The environmental performance indicators include energy consumption, water withdrawal, greenhouse gas emissions, and waste. The social performance indicators include employee turnover, lost time incident rate, employee training, and share of women in the highest corporate bodies.

external assurance and firms without external assurance separately. For each subsample, both hypotheses are supported. For those firms without external assurance (n=62), we further investigate the truthfulness of sustainability disclosure based on the extent of the restatements of the 14 disclosure items in the subsequent reporting year. Moreover, we use data from the RepRisk ESG Risk Platform to check whether the sustainability disclosure of firms without external assurance has been subject to criticism from third parties since 2007. RepRisk captures and analyzes information based on a rules-based and systematic methodology of screening and monitoring over 80,000 media, stakeholder, and other third-party sources external to the company on a global scale with respect to environmental, social, and governance (ESG)-related risk incidents (RepRisk, 2016). None of the analyses reveal any concerns that question the truthfulness of the firms' sustainability disclosure. Second, we check the robustness of our results with respect to our sustainability performance measure. We use membership in the Dow Jones Sustainability Index (DJSI) as an alternative proxy for sustainability performance and obtain similar results. A Monte Carlo simulation of missing sustainability performance values in our data also supports the robustness of our results. Third, we address concerns regarding the separate testing of our two hypotheses. For this purpose, we perform a Monte Carlo simulation to separately test the applicability of both hypotheses based on randomly drawn independent subsamples. Again, the results support our initial findings and thus do not indicate concerns with respect to our research setting. Overall, the results from these additional analyses comprehensively support the robustness of our main findings.

4. Conclusions

Voluntary disclosure theory and legitimacy theory are the prevailing theoretical foundational concepts used in the literature to explain the relationship between sustainability performance and sustainability disclosure. However, empirical researchers typically regard these two theories as incompatible with one another – even mutually exclusive – and interpret evidence supporting one of the theories as evidence disproving the other. To the best of our knowledge, this is the first study to investigate the applicability of *both* voluntary disclosure theory *and* legitimacy theory in explaining the relationship between sustainability performance and sustainability disclosure. The study presents theoretical reasoning and empirical evidence that reconciles the two theories by redirecting the focus of inquiry from the quantity of corporate sustainability disclosure to its quality.

In addition to the contributions to the academic literature, our study also has practical implications that may lead to future research. The finding that superior sustainability performers use high-quality sustainability disclosure to signal their sustainability performance to the market, whereas poor sustainability performers use low-quality sustainability disclosure to attempt to positively influence public perceptions, may point toward the need for a precise and binding regulatory framework for the contents of sustainability reports. However, there is empirical evidence indicating that firms' compliance with such mandatory sustainability disclosure regulations is often low (Chauvey et al., 2015; Larrinaga et al., 2002). Future research could therefore investigate different types of regulation of sustainability disclosure and analyze under which conditions mandatory sustainability disclosure regulations can achieve high-quality sustainability disclosure. In this respect, the introduction of mandatory sustainability reporting by the European Union (Directive 2014/95/EU) yields an interesting research setting. Future research might investigate both the pre-regulation adaptations of reporting behavior and post-regulation sustainability disclosure quality to determine the effectiveness of the new regulatory frameworks.

Second, the results of our study provide preliminary evidence regarding the relevance of high-quality sustainability disclosure for capital market participants. A different research design is necessary to test whether high-quality sustainability disclosure is indeed appraised by capital market participants and whether it affects firm value.[3] Although the results from previous investigations on the value relevance of sustainability disclosure in general are promising (Clarkson et al., 2013; Dhaliwal et al., 2012), the integration of the quality dimension of sustainability disclosure would add a new perspective to the ongoing discussion in this field of research.

[3] This research question must be separated from the overwhelming number of investigations into the relationship between sustainability performance and financial performance (for an overview, see Dixon-Fowler et al., 2013; Orlitzky et al., 2003).

REFERENCES

Al-Tuwaijri, S.A., Christensen, T.E., Hughes, K.E., 2004. The relations among environmental disclosure, environmental performance, and economic performance: A simultaneous equations approach. Account Org Soc 29(5-6), 447-471.

Chauvey, J.N., Giordano-Spring, S., Cho, C.H., Patten, D.M., 2015. The normativity and legitimacy of CSR disclosure: Evidence form France. J Bus Ethics 130(4), 789-803.

Cho, C.H., Guidry, R.P., Hageman, A.M., Patten, D.M., 2012. Do actions speak louder than words? An empirical investigation of corporate environmental reputation. Account Org Soc 37(1), 14-25.

Cho, C.H., Patten, D.M., 2007. The role of environmental disclosures as tools of legitimacy: A research note. Account Org Soc 32(7-8), 639-647.

Clarkson, P.M., Fang, X., Li, Y., Richardson, G.D., 2013. The relevance of environmental disclosures: Are such disclosures incrementally informative? J Account Public Pol 32(5), 410-431.

Clarkson, P.M., Li, Y., Richardson, G.D., Vasvari, F.P., 2008. Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. Account Org Soc 33(4-5), 303-327.

de Villiers, C., van Staden, C.J., 2006. Can less environmental disclosure have a legitimising effect? Evidence from Africa. Account Org Soc 31(8), 763-781.

Deegan, C., 2002. Introduction: The legitimizing effect of social and environmental disclosures – A theoretical foundation. Account Audit Accountab J 15(3), 282-311.

Dhaliwal, D.S., Radhakrishnan, S., Tsang, A., Yang, Y.G., 2012. Nonfinancial disclosure and analyst forecast accuracy: International evidence on corporate social responsibility disclosure. Account Rev 87(3), 723-759.

Dixon-Fowler, H.R., Slater, D.J., Johnson, J.L., Ellstrand, A.E., Romi, A.M., 2013. Beyond "does it pay to be green?" A meta-analysis of moderators of the CEP–CFP relationship. J Bus Ethics 112(2), 353-366.

Hong, Y., Andersen, M.L., 2011. The relationship between corporate social responsibility and earnings management: An exploratory study. J Bus Ethics 104(4), 461-471.

Larrinaga, C., Carrasco, F., Correa, C., Llena, F., Moneva, j.M., 2002. Accountability and accounting regulation: the case of the Spanish environmental disclosure standard. Eur. Account. Rev. 11(4), 723-740.

O'Dwyer, B., 2011. The case of sustainability assurance: Constructing a new assurance service. Contemp Account Res 28(4), 1230-1266.

O'Donovan, G., 2002. Environmental disclosures in the annual report: Extending the applicability and predictive power of legitimacy theory. Account Audit Accountab J 15(3), 344-371.

Orlitzky, M., Schmidt, F.L., Rynes, S.L., 2003. Corporate social and financial performance: A meta-analysis. Organ. Stud. 24(3), 403-441.

Patten, D.M., 2002. The relation between environmental performance and environmental disclosure: A research note. Account Org Soc 27(8), 763-773.

RepRisk, 2016. Our approach. https://www.reprisk.com/our-approach (accessed 13.03.16).

Sethi, S.P., 1978. Advocacy advertising – The American experience. Calif. Manage. Rev. 21(1), 55-67.