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Environmental reporting: Toward enhanced information quality

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Abstract Managers and stakeholders are increasingly aware of the importance of the environmental impact of a firm's operations when assessing risk and attempting to determine future profitability. Unfortunately, financial accounting systems often fail to fully disclose these environmentally-related costs. The reasons underlying this incomplete disclosure are myriad, ranging from measurement issues to the structure of the firm's chart of accounts. In many ways, the issues facing managers and stakeholders who are attempting to assess environmental costs arising from business operations resemble the issues faced when attempting to determine the costs of producing poor quality products. The negative impact on the environment from business operations can be viewed as a failure in the same way that the negative impact of producing a defective product can be seen as a production control failure. Similarly, costs are incurred to prevent and detect environmental failures, and the cost of failure—particularly if not addressed within the firm—can be huge and unknowable. Drawing on the experiences of firms employing quality measures and reporting, this article presents an environmental cost reporting model to provide greater transparency on environmental impact of business operations to managers and firm stakeholders.

1. A broken system

Information about a firm's past, present, and future environmental costs resulting from business operations is important to both external and internal stakeholders who might be assessing firm risk, determining firm value, and investigating investment opportunities. Unfortunately, costs and benefits resulting from activities impacting the environment are generally, at best, only partially reflected in today's financial statements and environmental reporting disclosures.

Traditional accounting systems and reporting have contributed to this disclosure problem. Environmental costs from operations are often aggregated with other costs, are buried within accounts, or are omitted entirely because of measurement issues. Failure

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to report information on environmental considerations may preclude users from identifying factors presenting long-term material risks—or providing material long-term benefits—to an organization, and may focus the user's decision perspective on short-term financial performance measurements rather than a comprehensive longer-term perspective. These issues are often similar to those faced by managers working to control production quality costs. This article draws on the solutions found in quality control management to present a more detailed approach to reporting on environmental costs and benefits, which will benefit managers and stakeholders using this important information.

2. Environmental activities, accounting, and disclosures

The costs of past, present, and planned future environmental impacts from business operations can range from hardly noticeable to highly significant to the organization and—possibly—society. Some environmental activities, such as the purchase of emissions allowances, are required to be addressed in various corporate disclosures because of legal or regulatory requirements. Other environmentally-related business operations, such as the installation of scrubbers to remove toxic chemicals from smokestack emissions, do not need to be separately disclosed and are typically included with other capital investment information. Additionally, the costs of some environmental activities are relatively easy to measure and capture in the accounting records. But there are other activities, such as the long-term impact of emitting acidic pollutants that may cause acid rain or excess energy usage, which are hard to measure and quantify—difficulties that could lead an organization to potentially ignore the positive or negative effects of such activities. Such a deficiency of information may paint an incomplete and possibly drastically inaccurate business picture that can lead to what Daniel Yankelovich terms the 'McNamara Fallacy' (Lodhia, 2001, p. 4):

> The first step is to measure whatever can easily be measured. This is OK as far as it goes. The second step is to disregard that which can't be easily measured or give it an arbitrary quantitative value. This is artificial and misleading. The third step is to presume that what can't be measured easily really isn't important. This is blindness. The fourth step is to say that what can't be easily measured really does not exist. This is suicide.

Compounding the quantification issue is the problem that the picture painted by financial accounting may be partially obscured. Financial accounting generally recognizes items that can be measured by distinct exchanges and accounted for in monetary units. By providing, to a large degree, the major basis for the assessment of a firm's success or efficiency, accounting is viewed as the business scorekeeper. However, the 'score' often shrouds the positive or negative organizational consequences of environmental activities by burying these costs or benefits in enigmatic accounts or by ignoring those costs or benefits entirely, if the activities have had no direct, current financial statement effects. As a result, when attempting to make economic decisions, external and internal report users are often unaware of the magnitude—or possibly even the existence—of such costs or benefits.

Perhaps because of these difficulties, the information currently being provided does not meet stakeholder expectations. For example, Dawkins and Lewis (2003) found that over 50% of surveyed investors rated the quality of corporate environmental and social disclosures as poor; analysts included in that same study were similarly unimpressed. Later work by Campbell and Slack (2008) found that the narrative information about environmental and social reporting included in annual reports was only rarely read by analysts, and generally dismissed as irrelevant. Additionally, a report by the United Nations Conference on Trade and Development indicates that informed decision making by shareholders is complicated by the current methods used to report on corporate social responsibility practices, including environmental activities (UNCTD, 2010). Such denigrating comments about the quality of environmental reporting is distressing given that the International Corporate Governance Network (ICGN), a global investor coalition, has identified the environment as a factor important to investors in assessing an organization's current and future value, as well as in understanding that organization's opportunities and risks (ICGN, 2008).

Although less is known about managers' satisfaction with internal environmental reporting, some managers are modifying or adopting alternative reporting methods such as the Sustainability Balanced Scorecard, suggesting that traditional reporting methodologies are falling short in providing needed information (Dias-Sardinha, Reijnders, & Antunes, 2007). Thus, it seems clear that simply requiring disclosures of more environmental information will not necessarily help stakeholders who are attempting to make informed decisions regarding a firm's environmental performance. When viewed in the context of environmental disclosures,