

# BEYOND PERCEPTIONS, CRAFTING MEANING

# ADVANCES IN PUBLIC INTEREST ACCOUNTING

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# BEYOND PERCEPTIONS, CRAFTING MEANING

EDITED BY  
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# DO SUSTAINABILITY MEASURES MATTER IN MANAGERIAL APPRAISAL AND REWARDS?

Regina F. Bento, Lasse Mertins and Lourdes F. White

## ABSTRACT

*This experimental study examined whether sustainability performance measures matter in managerial appraisal and bonus decisions. Participants received financial and non-financial information about four branch managers of a commercial bank, with different combinations of sustainability and financial performance. Participants perceived sustainability measures as being less important than financial ones; still, the experiment revealed that sustainability performance had some impact on appraisal and bonus decisions (albeit it mattered less than financial performance). Evaluators seemed to penalize inferior sustainability performance less than they penalized inferior financial performance. They also seemed to reward sustainability success less than financial success. These findings have practical implications for the implementation of sustainability measures in managerial evaluation systems. The experimental results indicated that incorporating these measures in evaluations does not necessarily mean they will have a sizable effect in decision-making. Results from a companion experiment suggested that organizations using a sustainability balanced scorecard for appraisal and bonus purposes might benefit from an increased emphasis on communication and evaluator training, with a focus on how sustainability performance impacts the attainment of strategic objectives.*

**Keywords:** Appraisal; balanced scorecard; bonus; financial measures; sustainability measures; effect sizes

Accountants face a pressing challenge: to help organizations develop measurement systems and tools that communicate the importance of sustainability to managers in the frontlines. Performance measures focusing on sustainability are needed to support decision-making and reporting of how managerial actions impact an organization's social, environmental, and economic performance, the three pillars of corporate sustainability (Epstein & Buhovac, 2014).

Sustainability concerns are receiving growing attention at the societal level, and advances have been made in the reporting of sustainability performance to external stakeholders (Global Reporting Initiative, 2015). In a survey by the United Nations and Accenture, an international consulting firm, 89% of chief executive officers (CEOs) responded that “commitment to sustainability is translating into real impact in their industry” and 86% “believed that standardized impact metrics will be important in unlocking the potential of business” with respect to sustainability goals (United Nations Global Compact & Accenture, 2016).

So far, however, most of the focus of the emerging accounting literature in this area has been on the external reporting of sustainability initiatives (Bebbington, Unerman, & O'Dwyer, 2014). Klovien and Speziale's (2014) review of sustainability studies published in the 2000–2014 period identified 117 journal articles on sustainability reporting and performance measurement; yet, their review did not include any empirical study dealing with the impact of sustainability measures on the evaluation of managerial performance. A similar focus on external reporting was present in Huang and Watson's (2015) extensive review of corporate social responsibility (CSR) research in accounting, where they analyzed the previous 10 years of CSR studies in the top 13 accounting journals (47 original research papers).

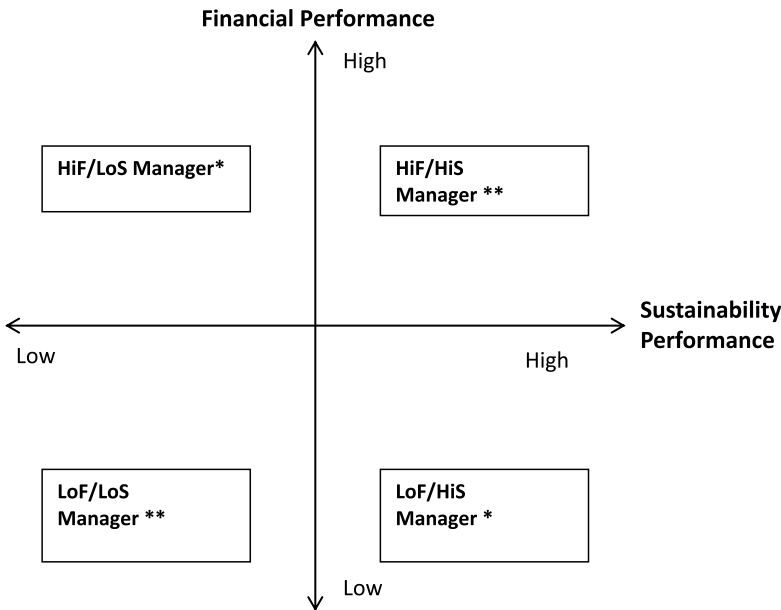
This leaves a significant gap in our knowledge about how societal and corporate concerns regarding sustainability are being translated within organizations, all the way to the level of individual performance: can we assume that a manager's sustainability performance matters for evaluators, just because it is being measured, and even formally included in the managerial performance appraisal and reward process? That is the question at the core of this study.

Here we examine whether sustainability “matters” when evaluators make key decisions: how are appraisal and bonus decisions influenced by different combinations of high or low performance in sustainability measures, vis-à-vis high or low performance in financial measures?

We addressed these questions in an experimental study where participants were asked to evaluate the performance of four branch managers of a commercial bank and make decisions on their appraisal and rewards. Participants received information about how the managers had performed along the sustainability perspective and the four perspectives (Financial, Customer, Internal Business, and Learning & Growth) that are typical for the balanced scorecard (BSC). Managerial performance was manipulated within subjects to generate the following four scenarios (illustrated in Fig. 1):

- “Both High” scenario: a win–win performance situation, where a manager had both high financial and high sustainability performance (HiF/HiS).
- “Both Low” scenario: a lose–lose performance situation, where a manager had both low financial and low sustainability performance (LoF/LoS).
- “Higher Finance” scenario: a mixed performance situation, where a manager had high financial performance, but low sustainability performance (HiF/LoS).
- “Higher Sustainability” scenario: a reverse, mixed performance situation, where a manager had low financial performance, but high sustainability performance (LoF/HiS).

The next three sections review the literature and formulate the hypotheses for our study of the four scenarios, describe its methodology, and present its results. This is followed by a section about a companion experiment – a robustness test which focused on the two mixed performance scenarios (HiF/LoS vs LoF/HiS) – where we investigated how the perceived importance of sustainability might be affected by variables such as the presentation format of performance measures and the evaluators’ familiarity with those measures. This article concludes with a



\* HiF/LoS and LoF/HiS Managers: Included in main study and companion experiment

\*\* HiF/HiS and LoF/LoS Managers: Included in main study

Fig. 1. Managerial Performance Scenarios.

discussion about the implications and relevance of the study (including the companion experiment), as well as its limitations and directions for future research.

## **MAIN STUDY: LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT**

Corporate sustainability has been defined in many ways. At first, the term sustainability was mainly focused on environmental concerns, but it has evolved into a more comprehensive concept which also includes social and economic issues (Keijzers, 2002; Van Marrewijk, 2003); therefore, it has many similarities with the CSR paradigm which encompasses economic, social, and environmental aspects (Sharma & Mehta, 2012). Concerns about sustainability and CSR are increasingly being integrated into the corporate agenda (Massachusetts Institute of Technology (MIT) Sloan School of Management & Boston Consulting Group, 2011, cited in Pérez-López, Moreno-Romero, & Barkemeyer, 2015). Freedman and Stagliano (2010) point out that organizational sustainability performance can be a holistic concept, including not only environmental performance, but also the quality of systems of corporate governance, efficient use of resources, or the way an organization treats its employees (p. 73). Although sustainability and CSR are often used synonymously, Van Marrewijk (2003) suggests that there is a difference between the two concepts:

[one should link] CSR with the communion aspect of people and organizations and CS [corporate sustainability] with the agency principle. Therefore, CSR relates to phenomena such as transparency, stakeholder dialogue and sustainability reporting, while CS focuses on value creation, environment management, environmental friendly production systems, human capital management and so forth. (p. 102)

For the purposes of Huang and Watson's (2015) extensive review of 10 years of CSR research in the top 13 accounting journals, CSR was defined as a

firm's efforts to surpass compliance by voluntarily engaging in actions that appear to further some social good, beyond the interests of the firm and that which is required by law [...] incorporating economic, legal, ethical and philanthropic responsibilities into decision-making. (p. 2)

Huang and Watson acknowledged the close relation between "corporate social responsibility" and "corporate sustainability," remarking that a 2013 KPMG report revealed different usage among the world's largest 100 firms: "corporate responsibility" (14%), "corporate social responsibility" (25%), and "sustainability" (43%). The articles they had included in their review, however, predominantly used "corporate social sustainability," so that was the term they adopted for their own study of those articles.

Huang and Watson's (2015) review encompassed four main themes (determinants of CSR, the relation between CSR and financial performance, consequences of CSR, and CSR disclosure/assurance). A broad spectrum of areas of activity (with the attendant measurement difficulties) was considered, involving multiple elements of CSR: environment, corporate governance, community relations,

employee relations, diversity, human rights, and product or industry-related characteristics or controversies. Huang and Watson pointed out the important role that accountants play in CSR, and highlighted that integrating CSR measures into management control systems (MCS) can significantly improve a company's control over CSR objectives and positively influence its CSR performance. Moreover, their review indicated that integrating CSR elements into an MCS may increase both environmental performance and financial performance, while acknowledging the potential tension between CSR objectives and traditional performance objectives, and stressing this as an important point for future research.

Shabana and Ravlin (2016) recommend the consideration of organizational issues such as compensation and performance management for a better understanding of substantive and symbolic CSR reporting. While the individual measures used to evaluate sustainability performance have CSR characteristics, in this study we focus on strategic internal sustainability reporting for performance assessment. The current G4 guidelines and the GRI Sustainability Reporting Standards, announced in Fall 2016 (scheduled to go in effect in July 2018), emphasize that sustainability measures and standards "create a common language for organizations and stakeholders ... [allowing] internal and external stakeholders to make informed decisions" (Global Reporting Initiative, 2016).

The institutionalization of sustainability measures plays an important role in successfully understanding and reporting corporate sustainability performance. The noticeable trend toward external sustainability reporting has been accompanied by another trend proposing the use of sustainability balanced scorecards (SBSC) as an internal tool to support the achievement of sustainability goals. SBSCs are often an integral part of MCSs because they provide a summarized overview of variances between a company's goals and actual results. SBSCs can be an important tool to communicate CSR performance, along with financial and other non-financial information, throughout an organization.

The SBSC originated in the practice, dating back to the first half of the 1900s, of companies reporting multiple performance indicators using both financial and non-financial measures (see, e.g., Pezet, 2009 and Epstein & Manzoni, 1997 for a description of the "*Tableau de Bord*" used by French companies). Building on this practice of multiple key performance indicators, Kaplan and Norton (1992) introduced the BSC first as an effective tool for *measuring* managerial performance along four financial and non-financial dimensions, and later as a system for *managing* performance (Kaplan & Norton, 2007). The BSC organizes multiple performance measures into integrated dimensions and communicates, through causal linkages among these dimensions, how performance measures can facilitate strategy execution (Banker, Chang, & Pizzini, 2004).

These properties have led the BSC to be regarded as a logical tool to help organizations implement sustainability initiatives and track progress toward the achievement of strategic sustainability goals. Okcabol and Hoffman (2015) suggest that an enhanced BSC approach, combined with the Environmental Managerial Accounting Initiative, might help counteract the tendency for US organizational environmental reporting to stick to the legally mandated minimum.

### *SBSC Architectures*

Organizations have designed sustainability scorecards in different ways (Figge, Hahn, Schaltegger, & Wagner, 2002), but the most common practice documented in the literature is to develop a fifth SBSC perspective dedicated to sustainability measures (Hansen & Schaltegger, 2016). This format has several advantages: it illustrates that sustainability performance is strategically relevant enough to have a perspective of its own (Epstein & Wisner, 2001), and that sustainability measures can be integrated via causal links with the other perspectives of the typical BSC (Figge et al., 2002; Hansen, Sextl, & Reichwald, 2010; Van der Woerd & Van den Brink, 2004). Field research has confirmed the need for additional perspectives in the SBSC to capture the unique aspects of sustainability performance (Chalmeta & Palomero, 2011; Hubbard, 2009; León-Soriano, Munoz-Torres, & Chalmeta, 2010).

This approach of adding a fifth perspective to the BSC is consistent with a recommendation by Kaplan and Norton (1996) that organizations rename or add perspectives while designing a BSC to fit their particular strategies (p. 33). More recently, in a comprehensive survey of SBSC architectures, Hansen and Schaltegger (2016) emphasized that there is no single best way to design a SBSC, as each organization should choose the SBSC hierarchy and degree of integration among measures that represents its strategic focus. In our study, we examined the five-perspective SBSC, where sustainability measures are grouped in their own perspective.

### *Perceived Importance of Sustainability Measures*

While the SBSC is generally considered an appropriate tool to highlight the importance of corporate sustainability (Hansen & Schaltegger, 2016), it shares implementation challenges with the conventional BSC, particularly with respect to how managers weigh and combine multiple performance cues (see review by Cheng & Humphreys, 2012). Performance measure results may be combined in subjective evaluations, allowing evaluators to adjust their assessments to the unique strategies of each business unit. Alternatively, performance results may be aggregated using objective weights, leading evaluators to consider performance aspects that have been determined to influence overall organizational performance. This topic of subjective versus preset weights has not been explored in the context of sustainability performance, leaving the possibility of several biases in decision-making. BSC researchers have documented a series of biases in the way subjects frame performance information and make judgments about which cues to prioritize and which ones to downplay (e.g., Banker et al., 2004; Dilla & Steinbart, 2005; Humphreys & Trotman, 2011; Lipe & Salterio, 2000, 2002).

Among the judgment biases associated with BSC use in general (Chan, 2006), two have particular relevance for the implementation of the SBSC: financial measure bias and subjectivity bias. The financial measure bias, which is present not only in multiple measure systems (Carmona, Iyer, & Reckers, 2014) but also preceded BSC adoption and was a main impetus for its introduction (Johnson & Kaplan, 1987), leads evaluators to focus more on financial measures than



non-financial ones (Cardinaels & Van Veen-Dirks, 2010; DeBusk, Killough, & Brown, 2005; Ittner, Larcker, & Meyer, 2003). The subjectivity bias stems from a lack of trust in the reliability of measures that are not independently audited or for which there are no consistent standards (Ittner et al., 2003; Malina & Selto, 2001). According to Ittner et al. (2003), when evaluations and rewards depend on subjective factors, evaluators focus on financial performance measures and place less emphasis on other BSC measures. In spite of the fact that the BSC was designed to highlight the importance of non-financial measures, the widespread practice of displaying the financial perspective first tends to create a sequencing effect that may contribute to the financial measure bias, since evaluators tend to emphasize the measures that are shown first (Neumann, Roberts, & Cauvin, 2011). Despite the fact that vocal support for sustainability has increased in recent years, the BSC judgment biases discussed above are still likely to affect how evaluators view sustainability measures in a SBSC, leading them to favor financial measures over sustainability measures.

#### *Sustainability Performance Effect on Managerial Evaluations*

Previous empirical findings suggest that good corporate governance and CEO public support of environmental initiatives are not enough to impact actual environmental performance at the firm level (Cong & Freedman, 2011; Cong, Freedman, & Park, 2014). Investors have often disregarded non-financial performance in areas such as sustainability because it is difficult to evaluate to what extent this information may have a material impact on financial performance (Ernst & Young, 2015). Inside organizations, even if evaluators perceive sustainability performance as important, that does not necessarily mean that these measures matter for their decision-making: evaluators might just pay lip service to the importance of sustainability performance, but not be influenced by it when making decisions about appraisals and rewards.

The process of making appraisal and bonus decisions involves dealing with multi-faceted information, in order to compare actual results vis-à-vis targets for a variety of measures, and to weigh these assessments to reach an overall performance rating. In practice, the SBSC typically includes four or more measures for each perspective, leading to a total of over a dozen measures being considered, which exceeds the conventional limits of human information processing (Miller, 1956). Under this cognitive load, evaluators are likely to resort to coping mechanisms, such as disregarding low-priority inputs (Eppler & Mengis, 2004). Evaluators may reduce cognitive effort by selecting certain performance measures and ignoring others when making decisions about which managers contributed to the achievement of the organization's strategic objectives and thus should be rewarded. The critical question is which measures will be selected and which ones will be ignored.

According to outcome effect theory (Ghosh, 2005; Ghosh & Lusch, 2000; Long, Mertins, & Vansant, 2015), we expect evaluators to emphasize outcome indicators such as financial results (e.g., sales or profits) when assessing managers. While evaluators may pay attention to actions managers undertook to achieve

sustainability targets, we hypothesize that the effect of financial performance on evaluations will be greater. [Pojasec \(2012\)](#) explained: “Most definitions of sustainability address action over the long term [...] but [...] too often, sustainability practitioners focus on ‘results,’ which reflect the outcome of performance” (p. 84). [Dutta and Lawson \(2009\)](#) further argue that, because organizational initiatives related to social and environmental goals may not translate into results immediately, they may be overlooked.

This financial emphasis is also predicted for bonus decisions: evaluators focus mainly on the achievement of financial targets because, if managers did not produce financial results as expected, there would be a smaller financial pool from which to draw the incentive compensation. As Kaplan and Norton (1996) acknowledged, the same organization may have performance appraisals based on a broad range of performance measures and still use only financial results as the basis for financial rewards. [Dilla and Steinbart \(2005\)](#) found that evaluators do consider unique measures of strategic importance; but, when assigning performance-based rewards, Van Veen-Dirks (2010) argued that evaluators emphasize the decision-influencing role of performance measures, and prioritize measures that have clear, unambiguous targets for bonus purposes. In the absence of explicit links between incentive compensation and efforts to reach sustainability targets or even exceed them (the “sustainability variance” studied by [Dutta, Lawson, & Marcinko, 2016](#)), evaluators may fail to focus on how sustainability performance is a key strategic imperative (Epstein & Wisner, 2001).

The discussion above leads us to propose that evaluators are likely to be influenced by both sustainability and financial performance when rating managers for appraisal and bonus purposes, but that the influence of financial results will be stronger than that of sustainability results. In other words, we expect that managers will be rewarded or penalized for excelling or failing in sustainability, but not as much as they will be rewarded or penalized for excelling or failing in financial performance.

We go beyond a simple test of statistical significance and focus on the effect size, as we are interested in comparing the effect sizes of differences in financial and sustainability performance. Even in cases where both financial and sustainability performance have a significant effect on appraisal and bonus ratings, assessing the magnitude of their effects and comparing them has practical relevance. Previous reviews of accounting literature (Borkowski, Welsh, & Zhang, 2001; [McSwain, 2004](#)) have alerted that accounting researchers need to pay greater attention to effect sizes, defined as “the degree to which a phenomenon is present in the population,” or “the degree to which the null hypothesis is false” ([Cohen, 1977](#), p. 9, as cited in [McSwain, 2004](#), p. 2). Effect sizes are particularly relevant for behavioral accounting research because of the relatively small sample sizes typical of accounting experiments, making effect sizes a crucial factor in determining statistical power, or the ability to detect an effect if one is present. As summarized by [Borkowski et al. \(2001](#), p. 64), “attention to statistical power and effect size can improve both the design and the reporting of behavioral accounting research,” consistent with the attention these topics have received in the psychology and education literatures. We formulate these hypotheses as follows: