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Rolling out Corporate Sustainability Accounting: A Set of Challenges

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ABSTRACT: The benefits of improving corporate environmental and social performance have been addressed by an increasing number of companies in the past two decades. However, not all companies have been interested in the topic since it first came up. Thus, companies' attempts to quantify sustainability performance typically start with a qualitative understanding of the impacts of the environment and society on corporate economic performance and vice versa. At the forefront of corporate sustainability accounting practice, research has highlighted the attempt of various companies to expand and transform sustainability information collection practices into regular, day-to-day activities known as sustainability accounting. However, this step – referred to as roll out – is related to various obstacles that hinder its success.

The following conceptual paper identifies the obstacles in the roll-out process and suggests an approach to deal with them. Based on various studies in the field, the developed approach presents typical challenges and highlights their significance for the success of the roll out of corporate sustainability accounting. The contribution of the paper lies in the identification of decision-situations which – albeit essential for the success of the roll out – appear to be neglected by many decision makers, often with undesired consequences.

The novelty of the findings can support higher and middle management in their transition from small-scale, project-based collection, analysis and provision of decision-making information to a company-wide, self-sustaining management accounting system that integrates social and environmental impacts of and upon business. This transition can contribute to the long-term success of the enterprise and reduce its externalities on environment and society

KEYWORDS

Sustainability accounting, Information management,
Decision making information, Challenge, Roll-out process

I. SUSTAINABILITY ACCOUNTING: A DRIVER FOR SUSTAINABILITY MANAGEMENT

Apart from being a topical issue in various fields of research (e.g., Schaltegger, Gibassier, and Zvezdov), corporate sustainability has been gaining importance in practice, too (e.g., Ernst & Young; BCG). Numerous recent studies reveal that companies seem to have realised the contribution of tackling sustainability issues toward their long-term success (e.g., Schaltegger and Wagner; Schaltegger, Bennett, and Burritt). Yet, corporate sustainability management poses various challenges to decision

makers, in developing an understanding of the linkages between sustainability management and financial performance (e.g., Schaltegger and Wagner). Furthermore, a successful corporate management would not only need to understand these linkages but also to be able to create new ones. This is where corporate sustainability accounting can provide decisive support.

The discipline has been maturing and enjoying a growing attention from researchers and practitioners alike (Parker; Schaltegger, Gibassier, and Zvezdov). Alongside this development several focuses of research have been observed: The oldest theme appears to have been looking into the business case for sustainability (e.g., Schaltegger and Sturm; Klassen and McLaughlin; Dyllick and Hockerts). The foundation of this research stream lies in the paradigm that striving for corporate sustainability is worth beyond pure financial performance and in the overall interest of the company. A later sub-stream of sustainability accounting publications has focused on the increasing recognition of the business case for sustainability (e.g., Porter and van der Linde; Schaltegger and Wagner). These publications give mostly empirical answers to the question of whether corporate sustainability management has been able to contribute to tangibly improving the financial performance of the company. The role of sustainability accounting in these publications has been to provide accounting tools and methods to support an accounting toward sustainability. A third theme concentrated on observing the practice of corporate sustainability accounting. The publications in this area (e.g., Bennett and James; Heydkamp et al.) look into what companies do in the field of SMA, how they do it, and why they do it. This research, although limited in volume (Schaltegger, Gibassier, and Zvezdov) has brought significant insights into the responsibilities involved in SMA, the type and regularity of the information collected, etc. Last but not least, a major body of publications in the area deals with various challenges to sustainability

accounting – from “how to get the right information to the right people” to “how to measure sustainability performance *reliably*.” (Burritt; Rikhardsson et al.) For example, Burritt identifies a thorough list of obstacles that need to be investigated in detail.

Thus, the discussion has developed beyond attempts to recognize the benefits of engaging with sustainability accounting with a trend toward establishing elaborate systems to provide support to decision makers as called for by Schaltegger and Burritt. Based on the development of sustainability accounting in leading sustainability companies (e.g., Burritt, Schaltegger, and Zvezdov), the paper draws the attention to the next challenge: the roll out of corporate sustainability accounting. The implications provide support in identifying the needs of the various people involved in sustainability accounting and its implementation in day-to-day business processes – referred to as “roll out” throughout this paper. A significant contribution toward understanding specific decision situations is made. From a more general viewpoint, the considerations made in this paper can be translated to other corporate functions engaged in sustainability management.

The argumentation builds upon literature in change management theory (Cooke) and in practice-oriented accounting theory as understood by Malmi and Granlund. The analysis is strictly qualitative, using only secondary data sources. The analysis of challenges in Section 2 is based on a literature review conducted for this research. The core of the paper is a conceptual development that identifies, groups and elaborates on the challenges identified in Section 3. A summary of the most important findings is provided in Section 4, together with implications for practitioners and researchers.

II. STATUS OF CORPORATE SUSTAINABILITY ACCOUNTING PRACTICE AND FUTURE CHALLENGES

A few years ago, Schaltegger and Burritt provided an account of what sustainability accounting is. In their paper, the authors provide an insight into the status of corporate sustainability accounting and interpret its meaning. The interpretations range from “an empty vogueish buzzword blurring debate” through “a broad umbrella term bringing together existing accounting methods dealing with environmental and social issues” and “a specific unitary measurement and information management tool” to “a pragmatic, goal driven, stakeholder engagement process, which attempts to develop a company specific and differentiated set of tools for measuring and managing environmental, social and economic issues as well as the links between them.” Precisely the latter – this pragmatic, goal driven approach – has been the subject of many decision-makers’ attention who have realised the importance of sustainability information provision and management. For this reason, a number of companies have been engaged in designing accounting systems that provide the right information to the right people in the right moment (Bennett, Schaltegger, and Zvezdov).

However, there are hardly examples of companies that have been able to implement an overarching sustainability accounting system. For example Adidas have just published a statement on their efforts towards developing an accounting system that considers various externalities and serves as a base for short and long-term decision making. DHL is another example that highlights the challenge of an integrated information management system – so far only carbon accounting has been claimed to be integrated in business activities (Hufschlag), little is mentioned on other sustainability aspects. On the other hand, a large number of companies report on their sustainability performance: some 1400 reported on their sustainability performance in accordance with the GRI guidelines (GRI). This reveals a discrepancy between the signals of company in regard to the relevance of society and

environment to business and the actual attempts to manage these aspects.

Whereas explanations of the above discrepancy such as mimicry and stakeholder pressure have been developed, the difficulty of moving from a project-based information generation and management to a company-wide sustainability accounting system has not been approached (e.g., Burritt). Yet, approaching the particular set of challenges to sustainability accounting – hereafter henceforth referred to as roll out – can provide several decisive advantages in managing corporate sustainability performance. One of the main considerations is that tackling these issues can help secure a smooth transition from project-based information collection and use to routine operations. “Project-based” refers here to the isolated nature of many sustainability activities. Projects for reducing energy consumption by educating staff are one example of such activities that can be embedded in business to improve their efficacy. Such an efficacy increase can be expected as energy consumption in this case is no longer tracked within certain boundaries (e.g., department, unit, or site) but is company-wide and not limited to a certain time frame. Furthermore, responsibilities that may contribute to improving energy efficiency are no longer excluded from the project team (e.g., Hobday).

Paying attention to SMA roll-out challenges also is likely to reduce the cost of the transition explained above through managing quality and efficiency. Last but not least, bridging management challenges with content challenges can contribute to the flow of knowledge and thus have a positive effect on SMA practice.

III. SPECIFICS OF THE SUSTAINABILITY ACCOUNTING ROLL OUT

Publications on change management often identify organisational aspects of processes and activities

that need to be considered in certain situations and/or for achieving certain goals (e.g., Aladwani; Nah, Lau, and Kuang). Knowledge from this field can contribute to developing an understanding for processes and thus enable decision makers to modify such processes to achieve strategic and operational targets. On the one hand, the linkages between the various aspects need to be identified and explored. On the other hand, these linkages between the various aspects need to be put together and observed how one affects the other aspects. In the case of the roll out of sustainability accounting, it needs to be identified how approaching without losing sight of the targets. For example, a small sustainability team in a company may be motivated and capable of uncovering potentials for improving social, environmental and economic performance. However, expanding the information system without instructing the newly engaged people on the targets may result in very high costs with little additional benefits, thus rendering social and environmental opportunities unattractive for decision makers.

On the other hand, diverse accounting studies have been working towards identifying the contingencies (e.g., Chapman; Gordon and Miller; Cadez and Guilding) of accounting practice. Researchers have been identifying and investigating the aspects of information that matter, so that decision making is supported. In the context of sustainability accounting, Schaltegger and Burritt produced one of the first publications that describes in detail the actors in sustainability accounting, their information needs, and the types of information generated and provided. Furthermore, Burritt, Hahn, and Schaltegger developed an “Environmental Management Accounting Framework” that identifies various situations in which different types of information are needed.

This section focuses on the issues and challenges of the the roll-out phase of sustainability management accounting. It identifies and considers

organizational as well as content-specific challenges in the roll-out phase of corporate sustainability accounting. As presented above, these two types of considerations play a significant role in the roll out of corporate sustainability accounting to support an efficient and effective transition of the latter toward day-to-day business activities.

Organizational aspects

The generic roll-out process has been tackled from various perspectives (Balogun and Jenkins), including in accounting context (Burns and Scapens; Sulaiman and Mitchell). For the purpose of this paper, the analysis of the organisational aspects of the sustainability accounting roll out are listed and systematically tackled, based on a recent publication by Homma and Bauschke. The latter is considered a good source to build upon as it provides an overview of the basics of the roll-out process by summarizing relevant literature and presenting generic steps in the process. The considerations in this section thus rest on this concept. Furthermore, the largely underestimated importance of formal transition (toward integrating sustainability accounting in core business) management (Bennett, Schaltegger, and Zvezdov) is interwoven in the following analysis.

The model for the roll-out process described by Homma and Bauschke rests on three decisive steps: (i) preparation of the roll out project, (ii) involving senior management, and (iii) subsequently involving employees. This preparation is particularly critical in terms of available resources, as the operational aspects of the roll out have been documented as very demanding (Burns and Scapens; Anderson and Young). This calls for a clear understanding of the needs of the roll-out process.

The first consideration to be made is that as the involvement of various departments is needed, this involvement needs to be provided the necessary support, and the business needs to make

sure that available capacities for the required tasks are available within these departments. As recent research (e.g., Bennett, Schaltegger, and Zvezdov) reveals, in practice this is often not the case, thus hampering the advancement of the roll-out process.

The involvement of senior management also has been identified to be crucial for the success of the roll-out process. Due to the often conflicting nature of sustainability management with short-term financial performance (e.g., Rappaport), the support of the senior management is often granted only partly (Epstein and Roy). In other words, by the nature of their functions, managers support processes and measures that can be legitimized in front of stakeholders – mainly shareholders, but also customers, wider public, etc. Thus a clear and tangible cost-benefit analysis needs to produce information (e.g., Bennett, Schaltegger, and Zvezdov; Schaltegger and Burritt) that draws the attention of senior management and stimulates its involvement. Therefore, one crucial task of roll-out management is the identification of a list of (expected) benefits of a transition to an encompassing sustainability accounting, ideally including short-term benefits as well as those expressible in monetary units. For example, a company-wide sustainability accounting can uncover further business cases for the company and additionally result in a reputation improvement.

As observed by Bennett, Schaltegger, and Zvezdov, senior management is rarely engaged in the sustainability management of the company, although it does not seem to obstruct related activities. Yet, further involvement of senior management may have positive effects on sustainability accounting, e.g., by granting additional resources, motivating employees, and even reconsidering core business activities. Last but not least, senior management can contribute to improving sustainability accounting practice by putting less pressure on middle management to justify expenses on each and every sustainability-related activity with too high an accuracy. Thereby

sustainability accounting can focus on accounting rather than accountability and reporting. Similarly, marketing managers are not expected to provide a detailed and accurate account of the exact number of items sold due to a forthcoming image campaign, are they?

The involvement of employees also has been identified as a critical factor in developing a company-wide sustainability accounting. For example Schaltegger and Burritt identify a lengthy list of providers and recipients of sustainability-related information. Also, Zvezdov, Schaltegger, and Bennett arrive at the conclusion that the employees involved in sustainability accounting play a significant role for the success of these activities for various reasons. First, their support is indispensable, as they are often the only providers of related information and, therefore, they need to be involved rather than having other functions generate the same information. For instance, specific, detailed information on raw material consumption may not be available in purchasing or bookkeeping but can have a major contribution toward saving resources. Second, employee involvement is essential as they are familiar with the content behind the information they provide, i.e. before information consolidation takes place. In other words, the original providers of information may be in the position to provide further related information, as the roll-out team may not be aware of the existence and/or relevance of this information. An example for such a situation is the provision of information on major water-consuming activities in production (Bennett, Schaltegger, and Zvezdov), with major savings potential being neglected as the workers operating the machines have not been involved in the water-saving project.

Employee involvement is often a very important aspect as sustainability accounting requires cross-departmental cooperation. A main problem appears to be the lack of resources in supporting (i.e., other than the sustainability)

departments to provide the required information in the required form and, on the other hand, the unwillingness of other departments to be subordinate to the sustainability department, for example, by formally agreeing to produce certain information (Bennett, Schaltegger, and Zvezdov). In this case it is necessary that all of the involved people be informed about what the information they provide is used for. This information sharing should go beyond “ticking check boxes” by engaging employees in contributing with their specific expertise.

Content-specific aspects

The second group of aspects that require consideration for a successful sustainability accounting roll out are the so-called content-specific aspects. These, as opposed to organizational aspects, describe what the accounting practice needs to look like, such as what information is needed and which functions and departments need to be involved. Yet, the following paragraphs should not be understood as suggesting that certain actions be taken; instead they point out and describe decision-situations that are likely to be neglected or ignored during (the planning phase of) a roll out.

There are several content-related aspects of the sustainability accounting roll-out process that need to be considered. On the one hand, (accounting) information flows need to be designed in view of potential providers, managers (administrators, gatekeepers), and users of sustainability information. This design requirement means that involving departments not only in the provision of information but also making the information available to them can be an incentive for their involvement and thus contribute to their supportiveness (Bennett, Schaltegger, and Zvezdov). As previously identified, the involvement of various departments generating information is particularly important; for the reasons outlined above, their involvement in making use of

such information is crucial, too.

Based on an environmental management accounting framework developed by Burritt, Hahn, and Schaltegger, a few additional recommendations in regard to the necessary information can be provided. On the one hand, more attention needs to be paid to future-orientated sustainability information. For the roll-out process this means providing the possibility of relating the potential impacts for each department so that an overall integrity is achieved – a main objective of an overarching sustainability management accounting system. This also has strategic implications as changes made to corporate strategy require decision making based on long-term, future-oriented information. Also management control (Schaltegger 2011) depends widely on future-oriented information supplied by accounting. Another particularly important function of such a system is linking monetary and physical data, which appears to be the case in only a few companies (Burritt, Schaltegger, and Zvezdov). Whereas the authors report that monetary information is widely considered in current practice of sustainability leaders, they stress on the difference between collecting physical information strictly for deriving monetary information and the possibility to derive monetary information from physical one. For example, a re-calculation of sale prices due to changing cost structure requires that information on related carbon emissions is collected that is in turn converted to monetary units based on current or expected carbon market prices. At the same time, however, information strictly collected for monetary purposed may be unable to provide sufficient decision-making information. For example, in the above case, if the management realised that too high costs are attributed to poor carbon performance, they may not be in a position to improve this performance as no detailed information in the various value-creation steps is available.

The frequency of sustainability data

and information generation is another important aspect to consider. On the one hand, regular data generation, collection, and use are likely to increase the efficiency of the process. On the other hand, however, limiting the scope of the system to such information renders it unable to take into consideration rare decision situations as identified in (Burritt, Hahn, and Schaltegger).

IV. CONCLUSIONS

With the increasing number of companies demonstrating sustainability engagement and the possible contribution of the sustainability manager (Zvezdov, Schaltegger, and Bennett), sustainability leaders appear to have reached a stage at which the roll out of sustainability accounting is the next step to take. Furthermore, companies that are less advanced in regard to their sustainability accounting practice are also likely to face the same challenges at a later point. Yet this process presents a serious challenge for businesses for the reasons outlined in Section 2 of this paper by means of a literature review. Against this background, an approach to tackling this challenge is developed and presented. The approach identifies and discusses crucial decision situations.

Depending on how advanced a company's sustainability accounting activities and system(s) are, these activities can present a different set of challenges for management. Some companies are expectedly more advanced in their sustainability accounting practices than others. As the above literature review reveals, different focuses of efforts toward sustainability accounting can be expected depending on what stage the company is at; a company that has just started (consciously) looking into sustainability accounting is more likely to be focused on identifying relevant performance indicators, figuring out (efficient) ways to produce the required information, and/or looking for the informational value of existing

sustainability information. More advanced in this regard companies, on the other hand, are more likely to be refining existing practice e.g., by increasing the departments and people involved in producing and using sustainability information, increasing the number of aspects and linkages they look for, etc.

Thus, resting on the comprehensible presumption that different companies struggle with different challenges, the assumption could be made that eventually the challenges of the most advanced company are likely to be faced by the other companies as they advance, too. Therefore, the focus is placed on the type of challenges that seem to be at the forefront from today's viewpoint and experiences. So what is the set of challenges today?

The main message of the argument is that in practice the roll out of sustainability accounting is a complex, multi-faceted process, often overlooked or underestimated that requires professional project management as well as the full support of senior management and employees. The paper deducts a typology of sustainability-accounting-related roll-out challenges grouped in two categories: organisational challenges and content-related ones. The former category points out what non-accounting specific issues need to be considered for a successful roll out. Albeit trivial, issues such as employee involvement and support have been paid little attention in literature or – even worse – have been neglected in practice. Thus, the article not only identifies such important issues but also gives an account of why they need to be considered.

The latter category – content-specific challenges – provides a list of accounting-specific challenges in the roll-out process. These are differentiated from the previous group since the list of challenges identified in Section 2 cannot be overcome without specific accounting considerations. That is, accounting techniques that have not been used in previous stages of accounting are essential for a successful roll out. For instance, linking physical to

monetary information or assigning a wide range of information providers is not essential for identifying sustainability performance improvement potentials but is absolutely necessary for a robust, future-proof information generation and provision system to support informed decisions.

These conclusions provide a **basis** for managers to consider in their next steps or even earlier in their sustainability accounting practice, cf. Figure 1. The emphasis is on basis as both sustainability management and management accounting develop and research uncovers contingencies that have previously been ignored. Yet, the list does not provide advice as to the specific actions to be taken, e.g., how employees can be motivated or what information needs to be collected. These are company-specific decisions that are subject to other field of research and are thus not part of this paper.

Also, additional research is required to identify further specific properties that need to be considered in the roll out. For this, the here developed typology can be either extended to include further relevant decision situations that need to be considered. Also case studies or surveys examining these challenges will contribute to testing the validity of the above arguments in practice.

V. REFERENCES

- [1] Aladwani, A. "Change management strategies for successful ERP implementation." Business Process Management Journal 7.3 (2001): 266–275.
- [2] Anderson, S. W. and S. M. Young. Lessons Learned from Activity Based Costing in the U.S. Automobile Industry. Dordrecht: Springer, 2001.
- [3] Balogun, J. and M. Jenkins. "Re-conceiving Change Management: A Knowledge-based Perspective." European Management Journal 21.2 (2003): 247–257.
- [4] BCG. The Business of Sustainability. Imperatives, Advantages, and Actions. Amsterdam: BCG, 2009.
- [5] Bennett, M. and P. James. "Environmental Performance Measurement in Business: current practice and future trends." International Journal of Business Performance Management 2.1 (2000).
- [6] Bennett, M., S. Schaltegger, and D. Zvezdov. The Practice of Corporate Sustainability Accounting. London: ICAEW (2011 not yet published).
- [7] Burns, J. and R. Scapens. "Conceptualising management accounting change: an institutional framework." Management Accounting Research 11 (2000): 3–25.
- [8] Burritt, R. L. "Environmental Management Accounting: Roadblocks on the way to the Green and Pleasant Land." Business Strategy and the Environment 13.1 (2004): 13–32.
- [9] Burritt, R. L., T. Hahn, and S. Schaltegger. "Toward a Comprehensive Framework for Environmental Management Accounting. Links Between Business Actors and Environmental Management Accounting Tools." Australian Accounting Review 12 (2002): 39–50.
- [10] Burritt, R. L., S. Schaltegger, S., and D. Zvezdov. "Carbon Management Accounting. Explaining Practice in Leading German Companies." Australian Accounting Review 21.56 (2011), 80–98.
- [11] Cadez, S. and C. Guilding. "An exploratory investigation of an integrated contingency model of strategic management accounting." Accounting, Organizations and Society 33.7–8 (2008): 836–863.
- [12] Chapman, C. "Reflections on a contingent view of accounting." Accounting, Organizations and Society 22.2 (1997): 189–205.
- [13] Cooke, B. "Writing the left out of management theory: the historiography of the management of change." Organization 6.1 (1999): 81–105.
- [14] Dyllick, T. and K. Hockerts. "Beyond the Business Case for Corporate Sustainability." Business Strategy and the

- Environment 11 (2002): 130–141.
- [15] Ernst & Young. Action amid uncertainty: the business response to climate change. New York: Ernst & Young, 2010.
- [16] Epstein, M. J. and M.-J. Roy. 2001 “Sustainability in Action: Identifying and Measuring the Key Performance Drivers.” Long Range Planning 34 (2001): 585–604.
- [17] Gordon, L. and D. Miller. “A contingency framework for the design of accounting information systems.” Accounting, Organizations and Society 1.1 (1976): 59–69.
- [18] GRI. Year in Review 2009/10. Amsterdam, Global Reporting Initiative, 2010.
- [19] Heydkamp, P., P. James, F. B. de Walle, T. J. Wolters, M. Bartolomeo, M. Bennett, and J. J. Bouma. Eco-Management Accounting. Dordrecht: Kluwer Law International, 1999.
- [20] Hobday, M. “The project-based organisation: an ideal form for managing complex products and systems?” Research Policy, 29.7–8 (2000): 871–893.
- [21] Homma, N. and R. Bauschke. Unternehmenskultur und Führung. Wiesbaden: Gabler Verlag and Springer Fachmedien Wiesbaden GmbH. Available in German only. 2010.
- [22] Hufschlag, K. “Weltweites Carbon Accounting bei Deutsche Post DHL.” uwf – UmweltWirtschaftsForum 18.1 (2010): 29–33. Available in German only.
- [23] Klassen, R.D. and C.P. McLaughlin, “The Impact of Environmental Management on Firm Performance.” Management Science 42.8 (1996): 1199–1214.
- [24] Malmi, T. and M. Granlund. “In search of management accounting theory.” European Accounting Review 18.3 (2009): 597–620.
- [25] Nah, F., J. Lau, and J. Kuang. “Critical factors for successful implementation of enterprise systems.” Business Process Management Journal 7.3 (2001): 285–296.
- [26] Parker, L. D. “Twenty-one years of social and environmental accountability research: A coming of age.” Accounting Forum 35 (2011): 1–10.
- [27] Porter, M. C. van der Linde. “Toward a New Conception of the Environment-Competitiveness Relationship.” The Journal of Economic Perspectives 9.4 (1995): 97–118.
- [28] Rappaport, A. “The Economics of Short-Term Performance Obsession.” Financial Analysts Journal 61.3 (2005): 65–79.
- [29] Rikhardsson, P., M. Bennett, J. J. Bouma, and S. Schaltegger. Environmental Management Accounting. Innovation or Managerial Fad?, in: Rikhardsson, P., M. Bennett, J. J. Bouma, and S. Schaltegger (Eds.): Implementing Environmental Management Accounting. Status and Challenges, Dordrecht: Springer, 1-18, 2005.
- [30] Schaltegger S., D. Gibassier, and D. Zvezdov. Environmental Management Accounting – A Bibliometric Literature Review. Luneburg: CSM, 2011.
- [31] Schaltegger, S. “Sustainability as a Driver for Corporate Economic Success. Consequences for the Development of Sustainability Management Control.” Society and Economy 33.1 (2011): 15–28.
- [32] Schaltegger, S. and A. Sturm. “Eco-Controlling: An Integrated Economic-Ecological Management Tool”, in: Köchlin, D. and K. Müller (Eds.): Green Business Opportunities. The Profit Potential. London: Pitman Publishing/Financial Times, (1992): 228–240.
- [33] Schaltegger, S., and M. Wagner, Ed. Managing the Business Case for Sustainability. The Integration of Social, Environmental and Economic Performance. Sheffield: Greenleaf, 2006.
- [34] Schaltegger, S. and R.L. Burritt. “Sustainability Accounting for Companies. Catchphrase or Decision Support for Business Leaders?” Journal of World Business 45.4 (2010): 375–384.
- [35] Schaltegger, S.; M. Bennett, and R. L. Burritt. Sustainability Accounting and Reporting, Dordrecht: Springer Kluwer Publishers, 2005.
- [36] Sulaiman, S. and F. Mitchell. “Utilising a typology of management accounting

- change: An empirical analysis.”
Management Accounting Research 16.4
(2005): 422–437.
- [37] Zvezdov, D., S. Schaltegger, and M.
Bennett. “The Increasing Involvement of
Accountants in Corporate Sustainability
Management.” Journal of the Asia-Pacific
Centre for Environmental Accountability
16 (2010): 20–31.