PART 2

Accounting and Management Control in Different Contexts

CHAPTER 7

Accounting for Sustainability: The Role of Responsibility and Cognitive Models in Advancing Sustainability Accounting Research[55]

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Abstract

With increasing concerns about the global climate change and raising demands for improved organizational performance measured in terms of intergraded economic, environmental and social indicators, sustainability accounting research has not adequately addressed how accounting can make a difference and contribute to changing behavior of individuals, organizations and societies towards more sustainability. By reviewing major directions and problematizing basic assumptions on which some of the mainstream and sustainability accounting research is based, we discuss how accounting research can be more relevant and more proactive in making managers, as decision-makers, more responsive to sustainability concerns. By introducing notions of decision-makers' responsibility and cognitive maps, we examine directions for future sustainability accounting research.

55 By referring to sustainability accounting in this chapter we mean accounting activities which focus on reporting information (both financial and non-financial) about a firm's performance to different organizational stakeholders (both internal and external) which contain information regarding how organizations' activities directly impact on society, environment and its economic performance. We also place attention on how this information is used for decision-making and consequent changes in organizational policies affecting performance in its economical, ecological and social dimensions. Thus, we use sustainability accounting interchangeably with other similar concepts like social accounting, social and environmental accounting, corporate social reporting, corporate social responsibility reporting.

Introduction

Despite an increasing interest from both practitioners and academics concerning topics such as sustainability and corporate social responsibility (CSR), there are relatively few companies which have succeeded in developing and implementing accounting systems which result in companies performing better in those areas (Songinni and Pistoni 2012). Thus, there is need for more knowledge not only about what this type of accounting is actually about or can be, but also how the successful implementation and use of such accounting systems can be achieved. The purpose of this chapter is twofold. Firstly, we would like to discuss how sustainability accounting is meant to be different compared to traditional accounting. Secondly, we would like to discuss how sustainability accounting can be better used in practice.

Focus on the protection of the environment, effective use of scarce resources, attention to social aspects of businesses and the proper treatment of human beings is more urgent today than ever before. In the world, where publications about environmental pollution, social injustice and the need for better protection are with increasing frequency appearing in the mass media, the expectations are many that organizations should stretch themselves and continuously adapt to new societal demands. In an increasingly transparent world, society is expecting that organizations prioritize sustainability-oriented actions. But even though it has been generally accepted that the global climate change is society- and industry-caused, it is also becoming increasingly difficult to do something about it politically (Giddens 2008, Oreskes 2004). There is a clear correlation between the global temperature rise as a consequence of increased amounts of CO2 and other GHG emissions caused by increasing human industrial activities (IPCC 2007). However, it is also evident that going beyond the pure accounts of those scientific facts and introducing workable regulation schemes which will induce considerable changes in the behavior of societies, industries, organizations and individuals towards more sustainability considerations on a global scale is a challenging task (UN 2012). Thus, organizational actions need more than a political will and changes in regulations; actions should be based on well-functioning sustainability-oriented accounting systems.

In this world of increasing focus on the global climate change and enhanced sustainability, accounting has been increasingly assigned new purposes (Hopwood 2009, Milne 1996). The role of accounting and reporting seems to have moved from the ideal of giving an objective representation of economic reality of the enterprises towards registration, measurement and communication of information allowing evaluation of the enterprise's performance from perspectives of the triple bottom line (GRI 2013). Following that, social and environmental issues have received equally important status in sustainability reporting as economic and financial issues (Lamberton 2005).

Despite the advances in accounting, the development of new accounting models in itself will unfortunately not save the planet (Buhr 2007). However, sustainability accounting has a great potential for making a difference because accounting numbers can set focus on what is important, namely to facilitate development of sustainability-related goals and action plans, and to assist in the consistent implementation of those goals and plans. Research has demonstrated that development and realization of such goals through better accounting systems is positively correlated with profitability, lower risks and positive stock price development on the capital markets (see e.g. Herremans et al. 1993). Thus, despite the importance of the ethical reasons to strive for a better environment and social performance, there are also economic motivations for working seriously with accounting systems which promote sustainability considerations. Because "what you measure is what you get" (Kaplan and Norton 1992) and can be mobilized and acted upon (Catasùs et al. 2007), development in sustainability accounting and reporting should be reflected in and make an impact on behavioral changes in individuals, organizations and societies. Despite huge research efforts related to the study of sustainability accounting during recent decades, it is still evident that accounting research played a relatively marginal role in promoting sustainable behavior in managers and corporations (Hopwood 2009). As Thompson (2007) demonstrates, a major volume of research so far has been based on the content analysis of social/environmental disclosures from annual repots and corporate documents produced by large private corporations. New directions of sustainability research are therefore badly needed.

In this chapter, we would like to problematize the development trends in sustainability accounting literature and discuss new areas for future research which can cast better light on the connections and tensions between sustainability-oriented accounting and managerial behavior. The chapter is structured as follows. First of all, we briefly review mainstreams of sustainability accounting research, especially analyzing basic assumptions on which this research is based. Secondly, and based on the results of the analysis of assumptions, we will dwell on how accounting research can be more relevant to make managers more proactive and thereby contribute to a more sustainable development. In doing so, we introduce two important notions which seem to be missing in current sustainability accounting research: the notion of "responsibility" and "cognitive maps" of decision-makers. After folding together these notions, we conclude with several research questions which, in our opinion, can represent interesting dimensions for further research.

Mainstream and current sustainability accounting research: from focus on shareholders to focus on stakeholders

It is interesting to ask how sustainability accounting literature is different when it comes to basic assumptions and use of theories compared to mainstream normative accounting research. Table 7.1 highlights the main differences which are discussed below.

Table 7.1 Main differences between two perspectives on accounting

	Shareholder perspective	Stakeholder perspective
Main interests	Standardized/ Return on equity	Broad scope/ Many and different
Type of accounting measures	Financial/ Economic focus	Financial and non-financial
Focus on main indicators	Lagging indicators	Leading indicators
Accounting is mainly used to	Control and decision-making	Tool for strategic change/ External legitimation
Users	Rational/ Limited rationality	Not necessarily only economic rationality

To begin our discussion, it is useful to review basic approaches to accounting from perspectives of classical (mainstream) normative literature. In this literature, accounting[56] is defined as a purposeful activity (AAA 1966); that is, it is directed towards specified ends such as giving accounts to someone for some actions taken. For instance, the principal makes decisions and controls to ensure that those decisions are implemented by the agent. An agent, thus, has to legitimate actions performed by giving to the principal accounts through, for example, accounting reports. In this sense, accounting reflects relationships between different parties within and outside the organizations and having different interests (Ijiri 1975). In this respect, accounting activities are guided by objectives of reducing uncertainty in order to improve accountability, stewardship, control and decision-making (Mellemvik et al. 1988; AAA 1977; AICPA 1974).

56 In practice, the term accounting is used much more broadly and less consistently to group different concepts and processes concerning the representation of economic (and organizational) phenomena through numbers, that is, the reporting of economic historical data and different calculation practices such as management accounting, cost accounting, financial accounting, budgeting, management control and financial management. As far as we know, no interpretation-free distinctions between these terms exist. Moreover, all these concepts are very often so closely interrelated that it is sometimes impossible to clearly distinguish between them. It is not our intention to cover all these possible fields.

From another side, according to the decision-usefulness approach to accounting, the rationale for accounting activities is to satisfy users' needs for useful financial information (Shapiro 1997; Lukka 1990; Davis et al. 1982; AAA 1977). Accounting is meant to be a communication language between the principal and the agent (Mellemvik et al. 1988). Normative accounting literature assumes that the information needs of the principal in order to maintain such relations are known. Accounting information is reported because it is seen to be useful in reducing the uncertainty that emerges when the principal monitors the agent. Accounting reports are meant to improve the principal's decision-making and abilities to control the agent. In this literature, accountants are prescribed to supply different kinds of information to cover such intended needs. Either way, whether accounting is about accounts-giving or decision-usefulness, this means that the key assumption behind the purposeful accounting activities is a quest for *accountability*, mainly to shareholders. Their main interest is the return on their investment, measured in accounting terms by return on equity.

Simons (2000) makes a distinction between lagging and leading indicators. Leading indicators are factors that could be a cause of a result. For example, the number of failures in production could be an explanation of poor financial result in the period. The number of failures will then be a leading indicator and the financial result a lagging indicator. Since corporate social responsibility accounting is free to define leading factors, it has a potential to become a proactive tool for producing good results in several dimensions.

There is another important basic assumption on which the classical mainstream thinking about accounting is founded. This assumption is about the human nature of decision-makers. Human agents are depicted as either quite rational or limited rational economic agents guided by self-interest and opportunistic behavior. This assumption is very often grounded on the fact that researchers use particular theories stemming from basic foundations of neoclassical economics, for example, the principal-agent theory, agency theory, and transaction cost theory.

We think that two assumptions are still standing strong even though we have several research streams. In the first research stream, the major focus is still placed on the economic aspect of enterprise performance treating organizational effects on the environment and social issues as merely externalities and imperfections. We can well designate this perspective as "business-as-usual" sustainability accounting. In this perspective, social and environmental issues are important as long as they have an effect on the economic bottom line of enterprises. For instance, sustainability issues can be approached from perspectives of the legal risks that those environmental and social issues may represent and, thus, would require special accounts incorporated into traditional investment appraisal and financial decisions (Coulson 2007). From this perspective, the focus on accounting and accountability is still placed from perspectives of

shareholders and their needs for economic/financial information. Sustainability as a societal or organizational phenomenon is not explicitly addressed as such (Thompson 2007). In this research, sustainability is therefore only an empirical research context for studying traditional disciplines like management accounting, financial accounting, risk management, etc. It can be expected that with time the gap between classical management theories and managerial practices will become evident because this type of mainstream research will not be able to explain development of new sustainability-oriented accounting practices of enterprises. This will require changes in the core assumptions about how accounting functions in organizations.

There is, however, a second stream of sustainability accounting literature focusing on perspectives of external legitimacy of organizations. Researchers in this field loosen up some of the assumptions of the mainstream research, for example, the recognition that organizations usually operate in the multi-principal environment of many *stakeholders*, that managers are not necessarily economically rational agents but may have some other interests that are not purely economic (Jones 2010). In this research, issues of sustainability are explicitly addressed in order to explain the behavior of organizations, especially reasons for and mechanisms of the corporate sustainability reporting. This research addresses the phenomena of increasing number and quality of sustainability reporting, problems of sustainability reports' assurance, etc. (Unerman et al. 2007)

Changes in the assumptions allow mobilization of new theories in sustainability accounting research. One of the theories in use is the stakeholder theory. Accountability of managers is addressed on the basis of the existence of many potential principals which may have different but still significant claims on the organization. The role of sustainability reporting as a tool of communication with and accountability towards those principals is a common topic of this research. The main conclusion from this literature is that organizations use sustainability reporting as a strategic tool in order to influence and to some degree even control the decision-making by stakeholders (Tilt 2007).

Another common theory is the legitimacy theory. It views organizational accountability and corresponding functions of corporate sustainability reporting from perspectives of a social (but not necessarily formal) contract between managers and (compared to stakeholder theory) an even larger number of principals and actors in the institutional environment of an organization (e.g., society). According to the theory, managers have to respond to growing expectations of the society towards better sustainability performance of enterprises. According to research from this perspective, also sometimes termed "managerial capture literature", managers use sustainability reporting to gain, maintain and repair legitimacy through creating an illusion of accountability relations but without necessarily carrying out or improving sustainability of operations in practice (Deegan 2007). Usually this research is critical towards managers'

genuine interests in improving sustainability and in responding to societal environmental and social concerns. New sustainability terminology and concepts are incorporated in managerial talks and reports, but business practice is "business as usual". Thus, sustainability efforts are "captured" in the search for legitimation of corporations' lack of progress towards sustainability (Gray 2006).

Finally, institutional theory is used to explain the rise of sustainability reporting as a part of institutional isomorphism processes (normative, mimetic and coercive). The lack of sustainability performance progress in organizations is examined as a process of organizational de-coupling from existing institutional norms or lack of those norms (Larrinaga-Gonzalez 2007).

In this literature it seems that theorization is based on the core assumption that accounting is still a major tool for promoting organizational *accountability*, though towards an increasingly larger number of actors in the organizational environment. Another important assumption is that managers still act out of *self-interest* when seeking legitimacy. The main conclusion which can be drawn from the contemporary sustainability accounting literature is that the increase in the scope of sustainability reporting is not necessarily a result of increasing managerial awareness of pressing sustainability issues. It is instead a "play to the gallery" intended to influence stakeholders and public opinion concerning enhanced suitability performance which in reality does not lead to better environmental and social performance through, for example, rethinking business models and operations. Another conclusion from this literature is that only harder and more compulsory regulation and its enforcement can compel managers to do more on the sustainability side and to improve accountability (Gray 2006). Despite the fact that interests from investors in sustainability accounting reports are inconclusively documented (Tilt 2007), sustainability accounting research has maybe been too much and too long focused predominantly on external reporting. As an alternative, we would like to encourage more research on how sustainability accounting can influence management practices and turn them towards new directions. This may focus more attention on sustainability accounting and create more interest, especially if researchers can demonstrate to managers that sustainability accounting can be applied to something more than a mere play to the gallery.

Proactive use of accounting for improved organizational sustainability

What do we miss in the current suitability accounting literature? For us, there is lack of attention to how sustainability accounting is or can be used from a more pragmatic and proactive internal managerial point of view to change organizations and behavior of organizational actors more towards sustainable development rather than how accounting is used as a tool for external stakeholder legitimation. To introduce this focus in accounting research there is probably

a need to shift attention in two important notions about how accounting is coupled to organizational actors' behavior. The first notion can be discussed in terms of how accounting can be related to organizational actors' *responsibility* for increased sustainability considerations rather than notions of *accountability*. Responsibility as a concept offers quite another look into the reasons for the conduct of organizations and individuals. Another point which we would like to address here is the role of *cognitive models of managers*. The combination of those two considerations offers some interesting research insights when it comes to sustainability accounting.

Responsibility vs. accountability

Accountability and responsibility concepts have distinct meanings but are in many instances used interchangeably[57]. Even though both are relational concepts, they have different implications for understanding how accounting is, and can be, used in practice. A good discussion of the differences between these concepts can be found in Bovens (1998) and Pedersen (2013). According to these authors, there are many forms of responsibility, where accountability is only one of the several forms of responsibility.

Our readings suggest that the basic characteristic of all forms of "responsibility" is essentially the *individual sense* of responsibility. This may stem from moral obligations, adherence to ethical codes or even as the result of influence from cultures, values and norms. Acting responsibly towards sustainable business would mean an active search for best business alternatives at present in order to prevent undesirable environmental and social situations. Decision-makers would have to balance between different norms and interests in relation to securing sustainability in operations and consider those when making decisions. A responsible manager would possess a high level of autonomy in seeking alternatives in order to answer the question "what is to be done to improve sustainability?"

Contrary to this individual sense of responsibility, "accountability" represents only a passive form of responsibility which focuses on a conduct induced by relations to external parties. The drive is to answer to the requirements and claims of others. Accountability is about how well the formal obligations of managers towards the external parties are executed, how best to inform about past actions and decisions, in short, a drive to give, explain and justify accounts of the past events. Thus, accounts are very often called for after the event; someone is either held responsible or not for the actions taken. In this sense, accountability is more about answering the questions "what has been done to improve sustainability?"

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57 Conceptual and linguistic distinctions between the terms accountability and responsibility can be very difficult. For instance, in some languages, such as Norwegian and Russian, there are no clear conceptual linguistic equivalents to make a meaningful distinction between these concepts.

From these two perspectives, what is the role of accounting if we want managers to act more in terms of individual responsibility toward improving business sustainability rather than act in terms of being accountable for his/her actions to some external actors? Most of the *regulated* accounting practices (e.g., through both "soft" and "hard" accounting standards for how accounting information should be registered, measured and communicated to prepare, present and defend "historical" accounts) are designed with the intent to promote accountability rather than responsibility. These norms, when applied in organizations, very often influence design and also the use of *non-regulated* accounting practices (e.g., management accounting and calculation practices). From these perspectives, what is the role of accounting information in making managers act more individually responsible and to work with sustainability? How well is regulated accounting (or put it in another way – formal accounting) suited to promote managerial responsibility for sustainable operations? These inherent questions bring us to another important consideration – managers as users of different types of accounting information.

Regulated (formal) accounting and managerial cognitive models

Our own previous research has motivated us to look closely here into the problems of how managers as decision-makers use different types of accounting information and how it can be linked to notions of responsibility and accountability as discussed above. For instance, when studying successful entrepreneurs, Hansen (2005) has demonstrated that decision-makers use two types of accounting information: the regulated (formal) accounting systems and another non-formalized system which can be termed as "the cognitive accounting model". While the formal accounting system manifests itself mainly through the use of the written accounting reports, the cognitive accounting model is a state of mind which influences entrepreneurial perception of business reality. It is a kind of cognitive map or scheme which is developed over a longer period of time (a kind of knowledge reservoir) and influences what the entrepreneur sees, thinks and talks about. In this sense, it is a cognitive accounting model which helps entrepreneurs to act responsibly towards their own business, but not necessarily identical with the notion of accountability that is associated with formal accounting systems.

In another study of management control systems in two big corporations, Bourmistrov and Kaarbøe (2013) demonstrate that the formal accounting system[58] designed to promote accountability put decision-makers into so-called "comfort zones". The "comfort zone" is an induced mental state resulting in a decision-maker's operating with a sense of comfort and security. In the studied

58 The study focuses on budgeting, but because budgets drive performance and corresponding accounts in the system of formal accountability for financial results, we use concepts of budgeting and accounting interchangeably here.

cases, the "comfort zone" resulted in dysfunctional behavior in decision-makers, who put more efforts into the repetitive, ritualistic and gaming behavior induced by the system of accountability for financial results. Managers were acting less responsibly in terms of exploring for new business opportunities. In order to act more responsibly, decision-makers had to make a transition from the "comfort zone" to the "stretch zone". The "stretch zone" is characterized by new features in the decision-makers' mindset and behavior, particularly when a decision-maker appraises in a positive way continuous business challenges, varieties and diversity of work tasks faced, all of which fall within the category of non-routine behavior at work. New accounting information was needed to complete this task and therefore new accounting systems were developed. New accounting information induced more responsible behavior and enabled better forward-looking and strategy-oriented decisions in situations requiring negotiations and learning, which facilitated the move of decision-makers into the performance "stretch zone".

Conclusions and implications for further research

From perspectives of the aforementioned research, focus on accounting from an accountability point of view is important but should become a part of a broader concept of responsibility. Accounting should not only be researched as a tool used to enhance accountability towards stakeholders but also as an enhancer of the notion of responsibility of managers for making decisions that result in superior economic, social and environmental operations and impacts. Previous research is dominated by theories which assume that managers are irresponsible and opportunistic agents of principals guided by notions of self-interest. McGragor (2006, 1960) has questioned the appropriateness of those assumptions. Ghoshal (2005) argues that managers may act as irresponsible and opportunistic agents because the accounting system designed to guide managerial behavior is actually used in congruence with assumptions of managers being irresponsible and opportunistic agents.

Focus on responsibility and the use of accounting from perspectives of managerial cognitive models and comfort/stretch zones may offer interesting insights into how we can understand managerial behavior from the perspective of sustainability. Corporate social responsibility used in a suitable way may become a tool to help managers make both profitable and ethical decisions at the same time.

We need more research based on the assumption that managers function as institutional entrepreneurs who would like to contribute to organizational and societal development and to explore their business environments from perspectives of sustainability. However, a change in managerial behavior towards more responsibility for the environment and social performance will require the development of new cognitive accounting models and will require moving

managers out of their "comfort zones", away from their "business-as-usual" attitudes and into "stretch zones". This may challenge and likely will be hampered by the existence of well-institutionalized accounting systems focusing on stakeholder accountability. The question is how accounting research can contribute to this new task.

We suggest that the following research questions can guide future research.

- How do managers interpret the concept of sustainability in terms of cognitive accounting models? How do managers use these cognitive models in decision-making concerning the formulation of business strategies and operations? How are these cognitive models different compared to formal financial accounting?
- From the perspective of sustainability, what constitutes managerial "comfort" zones and what constitutes "stretch" zones in terms of a particular mindset and behavior? In terms of sustainability, how and to what extent are concerns about climate change and social issues reflected in the transition of decision-makers from "comfort" to "stretch zones"?
- How does the transition from "comfort" to "stretch" zones contribute to changes in the supply of and demand for information? Do these changes improve decision-making and result in more responsible managerial behavior in the "stretch zones", and if so, in what particular ways?

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