Stockholm School of Economics
Department of Management and Organization
Master of Science in Business and Economics

Sustainability accounting between organizational legitimacy and efficiency

An exploratory case study of two sustainability leaders

Niccolò Ricci
40344

Abstract

The increasing attention to corporate sustainability over the past few decades determined a surge in the need for information linked to organizations' environmental and social performance. In this perspective, sustainability accounting has emerged as key provider of that information, as it enables the measurement, the control and the reporting of a corporation's environmental and social issues. Nevertheless, management research has not developed thus far a comprehensive paradigm for the topic and corporations still encounter challenges in finding a suitable approach. Hence, the aim of this study is to explore how sustainability accounting is managed in companies with strong experience in sustainability management. In this perspective, the influence of organizational legitimacy and efficiency pressures on sustainability accounting is analyzed. Accordingly, qualitative case studies were conducted at two leading corporations in the field of sustainability management. As a result, a model was developed showing that efficiency and legitimacy forces have a crucial role in shaping this function. Sustainability accounting supports the translation of the strategy into operations, thus answering to efficiency needs. At the same time, it enables communication with external stakeholders, hence resulting key in ensuring organizational legitimacy. When dealing with the topic, companies appear to experience a contrast between their need for a tailored approach and the external requests for standardization and comparability. It was found that organizations could answer to this tension by translating the institutionalized standards into a model that suits their characteristics. This study contributes to the management literature by widening the spectrum of factors to be considered when researching on sustainability accounting. Additionally, practitioners can find guidance about the critical aspects to consider when dealing with the design and the management of these systems.

Supervisor: Mats Jutterström
Presentation: December 2013

Master Thesis – Fall 2013/2014
Part of the examination for a Master of Science in Business and Economics
at the Stockholm School of Economics

ACKNOWLEDGEMENTS

First and foremost, I would like to thank my supervisor, Mats Jutterström, for his extremely valuable advice, guidance and comments throughout the progress of writing this thesis.

Furthermore, I wish to express my gratitude to the two companies that have been part of this study, and in particular to the managers that took the time to share their views on the topic. Without their cooperation, this thesis would not have been possible.

Finally, I would like to thank my family, for their constant inspiration and support throughout my studies.

Stockholm, December 2013

Niccolò Ricci

TABLE OF CONTENTS

LIST OF FIGURES

1 Introduction

This section aims to give the reader the background of the research context, presenting the theoretical starting point of the research and its relevance. Thereafter, the research question and the purpose of this work are outlined.

1.1 Background

1.1.1 Pressure towards sustainability initiatives in organizations

The last few decades, and in particular the last years, have seen a great increase in interest around the topic of corporate sustainability. This interest is not confined to the academic world, but it fully concerns also the businesses operating worldwide, as demonstrated by the over 10,000 corporations from over 130 countries that have signed the UN Global Compact[1] (UN Global Compact, 2013). One of the consequences of this increased attention to the topic is a mounting pressure coming from the external environment towards corporations for more sustainable behaviors. Firstly, consumers are more and more attentive to environment and social issues deriving from businesses providing them goods and services (Kiron et al., 2012). Furthermore investors, both individual and institutional, consider more and more aspects other than financial ones when making investment decisions, as demonstrated by the large and growing market interest in companies' environmental, social and governance performance and policies (Eccles et al. 2011). Sustainability is considered having an increasing effect on employees' loyalty and motivation as well as recruiting, as job seekers are increasingly adopting ethical considerations when choosing a new employer (Kiron et al., 2012). The number and the influence of NGOs monitoring environmental impact of corporation is increasing, and even business periodicals such as Fortune, Forbes and the Financial Times are now offering rankings based on social or environmental sustainability of companies (Brønn and Vidaver-Cohen, 2009). As a consequence of these dynamics, there is an increasing pressure on corporations to adopt more sustainable practices: especially in large companies, the fear of a loss in legitimacy and reputation is one of the main drivers for sustainability initiatives (Siebenhüner and Arnold, 2007).

---

[1] The UN Global Compact is a policy initiative promoted by the United Nations for businesses that are committed to aligning their operations and strategies with principles in the areas of human rights, labor, environment and anti-corruption (UN Global Compact, 2013).

1.1.2 Integration of strategy and sustainability

As a consequence, the question of how sustainability can be implemented efficiently is assuming an increasingly central position, as this aspect represents a real challenge for companies that are involved in this process (Epstein, 2008). Implementing sustainability can be a “double-edged sword” (Haugh and Talwar, 2010 p. 387), as the research of long-term benefits might be negatively counterbalanced by loss of short-term focus and profitability (Haugh and Talwar, 2010). According to the authors, firms should integrate sustainability in their own strategy, in order to integrate it in a way that creates value also in a financial perspective. This integration often requires a radical organizational change, as products and processes have to be adapted, or even radically changed and re-invented (Siebenhüner and Arnold, 2007). Organizational learning and change does not involve only strategy and processes. Units and managers are typically measured on purely financial indicators: therefore, Epstein (2008) claims that a sustainability strategy should include measurement and incentives systems that take into account new criteria. Furthermore, introducing sustainability measurement and reporting would also tap into the market request for non-financial information that investors are seeking (Eccles et al., 2011). Hence, the question of integration and operationalization of sustainability is still an open challenge for many organizations around the world.

1.1.3 Sustainability accounting

The literature underlines the importance for companies of finding ways to measure, control and report their performance in the field in order to integrate sustainability and strategy. Schaltegger and Burrit (2010) for instance, argue that “anybody pursuing sustainable development as a corporate goal will sooner or later face questions about the metrics used to operationalize sustainability and how these are communicated” (Schaltegger and Burrit, 2010 p. 377). Therefore, the attention around the topic of sustainability accounting has surged in the last decades, and the subject has been increasingly analyzed by scholars. For instance, Schaltegger, Gibassier and Zvezdov (2011) conducted a comprehensive review of environmental management accounting, and found out that in the last twenty years the topic moved from a niche to a more mainstream position. As a matter of fact, according to several authors (e.g. Lamberton 2005, Schaltegger et al. 2003), sustainability accounting has a very important role in supporting the development of sustainability initiatives in corporations.

1.2 Problem discussion

Despite the increasing interest around the topic of sustainability accounting, the majority of publications has been thus far very conceptually oriented and the amount of empirical work is very limited (Schaltegger, Gibassier and Zvezdov, 2011). In this sense, Taticchi (2013) argues that there is a lack of published research on the role that performance measurement systems and reporting tools can play in order to support sustainability projects. The reality sees that sustainability measures are not often integrated in strategic performance measurement systems; in addition, the factors that explain how companies' actual practices deal with this integration are largely unexplored (Gates and Germain, 2010). The authors claim that such research should not only address the academic world, but also be relevant for practitioners. Schaltegger and Burrit (2010) advocate further research on sustainability accounting, in particular with the aim of understanding the dynamics linked to the development and the use of sustainability accounting systems in corporate practice, as well as of developing a comprehensive management control approach towards sustainability that is so far missing.

As highlighted in the previous pages, the implementation of sustainability in companies deals in the first place with an external pressure of stakeholders for the legitimation of the company. This concept is strictly related to the role of sustainability accounting. As a matter of fact, following the criteria of sustainability implies for firms to consider responsibilities that go beyond those related to the actors with which they have a direct economical relations, including therefore a wider set of stakeholders (Hubbard, 2009). Furthermore, Epstein and Widener (2010) claim that there is a lack of guidance on the process of identification and evaluation of stakeholders' interests and their integration in the decision-making. On the other hand, it is argued that companies should integrate efficiently sustainability in their strategy (Epstein, 2008). Consistently with this view, Epstein and Roy (2001) report how managers are increasingly requesting support in understanding how the drivers of sustainability performance can be identified, managed and measured, and on how systems and structures can be created to improve sustainability performance. Starting from these considerations it appears that the characteristics of organizational legitimacy and organizational efficiency should also be considered when looking at sustainability accounting. This analysis is particularly interesting because legitimacy and efficiency represent two basic value creators that are crucial for organizations' survival and success (Perrow, 1970; in Milne and Patten, 2002). Nonetheless, the relation between these two forces can be complex, as legitimating actions do not always answer criteria of efficiency and these forces might actually be in contrast with each other, hence representing a challenge for organizations and management (Meyer and Rowan 1977, Brunsson 1986). Therefore, including these concepts when looking at sustainability accounting can generate interesting insights. Firstly, the topic of organizational efficiency should be included in the analysis, with particular attention to the issue of integration of sustainability. Additionally, the main characteristics and dynamics of the concept of organizational legitimacy should be identified, as well as their influence on organizations' actions.

1.3 Purpose of research

The aspects highlighted above show the relevance of the topic for scholars as well practitioners. Hence, the aim of this thesis is to contribute to the existing research on sustainability management, and to fill the already highlighted gaps in literature, namely the absence of research that is both empirically and theoretically relevant on sustainability accounting, and that provides insights on how this tool can be used by managers and organizations. In this perspective, the purpose is to explore how sustainability accounting is managed in organizations with a leadership position in sustainability. Furthermore, the aim is to investigate how sustainability accounting is affected by the concepts of organizational efficiency and legitimacy, in particular with regard to the need for controlling and steering the company in order to drive corporate and sustainability performance on the one side, and the need to answer to the external pressure of stakeholders on the other side.

1.4 Research question

The previous considerations lead to the formulation of the following two overarching research questions:

"How do sustainability leaders manage the function of sustainability accounting?"

"How is sustainability accounting influenced by efficiency and legitimacy demands, and how can the relation between them be explained?"

The first question aims at investigating the approach to sustainability accounting in corporations that are considered leaders in sustainability. In particular, the aim is to understand what are the critical success factors in designing and managing sustainability accounting systems. Subsequently, the aim of the second question is to understand the implications of both efficiency and legitimacy needs, in order to identify how they contribute to shape the role of sustainability accounting and how they can be dealt with when approaching the management of the function.

By developing recommendation on the management of sustainability accounting, the aim for this paper is to make both theoretical and practical contributions.

1.5 Disposition

In the following section, a short outline of the main parts of this work is provided:

Chapter 2: Theoretical Framework
Firstly, background literature related to the topic is presented, in order to provide the reader with a context for the subsequent conceptual development. In the second part, the theoretical framework of this work is explained. Finally, a literature review in perspective is conducted.

Chapter 3: Methodology
In this chapter, the chosen methodology is described. Research approach, case study set-up and the companies selected are presented, followed by the explanation of the procedures for data collection and analysis. Finally, potential quality issues related to this study are addressed.

Chapter 4: Empirical Data
The fourth chapter presents the empirical findings of the thesis. The data collected from interviews and reports are structured according to the theoretical framework developed in the second chapter. In each section, key quotes from the interviews support the presentation of results.

Chapter 5: Analysis and Discussion
In this chapter, the findings of the study are analyzed and discussed, mainly by using the theory presented in the theoretical framework and following its structure. The management of sustainability accounting in the studied organizations is presented, followed by an analysis of the main influences of efficiency and legitimacy needs.

Chapter 6: Conclusion

The work will be concluded by presenting the findings, the theoretical and managerial implications as well as the limitations of the study, followed by an outlook on the avenues for future research.

2 Theoretical framework

This section aims to present the theoretical framework on which the present work is based. Firstly, the reader is provided with some relevant concepts related to the theoretical background of the work. Secondly, the conceptual development and the derived framework are explained. Thereafter, a literature review of the relevant topics is conducted, followed by a short summary of the chapter.

2.1 Background literature

2.1.1 Definition of sustainability

On a broad level, sustainable development is defined by the United Nations (WCED, 1987) as a development that meets the needs of the present without compromising future generations to meet their own needs, in particular with regards to two core concepts of social and environmental responsibility. Narrowing this concept down to the business world, Dyllick and Hockerts (2002) defined corporate sustainability as "meeting the needs of a firm's direct and indirect stakeholders, without compromising its ability to meet the needs of future stakeholders as well" (Dyllick and Hockerts, 2002 p. 131). This idea is based on the triple bottom-line concept developed by Elkington (1994) in which it is argued that beside the economic sustainability, corporations should be able to satisfy also requisites of social and environmental sustainability. Therefore, the emphasis on short-term gains that has directed corporations' decision making in recent years has to be integrated with long-term considerations (Dyllick and Hockerts, 2002).

2.1.2 Evolution of research on sustainability

The interest of researchers around the topic of corporate sustainability has surged in the last decades, touching several different points and perspectives. Nevertheless scholars, just like practitioners, have struggled to find a clear paradigm for the topic. The theoretical justification for corporate sustainability, as well as for Corporate Social Responsibility in general, saw two different views opposing each other, namely the classical and the socioeconomic view (Rath and Gurtoo, 2012). On the one side, the classical view, proposed by Friedman (2008), argues that the aim of a business is to maximize its profits. Therefore, the responsibility of the managers is to maximize gains for the people that invested in the corporation itself, i.e. the shareholders. On the other side, there is the socioeconomic view, sustained for example by Freeman (1983). According to this perspective, corporations receive the possibility to operate from the society, and therefore owe something back to it. This school of thoughts theorizes the existence of a social contract, and argues that corporations should be responsible and sustainable out of gratitude and reciprocation with the society.

In light of this discussion, the relation between sustainability and profitability has been analyzed empirically, as researchers had tried to demonstrate for years whether a clear link between sustainability and financial performance exists. Nonetheless, the reality is that there is no such an automatic link, and that the fact of introducing some sort of sustainable initiative does not automatically guarantee financial success (see for example Aragon-Correa and Rubio-López 2007; Wagner 2007; Schaltegger and Synnestvedt 2002).

2.1.3 Development of sustainability accounting

The growing importance of sustainability triggered an increasing number of organizations to collect, use and distribute sustainability-related data and information (Schaltegger et al., 2003). In order to respond to this trend, the function of sustainability accounting emerged, as its role is to provide and transmit that information, with the same purpose with which conventional financial accounting deals with financial information and objectives (Lamberton, 2005). The literature proposes sustainability accounting as an entirely new system of accounting, or as an extension of traditional accounting functions, depending on who the people in charge within the organization are and on which type of information is collected. In both cases, the starting point is that the conventional accounting systems overlook environmental and social issues related to the company's activity, and are therefore are not adequate to drive decision-making in organizations that want to proactively manage sustainability (Bennet et al., 2013).

Nevertheless, the term "sustainability accounting" has become a rather generic term, and although attempts have been made, few definitions of sustainability accounting exist (Schaltegger and Burrit, 2010). For the purpose of this paper, it was chosen to focus on an idea of sustainability accounting that builds up on the concept of the "triple bottom-line" coined by Elkington (1994). This concept is based on the perspective that a company should not just consider its financial performance, but also the environmental and social ones, as the activity of the firm generates impact on all three of these areas. Therefore, the concept of the triple bottom-line emerged as new tool to measure organizational performance and implies that, beside economic performance, also environmental and social performance should be measured (Hubbard, 2009). Starting from these considerations, the following definition of sustainability accounting was developed: "the set of activities and processes aimed at integrating social and environmental performance into companies' performance measurement systems, in order to facilitate the control and the reporting of such issues".

According to Lamberton (2005), the influence of traditional accounting principle on sustainability accounting are widely acknowledged, as the majority of approaches to it takes inspiration from conventional accounting principles and practices. At the same time, the author claims that it is not proven whether applying traditional accounting principles to sustainability is beneficial.

The involvement of traditional accounting into sustainability management is discussed by the literature as well. Zvezdov et al. (2010) for instance, claim an increasing involvement of the accounting function as well as a recognizable participation of accountants. The involvement of accountants is often seen as valuable: Ballou et al. (2012) for example claim that using accountants' expertise, especially in terms of risk management, financial reporting and independent assurance, increases the strategic integration of sustainability initiatives. Ross (2010) adds that beside their analytical skills, management accountants can contribute with their experience in communicating with different management functions. In order to leverage on this potential, Medley (1997) points out that accountants should receive tailored trainings in order to improve their understanding of sustainability issues, and promote best practices to develop their role.

For the purpose of the present work, the topic of sustainability accounting could have been analyzed from several perspectives. A first possible approach could have been to start from the theory on traditional accounting and to attempt transferring it to the literature on sustainability accounting. Nonetheless, the transferability of accounting principles and dynamics to sustainability has not been proven so far (Lamberton, 2005). Furthermore, sustainability accounting appears to require a specific approach, as the literature recognizes limits in the underlying philosophy of traditional accounting applied to sustainability, due for example to its focus on quantitative and monetary measures (Schaltegger and Burritt, 2010). Besides, this work focuses on the relation between sustainability accounting and legitimacy and efficiency forces: using literature on traditional accounting was therefore not central for this purpose. Another option could have been to focus on a deep analysis of the characteristics of the systems themselves, looking at the technical aspects and the specific tools that are used in sustainability accounting. Ahlrichs (2012) for example, claims that sustainability controlling requires new or enhanced tools and metrics in order to be successfully utilized. However, following this approach presented the risk of remaining very theoretical without creating any new valuable insights: in this sense, Gates and Germain (2010) claim that sustainability measures are often not integrated and companies' actual practices are still unexplored. Therefore, the approach chosen for this paper rather focuses on providing a clear picture of the management of sustainability accounting in leading organizations, highlighting the dynamic and interplays between the development and integration of the processes with internal management and external stakeholders.

2.2 Conceptual development

The aim of the presented framework is to develop a theoretical base for the analysis of the empirical part. The starting point is an analysis of sustainability accounting, whose function is to support the formulation of key performance indicators and the design of reporting systems, establishing a link between sustainability, business success and reporting (Herzig and Schaltegger, 2006). Therefore, the central part of the framework deals with literature on the topic of sustainability accounting.

Finding inspiration in Schaltegger et al. (2003), sustainability accounting was divided in two areas, sustainability controlling and sustainability reporting. These two areas represent the two main functions of sustainability accounting: on the one hand the internal perspective, that means the integration of sustainability as well as the control and the steering of operations; on the other hand the external perspective, the communication with stakeholders and sustainability reporting (Taticchi, 2013). This approach is also supported by Bartolomeo et al. (2000), who argue that environmental accounting has two primary targets, on the one hand internal decision support to the management on environmental issues, and on the other hand external reporting of environmentally related information. As a clear definition for these two functions is thus far missing, the sections relative to sustainability controlling and reporting start by defining the approach taken on the functions by this work, and continue with a review of the literature in perspective. The management literature provides a rich amount of normative theory on the topic of sustainability accounting. Despite the fact that the correctness of these theories has not been proven so far, a review of the existing research results interesting, as it generates a frame for comparing what has been theorized with what is actually done by sustainability leaders.

The framework is further developed by following the argument of Herzig and Schaltegger (2006), according to who the challenge for corporate sustainability management is not only to manage the economic, social and environmental performance of the company, but also to communicate with external stakeholders about how sustainability issues are dealt with and managed. Accordingly, Schaltegger and Burrit (2010) list six reasons that push managers to establish systems that provide information for monitoring the sustainability performance of the company (see Figure 1 below).

Reasons for sustainability accounting systems

1. Green washing
2. Mimicry and industry pressure
3. Legislative and stakeholders pressure
4. Self-regulation
5. Corporate responsibility
6. Managing the business case

Figure 1 – Reasons for sustainability accounting systems

The first three of these reasons (green washing; mimicry and industry pressure; legislative pressure, stakeholder pressure and ensuring the "license to operate") concern the necessity of responding to demands from external actors. The following three (namely self regulation; corporate responsibility and ethical reasons; managing the business case for sustainability) deal with the need of the company to be able to control and steer its sustainability strategy efficiently. In this sense, Schaltegger and Burrit (2010) argue that even the design of goal and target driven frameworks cannot exclude the identification and assessment of the key stakeholders. The aim of this work is therefore to analyze the interplays between the pressure for organizational legitimacy, the strive for an efficient management of the company and the function of sustainability accounting, observing whether these forces are in contrast or if and how they can be leveraged on each other.

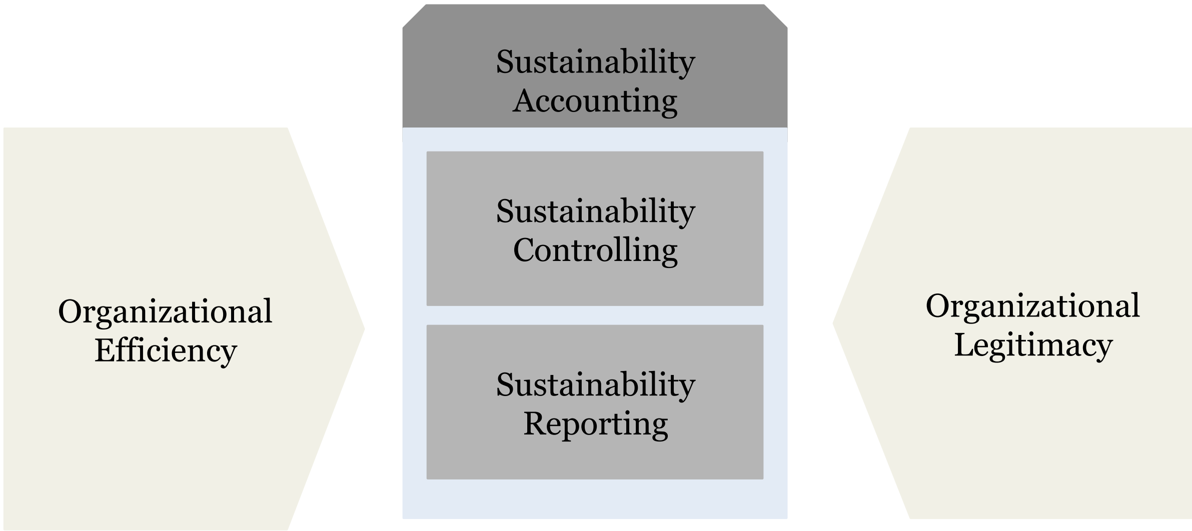

Figure 2 – Theoretical Framework

Hence, there are two further bodies of research that are relevant for the present study and that should therefore be included in the theoretical framework (see Figure 2 above), as they provide a frame to better analyze this dualism of forces. The first one draws from organizational efficiency, and explicates the mechanisms internal to the companies that strive for the integration of sustainability into the corporate strategy and for an efficient management of sustainability issues. The second one draws from organizational legitimacy, and analyzes the nature and the characteristic of the pressures coming from the external environment on organizations. These two aspects represent the forces that put pressure on the organizations.

2.3 Literature Review

2.3.1 Sustainability controlling

The first purpose of implementing sustainability accounting is to provide information to the management, thus enabling its decision-making (Bartolomeo et al., 2000). Hence, for the scope of the present work, the following definition of sustainability controlling was developed: "the set of systems and processes aimed at measuring a company's sustainability performance, in order to provide meaningful and decision-making enabling information to its management". Hence, the attention around the topic of sustainability measurement and controlling has notably increased in the last years (Bonacchi and Rinaldi, 2007). Furthermore, the tendency for organizations is to have an increasingly integrated approach of their sustainability initiatives and of their performance, while in the past the focus was mostly on single projects and activities (Zvezdov et al., 2010). The fact of having an integrated approach raises several questions about the management of this process. According to the literature, it is crucial to select the right indicators to measure and manage the goals of the organization. Thereafter, it should be defined how to combine environmental and social aspects in the performance measurement systems and processes in order to enable decision-making (Schaltegger and Burrit, 2011).

Measurement of sustainability

According to the literature, companies should develop a measurement system that is relevant for their business. As a consequence, core topics for the company as well as sustainability targets should be identified (Schaltegger and Burrit, 2010). Several authors point out that the collection of information about sustainability can differ substantially from the traditional accounting practices. The nature of sustainability indicators can be very different from conventional measurements, as they often imply long-term horizons, they are not always clearly measurable and intrinsically highly uncertain (Epstein and Widener, 2010). Conventionally, the focus is on market issues and processes, while the value added of sustainability is to go beyond this focus, including aspects that develop out of the market sphere but that have an impact on the business. Therefore, the challenge in this sense is to identify sustainability issues and processes (both market and non-market ones), to evaluate their relevance to business success and to provide support to the management in decision-making (Schaltegger and Burrit, 2011). As a matter of fact, conventional management control systems are often neglecting information that is not expressed directly in monetary terms (Schaltegger and Burrit, 2011), while sustainability-related information might include unconventional sources of information, such as interview data, survey data and other external databases (Epstein and Widener, 2010). Furthermore, in comparison to financial indicators, social and environmental ones can be very company-specific, and therefore difficult to quantify (Hubbard, 2009). Schaltegger and Burrit (2010) emphasize how a too strong prominence of monetary measurements in this stage might jeopardize the possibility of having a complete picture of opportunities and risks. This approach is consistent with Hespenheide et al.'s view (2010), as they argue that the indicators developed will not only be important for tracking the financial success of the organization, but also to understand and highlight sustainability related risks as they become more salient.

Adding several new indicators to systems that are already very complex could create a complexity difficult to manage. Ahlrichs (2012) argues that actually companies often use more indicators than what would be necessary for compliance with the law and for the steering of the company. Therefore, he claims that the focus should be on few but critical

KPIs, in order to create value in decision-making without an unnecessary increase in complexity and resources requirements. The focus should be then on quality rather then quantity of indicators: Hespenheide et al. (2010) for example, point out that mature organizations use relative measures (e.g. emissions per unit of product), or even measures in context (e.g. based on the country), in order to have information that is more meaningful and manageable.

Systems for sustainability controlling

According to the literature, once the indicators are selected, controlling systems should be implemented in order to enable decision-making. Ahlrichs (2012) argues that the scope of the company's controlling has to be enlarged, including new indicators and new tools. As the impact of the organization will not be only financial anymore, stakeholders groups that were not considered before should also be involved. This perspective, that creates a stronger link between sustainability measurement and sustainability reporting, is advocated also by Schaltegger and Burrit (2010) as well as by Epstein and Widener (2010).

Wagner (2007) argues that integrating sustainability management with the core managerial processes and functions of the firm is a crucial step in order to respond to market and non-market pressures companies are exposed to. Consistently with this view, Judge and Douglas (1998) claim in their study that companies in order to respond to new strategic issues integrate them into their formal strategic planning process. Supporting their argument, they found that the level of integration of environmental management concerns in the strategic planning process was positively related to financial and environmental performance. Additionally, it is pointed out in the literature that, similarly to traditional business activity, voluntary corporate initiatives can be conducted more efficiently if basing them on relevant and robust information (Schaltegger et al., 2012).

Epstein and Widener (2010) report that managers are often concerned with the reliability and validity of comprehensive sets of performance measures, limiting their use of them, even though such comprehensive sets could help to reduce uncertainty and facilitate decision-making. In this perspective, the target for sustainability management should be to find "methodologically convincing approaches" (Schaltegger and Burrit, 2011 p. 10) that are able to identify as clearly as possible cause-and-effect chains, enabling decision-making. As a consequence, Schaltegger and Burrit (2010) claim for a higher involvement of sustainability accounting and accountants in this process. In fact, they could support the engagement of management in the development of corporate sustainability and their decision-making, support the review of results and processes as well as facilitate communication throughout the company.

2.3.2 Sustainability reporting

Drawing from Bartolomeo et al. (2000), the second purpose of sustainability accounting is to report externally organizational performance on sustainability issues. The last decades have seen a surge in the quantity of information disclosed by companies, far beyond what is required in order to comply with legal requirements; most of this information concerns non-financial information (Meek et al., 1995). When looking at sustainability reporting, Kolk (2003) observed that in 2001 the 45% of Fortune Global 250 companies was issuing sustainability reports. In 2013, that number raised exponentially to 95% (Ernst and Young, 2013). The explanation for this large increase is that conventional reporting is criticized for not allowing a clear understanding of companies' sustainability-related issues. Therefore, additional disclosures related to such issues were requested (Schaltegger and Burrit, 2010). Given the increase in sustainability initiatives, companies will be increasingly requested such information, and particular to develop and report sustainability metrics, from environmental impact measures to social performance indicators (Hespenheide et al., 2010). Hence, for the purpose of this work, sustainability reporting was defined as "the set of systems and processes aimed at reporting a company's sustainability performance, in order to provide relevant information to its stakeholders".

Reasons for sustainability reporting

The literature mainly identifies three factors that induce companies to report on sustainability performance (see for example Hespenheide et al., 2010; Ross, 2010; Alrichs, 2012). Firstly, organizations must comply with the law. Even if regulation is still evolving in this field and the landscape is scattered with fundamental differences among countries, regulations on sustainability reporting is evolving rapidly, and the requirements in terms of indicators to be disclosed is likely to increase (Hespenheide et al., 2010; Ross, 2010). For instance, the European commission organized in 2009 debates including several stakeholders about the topic of environmental, social and governance disclosure, building the foundations for future regulations (Ioannou and Serafeim, 2011). Secondly, researchers argue that there is a strong increase in stakeholders demand for information on social and environmental performance of companies. As sustainability issues influence factors such as the "quality and sufficiency of vital resources in the world" (Hespenheide et al., 2010 p. 57), there is interest from diverse types of stakeholders in companies' use of this sort of information (Hespenheide et al., 2010). Reporting on such issues is crucial for organizations to increase the trust of stakeholders (Ahlrichs, 2012) and to signal a eagerness to be transparent about how sustainability is treated and dealt with, helping the organization securing legitimization for its activities and maintaining good relationships with its stakeholders (Herzig and Schaltegger, 2006). Thirdly, the literature reports an increase in interest coming from financial investors and shareholders concerning social and environmental performance (Hespenheide et al., 2010). This phenomenon was not only determined by an increase in socially responsible investments funds, but also by an increase in traditional investors, such as for instance private equity funds (Eccles et al., 2011). In addition, Ioannou and Serafeim (2011) found evidence that sell-side analysts were more likely to generate more positive recommendations for companies with better social, environmental and governance performance. A further confirmation of this increase in interest is represented by the fact that the majority of initiatives in the last decades aimed to improve companies reporting focused on non-financial information, in particular related to companies' environmental, social and governance performance (Eccles et al., 2011).

Structuring reporting initiatives

The method with which companies are assessed externally in terms of sustainability can profoundly affect the way in which they are appraised; the level of corporate sustainability is not only influenced by the concept of sustainability itself, but also by how it is researched, e.g. set of attributes used, number and types of indicators, techniques used (Benijts, 2008). Therefore, Herzig and Schaltegger (2006) analyzed how sustainability reporting can be optimized in order to communicate the actual performance of the company on sustainability matters. They identified different patterns (see Figure 3 below).

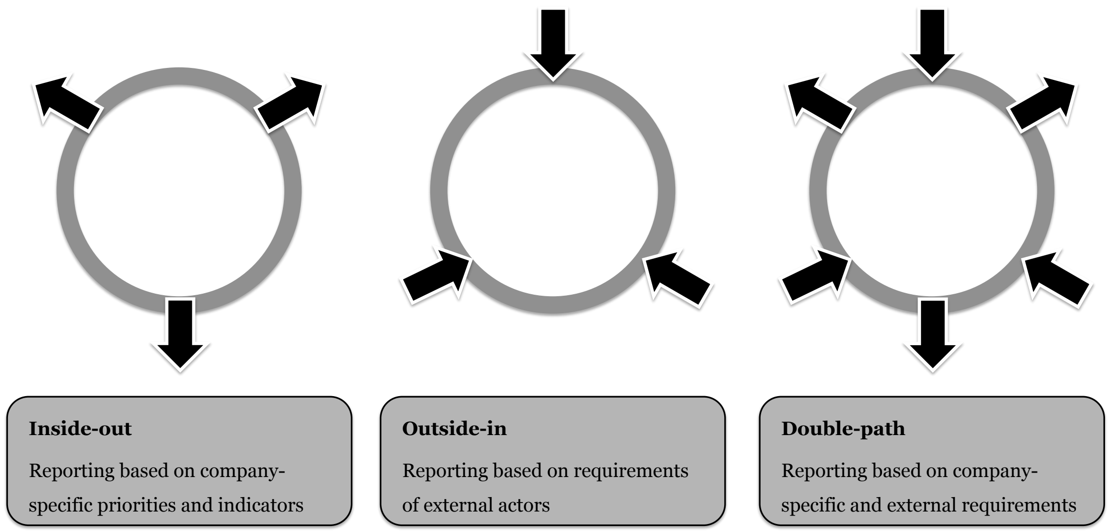

Figure 3 – Approaches to sustainability reporting

The first one, labeled “inside-out”, implies the reporting of sustainability based on the company’s specific strategic priorities and sets of indicators. The second one, called “outside-in”, entails that a company structures and builds its reports based on the requirements of external actors (e.g. rating agencies). The choice of these approaches clearly poses a challenge. On the one hand, it is important to consider the role of external schemes in order to fulfill society’s expectations and goals. On the other hand, generating and reporting information that is not truly reflected on aspects that are relevant for the companies’ activities and business could harm the performance (both in terms of financial and sustainability performance) of the company. As reports are intended to be communication tools directed to stakeholders, they do not really support managers by giving a framework for the planning and monitoring of corporate activities (Manetti, 2011). Hence, Herzig and Schaltegger (2006) recommend for sustainability reporting a “double-path approach”, which combines the alignment of the characteristics of the company’s strategy with the approach of adapting to the external schemes.

In this perspective, the role of sustainability reporting standards is central and, as a matter of fact, over the last decades several institutions and actors have published guidelines, regulations and standards aimed at giving guidance in harmonizing corporate sustainability reporting. Some of the most well known examples are the guidelines of the Global Reporting Initiative (GRI), those of the World Business Council for Sustainable Development and the standard ISO 14063 for environmental communications (Herzig and Schaltegger, 2006). A case in point in this respect is represented by the GRI, founded in 1997 as collaboration between CERES (Coalition for Environmentally Responsible Economies) and UNEP (United Nations Environment Program) and whose guidelines are today adopted by more than 4,900 organizations around the world (Taticchi, 2013). The main part of GRI’s framework is represented by the “Sustainability Reporting Guidelines”, that provide guidance in terms of reporting content, quality and boundary (see Appendix III for an overview of the indicators’ categories). The choice of the level of the standard (A, B or C) determines the number of indicators to be disclosed, and the report can be certified and audited by third parties in order to receive a higher score (relatively, A+, B+ or C+) (Taticchi, 2013).

Eccles et al. (2011) report that one of the main issues for a widespread acceptance and use of non-financial information from the perspective of investors and stakeholders in general is the lack of a generally recognized framework or standard for the reporting of such information, that would allow greater transparency and comparability. On the other hand, especially in the last few years the area of sustainability reporting standards seem to have reached a considerable level of development. In particular the GRI framework, given its level of diffusion and trend of adoption seems to have affirmed itself as the leading standard worldwide for sustainability reporting in large corporations, further contributing to this maturity (Taticchi, 2013). Furthermore, Etzion and Ferraro (2010) bring another interesting consideration about GRI and the other frameworks. If on a first moment they were perceived as a mere convention imposed from the environment and therefore triggered only superficial and rather passive adoption, the authors claim that this role evolved and companies started finding inspiration from the standards to tackle the sustainability challenge.

In parallel to the growth in adoption of sustainability reporting standards, there has been an increase in the assurance of the information contained in the reports. This assurance is normally performed by external and independent providers (Manetti and Toccafondi, 2012) and its purpose is to increase the credibility and reliability of the information reported (Smith et al., 2011). Manetti and Toccafondi (2012) also report that recent studies estimated that about 40% of the sustainability reports issued by large corporations has been audited by an external body.

2.3.3 Organizational efficiency

Organizations are units whose essence is the attainment of specific goals (Etzioni, 1964). While reaching their goals, organizations aim to be efficient. This means, organizations aim to have in their operations an output – input ratio that is high enough to ensure their competitiveness with regards to other actors (Jutterström and Norberg, 2013). The implementation and operationalization of sustainability can have a significant impact on organizational performance (Haugh and Talwar, 2010). Therefore, it is important to consider the need for efficiency that corporations have when dealing with sustainability-related issues and processes. The literature claims that in order to answer to this need, corporations should deal with the integration of sustainability into the company's strategy and processes (Ross 2010, Epstein 2008,).

Integrating sustainability in the strategy

Ross (2010) claims that a company's activities should be integrated into the company's strategy in order to exercise control on sustainability initiatives and to leverage on their potential for creating value for the company. According to Wagner (2007), the integration of sustainability is done through a process based on tacit capabilities that for definition are not easily imitable or replicable by other companies, making the advantage achieved more lasting. In order to fully exploit such potential, the firms will have to develop the capability of integrating sustainability issues into the strategic planning processes of the organization, in order to maximize financial and social outcomes (Judge and Douglas, 1998). Companies should be able to develop systems that are able to quantify sustainability, identify the most critical factors and support management in the implementation of the strategy (Bonacchi and Rinaldi, 2007). In order to develop a viable solution for this problem, Aragon-Correa and Rubio-López (2007) argue that rather than implementing naive one-size-fits-all solutions, firms should develop a "contingent approach to corporate environmental management" (Aragon-Correa and Rubio-López, 2007 p. 372), through which the integration of sustainable practices is tailored on the specific characteristics of the firm.

Transmitting sustainability to the operations

The development of a suitable approach for the integration of sustainable processes into the firm's operations is a critical step for corporations, as aligning strategy, structure, management systems and performance measures is essential for the implementation of sustainability (Epstein, 2008). Connecting the overall business strategy and the sustainable development strategy, that means more concretely defining a sustainability management system and integrating it into the overall business process, still represents a major challenge for the business world (Scherrer et al., 2007). Ross (2010) points out how sustainability issues affect every part of the organization, such as for example research and development, procurement, production, marketing, legal and finance. Thereby, a comprehensive set of several managerial systems such as capital budgeting, performance measurement, human resource management and incentive should be used in order to translate strategy into operations (Epstein, 2008). Companies that present a disconnection for which general management and sustainability functions are not integrated but acting separately often incur in inconsistencies that negatively affect both environmental and financial performance (Wagner, 2007).

In order to implement sustainability, it is important for all managers and employees throughout the organization to be aware of these policies, and to be part of the implementation (Haugh and Talwar, 2010). According to the authors, the change starts with a company wide action that addresses the collectively held shared values, and cuts across business functions, from production to management control. As a matter of fact, as sustainability is a relatively new strategic approach for many companies, performance measurement systems and strategic planning process should be strongly interlinked, in order to not disconnect sustainability from the overall company's strategy and operations. Similarly, Sharma and Ruud (2003) recognized that performance measurement is crucial for business performance. Therefore, having proper measurement systems in place can facilitate the comprehension of sustainability drivers and the management of processes, driving improved sustainability performance (Taticchi, 2013). Supporting this perspective, Gates and Germain (2010) suggest to incorporate sustainability measures in the existing performance measurement systems, tailored to the company. In this context, the role of sustainability accounting can be seen as provider of information about risks and opportunities that an organization is facing linked to sustainability issues (Schaltegger and Burrit, 2010). Finally, Epstein (2008) is highlighting the role that incentives connected to environmental and social performance for managers, which can additionally contribute to proactive sustainability management.

2.3.4 Organizational legitimacy

Researchers and scholars have proposed, over the last decades, several different definitions of legitimacy. One of the most common definition used in the literature is proposed by Suchman (1995) and it "incorporates both the evaluative and the cognitive dimensions and that explicitly acknowledges the role of the social audience in legitimation dynamics" (Suchman, 1995 p.573). Legitimacy is then defined "as a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Suchman, 1995 p.574). Legitimacy is thus generalized beyond specific events or occurrences, and more linked to a longer perspective of multiple actions. Another interesting perspective is proposed by Woodward (1996), who interprets legitimacy as stemming from the cultural values of society, and proposes the concept of a social contract between the organization and the society. Such social contract, which can be also assimilated to a principal-agent relationship, implies that businesses hold a mandate given from the society, which could be withdrawn if organizations are not acting properly. Therefore, the literature expresses the concept that, in order to get or retain legitimacy, organization are modeled and limited by the pressure exercised by the institutional actors. A large body of research has demonstrated the importance of having legitimacy for organizational success (see for example Deephouse and Suchman 2008 for a comprehensive review).

Elements influencing organizational legitimacy

Organizations should deal with the pressure from the external environment in order to preserve their legitimacy (Suchman 1995). As a consequence of this pressure, organizations have to reflect values and norms that do not stem from the organizations themselves but rather from the institutional environment which they cannot strongly influence (Brunsson, 1986). Organizations' survival is not only determined by economic principles such as efficiency and profits, but also upon the acceptance of outputs and methods of operation by significant sectors of their environment (Perrow, 1970; in Milne and Patten, 2002). The literature, and in particular institutional theory, suggests that there are three different set of factors influencing organizational legitimacy: the characteristics of the institutional environment; the organization's characteristics and actions; the legitimation process by which the environment builds its perceptions of the organization (Suchman, 1995). The nature of the interactions shaping legitimacy is highly context dependent, as it is socially constructed (Kostova and Zaheer, 1999). Given this intrinsically abstract nature of legitimacy, Hybels (1995) argues that its existence has to be inferred from the behavior of the actors involved, for example looking at the resource flow that represent approval and consent of the external environment to the existence of the organization.

Considering the contextual nature of legitimacy, a crucial step to build a successful model of the legitimation of an organization is a comprehensive appraisal of relevant actors and stakeholders (Hybels 1995, Milne and Patten 2002, Woodward et al. 1996). Hybels (1995) puts his emphasis on four main groups that impact legitimacy of organization in the contemporary Western world. The first one is the state, that controls resources flow through contract and grants, but also through regulation and legislation. The public plays another important role, on the demand side as well as in the supply of labor. The third group is represented by media, which perform a monitoring role but also define the ground for organizational actions. Finally, the financial community contributes to the creation of legitimacy by determining the value of the firms. Campbell (2007) integrates other stakeholders that can pressure organizations to social behaviors: industrial or trade associations, NGOs, employers' associations and unions. Milne and Patten (2002) delegate to managers the identification of the "dominant stakeholders", so those actors perceived to have power and legitimacy. Nevertheless, stakeholders' importance and salience may change over time and also according to the issue taken into consideration; therefore it is crucial for managers to be able to prioritize and address the right groups. Similar interest groups are proposed by Woodward (1996), followed by the argument that a company will be more legitimate the more its responses to stakeholders' needs, values, expectations and demands are appropriate. Pfeffer (1981) adds that the legitimation process does not only happen outside of the organizational boundaries, but also inside them, as it contributes to the involvement, motivation and commitment of organizational members.

The legitimation process

Legitimacy is the result of a process of interaction between an organization and its environment (Milne and Patten, 2002). The literature proposes several different approaches to this process (Suchman 1995; Milne and Patten 2002; Wæraas and Sataøen 2013). The first approach is grounded into the resource dependency theory, and according to it, legitimacy is not only achieved by adapting to the environment. Instead, a greater managerial control over the processes is considered, and legitimacy is seen an operational resource that organizations can utilize in the pursuit of their goals (Suchman, 1995). The second approach draws from institutional theory and sees the legitimation process as a process through which organizations are pressured to conform to the existing values, customs and practices observed in similar organizational forms. The result of this process is an increasing homogeneity among organizations, shaping a phenomenon defined as organizational isomorphism (DiMaggio and Powell, 1983). Despite the fact that answering to such requests might cause the organization to lose a point on efficiency, it is argued that "institutional isomorphism promotes the success and survival of organization" (Meyer and Rowan, 1977 p. 349). A third perspective, supported by Scandinavian institutionalism, emphasizes the role of translation (Wæraas and Sataøen 2013). In this perspective, Sahlin-Andersson (1996) claims that organizations tend to imitate success from other actors. While doing so, they can translate what they observed in other organizations, interpreting the model in their own way and adapting it. In this case, the result is not an exact copy but rather something that can differ from the original model. Similarly, Rottenburg (1996) defines the role of translation as the appropriation of an external thing, which is adapted to the context in which it is implemented. This approach partly contradicts the traditional institutional view on organizational isomorphism, rather claiming that translation will produce heterogeneity among organizations (Wæraas and Sataøen 2013). The tension between isomorphism and translation is also highlighted by Friedland and Alford (1991), who explain that organizations are influenced and shaped by forces that are different as well as partly contradictory. Therefore, the adoption of external trends is not seen as a merely passive process, but rather implies organizations to be able to shape proactively their response. In this sense, Røvik (2007, in Wæraas and Sataøen 2013) categorizes the approach to translation in four different rules, according to the degree of adoption of the external idea: copying, addition, omission and alteration.

Independently from the theoretical perspective adopted, the legitimation process is a process that occurs over time, and involves several organizations and institutions (Hybels, 1995). This process involves an ongoing testing and definition of the legitimacy status though a constant interaction with the environment, and being socially constructed is likely to be a bounded rational process, implying significant challenges for the organizations involved (Kostova and Zaheer, 1999). To conclude, it is interesting to mention that managers might implement legitimating initiatives that respond to institutional and external pressure, but such initiatives may actually be more of a façade without any concrete effect on the organizational outcomes and procedures (Milne and Patten, 2002). Therefore, the legitimating process does not necessarily need to produce actual changes, but rather the way the organization is perceived.

2.3.5 Tensions between organizational legitimacy and efficiency

Several authors describe the potential contrast between legitimacy and efficiency for organizations, as it is claimed that these two aspects might not always fit together. Meyer and Rowan (1977) argue that organizations are pressured from society to adopt practices and procedures that are accepted by the institutional environment, even if those practices might conflict with criteria of internal efficiency and control. These pressures could therefore bring organizations to incorporate elements that are legitimated externally rather than having a point of efficiency, to employ external criteria to define the value of such elements, and to be dependent on external institutions to ensure stability. Similarly, Brunsson (1986) claims that organizations sometime have to face strong inconsistencies in areas of their activity that is crucial for their survival. The reason for it is that, in order to ensure legitimacy, organizations try to answer to the requests of powerful stakeholders. These inconsistencies might be conflicting with another organizational goal that is to achieve efficient actions.

The literature proposes several strategies that organizations can follow to gain or retain legitimacy while at the same time not compromising their efficiency. According to Brunsson (1986), organizations generate three kinds of outputs: talks, decisions and products. These outputs are normally used to mobilize and coordinate internal action, but they can also be used as tools to reflect externally norms of the organizational environment: in this case, the author talks about "hypocritical outputs" (Brunsson, 1986 p. 170). Therefore, the legitimating process does not necessarily need to produce actual changes, but rather the way the organization is perceived. Similarly, Meyer and Rowan (1977) describe the process of decoupling, according to which organizations present formal structure to the external environment in order to retain legitimacy, but at the same time the actual practices differ and are rather influenced by practical considerations. Other authors (Sahlin-Andersson 1996, Røvik 2007 in Wæraas and Sataøen 2013) propose the procedure of translation, through which organizations can re-adapt the pressure coming from the institutional environment by creating versions of it whose negative impact on organizational efficiency is reduced.

2.4 Summary

The literature review showed that according to the theory, sustainability accounting has two main functions, the support to internal decision-making and the communication with external actors. Therefore, sustainability accounting was divided into its two main functions, controlling and reporting, and the aspects that are strongly emphasized by the literature were presented. The review of existing management literature provides a frame against which comparing the actual practices of companies, which will be discussed in the fourth chapter. Understanding how and why this topic is approached is important in order to better understand the relation it has with efficiency and legitimacy. These forces are seen by the literature as basic forces that are crucial for the survival of the organizations, and that strongly influence their activities. On the one hand, answering to criteria of efficiency is considered key for the integration of sustainability. On the other hand, legitimacy plays a crucial role in ensuring stakeholders acceptance and therefore the survival of the organization. Nonetheless, the relation between these forces can be complex, as they might conflict with each other. Therefore, the developed framework will be used in the next chapters as a basis for analyzing how efficiency and legitimacy pressures are related to the management of sustainability accounting, and how the relation between them can be explained.

3 Methodology

The purpose of this section is to outline the research methodology used for the present work, and the decisions taken along the way. Firstly, the research approach is explained. Thereafter, the methodology used for the collection and the analysis of the data is presented. Finally, potential issues related to quality are addressed.

3.1 Research approach

Research approaches can be classified as explorative, descriptive or explanatory (Saunders, et al, 2009). For the present study, an explorative approach is more suitable. An explorative study can be used when its purpose is to investigate what happens in specific circumstances that are not well known and to increase the understanding of a problem. This method allows seeking for new insights and assessing "phenomena in a new light" (Robson, 2002 in Saunders et al. 2009 p. 139). Descriptive studies, on the other hand, require a prior deep knowledge of the phenomenon, and explanatory studies focus on establishing clear causal relationships between variables (Saunders et al., 2009). The aim of the present work was to investigate critical factors in the management of sustainability accounting and the interplays with efficiency and legitimacy needs. Such factors and dynamics are mostly unknown as not much has been written on a managerial perspective and therefore the purpose was to increase the understanding of the topic. Therefore, the present research can be considered as exploratory in nature. Considering the exploratory nature of the study, a qualitative approach is more suitable, as pointed out by Ghauri and Grønhaug (2010). Jonker and Pennink (2010) claim that qualitative research aims to identify characteristics and structures of phenomena: this approach fits with the purpose of the present work, as the aim is to identify the interconnections between sustainability accounting and efficiency and legitimacy forces in organizations. Furthermore, qualitative research enables a better understanding of the complex relationships and dynamics thanks to its internal view; additionally, using interviews as source of information allows gathering efficiently rich empirical data (Eisenhardt and Graebner, 2007). A qualitative approach was therefore chosen for the present study.

In order to address the research question, a researcher can choose an inductive, deductive or abductive approach. Induction is followed when concepts or models are derived through the observation of raw data (Thomas, 2006). On the other hand, a deductive approach implies the construction and development of hypothesis to be tested against a set of data (Thomas, 2006). An abductive approach is followed when “a researcher moves between induction and deduction while practicing the constant comparative method” (Suddaby, 2006 p. 639). The present study aims to develop “new conceptual views of the empirical world” (Suddaby, 2006 p. 639) and therefore applies an abductive methodology. Moving between different bodies of research and empirical data allowed identifying dynamics and interconnections between sustainability accounting and legitimacy and efficiency forces in a better way. At first, a partially deductive approach was used. Nonetheless, this approach was not aimed at developing specific hypothesis to be tested, but rather the existing literature on the topic was used to create a frame to be compared with the raw data. In doing so, it was always paid attention not to suffocate the generation of new theories and insights by the presence of the initial theory, as suggested by Järvensivu and Törnroos (2010). Thereafter, a partly inductive approach was used in the sense that the aim of the study was to generate new insights through the observation of reality. Hence, using abduction allowed to leverage on the advantages of both inductive and deductive approaches by moving between empirics and theory (Suddaby, 2006).

3.2 Case study set-up

Given the exploratory and qualitative approach of the present work, a case study set-up appeared as the optimal method of research in order to answer the research question. When evaluating different qualitative research methods, experiments and observations appeared to be not appropriate. Even though they would both ensure the availability of data rich in information, they also presented drawbacks. In fact, experiments require a great control over aspects of the research process, and are usually conducted “in laboratories rather than in the field” (Saunders et al., 2009 p. 142). Observations on the other hand, require the researcher to spend a lot of time with the organization (Saunders et al. 2009), and was therefore not applicable in the context of this Master thesis. On the contrary, a case study setup offered several advantages. First of all, a case study research allows to investigate “how” and “why” questions (Yin, 2003) allowing to understand and investigate the phenomenon in its entirety and complexity. For the purpose of this work, this allowed for example to go beyond the explanation of how a certain process is designed in order to understand the rationale behind the choices that were made in the organization. This aspect was very helpful when analyzing the dynamics between sustainability accounting and the various needs of the organizations; therefore it perfectly fitted the purpose of the research. Secondly, case studies are recommended when the aim is to describe and explain organizational behavior as it allows studying the subject in its natural setting (Yin, 2003): as the purpose was to observe these dynamics within the boundaries of the companies, possibly talking to the people directly involved in the processes, this format resulted to be optimal. Furthermore, the case study setting does not require an extensive knowledge of the topic researched (Miles and Huberman, 1994). It is therefore recommended when the “opportunity to learn is of primary importance” (Stake, 1994 p. 244) and when there is a lack of previous studies in the given research area (Miles and Huberman, 1994).

3.2.1 Case study design

Concerning the case study design, Yin (2003) claims that the use of a single case study should entail a strong justification, and that otherwise multiple case studies are more suitable as they offer a better foundation to derive implications that can be generalized. A single case study could be for example suitable in the instance of a critical or unique case (Saunders et al., 2009). In the present case, even though the organizations to be analyzed are considered to be at the forefront in the field of sustainability, the rationale was not strong enough to support the use of a single case study. Furthermore, the use of multiple case studies generates findings that are “deeply grounded in varied empirical evidence” (Eisenhardt and Graebner, 2007 p. 27) and should be preferred when the aim is to build theory (Eisenhardt, 1989). As the purpose of the paper was to understand the critical factors in the management of sustainability accounting, a multiple case study was required by the nature of the research question. Besides giving the possibility to find common patterns in the procedures, a multiple case study also increases external validity and gives the possibility of generalizing the results more easily (Voss et al., 2002). Finally, the fact of using more companies reduced the commitment needed from the companies in terms of time to be devolved by their employees, making the process of finding potential subjects willing to participate to the case study much easier. Given the scope of a master thesis, and in order to be able to analyze and describe more in depth the companies and their dynamics (Darke et al., 1998), the number of case studies analyzed was limited to two.

3.2.2 Cases selection

In order to select the case companies for this work, several criteria were defined and applied to find suitable organizations (see Figure 4 in next page).

Overview of criteria for selection of case companies:

1. Leadership position in sustainability
2. Size and company type
3. Geographical presence
4. Accessibility

Figure 4 – Overview of criteria for selection of case companies

Firstly, the aim was to analyze companies that on the one hand have developed a strong sustainability component in their strategy and that, on the other hand, are openly recognized by stakeholders for their leadership in the field. Therefore, several studies from different independent sustainability analytics provider were analyzed, in order to have a first mapping of potential candidates[2]. The industry in which the firms were operating was not considered an important factor, as sustainability issues can concern companies from all industries, and the focus of the paper is on managerial issues rather than technical or industry specific matters. Nevertheless, companies operating in controversial industries on the sustainability perspective (e.g. oil, tobacco) were excluded, as choosing samples from such industries might imply that the insights collected could be difficult to generalize. Furthermore, the high sensitivity of the topic in such industries hinted a potentially lower availability to discuss sustainability-related issues openly.

Secondly, it was chosen to focus on large companies and in particular to publicly listed companies. This was choice was made basing on the rationale that the aim of the work is to observe how companies can manage on the one side to answer to stakeholders' pressure and on the other side to drive satisfactory performance. Therefore publicly listed companies represent an optimal object of study, as these forces are maximized, on the one side due to the pressure of external actors (e.g. public opinion) made starker by a higher visibility, and on the other side because of the pressure of shareholders to maximize return.

Thirdly, the proximity to the companies' headquarters or operations was also considered. Even though the possibility of having interview through telephone or Skype reduced the limitations in terms of geographical scope, companies with a strong presence in Italy,

[2] The reports were not included in the references list in order to protect the anonymity of the selected companies

Germany or Sweden were preferred, in order to facilitate at least one face to face meeting with the sponsors within the companies. This allowed the establishment of a closer contact with the interviewees, ensuring more support as well as more detailed information (Saunders et al., 2009).

Finally, as access to the company was essential in order to find suitable interview partners, the existence of professional and personal network with the company was considered.

With these criteria in mind, two companies were identified as fulfilling the requirements and ensuring the possibility of having enough access. In particular, a contact person in each company was identified that could be a sponsor within the organization. Beside being directly involved in the sustainability management at the company and therefore being able to guarantee initial interviews, the role of sponsors implied the will to support throughout the process of finding other suitable candidates for the interviews, in particular through referral to other employees that were knowledgeable in the researched area.

3.2.3 Cases presentation

In order to protect the anonymity of the two companies, the two firms will be referred as EnergyCompany and ChemicalCompany. Furthermore, the presentation of the companies will be only general, in order to give the reader the necessary background information without going into details of the companies' activities.

EnergyCompany operates in the field of energy and robotics, providing a wide range of services and products. ChemicalCompany mainly belongs to the chemical industry, in which it operates by providing products for consumers and industrial businesses. Both companies operate worldwide, with a head count that consistently exceeds 15,000 employees. Besides, both companies report revenues for over 10 Billion Euros and are publicly listed on the stock markets of the respective countries.

Both companies share a long tradition in sustainability practices. They share a strong sustainability management function, and were among the pioneers in sustainability measurement and reporting already in the early nineteen-nineties. These practices are reflected across the organizations into the internal processes of the companies, but also transmitted externally, for instance through the development of products and solutions that foster sustainable usage among customers and consumers. This tradition in the sustainability field has not only contributed to shape the strategic direction of the companies, that has been influenced by the attention to and high consideration of this topic, but has also affirmed them as important players in the field on a global level, with a variety of stakeholders recognizing their leadership in sustainability practices. Thereby, EnergyCompany and ChemicalCompany represent optimal organizations in order to analyze what is the role of sustainability accounting in the internal management as well as in the relationship with stakeholders.

3.3 Data collection

3.3.1 Qualitative interviews

The main source of material for the empirical part of the present work is represented by qualitative interviews. The advantage of qualitative interviews for exploratory studies is that they give the opportunity to "probe answers", giving also the possibility to ask follow-up questions and to investigate further certain aspects (Saunders et al., 2009). The type of interviews used was semi-structured interviews. This methodology implies the researcher to have a list of themes and questions to be covered, while keeping some degree of flexibility (Saunders et al., 2009). In comparison to other types of interviews such as structured interviews, unstructured interviews or questionnaires, this approach presented several advantages. The aim for the interviews was to investigate the topic and collect data useful for the analysis. Thereby the semi-structured approach was chosen, as it allows deciding the focus of the interviews and directing the development of the conversation, but it provides more detailed information compared to closed question interviews (Keats, 1999). At the same time, it allows being flexible in the way things are discussed and let interviewees elaborate their own views on the topic, giving also the possibility of touching on topics that had not been considered in the first place (Longhurst, 2003).

Interview participants

In total, a number of 10 interviews were conducted: 5 with managers belonging to ChemicalCompany and 5 with managers from EnergyCompany. The respondents all belonged, with different roles, to the sustainability function within the two companies[3]. Originally, the intention was to interview also people not having direct sustainability roles. Nonetheless, along the work, it was clear that the topic of sustainability accounting is almost entirely managed by the sustainability organization in its different levels; therefore, the choice of interviewees was limited to managers with sustainability-related

[3] An overview of the interviewees and their job titles can be found in Appendix II.

responsibilities, as they had a better knowledge on the processes and their challenges. At the same time, people belonging to both group function and divisions were interviewed, in order to be able to analyze different phases of the process and to grasp potential differences. The reason for this choice was determined by the fact that people working on group functions were closer to the strategy and had a good overview of the relationship between the company and the external environment, driven by topics such as sustainability reporting. On the other hand, people belonging to the divisions were closer to the business operations and to the more practical aspect of strategy development, and therefore to aspects such as sustainability controlling.

Potential participants were mainly identified through leveraging on personal network and through usage of referral of the respondents to other potential interview partners. Occasionally, channels such as LinkedIn were used in order to identify employees whose position implied knowledge of the topic. Once contacted, potential interviewees were presented with an overview of the topic, and asked whether they were knowledgeable in the area and willing to share their insights. In case of affirmative answers, an interview was scheduled. After the interviews, respondents were asked if it was possible to contact them in case of need for clarification of some aspects or for further questions.

Interview setting and agenda

Interviews were conducted in person when possible (a total of four interviews was conducted face-to-face), otherwise on the phone. The length ranged from thirty to eighty minutes. The language of the interviews was either English or Italian. In case of non-English native speakers were interviewed, they were asked if they were comfortable in conducting the interview in English.

The first interview with the members of the two organizations aimed to gather information about the broader research topic. Hence, these first interviewees were presented with a general idea of the approach of the work and thereafter, they were allowed to talk rather freely about the general aspects of sustainability management. This stage aimed to explore in depth the general research area (Saunders et al, 2009), as it was intended to understand the general approach to sustainability management and accounting in the selected companies. This allowed the generation of a comprehensive picture. Thereafter, several employees per each company were involved. According to the advice by Voss et al. (2012), a short introduction about the thesis including the main topics to be analyzed was sent to the interviewees by email, in order to allow them to prepare for the meeting. The interviews were then conducted following a semi-structured approach. First of all, a further short introduction of the author and of the thesis's purpose was given, and the anonymity of both companies and individuals was ensured. Afterwards, the interviewees were asked to describe their role in the organization, in order to collect some background information. These first steps were rather informal and allowed the establishment of a relationship with the interviewees, facilitating the dialogue (Ghauri and Grønhaug, 2010). In a third step, the interview followed a protocol that had been prepared, with different set of questions reflecting the different topics analyzed in the literature. An example of the interview protocol can be found in Appendix I. In general, the suggestions of Yin (2003, p. 59): "to ask good questions, to be a good listener, to be adaptive and flexible, to have a firm grasp of the issues being studied, and to be unbiased by preconceived notions" were followed. Having conducted a literature review and prepared interviews protocol ensured grasp on the issue as well as the availability of pondered questions to be asked. The flexibility is expressed by the fact that focus and the time spent on each of the topics changed according to the position of the interviewee, for example if he or she was mostly involved with sustainability controlling or reporting. Independently from the topic touched, the protocol was used mostly as guidance rather than a strict list of questions to be answered, in order to follow the flow of the conversation as well as to grasp and discuss unexpected aspects and findings (Saunders et al., 2009), thereby avoiding preconceptions. The interview partners were encouraged to speak openly, and questions such as "Could you please elaborate more on this?" or "What do you think the main reason for this could be?" were asked in order to encourage an extensive and detailed answer (Saunders et al., 2009). The protocol was partly reviewed along the process, in order to optimize the understanding, clarifying some terms that were not clear, or excluding questions that did not provide insightful results. In the last interviews, the questions became more specific and precise, in order to clarify aspects that emerged from the previous interviews, or aspects that had not been touched upon previously.

3.3.2 Companies data

Beside the interviews, an important source of information was represented by the companies' reports, and in particular by the sustainability reports[4]. Such reports are used

[4] Due to the need of anonymity of the companies, the reports were not included in the reference list.

as tools to communicate with stakeholders on the topic of sustainability, and therefore contained useful information for the purpose of this work.

In the first phase of the research, the reports were used to gather general understanding and data about sustainability management at the companies analyzed and to collect background information. Thereafter, they were used as a complement to the interviews, as suggested by Bowen (2009). First of all, the reports represented a tool to contextualize the data collected through the interviews, and to further ensure the reliability of the interview data. Furthermore, the sustainability reports contained useful information about some aspects of the topic researched; thereby, their analysis enabled to collect some information in a faster and more efficient way. At the same time, using also the reports to collect data allowed during the interviews to focus more on aspects that were not explained in the reports. Also, the reports represented a source of inspiration for questions to be asked to employees (Bowen, 2009). While analyzing the reports, it was always kept in mind that they are tools to communicate with external stakeholders, and that therefore their impartiality could be questioned (Ghauri and Grønhaug 2010; Bowen 2009).

In addition to the reports, during two face-to-face interviews, managers of the companies also shared intranet and the internal systems for sustainability accounting, showing some of the tools that are used in the various processes. This contributed to generate a better understanding of these systems, and represented a valuable concrete exemplification of what had been discussed about the topic.

3.4 Analysis approach

All interviews, both personal ones and those at the phone, were recorded through the recording function of the phone or of the computer. This allowed focusing on the interviewees and on the conversation rather than on taking notes. On the same day of the interviews, the conversation was transcribed in order to reduce the risk of wrong interpretations (Saunders et al., 2009). The sustainability reports were downloaded from the companies' websites and stored digitally. While reading, notes were made and the most important parts were highlighted.

After the transcription of each interview, the transcript was looked at individually, and the most interesting excerpts were marked. This step was useful for increasing the knowledge and understanding of the topic, as well as to identify and develop new questions and ideas to be tested in the subsequent interviews. In the following step, the developed theoretical framework was used as orientation for the categorization of the data (Bazeley, 2013). After all interviews were conducted, quotes from interviews and reports were grouped according to the different sections of the framework. Quotes deriving from interviews conducted in Italian were translated into English during this stage. While doing so, it was carefully considered to retain the original meaning through the translation, as recommended by Bazeley (2013). At this stage, the categorization of the data allowed the identification of main trends and patterns within the single sections (Ghauri and Grønhaug, 2010). Inferences and connections between different interviews belonging to same topic were made explicit. Along the analysis, following the suggestion of Bazeley (2013), observations and thoughts about most important aspects and possible development were noted in a separate file, that was update throughout the process. After having acquired a holistic view, it was possible to derive the main processes in the management of sustainability accounting, as well as main characteristics of the pressures for legitimacy and efficiency. Differences and similarities with the literature as well as between the two companies were also highlighted in this stage. Thereafter, interconnection and dynamics among these areas were analyzed, with particular attention to the aspects of sustainability accounting procedures in which the influence of legitimacy and efficiency forces could be observed. Once patterns and common aspects were identified, it was possible to draw conclusions and derive implications.

3.5 Quality aspects

In this section, quality aspects relative to the methodology used for the collection and the analysis of the empirical data are discussed. Taking inspiration from Gill and Johnson (2002), the criteria of internal validity, external validity and reliability are addressed. Additionally, given the qualitative nature of the research, these aspects are integrated with the criterion of objectivity, as suggested by Miles and Huberman (1994).

3.5.1 Internal validity

Internal validity implies that the cause-effect relationships that have been identified in the study are actually correctly interpreted (Gill and Johnson, 2002), and therefore refers to the validity of the results of the study. In order to increase internal validity of the results, a possibility could have been to provide respondents with transcript of the interviews and/or with the final results of the study, asking for confirmation. Nonetheless, due to time restrictions of the interviewees, this was not done. On the other hand, all participants had been asked for contact details in order to have the possibility to clarify potential doubts subsequently to the interviews. Furthermore, while proceeding with the interviews it was possible to observe that interviewees' answers were in line, and no major deviation was identified. Finally, the use of reports allowed verifying the evidence collected through interviews, enhancing the credibility of the findings (Bowen, 2009).

3.5.2 External validity

External validity refers to the generalizability of the findings and conclusions of the work beyond the research sample (Gill and Johnson, 2002). Although the aim of this work was not to generate widely generalizable implications, the fact of including more than one case study enhanced the generalizability of the results (Voss et al., 2002). The companies analyzed were intentionally chosen among large publicly listed companies with strong experience and reputation in the field of sustainability. This aspect obviously represents a limit to the external validity of this work's findings and the implications. Nonetheless, some of the dynamics and the factors observed are likely to be shared among a wider range of companies. Furthermore, the choice of selecting companies from different industries and countries allowed enhancing the external validity of the results, by limiting the influence of industry- and country- specific elements.

3.5.3 Reliability

The criterion of reliability concerns the consistency in the interpretation of results, which means the extent to which the study could be replicated by other researchers (Gill and Johnson, 2002). Following the advice of Yin (2003), all empirical data were collected in a case study database. Additionally, the methodology section of this thesis aims to clarify in detail the process followed in the collection and analysis of the data in order to enable other researchers to understand the approach used and eventually to replicate it.

3.5.4 Objectivity

Objectivity concerns the neutrality and the freedom from unacknowledged researcher biases (Miles and Huberman, 1994). Qualitative research implies an active role of the researcher in interpreting the result. Hence, in order to ensure the highest possible degree of objectivity in data analysis, all interviews were fully recorded and transcribed on the same day, thus reducing the risk of biases in the interpretation or the risk of considering only partially the data (Saunders et al., 2009). The presence of an additional researcher could have increased even further the objectivity of the study, by reducing the risk of subjective interpretation of data. Nevertheless, the possibility of crosschecking findings in different interviews contributed to limit this concern.

4 Empirical Data

This section presents the empirical findings of the research. This section is structured basing on the developed theoretical model. Hence, the data are organized following the four core topics composing the framework. In all sections, findings are supported by quotations extracted from the interviews.

4.1 Sustainability controlling

The measurement of sustainability

The collected empirical data showed that the measurement of sustainability is at the foundation of numerous other processes linked to sustainability controlling. ChemicalCompany states in its report that sustainability measures fulfill several functions: they help steering the strategy and identify improvement possibilities, as well as monitoring the achievement of targets. The identification of the topics and indicators to be used for measurements purposes starts with the identification of what is relevant for the business and is therefore closely connected to the strategy.

Interviewees highlighted that the choice of targets is not always in line with what reporting standards are asking, and this is exactly determined by the need of having business-relevant indicators. A respondent from EnergyCompany (EC03) reported that the internal needs are therefore the main drivers, and they lead to an internal set of indicators. In comparison to external standards, these often present overlaps; nevertheless, there are also indicators developed for internal purposes. This approach is also shared by ChemicalCompany, as reported by an employee:

> *"Since you know your business and your environment best, you have to try to understand what you really have an influence on, and what you really want to talk about in terms of relevance for your business." (CC04)*

The respondents indicated that the relevance of indicators can change, due to different factors. On the one hand, the indicators that lead to targets and objectives should be based on products and business drivers of the company, which are evolving over time together with the strategy. Also, risk and opportunities that are related to the business are important and represent the foundation of those performance indicators, as this is what the company is interested in managing (CC04). On the other hand, there can be external events that trigger changes in the environment (for instance Fukushima nuclear disaster), to which the company needs to react, evaluating the implications of such occurrences. For example, that could mean adding new measurements, or evaluating what to do in case new measurements are not necessary but required by internal or external stakeholders. Therefore, next to more formal processes there are ad-hoc decisions made in case of unexpected variations. On the other hand, a respondent (EC03) claimed that the number of indicators to be proactively used cannot grow without control, and that the tendency is rather to reduce the number of indicators in order to moderate complexity.

With this regards, it was reported that internal steering purposes might require local adaptation, as the relevance of topics can vary greatly from country to country. Respondents from EnergyCompany reported that in some areas, such as Corporate Responsibility, there is a very strong independence. In other areas such as Health, safety and environment, the autonomy is more limited, and the group gives guidelines that are partially adapted locally (EC03). The rationale behind this is the need to protect business relevance for the local units, but at the same time allowing aggregation and steering on a group level, as reported by an employee:

> *"You need flexibility, you cannot fully pick and choose but we cannot even have a "one-size-fits-all", because our company is too diverse." (EC05)*

Similarly, a manager from ChemicalCompany (CC05) reported that the importance of some areas of sustainability measurement changes according to the geographical area: for instance, the topic of workers' safety is particularly relevant in emerging countries, where there is high potential for improvement. Moreover, ChemicalCompany states in its report that every division is entitled to develop an own specific program, as the great differences between the businesses and processes involved requires individually-tailored approaches.

Respondents explained that, in order to have meaningful information, the measurement itself is not enough: figures should be presented in a way that reflects the real dynamics, that means giving a context to what a specific indicator could mean. With this respect, employees mentioned for example, the need to express emissions in relation to the quantity of the output, or the number of accidents in relation to the number of man-hours worked (EC01, CC02). Following this approach increases the transparency of the information and gives a clear picture of what the measurements really stand for. Furthermore, it was mentioned that methodology for calculation should be coherent and not continuously restated, in order to increase transparency and to enable comparability over the medium and long term (CC02).

Finally, interviewees stated that one of the main challenges of sustainability measurement concerns the nature of indicators, which differs from the traditional financial ones. It was reported that the context around the measurement of sustainability is extremely important, as quantitative measures often fail to grasp the complexity around the various topics. Furthermore, the source of data can be very different, and therefore requires more "stories" around the measurements than traditional financial measures (CC01).

Systems for sustainability controlling

Respondents presented several processes that allow the integration of sustainability measurements in the company systems. The origin of the controlling process is the strategy in the first place, which according to the employees, is developed on a group level at the headquarters, usually through consultation with division and country managers. The aim of the strategy is to create guidelines to derive targets and plans. Therefore, one respondent claimed that clarity and simplicity are crucial attributes at this stage, as they make the strategy easier to understand and to communicate (CC03).

Starting from the strategy, the typical controlling systems are implemented. In this perspective, one respondent from EnergyCompany reported that, one of the first steps after the creation of the sustainability function was the creation and the activation of management systems necessary for the measurements:

> *"The function [sustainability management] started because we needed to improve sustainability, so we got the management systems in place, we started issuing sustainability reports, and then we have continued. Therefore we designed an organization to manage that." (EC05)*

The main process that was named by employees from both companies was the target planning process. Target planning is done on an overall group level, but also on lower levels, relative to country and division dimension. Interviewees (EC03, CC03) reported that the sustainability department is normally responsible for the process, but holding a close collaboration with the management, in order to ensure the targets become group-wide targets and not only confined to the sustainability area.

According to interviewees, the aim of this process is to enable action on a local level, as the specific targets enable employees throughout the organization to relate to their operations and therefore take action (EC01, CC02). In practice, the targets normally include a timeline and a responsible person. Usually, the process involves the analysis of the results of the previous year, which leads to the developments on new targets for the division and country in each of the relevant areas. While doing so, the targets on an overall level are also considered, in order to allow flexibility but at the same time to ensure coherence within the organization. Furthermore, a respondent from ChemicalCompany explained that the divisions are responsible for their internal target setting that is then monitored on a group level (CC04). To facilitate the tracking of the contribution by each different unit, the frequency of internal reporting was also increased.

Furthermore, one respondent highlighted the importance of IT systems. These systems are an essential tool in order to manage a multinational company and to roll out the strategy globally. The manager reported:

> *"We have a business strategy and we have a sustainability strategy, each with its targets. These targets can be steered because we have IT systems, and every plant in the world is connected to that system." (CC02)*

Once the strategic direction is set, there is a continuous and iterative approach to its development, as the framework used for these systems should be relevant for the company and should be checked regularly to ensure this relevance. One employee from ChemicalCompany for example, reported that the conditions under which the controlling systems were set and that were used as a reference point are periodically reviewed together with the overall strategy, in collaboration with the pool of experts that helped setting the strategy in the first place (CC03). In this way, a checking and confirmation process is put in place, ensuring that the strategy and the systems are always up-to-date and relevant. A similar approach is claimed by the interviewees of EnergyCompany (EC03, EC04). The overall strategy setting is periodically reviewed, in order to ensure that the systems in place are fulfilling their purposes. For instance, the approach to the main topics in the systems was recently changed. In the new approach, strategic long-term objectives are defined on a group level, together with priorities for the upcoming years. At the same time, the details on how the processes should be structured are defined on division and local level, as required by the great diversity among countries and divisions. Furthermore, it was highlighted how the format and the source of data should fit with the steering of the company, in order for decision-making to be optimized. In particular, a respondent from EnergyCompany reported that his organization recently adapted the platform through which the data was collected. As the company is managed through divisions and product lines, it was important to update the systems to reflect this structure in the collection of data, previously done on geographic base:

> *"People live in countries, but the business dimension is through the divisions and the product groups. And this is the direction it is going, not only to report, but also to get to quicker feedback and to make it possible to control it in a better way." (EC05)*

Through the controlling systems, the importance of the sustainability issue is transmitted throughout the company, influencing the activities of the various actors. The targets that are set on a group or division level, permeate the organization arriving to the operations (EC01): for example, a target linked to reduction of water consumption is transmitted to factory managers who have directly responsibility on the issue and that can control, monitor and influence (CC04). Also, it was reported that each site is connected to the management systems, through which their operations are controlled.

Interviewees from both companies explained that the targets are monitored along the way, and the information goes to the management (EC02, CC04). The achievements are measured on a periodical base and compared against the targets that had been set, and the progress of activity is presented to the responsible managers. This highlights possible variations enabling decision-making and the actuation of possible corrective actions. Therefore also the frequency of data reporting was pointed out as very important, as a higher frequency of data implies an enhanced decision-making capability on the managers' side.

The respondents from both companies highlighted the importance of the strategic principles that guide the systems. Given the great diversity manifested in the company, both in terms of businesses and geographical differences, the strategic principles support the decision makers and help interpret the measurements and the data (EC05, CC03).

The importance of these principles lays in the fact that they give a direction to the effort towards sustainability improvement. As an interviewee reported:

> *"Beside the measurements, extremely important are our strategic principles, it is not only about delivering against the targets. You can also turn it around: we can also check whether we are active enough in all of the strategic principles. And if you are, if you are really up-to-date and state of the art with all our strategic principles, than you are really on a good track." (CC03)*

At the end, looking at the big picture, respondents could identify an articulated set of targets and processes, whose final aim is to monitor every aspect continuously, both on country and division level. This complex set of processes was identified as the key to steer sustainability throughout the organization.

Respondents from both companies claimed that the connection between sustainability organization and finance organization within the companies is still limited (CC04, EC05). One of the main reasons for this distance, confirmed by interviewees from both organizations, is the difficulty of translating "soft" factors in hard figures and monetary aspects like those that people in the financial part of the organization usually deal with. If for some aspects such as energy efficiency or workers' safety this is perceived as more feasible, for many other aspects it still represents a challenge. Nevertheless, respondents claim that a greater involvement of the finance organization could increasingly help the integration of sustainability with the strategy. For example, the use of frameworks and methodology imported from the traditional finance function applied to sustainability topics are seen as possible tools to increase the relevance and the understandability of the sustainability topic throughout the whole organization, thereby enabling the decision making of top management. Therefore, this was seen as a responsibility and challenge for the sustainability organization in order to promote the topic even more throughout the company:

> *"It is also a message towards sustainability people, make your job in a way that the CFO becomes aware of you, use existing language and frameworks so that the CFO is able to understand what you are trying to say. And if this means incorporating your information into a risk management framework, then do so. If this means using language and frameworks that the CFO understands, do so." (CC04)*

4.2 Sustainability reporting

Reasons for sustainability reporting

Respondents from both companies reported several reasons as rationales for engaging into the reporting of sustainability performance. They substantially agreed with each other on the importance of sustainability reporting for several purposes. Fist of all, sustainability reports are seen as tools of communication with external stakeholders (CC02, EC03). They are perceived as a tool to demonstrate transparently to external stakeholders that sustainability is an integral part of the business, thus enabling dialogue with very diverse group of people, that vary from university student, to NGOs, to political groups, including also some customers groups. Respondents agreed on the fact that reporting is being increasingly demanded by society:

> *"You create transparency on your operations. If you are on a sector like we are, the chemical sector, transparency is very important also for being accepted by society." (CC04)*

> *"I think we need to produce it, because there is an expectation for large companies like EnergyCompany to do a sustainability report." (EC05)*

Therefore sustainability reports are considered a platform for communication with the stakeholders, a tool to start a debate around an increasingly considered topic. Secondly, the increasing role of regulation in the field was highlighted. Interviewees (CC01, EC05) mentioned for example a growing regulation on European Union level, which was said to be preparing a draft for legislation. Moreover, there are increasing requirements from stock markets in terms of sustainability disclosures in order to be part of the stock exchange. Thirdly, an increasing interest of the financial world was mentioned (CC04, EC05). Respondents reported the existence of a growing segment of investors interested in Socially Responsible Investments (SRI), that are very attentive to social and environmental issues. Nonetheless, this segment was claimed to cover still a niche position. Additionally, the attention to the topic of "traditional" investors is slowly increasing: even if they appear not to be directly interested in sustainability itself, its strong risk management component was identified as one of the features that interest the financial community.

Finally, sustainability reporting is also seen as something that is important within the organization. In particular, one interviewee mentioned that reporting is also a way to align internally and facilitate the management of sustainability:

> *"There is this a management saying, what gets measured gets managed, and I think when you do a report, on the one hand you force yourself to deal with the topic and to manage the topic because you dive into it." (CC04)*

Structuring reporting initiatives

The respondents from the two companies showed a common pattern in the approach to reporting: external reporting does not influence the way in which the internal steering of sustainability is approached, and external standards are not followed strictly. Respondents mentioned that the fact of operating in the business from within implies a greater knowledge of it, resulting in the will of choosing independently which are the important indicators for the business.

ChemicalCompany has a very tailored approach to reporting, in which the indicators reported reflect what is used in the strategy steering:

> *"We are the ones that understand our business best, because we work in this business, and therefore we know which KPIs have an influence and an impact* [...]. *As we have been doing this for such a long time, we have grown and that's why we can state quite confidently that we report what we think is important." (CC04)*

This choice is explained with the argument that standards such as GRI have become too comprehensive, reducing the relevance for the single business. Nevertheless, the importance of GRI is recognized by respondents (CC04, EC03), as it is perceived as the most relevant standard in terms of reporting because there is no other standard that can compete in terms of spread of utilization. At the same time, the limits of standards are recognized. In practice, standards such as GRI aim to create an overarching framework for all industries. The problem reported related to this approach is that reports can become very lengthy, losing relevance. Firstly, companies would have to report on indicators not important for their business. Secondly, reading very complex reports, which contain information that is hardly relevant, would be problematic for stakeholders that want to be informed on the topic. Because of these reasons, ChemicalCompany is not following strictly GRI in all their mentions and items that are not relevant from the company, but rather decided to follow an own structure for reporting.

Similarly, interviewees from EnergyCompany (EC03, EC05) reported that, even though GRI represents the main source of inspiration in the design of the report, it cannot be followed completely, as for example some parameters that are required cannot be collected or are not relevant for the company. The approach also in this case, is to define what are the most relevant aspects, and focus the reporting efforts on those aspects:

> *"We try to define what is material for EnergyCompany [...]. We define which are the important issues for us, and we report on that. I think a little we pick and choose, what is relevant for us. If we look at GRI content table, we do not report on everything. We skip some of them because we don't think they are meaningful." (EC05)*

Even in this perspective, not all indicators contained in the report are considered as key indicators internally: rather, a respondent reports that some indicators are simply measured and reported, without being proactively managed. On the other hand, interviewees recognize that GRI indicators, even though sometimes less relevant for steering purposes, are well recognized and understood externally, and therefore are well suited to be reported. Their connotation of standard system makes them easier to communicate externally, and makes it easier for stakeholders to compare and understand companies' performance. The issue of comparability appears to be quite complex. A manager (CC02) highlighted that, while analyzing peer companies, it emerged that the same indicator was calculated in different ways, leading to very different results. The fact of not having deeply institutionalized indicators leads to an increasing complexity in this sense. Additionally, a manager noted that the importance of sustainability reporting guidelines lies also in the fact that they represent a model, which can be very useful for companies that are relatively inexperienced in the field (CC04).

On the other hand, employees from both companies argue that steering importance and business relevance are not the only aspects that are considered when deciding on indicators to measure and report on. Even though the overlap between business relevant indicators and reporting should ideally be total, in practice there are other factors that come into play. One respondent from EnergyCompany (EC05) reported that some indicators can be important for sales with business clients. In some cases for example, clients might require the company to report on some indicators or to implement particular certifications, because they expect the company to be knowledgeable and competent in the field, and to be able to demonstrate it. In this case, this sort of reporting is determined by market reasons. At the same time, the attention of stakeholders to particular topics in sustainability reports can change from country to country, requiring for example special supplements in order to better communicate with specific groups of stakeholders (CC05). Therefore, in general this process can be seen as a selection, where the own internal assessments are balanced with external expectations of various types. Similarly, an interviewee from ChemicalCompany (CC04) reported an interesting point on the choice of reporting indicators that are not considered important for business steering purposes. As integrating such an indicator is indeed an investment, an appraisal of how strong is the external pressure towards this integration is made, and the management must then decide:

> *"It is like a business case. We look at the cost of implementing it, and at the added value, that is the ability to report on this topic to those stakeholders that are interested in it, who are important to us because of whatever reason. And then the top management decides, we take a budget and we extend our systems." (CC04)*

In terms of external verification of the reports, the approach of the two companies is claimed to be different. EnergyCompany's respondents perceive an added value in the certification of their sustainability reports (EC02, EC03). The argument they bring is that, as the report is a document that states the performance of the company, it should be certified when presented externally, as a document containing data which are not certified would have a lower credibility with external actors.

An interviewee from ChemicalCompany on the other hand, claimed that the certification would be only an added cost, and that their strong reputation in the field allows them to avoid that cost.

> *"Our report is not assured, they just check some data. [...]. But we can allow ourselves to do so just because we are sure of what we are doing, and our stakeholders understand that, even if we are not doing certain things, we are still very well aware of what sustainability means and how we integrate it in our business. If you try to do everything, then you really risk losing a point on efficiency." (CC02)*

4.3 Organizational efficiency

Integrating sustainability in the strategy

Respondents from both companies reported that the first step in making sustainability part of the business is to integrate it in the overall values and strategy of the company, and that this integration is crucial to leverage on the potential of sustainability. It is widely shared among interviewees that this integration is strongly rooted within the companies and that supports the development of sustainability strategy. Furthermore, it was reported that this is not a process that can be done overnight, but takes a long work of integration in order to be accomplished. One respondent explained that EnergyCompany is basing its long-term strategy on mega trends, and that many of these mega trends have a strong sustainability component already within them (EC04). This supports the business development towards sustainability, as it becomes one of the business drivers of the future. Another respondent claimed that achieving a true integration of sustainability in the company's strategy and culture represents a ground condition for benefitting from its business potential (EC01). Similarly, one respondent from ChemicalCompany stated:

> *"ChemicalCompany has been following this sustainability approach since long time, and it has really become part of the values of the company and of people that manage it. This is something "nice to have", but also something that supports you when it comes to leveraging on it even further." (CC01)*

The report of ChemicalCompany makes the need of a deep integration of sustainability explicit, explaining that its principles must be understood by all employees and integrated in their everyday actions. Respondents confirm this approach, claiming that including sustainability into business strategy it is a crucial step, as it allows build a strong connection and to anchor the company values with its operations. A manager (CC03) reported that, in this way, who deals with the sustainability feels that this is a concrete and important part of the business, and that fits into the company strategic direction.

Transmitting sustainability into the operations

Respondents claimed that from the strategy, sustainability must enter in the business model and in the operations of the company. In this respect, making sustainability part of the business model of the company was identified as one of the main success factors. Responding to this need, a manager (EC01) highlighted the role of policies, that means basic principles that are created on a group level and are transmitted as well as integrated in all company's level. Moving from generic principles to specific aspects and from a global to a country level, the policies are expressed practically into the company's processes, enabling a true integration into the business. Thereafter, respondents indicated that the integration is further strengthened by ad-hoc processes such as target setting, incentives etc. As the authority of the sustainability organization in relation to other departments can be limited, respondents claimed that employees should receive directions from the sustainability department but also from the higher hierarchies in order to facilitate the comprehension and the application of the measures required. This can be further strengthened by the use of incentives (e.g. financial incentives such as performance bonus) linked to environmental or social indicators for the people that have a direct influence on such aspects.

The respondents from both companies named some examples that show how the sustainability aspect was present in many processes throughout the value chain of the company. For instance, a respondent from EnergyCompany (EC02) highlighted that sustainability issues had been integrated in all steps of projects, that represent the core business of the company. In practice, sustainability requirements were added to technical requirements in every stage of the project. Furthermore, tailored checklists for safety and health as well as environmental issues to be considered in the engineering phase had been developed, and site managers had been charged of the responsibility of monitoring all the process, including the suppliers involved. Similarly, a respondent from ChemicalCompany stated:

> *"Sustainability is part of our business model and not a part of separate pile of things that we have somewhere. To give you one concrete example, we have a very strict innovation process [...]. Each new product has to deliver to at least one of our focal areas for sustainability, [...] or it will not get an approval for the launch. This is what I mean with "sustainability is a integral part of our business"." (CC03)*

Respondents pointed out that, in order to make the sustainability footprint even stronger in the company, there is a need of involving the whole organization.

> *"Sustainability cannot close the gap by itself, it must be recognized by the rest of EnergyCompany that the gap should be closed." (EC04)*

On the one hand, the size of the sustainability function itself was claimed to be appropriate and not intended to grow further. On the other hand, the ambition set was that more people throughout the organization, in their normal roles and normal business functions, should better understand the sustainability aspects of their daily work. In order to make sustainability a company wide effort, which goes beyond sustainability departments and roles, the importance of spreading the message throughout the organization was also highlighted: ChemicalCompany for example, states in its report that several initiatives were undertaken in order to promote and inform about sustainability among employees in all roles. Furthermore several respondents (EC03, CC05) pointed out top management support and direction as crucial point.

Although both companies are recognized as leaders in sustainability, respondents of both organizations are aware of possible further improvements, and report that the organization is continuously evolving in order to reach an always higher and stronger integration. One manager (EC04) identified the fact that, despite sustainability being already a very important component in the business development of the company, the link between the sustainability function and the business strategy could be improved, as the sustainability function role is perceived to be mostly about managing internal sustainability aspects. Therefore, a new group strategy to integrate even more sustainability and business was under development, in order to emphasize the strategic aspect of integration of sustainability in all phases of the business management. Moreover, another respondent reported as a main challenge the fact that, even though sustainability is an integral part of the business, is not yet perceived by all actors as a top priority (CC03).

4.4 Organizational legitimacy

Elements of organizational legitimacy

Interviews highlighted the importance for companies of interpreting signals coming from stakeholders, in order to collect indications on how their activity is perceived in the external environment. Respondents mentioned a wide range of relationships and activities that fulfill this purpose. For example, it was reported that taking part in rankings about sustainability, gives a good indication and feedback on how the company's performance is perceived externally (CC01). Therefore, managers perceive the participation to these rankings, even though resources and time intensive, as an important activity. The evaluation in rankings and sustainability indexes is also reflected in the opinion that many other stakeholders, such as the press, NGOs, business associations and even the employees of the company have, and that contributes to generate a sense of recognition for the company. Some instances demonstrate how legitimacy is important in order to be able to operate successfully with the other actors in the environment. One manager (CC03) presented an example concerning trade partners, such as large retail chains. It was claimed that the interest of these actors in sustainability is rising, and that the value they give to the topic is increasing even more. As a consequence, a company that is not recognized as legitimate in the field will be punished, for example by getting less listing, less promotions, and less good placements of the products. On the other hand, being recognized actors in the field could help to improve the relationship with the trade partners that are interested in the topic. Additionally, it was mentioned that even the approach to the topic of business customers has evolved, and they often have very strict requirements: a lack of legitimation, for example manifested by lack of certifications and permits, can damage the relationship (EC01).

Interviewees, on the other side, report how the concept itself of sustainability, and therefore of legitimacy, is continuously evolving together with society:

> *"This is an ongoing change, also in society, where sustainability comes at the center stage. That is not a change that comes overnight." (EC04)*

Interviewees reported that the requirements in terms of sustainability are continuously evolving, and in particular are increasing, requiring companies to get more and more engaged (EC02, CC03). This implies a battle for the leadership in the sector that can bring even very affirmed actors to lose their legitimacy (or at least part of it), if they do not keep up with their efforts. Respondents highlighted that sustainability is increasingly becoming an important factor to be legitimate also in areas such as capital markets and employers market. As a matter of fact, the attention of investors and institutions on sustainability reporting or disclosure is growing. At the same time, an increasing number of potential employees value sustainability and make ethical considerations when choosing an employer, requiring companies to be sustainable in order to be seen as attractive.

A respondent reported that not only the content of legitimacy is changing, but also the nature of interaction with external actors:

> "50 years ago, there was also less pressure and control. If a factory burns down in Bangladesh, it is now on Facebook in 30 seconds, companies cannot afford any longer to hide things under the carpet. Everything is much more transparent and information flows so fast, it is a different environment we are working in." (CC02)

The legitimation process

The data collected shows that the companies recognize the importance of stakeholders, and they deal with several aspects to ensure that what they do and how they present themselves in the outside environment ensures them to be legitimate. ChemicalCompany, for example, states in its report that the acceptance and the support of society are essential to ensure viable business activity. Therefore, the company takes part to several dialogue platforms in order to better understand which are the main challenges and trends in terms of sustainability, and to identify in which aspects stakeholders are interested. This is considered a crucial step in order to respond appropriately to their demands. Similarly, EnergyCompany recognizes the importance of sustainability among its stakeholders, and therefore promotes the dialogue on the topic with a variety of different actors. For instance, initiatives of customers and suppliers engagements are mentioned; the former aimed at ensuring high levels of satisfaction, the latter to foster sustainable practices also among suppliers.

Interviewees claimed that one of the difficulties in the relationship with external actors is represented by the fact that stakeholders' needs and wants can be very different, as stakeholders' groups are very diverse. A respondent reports how this is a challenge to be proactively addressed:

> "We need the consumers because they buy the products. But we also need the very talented people and students that want to work for a sustainable company [...]. And then there is the stakeholder who is an investor, and he gives us also money. You can always argue in a way that you do efforts but you don't reach the end consumer or the expert, so it's a balance and you need to address them all." (CC04)

Therefore, interviewees reported that engaging in interaction and communication with stakeholders is considered a key aspect in order to gain and retain legitimacy. One crucial aspect concerns the promotion of communication between company and stakeholders, as it contributes to better understand their needs, while at the same time making the communication easier. Direct dialogue with stakeholders is seen as a key aspect to understand the context and the more complex facets of stakeholders' demands. For instance, with regards to the discussion on sustainability reporting standards, one interviewee (CC02) claimed that companies and investors should come together and dedicate more time to understand the issue, in order to derive a framework that combines the needs of relevance and of comparability, though being at the same time flexible and fairly simple.

At the same time, respondents (EC05, CC04) indicated that participating to external platforms was seen as a valuable opportunity to get feedback. Employees from both companies named events aimed at fostering dialogue with stakeholders. Some examples were finance events, sustainability roadshows, fairs with trade partners, participation to the political arena as well as contacts with universities and meetings with experts' networks. Both companies explain that stakeholder engagement is activated at group level but also with local and international stakeholders, in order to ensure legitimacy throughout the all organization at all levels on a global scale (EC05, CC05). As a matter of fact, the great diversity of stakeholders' needs around the world often requires tailored strategies and solutions that fit the specific issues. The quantification of these feedbacks is seen as a challenge, and therefore rather qualitative measures are used to track the development of the relationship with stakeholders.

5 Analysis and discussion

In this section, the empirics are analyzed and discussed. Firstly, the management of sustainability controlling and reporting in the companies studied is presented and compared with the relevant literature. Thereafter, the role of efficiency and legitimacy forces in shaping this function are analyzed and further compared to the theoretical framework.

5.1 Management of sustainability accounting

5.1.1 Sustainability controlling

The measurement of Sustainability

The conducted interviews highlighted that the choice of measurements can be strongly influenced by what is considered as relevant for the business in terms of social and environmental indicators. In line with the argument of Schaltegger and Burrit (2011), companies primarily choose their indicators according to what drives decision-making and what needs to be controlled. Respondents stressed that, especially in the field of sustainability, indicators are very contextual and company specific, as suggested by Hubbard (2009). Likewise, it was highlighted that the importance and relevance of the indicators might change and evolve over time, due to both internal and external factors. This aspect should be associated with the evolution of the strategy: as the aim is to ensure high relevance, a change in the strategy can be reflected into changes in the indicators used. Furthermore, topics emerging from the external environment might determine changes in this sense too. Another aspect that was highlighted is a need for adaptations in terms of location and different business units. This is relatively intuitive, given the size and complexity of the companies observed. When looking at modern multinational organizations, often including divisions very different between each other, it can be difficult to use the same approach for the whole company. Hence, in order to correctly assess the key areas of impact as suggested by Hespenheide et al. (2010), many issues should be tackled at lower levels – for example involving the local management or the business unit leaders. At the same time, a need for reduction or at least restraint of complexity was highlighted. This leads to streamlining the indicators in order to try to avoid an over-usage of measures, resulting in line with Alrichs' (2012) view on the topic.

The literature (in particular Epstein and Widener 2010, Hubbard 2009) underlines the difficulty of finding indicators that are suitable and representative while being at the same time easily measurable. Furthermore, Schaltegger and Burrit (2011) state that many systems ignore information that is not expressed in monetary terms. Practitioners partly confirm this challenge, pointing out the importance of giving a context to many measurements, and highlighting the difficulty in finding quantitative measures for aspects such as social progress. Nonetheless, a concern for non-monetary measurements was not expressed, but rather a difficulty in controlling aspects that are not directly quantifiable. As many sustainability measures go beyond the traditional financial measures, the integration with more qualitative indications was highlighted as important to ensure the completeness of the information. In fact, it was claimed that the aim of indicators is to reflect the risks and opportunities relevant for the business, regardless of their nature, thus confirming the hypothesis of Hespenheide et al. (2010) and Schaltegger and Burrit (2010). The need of having fewer indicators but relevant and contextual is tackled through the usage of indicators expressed in relative measures. Such indicators increase the completeness and comparability of the information transported, and result fundamental for a correct measurement of sustainability. This finding results to be in line with Hespenheide et al. (2010), even though practitioners did not explicitly mention the usage of measures in context.

Systems for sustainability controlling

Companies, in order to create and manage the sustainability controlling function, start from their strategy and develop specific controlling systems and processes. In line with the argument of Schaltegger and Burrit (2010), the identification of the core topics in terms of sustainability plays a crucial role at this stage. Therefore, respondents claimed that the connection with the strategy is an important component in this sense. The role of strategy is two-fold: first of all, it gives guidance in the design of controlling systems and it influences planning and target setting. At the same time, it represents a reference point against which interpreting the results of such systems, ensuring a coherent management. Sustainability managers also stressed the importance of reviewing and adapting the framework along the way. This is coherent with the theory of Schaltegger and Burrit (2010), as the core topics might be shifting and, in order to retain high relevance and accuracy, an iterative approach might be required. Alrichs (2012) claims that the scope of controlling systems has to be enlarged: his argument finds confirmation in the practices of the companies, as it was explained how the implementation of sustainability-specific planning and target setting systems covers in this sense a main function, as it allows to directly relate the operations to the strategy, enabling action throughout the organization. Judge and Douglas (1998) argued that a high integration of sustainability-related planning is positively associated to financial and environmental performance. Although it is not possible to observe a direct cause-effect link in the context of this study, the evidence is in line with the researchers' findings, as both companies showed a highly structured approach to sustainability measurements that was strongly integrated in the formal strategic planning processes. At the same time, they are recognized leaders in sustainability as well as companies with positive financial performance.

The companies presented a strong commitment towards integration with the overall processes and the steering of the strategy. Even though the sustainability-related strategic planning is mostly managed by the sustainability department, top management involvement ensures a group-wide relevance. This is in line with the perspective of Wagner (2007), who advocates a strong integration of sustainability management with core managerial processes. The literature points out that relevant and robust information is important for conducting sustainability initiatives (Schaltegger et al., 2012). In line with this perspective, several aspects were highlighted. First of all, the frequency of data reporting, indicated as very important, fulfills the role of increasing the data available to managers, in order to strengthen their possibility of making decisions. Secondly, it was pointed out that the data should be collected in order to reflect the decision making of the company. For example, EnergyCompany improved the system in order to collect data according to divisions and product lines, to reflect the steering of the company. These measures were exactly aimed at improving quantity and quality of data, supporting Schaltegger et al.'s (2012) argument.

Epstein and Widener (2010) pointed out a general concern for managers in using sustainability-related data, mostly due to their differences with traditional measures, and therefore claiming new approaches whose methodology is convincing. This argument was partially matching the need expressed by respondent, according to who one of the challenges for sustainability managers is to find frameworks and languages more similar to those of the finance organization in the company to better address a wider range of people. At the same time, the existing methodology was not criticized as such, but rather its potential for communication within the company was addressed. Similarly, it was claimed that involving more the finance organization could help the strategic integration of sustainability as well as increase the visibility of the topic. This finding is in line with what argued by Schaltegger and Burrit (2010) and by Ballou et al. (2012). This aspect can be explained with the fact that normally finance managers within the company have experience in the role of providing data to the managers to drive decision-making and could therefore provide this expertise to the sustainability function (Ross, 2010). Nonetheless, even though this potential was recognized, the companies analyzed currently presented no involvement of finance people in the controlling of sustainability. This marks a difference with what was observed by Zvezdov et al. (2010), who claim an increasing involvement of accountants in these processes.

5.1.2 Sustainability reporting

Reasons for sustainability reporting

Interviews showed that the attention of scholars and researchers around sustainability reporting is reflected in an increasing interest in the business world. According to the literature (e.g. Hespenheide et al. 2010, Ahlrichs 2012), a wide range of companies' stakeholders expresses interest for sustainability reporting. This was confirmed by managers of both ChemicalCompany and EnergyCompany, who explained that companies, and especially large and publicly listed corporations, are now expected to produce such reports. Alrichs (2012) mentions the increase of trust as a rationale for reporting, while Herzig and Schaltegger (2006) talk about ensuring transparency on operations and sustainability management as well as the maintenance of good relationships with stakeholders. All these aspects were confirmed by interviewees. In particular, it was pointed out that reports are tools to actively manage stakeholders' expectations and to communicate with them. Therefore, it was highlighted a role of reporting that goes even beyond what is proposed by the literature: reports are not only an out-bound communication tool, but also an instrument to foster in-bound communication, through stimulating dialogue with very diverse groups of stakeholders. The explanation of this role was given by the fact that a published report represents a basis for discussion, a reference point that also external actors can use in the communication with the company.

The role of regulation in fostering sustainability reporting, excluding some specific areas such as occupational safety, is still quite limited but evolving. This is in line with what is pointed out by Ross (2010), Hespenheide et al. (2010) and Ioannou and Serafeim, (2011). Companies expect further developments in this area: in particular the elaboration of policy from the European Union was mentioned, as well as increasing non-financial disclosure requirements from stock markets in order to allow the listing of the company. In this perspective, the role of investors and financial community in fostering sustainability reporting appears somewhat unclear, despite the claims of literature (e.g. Hespenheide et al. 2010, Eccles et al. 2011) for a strong function in this sense. Socially Responsible Investment funds are growing rapidly, but still represent a small minority whose importance is relatively low. On the other hand, conventional investors do not prioritize sustainability matters as much as traditional financial measures. At the same time though, there is strong attention to risk management topics that are closely correlated to sustainability issues. Therefore, a strong sustainability management is perceived as a tool to minimize risks in the medium and long term and, as a consequence, lack in sustainability reporting would be perceived as a signal of potential risks. Reporting on sustainability is in this perspective seen as an hygiene factor: if on the one hand an excellent sustainability result does not seem to increase investors interest, on the other hand a very poor performance might determine investors to be concerned. This aspect was rather interesting, as the literature does not go that far in explaining the mechanisms influencing the requests of investors.

Finally, the importance of reporting under an internal perspective was highlighted. This aspect was particularly interesting, as it is not strongly emphasized by the literature. In fact, reporting is seen as an instrument to align within the organization around the sustainability topic, as the issuing of a report is a public commitment that creates pressure in the organization. In this perspective, reporting can be considered not only as a tool to communicate externally, but also internally, in particular with the aim of raising the priority of sustainability in the company. This is partially contradicting the view of Manetti (2011) on the topic, as he presents sustainability reports as tools directed to external stakeholders and which do not support managers in the planning and monitoring of corporate activities.

Structuring reporting initiatives

Structuring the approach to reporting appears to be a complex matter, as claimed by both practitioners and academics. Herzig and Schaltegger (2006) argue that there are three different approaches to reporting: inside-out, outside-in and double path. The first approach implies reporting based on company specific indicators, while the second starts from external actors' requirements that are internalized by the company. The double-path approach is a combination of the two, and is recommended as an optimal method by the authors. The methodology used by the companies is substantially in line with the argumentation of the authors. As a matter of fact, both companies claim that an approach to reporting that fully reflects external indications would not be advantageous for the company, as a deep knowledge of the business is essential to ensure the relevance of the measurements. Therefore, they argue for autonomy in deciding what to report about. At the same time, reporting guidelines and standards play an important role, in the sense that they are widely recognized externally and their use is requested by stakeholders. Besides, it was claimed that additional complexity is brought up by the fact that, as sustainability measures are relatively new and not deeply institutionalized such as for example financial ones, the same indicator can be defined in very different ways in companies, therefore impacting the way this is perceived and assessed externally as well as internally (Benijts, 2008).

Even though both companies share this approach, the two organizations present a slight difference: ChemicalCompany, on the one hand, has a very tailored approach to reporting, with reports that are structured in a rather customized way. On the other hand, EnergyCompany, although it chooses autonomously which indicators to report on, tends to follow more the structure of GRI standards, as it can be also observed in its reports. Anyway, it appears a formal rather than substantial difference, as both companies have a strongly pro-active approach to sustainability reporting, and they do not passively rely on external standards but rather are eager to implement systems and measures that truly reflect their businesses' characteristics.

The increasing importance of reporting standards was highlighted by the managers (Herzig and Schaltegger, 2006) and in particular it was pointed out the clear leadership of the GRI guidelines in the sector, in line with the findings of Taticchi (2013). This partially contrasts, at least for what concerns the sustainability area, with what pointed out by Eccles et al. (2011), according to which a generally recognized framework for non-financial information disclosure is missing. Etzion and Ferraro (2010) claimed that frameworks' role evolved from an external imposition to a tool to trigger sustainability initiatives. Interestingly, the arguments of sustainability managers almost go in a opposite direction, as it was claimed that the limits of such universal frameworks consist first and foremost in the loss of relevance due to the great differences among businesses, therefore determining a risk of hindering organizational and sustainability performance. This discrepancy can be explained by the fact that the companies analyzed are leaders in sustainability, with a long experience in the sector and developed competences and knowledge in terms of sustainability management. As reported by a respondent, companies that are new to the field might actually find great help in the standards, as they represent a detailed list of aspects to consider when dealing with sustainability issues and their measurement.

Finally, it is worth noting a difference concerning the approach to sustainability reports assurance and audits. Respondents from EnergyCompany, in line with the literature (Smith et al. 2011, Manetti and Toccafondi 2010), perceive the audit of reports as a tool to increase the transparency and reliability of the documents. On the contrary, managers of ChemicalCompany do not see such value in the certification, nor a strong pressure from external actors for it.

5.2 Influence of organizational efficiency on sustainability accounting

While managing their day-to-day activities and their strategy, companies aim at operating efficiently (Jutterström and Norberg, 2013). According to the literature (e.g. Ross 2010, Judge and Douglas 1998, Wagner 2007), in order to ensure efficient operationalization of sustainability, it is of crucial importance to integrate it into the strategy and the processes of the company. Wagner (2007) in particular claims that an inconsistent integration would harm the performance of the company. Companies embrace this perspective, as it was claimed by respondents that one of the key success factors was exactly the ability of their organizations to integrate sustainability in the business model and finally in the operations. In this sense, the managers argued that their organizations promote the involvement of employees at all levels on the topic, and that this effort is further strengthened by a clear top-management commitment. Accordingly, Haugh and Talwar (2010) argue that involvement of managers and employees throughout the whole organization is crucial to guarantee an efficient integration of sustainability. Furthermore, the iterative nature of this process was stressed, as the approach to integration was periodically reviewed in order to ensure relevance. Scherrer et al. (2007) report that the connection of sustainability strategy with the overall strategy and ultimately with the business processes represents a major challenge. As a consequence, as confirmed by the respondents, there is a strong need for implementing systems such as sustainability accounting that can support this process. Managers explained that one of the functions of sustainability accounting, and in particular of sustainability controlling, is exactly to enable the control and steering of sustainability (Bartolomeo et al., 2000) and therefore its own essence is influenced by the need for operating efficiently. This appears to be in line with the argument of Sharma and Ruud (2003), according to who the use of measurements is essential for ensuring performance. In order to further strengthen this integration, the respondents mentioned the role of financial incentives linked to sustainability performance of managers in their area of responsibility, as suggested by Epstein (2008). In this sense, the use of incentives was seen as a valuable tool to further promote an efficient integration of sustainability.

ChemicalCompany and EnergyCompany present structured processes that, starting from generic guidelines created at group level, permeate the organizations into their processes, arriving to measurement and planning of sustainability. This is in line with the argument of Bonacchi and Rinaldi (2007), according to who companies should develop systems in order to identify critical factors, quantify sustainability and support management. Respondents highlighted the importance of the internally developed strategy for achieving integration. In particular, it was stressed how this tailored approach must be applied to sustainability accounting. The basis for sustainability accounting is the measurement of sustainability, which is then reflected in both controlling and reporting processes. When approaching the topic of measurement of sustainability, the need for internal efficiency plays a very important role. All respondents made very clear that a deep knowledge of business-specific characteristics and dynamics is essential to choose indicators that are relevant for the business. Relevant indicators are vital because they enable the control and the steering of the company. Hence, both companies claimed a need for autonomy in this sense. This finding is in line with the approach of Aragon-Correa and Rubio-López (2007), who claim that the approach taken to integration of sustainability should be contingent and tailored, rather than relying on generic ready-to-use models coming from the outside.

Elaborating on this topic, respondents provided an interesting insight: next to the structured processes to choose measurements to be used, there are ad-hoc processes in which case by case decisions are made. In such instances, managers appraise the pressure coming for example from the external environment towards the implementation of specific systems or indicators, and they confront it with the need for the company's efficiency. As a matter of fact, the implementation of new indicators to be measured requires investments in terms of time and resources from the company and its rational must therefore be evaluated. According to the results of this analysis, different actions can be undertaken, such as the implementation of the indicator or the decision to exclude it. This process is important because it clearly shows how the organizations need to consider the different pressures in the design of their systems.

A further interesting point that was mentioned concerns adaptation of indicators in terms of location or business unit. On the one hand, local adaptation is important to ensure relevance; on the other hand, there is a need for consistency in order to enable the steering of the company on a group perspective. Two different sides of efficiency are therefore observable: it is important for the companies to find the balance for it both on a local and on a group level.

Sustainability controlling is closely linked to sustainability reporting, as the two functions share many of the processes and systems. Indeed, the pressure for efficiency is also affecting the way sustainability is reported externally. As already stated in the previous pages, both companies exhibit an approach to reporting that can be seen in line to the double-path approach presented by Herzig and Schaltegger (2006). One explanation for this is that the external requirements must be compensated by what is considered as relevant for the companies, in order to ensure that resources are not jeopardized to report on aspects that are not relevant for the steering of their sustainability strategy. On the other hand, this approach partially contrasts with the concept of frameworks and standards, as they pressure towards standardization across industries and companies. A similar perspective is expressed by ChemicalCompany concerning the approach to the audit of sustainability reports. In fact, it was explained that, in the company's point of view, investing in the assurance of the report would be a relatively large investment. This investment, similarly to other ones linked to additional certifications, could imply distracting resources from relevant initiatives, and therefore posing a risk of a loss in efficiency. Finally, it is worth noting that reporting can also be seen as a tool to answer to the need of efficiency as it facilitates the management of sustainability through its function of tool for internal alignment.

Additionally, respondents claimed that, even though both companies are at the forefront in the field, there can be still possibility for improvement with regard to the management and the accounting of sustainability. Firstly, managers claimed that achieving an even stronger integration of sustainability across their organization would improve even further the performance and the results, in line with what is pointed out by Judge and Douglas (1998). Furthermore, it was claimed that an increased involvement within the companies of the finance organization, that is not thus far concretely involved, could contribute to further enhance the function of sustainability management and accounting. This expectation is consistent with what was predicted by the literature (e.g. Schaltegger and Burrit 2010, Ballou et al. 2012, Ross 2010), which claimed for a higher involvement of traditional accountants in order to leverage on their competences.

5.3 Influence of organizational legitimacy on sustainability accounting

Besides operating efficiently, companies are concerned with earning and retaining legitimacy with their stakeholders. According to Siebenhüner and Arnold (2007), this is one of the motivations that encourage organizations to embrace sustainable initiatives. The reason for this, according to Brunsson (1986), is that organizations are supposed to reflect values and norms dominating in their environment. Interviewees highlighted how sustainability is an increasingly important topic in society, and that this creates an additional pressure on companies to exhibit sustainable behaviors. As described by Perrow (1970; in Milne and Patten, 2002), legitimacy contributes to the survival of organizations, as it ensures the acceptance of outputs and operations in their environment. This aspect was confirmed by the examples of trade partners or clients related to sustainability: operating correctly in this perspective is becoming increasingly important to be accepted by other actors. However, the definition of what operating correctly means is changing and evolving with society: it was highlighted how this is an ongoing process that requires companies to stay continuously on track not to lose their legitimacy. At the same time, the nature itself of the interaction with stakeholders is evolving, and the development of communication for example with the emergence of social media has profoundly changed the landscape organizations are operating in. These findings are in line with the argument of Kostova and Zaheer (1999), according to who legitimacy is context dependent and socially constructed: there is no clear definition of what organizations are supposed to do, as this can change in time, but also according to the stakeholders groups involved (Hybels, 1995).

Companies have structured procedures to identify relevant stakeholders and this is seen as a crucial step to manage external demands, as claimed by Milne and Pattern (2002) and Woodward (1996). Furthermore, the organizations are directly engaged in enabling stakeholders dialogue: this set of processes and activities allows to monitor the perception of stakeholders in the external as well as internal environment, enabling companies to get feedback on their performance. The literature confirms this finding, arguing for an ongoing testing and definition of legitimacy through interaction with the external environment (Kostova and Zaheer 1999). It was reported that one of the main reasons for participating in sustainability rankings is that they give the opportunity to receive feedback on what the actors in the outside environment think about the company. This supports Hybels view (1995), according to who legitimation has to be inferred from the behavior of the actors because of its abstract nature.

One of the main tools linked to legitimacy concerning sustainability is reporting. Through sustainability reporting, organizations disclose information about their activity and engage their stakeholders in dialogue, answering to the pressure for legitimation as described by Woodward (1996). Respondents openly pointed out the existence of a clear expectation in society for corporations of their kind to produce sustainability reports, and this expectation is made explicit by direct requests of stakeholders in this direction. This supports the theory of DiMaggio and Powell (1983), who claim the existence of a pressure for companies to conform to practices observed in the institutional environment among similar organization. Therefore, the rationale itself of sustainability reporting can be seen as an answer to a strong pressure for legitimacy with external actors. Stakeholders that can be addressed with this tool belong to a very wide range: government, customers, partners, investors as well as the wider society including for example NGOs and media (Campbell, 2007). Furthermore, it was pointed out that reporting has also the function of promoting alignment within the company around the sustainability topic. In this perspective, reporting can be seen as fulfilling a legitimating function within the boundaries of the company (Pfeffer, 1981), ensuring the commitment to sustainability for the organization's members.

The requests of stakeholders play an important role in shaping the reporting initiative, in line with the double-path approach proposed by Herzig and Schaltegger (2006). First and foremost, the use of reporting standards is a clear example of institutional pressure. In the case of the companies analyzed, the use of such standards appeared not to be required from an internal point of view, as the managers interviewed pointed out their organizations' competence and ability of reporting autonomously. Nonetheless, stakeholders pose strong importance in the use of such standards, as demonstrated by the fast growth of GRI guidelines in the last years. Hence, even though the degree of adaptation to the reporting standards shown by the companies is somewhat limited, their behavior is in line with the argument of Brunsson (1986), which expects organizations to adapt to norms expressed by the environment. The respondents named some specific examples of external influence on reporting choices. It was pointed out how, in some instances, specific requests coming from stakeholders can influence the decision of reporting on specific issues or to implement certifications. In line with Meyer and Rowan (1977) thoughts, the implementation of these measures, even if potentially in contrast with efficiency criteria, supports the organization in their survival and success. Building on this, respondents argued that one of the challenges in sustainability reporting is the need to address very diverse stakeholders, who have very diverse interests and needs. To solve this challenge, it was pointed out that proactive communication and interaction with the different groups was very important. Accordingly, Milne and Patten (2002) claim that managers have the responsibility to identify and address relevant stakeholders, and Woodward (1996) states that the ability of answering correctly to these pressures is the key to make the company legitimate.

Finally, it is interesting to observe the interplays of legitimacy concerning the topic of the audit of the sustainability report. On the one hand, EnergyCompany's approach is to engage in this activity, in order to increase the transparency of the report and its acceptance from stakeholders, showing the effects of legitimacy pressures. On the other hand, a manager from ChemicalCompany argued that, in their view, the company's reputation with stakeholders was so established that they could afford avoiding this costly activity, without risking damaging their legitimacy. This can be seen as in line with Suchman (1995), according to who legitimacy is not something to be only passively withstood, but rather an operational resource that can be used in the pursuit of organizational goals.

5.4 Addressing the tensions between efficiency and legitimacy

According to the analysis, a structured approach to sustainability accounting, and in particular to its two main components of controlling and reporting, appears to be a key for the management of sustainability. It was discussed how these two components are in nature mostly influenced by two different forces: on the one hand, controlling is directly connected with the need for efficiency of the company while on the other hand, the nature of reporting is firstly associated with ensuring organizational legitimacy. Nonetheless, these two functions appear to be deeply interlinked: consequently, the function of sustainability accounting in its entirety needs to address the tensions between the efficiency and legitimacy forces to which it is subject.

As highlighted by the empirical findings, measurement processes and systems are a case in point, as they represent the basis for both controlling and reporting, and are directly influenced by efficiency and legitimacy needs. A representative example is shown by the choice of indicators. According to the managers interviewed, indicators in the companies analyzed are ideally chosen on the base of what managers value important for their decision-making. At the same time, there are requests from the outside for measurement and reporting of specific issues that are considered important by one or more stakeholders group. On the one hand, introducing a new indicator means implementing new systems and processes that require investments in term of money and time, reducing the company efficiency. On the other hand, not answering to a request of stakeholders could harm the legitimacy of the company. Interestingly, respondents reported that in these cases, a decision is made on the base of what was defined a business case. In such instances, managers evaluate the investment needed, and assess the importance of the stakeholders making the request, and the possible consequences of an agreement or refusal to implement the measurement. The final decision is based on the result of this analysis. This process shows clearly how crucial it is to find a suitable approach, and that both legitimacy and efficiency factors should be appraised.

This sort of choices is then reflected in the reporting procedures of the company. Originally, companies followed a rather independent approach to sustainability reporting based on their internal procedures. The emergence of guidelines such as GRI as institutionalized standards for sustainability reporting created a pressure for organizations to homologate in this direction in order to satisfy stakeholders. Nonetheless, the companies studied claimed the will of maintaining some degree of autonomy, as this protects their ability to control their sustainability activity and to operate efficiently. In this sense, it was also claimed that, especially in the case of sustainability, reality can be very complex, and not always suited to be represented by purely quantitative measures, as instead often required externally. This aspect is also partially contradicting with the expectations of reporting standards that push towards simplification and comparability. This implies sometimes overlooking the soft factors that companies perceive being very important for a thorough understanding of the issues. Similarly, respondents addressed that a simple and clear strategy was a key factor for an efficient operationalization of sustainability. This aspect is partially in contrast with the use of very complex and comprehensive reports such as GRI. Basing the strategy development on such wide sets of indicators could over-complicate the process, resulting in a loss of efficiency. Furthermore, overly complex sets of indicators could be not beneficial to stakeholders, whose intent is to gather a good understanding of the company's activity and sustainability performance.

On the topic of the struggle between legitimacy and efficiency, the literature proposed several strategies for companies, such as producing hypocritical outputs (Brunsson, 1986) or engaging in decoupling processes between formal and actual activities (Meyer and Rowan, 1977). To some extent, these practices can be observed in the companies: the factors that are reported externally, but not used internally for the control and steering of sustainability, can be seen as hypocritical outputs through which formal measurements, differing from the ones actually used by the company, are created in order to satisfy stakeholders requests and, as a consequence, retain legitimacy. Nonetheless, this is only a very limited component, and companies' actions actually partially contradict the view of the authors on the topic. In fact, it was not possible to observe a substantial gap between the companies' formal and actual practices. Rather, the companies appeared to be truly committed to the integration of sustainability issues in their operations, and this attitude was reflected in their approach to sustainability accounting. The hypocritical outputs or the decoupling activities theorized by the authors were not significantly used. Also in the specific field of sustainability accounting, the companies strive for ideally having a total overlap between the measurements for controlling and those for reporting. The rational behind this choice is also linked to efficiency criteria, as maintaining separate systems implies a waste of resources. The companies' approach appears therefore rather in line with the view of Scandinavian institutionalisms (Sahlin-Andersson 1996, Wæraas and Sataøen 2013). Organizations do answer to external pressure by for example reporting following the GRI guidelines. At the same time though, they translate this pressure by proposing an own version of the model, adapted to fit to their business characteristics. In particular, their approach to translation resembles what labeled by Røvik (2007, in Wæraas and Sataøen 2013) as omission, as it was mentioned that indicators and areas of GRI that are not considered as relevant are not measured or reported on.

Interestingly, managers claimed that the good reputation and long experience of the companies in the sustainability field enables them to follow a more customized approach without losing legitimacy with their stakeholders. A similar approach was claimed for sustainability certifications and rankings. If on the one hand, some of them are used, for example to get feedback from stakeholders or to satisfy requests from important clients, the companies do not feel the need to take part to all existing ratings. The argument behind this choice is that their leadership in sustainability among stakeholders is already recognized, and additional investments in that sense would only imply an additional utilization of resources. In this sense, it appears that legitimacy and efficiency can be leveraged on each other, with the condition of being already perceived as competent actors in the field.

5.5 Summary

Sustainability accounting appears to be crucial for ensuring sound sustainability management in leaders of the field. Controlling and reporting functions are needed to properly address the relevant issues, i.e. in particular the control and the steering of sustainability strategy as well as the communication with stakeholders on the topic, as claimed by Schaltegger and Burrit (2010). While doing so, they support the company in answering to efficiency and legitimacy needs. The analysis of two leaders in sustainability highlighted several critical factors for the organization of sustainability accounting, and the effects that efficiency and legitimacy forces have on the design and management of the function. The picture below summarizes what has been explained in the previous paragraphs.

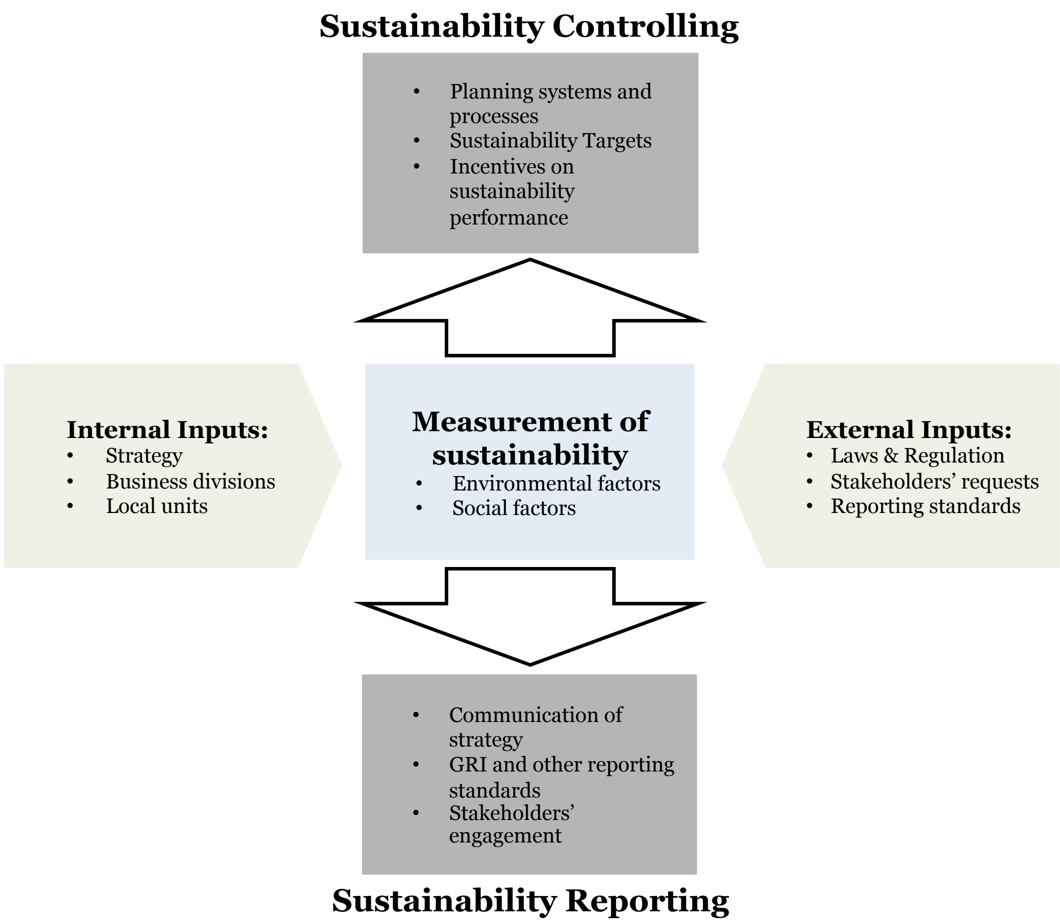

Figure 5 – Sustainability accounting processes: overview

First of all, it was highlighted how the companies showed a strong integration of sustainability in their overall strategy and business model. The integration of sustainability in the processes of the company is enabled by the function of sustainability accounting, that allows the strategy to be translated to operations, and communicated externally. This finding supported the argument of Herzig and Schaltegger (2006). Nonetheless, sustainability accounting is influenced by the company's efficiency and legitimacy needs, which should be considered when structuring the approach to the function. In particular, this dualism of forces could be observed in how sustainability measurement is approached, and it was reflected in the approach to reporting. In fact, if the need for an efficient management of the organization calls for a highly tailored and customized design of controlling and reporting (Aragon-Correa and Rubio-López, 2007), companies are pressured from the external environment towards a more standardized approach in order to gain and retain legitimacy (DiMaggio and Powell, 1983). Therefore, companies exhibited a way of dealing with the tension between these forces that can be identified as translation, as proposed by Scandinavian institutionalisms (Sahlin-Andersson 1996, Wæraas and Sataøen 2013, Rottenburg 1996). Through this process, the organizations translate the pressures coming from stakeholders for standardized reporting by providing an adapted version of it that suits the business's characteristics. In this sense, this process resembles what is labeled by Røvik (2007, in Wæraas and Sataøen 2013) as omission, as some parts of the standards considered as not relevant are omitted. Hence, it can be concluded that the role of sustainability accounting cannot be fully understood without considering the role of both efficiency and legitimacy pressures on organizations. This results in line with the expectations of Schaltegger and Burrit (2010), according to who even target driven frameworks should not exclude the consideration of key stakeholders.

Interestingly, it was possible to see that, in the case of actors with a strong reputation, the forces of legitimacy and efficiency can be leveraged on each other, as a strong legitimacy allows focusing on efficiency-driven measures, without risking compromising stakeholders' satisfaction. Finally, the role of the finance organization in sustainability accounting was discussed. Despite the claim from Zvezdov et al. (2010) for an increasing involvement of accountants in sustainability, such participation was not present in the organizations analyzed. Nonetheless, respondents claimed that a greater involvement of the traditional controlling and accounting functions could further improve the efficiency as well as contribute to a stronger internal legitimacy for the topic, resulting in line with what argued for example by Ballou et al. (2012) and Ross (2010).

6 Conclusion

This section outlines the concluding thoughts of this work. First, a general conclusion is provided through a summary of the findings. Secondly, theoretical implications of the research are presented, followed by managerial implications. Finally, the limitations of this study are discussed, and suggestions for future research are addressed.

The aim of this work was to investigate how the function of sustainability accounting is managed in organizations with leadership positions in sustainability. In this perspective, the goal was to analyze how the pressures for organizational legitimacy and efficiency on the companies contribute to shape this function. Therefore, the following research questions were developed:

> *"How do sustainability leaders manage the function of sustainability accounting?"*
>
> *"How is sustainability accounting influenced by efficiency and legitimacy demands, and how can the relation between them be explained?"*

In order to answer these questions, two leading corporations with a strong sustainability management were analyzed with a case study approach, through interviews with their managers. The study was based on a theoretical framework developed by combining management literature on sustainability accounting as well as research on organizational legitimacy and efficiency.

The analysis revealed that the two questions should be jointly answered, as the role and the design of sustainability accounting in these organizations is deeply interlinked with both efficiency and legitimacy needs. It was found that the companies showed a strong commitment towards the integration of sustainability, and that sustainability accounting has a great importance for this process. On the one hand, this function enables the integration of sustainability into the processes of the company by linking strategy to operations; on the other hand, it enables communication with external stakeholders on the topic of sustainability. Efficiency pressures strongly shape what was defined as sustainability controlling, whose role is to provide information to managers and decision-makers within the organizations. A strong connection with the strategy and adaptation to the business characteristics were highlighted as key factors to answer to criteria of efficiency. At the same time, sustainability accounting, and in particular its reporting role, is strongly influenced by the need for organizational legitimacy. The importance of reflecting stakeholders' expectations was highlighted. In this sense, external stakeholders expect organizations to follow standardized procedures in sustainability reporting, such as the adherence to mainstream reporting guidelines and standards.

This dualism of forces can create particular pressure on how sustainability is measured in the companies, as there appears to be a contrast between the organizations' need for a tailored approach and the external requests for standardization and comparability. Moreover, if on the one hand companies value a simple and clear strategy, the use of external standards on the other hand requires a complex and comprehensive use of indicators. This tension should be addressed by managers, who should find a degree of adoption of these standards that allows answering both efficiency and legitimacy needs. It was found that the organizations analyzed react to this dualism by translating the institutional pressure, in line with the thoughts of Scandinavian institutionalism (Sahlin-Andersson 1996, Wæraas and Sataøen 2013, Rottenburg 1996). In particular, organizations' approach resembles what labeled as omission by Røvik (2007). By providing a version of the external standards that is adapted to their business's characteristics, the companies can satisfy both efficiency and legitimacy needs, while at the same time avoiding hypocritical outputs or decoupling of activities. Interestingly, it was also found that in the case of highly legitimated actors as those analyzed, the pressure for compliance to external frameworks is to some extent lower, allowing the implementation of more measures aimed to answer efficiency rather than legitimacy needs, without the risk of damaging their reputation with stakeholders.

6.1 Theoretical implications

This study contributes to management literature by exploring the management of sustainability accounting among organizations with a leadership position in sustainability, and by investigating what is the role of pressures for organizational legitimacy and efficiency in shaping this function. Building on the proposition from Schaltegger and Burrit (2010), according to who even performance-oriented measurement systems should include the appraisal of most relevant stakeholders, a framework was developed that directly connects legitimacy and efficiency needs to the design and management of sustainability accounting. The analysis revealed that the role of sustainability accounting cannot be fully understood without considering the role of both these needs on organizations. Hence, a model representing an overview of the main processes in sustainability accounting was built. This works' findings reveal that the design of sustainability-related measurement systems should go beyond the internal perspective of the organizations, by including important stakeholders in the process. At the same time, it was highlighted how the institutional pressure towards the adoption of standardized reporting guidelines can negatively affect organizational efficiency, resulting even counterproductive for corporate and sustainability performance. In this sense, the theory of organizational translation of institutional pressure proposed by Scandinavian institutionalism appeared central in explaining the way the companies analyzed deal with this potential contrast of forces. This provides new insights into the research on sustainability accounting, by widening the spectrum of factors to be considered when researching on the topic. In this perspective, these findings can serve as a basis for future research on the role of institutional and organizational factors for the management of sustainability accounting. Furthermore, this work contributes to the studies on the relation between organizational efficiency and legitimacy, highlighting the role of translation and marking a difference with theory on other organizational responses to these forces, such as hypocrisy and decoupling activities.

6.2 Managerial implications

The results of this work can offer useful insights to organizations that are dealing with sustainability accounting and to managers that wish to enhance their understanding of the critical factors in the design and management of this function. As extensively highlighted in the analysis, relevance for the characteristics of the specific business and environment are crucially important factors in this field, and therefore the use of "ready-to-apply" frameworks could be not only of little help, but also counterproductive. Nonetheless, these recommendations can be a useful overview of important aspects to keep in mind when dealing with the management of sustainability accounting systems. Henceforth, some key points are illustrated as practical recommendations for managers (see Figure 6 below).

Managerial implications:

1. Consider the value of having strategy at the beginning and at the end of the process
2. Reflect on the role sustainability controlling can have in translating the strategy into the operations
3. Keep in mind that efficient management might require adaptation to the characteristics of your business
4. Take into account the requests of stakeholders in the process
5. Consider standards and guidelines as a tool but not as a limitation
6. Reflect on the relation between legitimacy and efficiency
7. Remember that legitimacy can be an asset

Figure 6 – Managerial implications

1. Consider the value of having strategy at the beginning and at the end of the process

The role of strategy can be crucial in the design and the management of a sustainability accounting function that enables the steering of the environmental and social performance of the company. First of all, the strategy represents the starting point for the design of these systems: it can help highlighting the most important drivers for the company and it explicates the direction of the business development. This can provide support in the identification of the core topics to be addressed by sustainability controlling systems. Furthermore, the strategy represents a tool to help interpreting the measurements and to support decision-making. Hence, using it as benchmark throughout the processes related to the measurement and control of sustainability can support the design of suitable systems.

2. Reflect on the role sustainability controlling can have in translating the strategy into the operations

In order to lead to sustainability performance, the strategy should be broken down in actionable activities that members of the organizations can relate to during their daily work. In this sense, the role of sustainability controlling can be crucial, as it contributes to translate the overall strategy into the operations, providing clear targets to be achieved. Organizations and managers can use this function to enable employees to take action by providing clear plans and targets, and by constantly monitoring the achievements.

3. Keep in mind that efficient management might require adaptation to the characteristics of your business

Different businesses in different industries can have profound differences, especially in social and environmental measures, whose specificity is even higher. Hence, it is vital to recognize the specific characteristics of the company's business and eventually to adapt measurements to them. This can be a key aspect to ensure that, for example, the indicators used to monitor the performance of the organization truly reflect the dynamics and the peculiarities of the business. Even within the same company, differences among divisions or locations might require the adaptation of such measurements in order to always ensure high relevance.

4. Take into account the requests of stakeholders in the process

The role of sustainability accounting is not only to provide information to the management and to decision-makers, but also to communicate with the company's stakeholders on the progresses of sustainable development. Therefore, managers should proactively engage in understanding who their stakeholders are, their needs and expectations in terms of form and content of communication, and to take into account those requests when designing the company's processes. This might imply, for example, reporting on particular indicators that could be of interest for some particular groups, or following standards or guidelines that are recognized as trustworthy by institutional actors.

5. Consider standards and guidelines as a tool but not as a limitation

Reporting standards and guidelines on sustainability are becoming increasingly common, and organizations are often expected to adopt them. These standards, beside a legitimization tool, can offer precious support in identifying which are generally the most important topics and indicators to be considered when approaching the measurement and reporting of sustainability. At the same time, they might represent a limitation or an unnecessary burden if followed too strictly. Therefore organizations should use them to increase their understanding of the topic, but without renouncing to investigate what are the business-specific aspects that are relevant for them, thereby considering the adoption of an adapted version of them that better suits their characteristics.

6. Reflect on the relation between legitimacy and efficiency

Integrating the need for business relevance and the requests of external stakeholders can imply a tension between the two forces, determined for example by the necessity of investing a large amount of resources. As a consequence, managers should reflect on the interconnections between legitimacy and efficiency. While facing this decision, it is important to appraise the nature of stakeholders' requests, the stakeholders' importance for the companies and the possible consequences of the decisions to be made. By considering these factors in making the decision, managers can maximize the outcomes, for example avoiding unnecessary investments or enhancing the relationship with key stakeholders.

7. Remember that legitimacy can be an asset

Legitimacy and reputation are usually the result of a long process of stakeholders management. Legitimate companies have the possibility of using their trustworthiness to engage proactively in discussions with the stakeholders and to promote their views and procedures without damaging their reputation. This can represent a great advantage in comparison with companies whose credibility is low, and should be proactively used to promote dialogue with other actors.

6.3 Limitations

This work presents a set of limitations that the reader should consider and be aware of.

Firstly, the generalizability of the results cannot be ensured, as the research sample is relatively limited. The number of organizations studied was limited to two: increasing this number including a wider range of companies could have offset this limitation. Nevertheless, due to the scope of a Master thesis work, this was not possible. Furthermore, the companies analyzed were fairly similar, as both are large listed companies operating worldwide. Therefore, the results might not be applicable to organizations with different characteristics. However, the fact of including companies from different industries represented an attempt to avoid industry-specific results, increasing the generalizability of the findings. In this sense, the fact that one company belongs to the business to business sector, while the other operates in both business to business and business to consumer could have been addressed to understand potential implications; nevertheless, due to the scope of this thesis, it was chosen to delimit this study and not to directly address the issue.

Secondly, the number and the position of the interviewees could have affected the results of the study. This work was based, beside the analysis of companies' reports, on ten interviews with managers within the companies. Firstly, a higher number of respondents might have increased the depth of the study and generated more data. On the other hand, the topic resulted to be managed by a fairly limited number of people within the organizations, and the managers interviewed appeared to be very knowledgeable on the topic. This aspect, together with the difficulty of accessing more people within the time frame of this Master thesis, limited the quantity of the interviews to the reported figure. Secondly, the complex structure of the companies and the limited transparency of the people covering each role throughout the organizations implied that the possibility of autonomously identifying possible interview-partners was to some extent limited. Instead, several respondents were identified through referral from other interviewees. This could have been reflected in having only a partial view of the topic within the organizations. In order to offset at least partially this bias, some respondents were autonomously contacted through channels such as LinkedIn. Furthermore, respondents whose position was on a group as well as on a division level were interviewed, in order to include both corporate and business units perspectives.

Finally, the use of qualitative interviews entails also limitations, as interviewer and interviewees might interpret some statements or questions differently. Therefore, some aspects might have been overlooked or misinterpreted. Furthermore, respondents might describe reality in a way that is at least partially different from the facts, on purpose or unconsciously. For example, some aspects could have been under-emphasized because of the little knowledge of the interviewee on the topic, or vice versa. In order to reduce the impact of this aspect on the results, many aspects were crosschecked with other respondents and/or the companies' reports. Moreover, ensuring the anonymity of the companies and of the respondents in the study reduced the possibility of managers using the interviewees to put themselves or their companies in a positive light.

6.4 Future Research

Based on the results of this work and as well as on its limitations, several avenues for future research could be identified.

Firstly, the study could be repeated with a larger sample of companies, in order to prove the validity of the developed model and to increase the generalizability of the findings. Possibly, a partially quantitative method could be used, in order to map potential differences in the influence that efficiency and legitimacy forces have on the companies' practices. In this perspective, it would be interesting to see a study that analyzes organizations with different characteristics, for example in terms of size and industry, in order to identify possible meaningful deviations. Furthermore, it could be investigated if operating in the business to business or in the business to consumer industry implies substantial differences in the way sustainability accounting is approached, and in the characteristics of the forces influencing the organizations.

Secondly, the exploratory nature of the study implied that many facets of the management of sustainability accounting had been only touched upon briefly, without a deep analysis. Therefore, some of these aspects could be further investigated, in order to further increase the understanding of the critical factors in managing this function and the forces to it related. For example, the importance of the strategy for the design of sustainability accounting was highlighted. In this sense, it might be further researched on the dynamics of transferring strategy into operations through sustainability accounting, and the role of efficiency and legitimacy in this process. Additionally, the role of the finance organization within the companies appeared somewhat unclear: the managers interviewed claimed that the integration of finance professionals and knowledge to sustainability accounting could enhance this function, but at the same time such integration was not yet realized.

Moreover, also the view of the literature on the topic is dissenting: if several authors claim the potential benefit of this integration, the degree of actual integration within companies is still unclear. Therefore, researchers could further investigate the topic, mapping the phenomenon in order to derive practical implications for achieving this integration.

Thirdly, the analysis revealed how the companies studied were able to leverage on their experience in the field of sustainability, hence limiting their degree of adoption of sustainability reporting standards and guidelines, rather relying on their expertise in determining relevant factors. At the same time, it was argued that for companies new to the field, those guidelines could actually give crucial support. In this perspective, future research could explore how the experience in sustainability influences the adoption of standards, both in the reporting field and in the wider sustainability area. It would be interesting to prove whether there is a learning curve in sustainability that implies a lower adoption of external standards. A quantitative study could attempt to map these two variables, investigating the existence and the extent of a correlation between the two, as well as other potential factors of influence.

Finally, it appeared that the local adaptation of sustainability accounting procedures, both linked to controlling and reporting aspects, is important to enable the steering of the company and to properly address stakeholders' needs. Further research could investigate the extent and the implications of this adaptation, in particular with regard to the effects on the efficiency on a group level.

References

Ahlrichs, F. (2012). Controlling of sustainability: How to manage a sustainable business. *Journal of Organisational Transformation & Social Change, 9*(2), 141-153.

Aragon-Correa, J. A., & A Rubio-López, E. (2007). Proactive corporate environmental strategies: Myths and misunderstandings. *Long Range Planning, 40*(3), 357-381.

Ballou, B., Casey, R. J., Grenier, J. H., & Heitger, D. L. (2012). Exploring the strategic integration of sustainability initiatives: Opportunities for accounting research. *Accounting Horizons, 26*(2), 265-288.

Bartolomeo, M., Bennett, M., Bouma, J. J., Heydkamp, P., James, P., & Wolters, T. (2000). Environmental management accounting in Europe: Current practice and future potential. *European Accounting Review, 9*(1), 31-52.

Bazeley, P. (2013). *Qualitative data analysis: Practical strategies* Sage.

Benijts, T. (2008). Measuring corporate sustainability. *Journal of Corporate Citizenship,* (32), 29-42.

Bennett, M., Schaltegger, S., & Zvezdov, D. (2013). Exploring corporate practices in management accounting for sustainability. *London: Institute for Chartered Accountants of England and Wales (ICAEW).*

Bonacchi, M., & Rinaldi, L. (2007). DartBoards and clovers as new tools in sustainability planning and control. *Business Strategy and the Environment, 16*(7), 461-473.

Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal, 9*(2), 27-40.

Brønn, P. S., & Vidaver-Cohen, D. (2009). Corporate motives for social initiative: Legitimacy, sustainability, or the bottom line? *Journal of Business Ethics, 87*(, Supplement 1: Globalization and the Good Corporation), 91-109.

Brunsson, N. (1986). Organizing for inconsistencies: On organizational conflict, depression and hypocrisy as substitutes for action. *Scandinavian Journal of Management Studies, 2*(3–4), 165-185.

Campbell, J. L. (2007). Why would corporations behave in socially responsible ways? an institutional theory of corporate social responsibility. *Academy of Management Review, 32*(3), 946-967.

Darke, P., Shanks, G., & Broadbent, M. (1998). Successfully completing case study research: Combining rigour, relevance and pragmatism. *Information Systems Journal, 8*(4), 273-289.

Deephouse, D. L., & Suchman, M. (2008). Legitimacy in organizational institutionalism. *The Sage Handbook of Organizational Institutionalism,* , 49-77.

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review,* 147-160.

Dyllick, T., & Hockerts, K. (2002). Beyond the business case for corporate sustainability. *Business Strategy and the Environment, 11*(2), 130-141.

Eccles, R. G., Serafeim, G., & Krzus, M. P. (2011). Market interest in nonfinancial information. *Journal of Applied Corporate Finance, 23*(4), 113-127.

Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review, 14*(4), 532-550.

Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal, 50*(1), 25-32.

Elkington, J. (1994). Towards the suitable corporation: Win-win-win business strategies for sustainable development. *California Management Review, 36*(2), 90-100.

Epstein, M. J., & Roy, M. (2001). Sustainability in action: Identifying and measuring the key performance drivers. *Long Range Planning, 34*(5), 585-604.

Epstein, M. J. (2008). Implementing Corporate Sustainability: Measuring And Managing social and environmental impacts. (cover story). *Strategic Finance, 89*(7), 25-31.

Epstein, M. J., & Widener, S. K. (2010). Identification and use of sustainability performance measures in decision-making. *Journal of Corporate Citizenship,* (40), 43-73.

Ernst&Young. (2013). *Value of sustainability reporting*. (Boston College Center for Corporate Citizenship ed.)

Etzion, D., & Ferraro, F. (2010). The role of analogy in the institutionalization of sustainability reporting. *Organization Science, 21*(5), 1092-1107.

Etzioni, A. (1964). *Modern organisations* Prentice-Hall Englewood Cliffs, NJ.

Freeman, R. E., & Reed, D. L. (1983). Stockholders and stakeholders: A new perspective on corporate governance. *California Management Review, 25*(3), 88-106.

Friedland, R., & Alford, R. (1991). Bringing society back in. symbols, practices and institutional contradictions. In W. Powell, & P. DiMaggio (Eds.), *The new institutionalism in organizational analysis* (University of Chicago Press ed., pp. 232-263)

Friedman, M. (2008). The social responsibility of business is to increase its profits. In K. E. Meyer (Ed.), (pp. 375-380) Elgar Reference Collection. Globalization of the World Economy series, vol. 21. Cheltenham, U.K. and Northampton, Mass.: Elgar.

Gates, S., & Germain, C. (2010). Integrating sustainability measures into strategic performance measurement systems: An empirical study. *Management Accounting Quarterly, 11*(3), 1-7.

Ghauri, P., & Grønhaug, K. (2010). *Research methods in business studies* (Fourth edition ed.). London: Prentice Hall.

Gill, J., & Johnson, P. (2002). *Research methods for managers* Sage.

GRI. (2013). Global reporting initiative website. Retrieved 02.11.2013 from https://www.globalreporting.org/

Haugh, H. M., & Talwar, A. (2010). How do corporations embed sustainability across the organization? *Academy of Management Learning & Education, 9*(3), 384-396.

Herzig, C., & Schaltegger, S. (2006). Corporate Sustainability Reporting
an overview. In S. Schaltegger, M. Bennett & M. Burritt (Eds.), *Sustainability accounting and reporting* (pp. 301)

Hespenheide, E., Pavlovsky, K., & McElroy, M. (2010). Accounting For Sustainability Performance. *Financial Executive, 26*(2), 52-58.

Hubbard, G. (2009). Measuring organizational performance: Beyond the triple bottom line. *Business Strategy and the Environment, 18*(3), 177-191.

Hybels, R. C. (1995). *On legitimacy, legitimation, and organizations: A critical review and integrative theoretical model* Academy of Management.

Ioannou, I., & Serafeim, G. (2011). The consequences of mandatory corporate sustainability reporting. *Harvard Business School Research Working Paper,* (11-100)

Järvensivu, T., & Törnroos, J. (2010). Case study research with moderate constructionism: Conceptualization and practical illustration. *Industrial Marketing Management, 39*(1), 100-108.

Jonker, J., & Pennink, B. J. W. (2010). *The essence of research methodology: A concise guide for master and PhD students in management science* Springer.

Judge, W. Q., & Douglas, T. J. (1998). Performance implications of incorporating natural environmental issues into the strategic planning process: An empirical assessment. *Journal of Management Studies, 35*(2), 241-262.

Jutterström, M., & Norberg, P. (2013). *CSR as a management idea: Ethics in action* Edward Elgar Publishing.

Keats, D. (1999). *Interviewing: A practical guide for students and professionals* NewSouth Publishing.

Kiron, D., Kruschwitz, N., Haanaes, K., & Velken, I. v. S. (2012). Sustainability nears a tipping point. *MIT Sloan Management Review, 53*(2), 69-74.

Kolk, A. (2003). Trends in sustainability reporting by the fortune global 250. *Business Strategy and the Environment, 12*(5), 279-291.

Kostova, T., & Zaheer, S. (1999). Organizational legitimacy under conditions of complexity: The case of the multinational enterprise. *Academy of Management Review,* , 64-81.

Lamberton, G. (2005). Sustainability accounting—a brief history and conceptual framework. Paper presented at the *Accounting Forum, , 29*(1) 7-26.

Longhurst, R. (2003). Semi-structured interviews and focus groups. *Key Methods in Geography,* , 117-132.

Manetti, G. (2011). The quality of stakeholder engagement in sustainability reporting: Empirical evidence and critical points. *Corporate Social Responsibility and Environmental Management, 18*(2), 110-122.

Manetti, G., & Toccafondi, S. (2012). The role of stakeholders in sustainability reporting assurance. *Journal of Business Ethics, 107*(3), 363-377.

Medley, P. (1997). Environmental accounting-what does it mean to professional accountants? *Accounting, Auditing & Accountability Journal, 10*(4), 594-600.

Meek, G. K., Roberts, C. B., & Gray, S. J. (1995). Factors influencing voluntary annual report disclosures by US, UK and continental european multinational corporations. *Journal of International Business Studies,* , 555-572.

Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology, 83*(2), 340-363.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* Sage.

Milne, M. J., & Patten, D. M. (2002). Securing organizational legitimacy: An experimental decision case examining the impact of environmental disclosures. *Accounting, Auditing & Accountability Journal, 15*(3), 372-405.

Pfeffer, J. (1981). *Power in organizations* Pitman Marshfield, MA.

Rath, J., & Gurtoo, A. (2012). Corporate social responsibility orientation: Theorizing through the Williamson framework. *Vikalpa, 37*(2), 9.

Ross, L. (2010). Accounting for sustainability. *Financial Management (14719185),* , 31-32.

Rottenburg, R. (1996). When organization traveks: On intercultural translation. In B. Czarniawska, & G. Sevón (Eds.), *Translating organizational change* (Walter de Gruyter ed., pp. 191-240)

Røvik, K. A. (2007). *Trender og translasjoner: Ideer som former det 21. århundrets organisasjon* Universitetsforlaget.

Sahlin-Andersson, K. (1996). Imitating by editing success: The construction of organizational fields. In B. Czarniawska, & G. Sevón (Eds.), *Translating organizational change* (Walter de Gruyter ed., pp. 69-92)

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students* (5th Edition ed.) Pearson Education.

Schaltegger, S., & Burritt, R. (2011). Beyond markets: Strategic sustainability management control. *URAM 2011: Management Culture in the 21st Century: European Academy of Management (EURAM) Estonian Business School.*

Schaltegger, S., Gibassier, D., & Zvezdov, D. (2011). Environmental management accounting–A bibliometric literature review. *Leuphana University, Lüneburg,*

Schaltegger, S., & Burritt, R. L. (2010). Sustainability accounting for companies: Catchphrase or decision support for business leaders? *Journal of World Business, 45*(4), 375-384.

Schaltegger, S., Burritt, R. L., & Petersen, H. (2003). *An introduction to corporate environmental management: Striving for sustainability* Greenleaf Publishing.

Schaltegger, S., & Synnestvedt, T. (2002). The link between 'green' and economic success: Environmental management as the crucial trigger between environmental and economic performance. *Journal of Environmental Management, 65*(4), 339-346.

Schaltegger, S., Viere, T., & Zvezdov, D. (2012). Tapping environmental accounting potentials of beer brewing: Information needs for successful cleaner production. *Journal of Cleaner Production, 29*, 1-10.

Scherrer, Y., Daub, C., & Burger, P. (2007). Toward integrating sustainability into business strategy. *Business Strategy and the Environment, 16*(7), 459-460.

Sharma, S., & Ruud, A. (2003). On the path to sustainability: Integrating social dimensions into the research and practice of environmental management. *Business Strategy and the Environment, 12*(4), 205-214.

Siebenhüner, B., & Arnold, M. (2007). Organizational learning to manage sustainable development. *Business Strategy and the Environment, 16*(5), 339-353.

Smith, J., Haniffa, R., & Fairbrass, J. (2011). A conceptual framework for investigating 'capture' in corporate sustainability reporting assurance. *Journal of Business Ethics, 99*(3), 425-439.

Stake, R. (1994). Case studies. handbook of qualitative research. N. Denzin and YS Lincoln. eds.

Suchman, M. C. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review, 20*(3), 571-610. doi:10.5465/AMR.1995.9508080331

Suddaby, R. (2006). From the editors: What grounded theory is not. *Academy of Management Journal, 49*(4), 633-642.

Taticchi, P. (2013). Sustainability measurement and reporting: Impacts on finance, stakeholders communication and internal measurement practices. In P. Taticchi, P.

Carbone & V. Albino (Eds.), (pp. 221-231) Springer Berlin Heidelberg. doi:10.1007/978-3-642-37018-2_10

Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation, 27*(2), 237-246.

UN Global Compact. (2013). United nations global compact website. Retrieved 03.11.2013 from http://www.unglobalcompact.org

Voss, C., Tsikriktsis, N., & Frohlich, M. (2002). Case research in operations management. *International Journal of Operations & Production Management, 22*(2), 195-219.

Wæraas, A., & Sataøen, H. L. (2013). Trapped in conformity? translating reputation management into practice. *Scandinavian Journal of Management,*

Wagner, M. (2007). Integration of environmental management with other managerial functions of the firm: Empirical effects on drivers of economic performance. *Long Range Planning, 40*(6), 611-628.

WCED, U. (1987). Our common future. *World Commission on Environment and DevelopmentOxford University Press,*

Woodward, D. G., Edwards, P., & Birkin, F. (1996). Organizational legitimacy and stakeholder information provision. *British Journal of Management, 7*(4)

Yin, R. K. (2003). Case study research: Design and methods. applied social science research methods series, vol. 5.

Zvezdov, D., Schaltegger, S., & Bennett, M. (2010). The increasing involvement of accountants in corporate sustainability management. *Journal of the Asia-Pacific Centre for Environmental Accountability, 16*(4), 20-31.

Appendix

Appendix I – Generic interview protocol

Introduction

- Brief repetition of thesis approach and aim
- Confidentiality and anonymity of interviews
- Permission of recording

Background questions

- Could you please tell me briefly about your background and your role at Company?
- What is your relation to sustainability in your daily work?
- How are you involved in sustainability accounting, meaning the set of processes linked to the measurement, the planning and the reporting on environmental and social issues?

Controlling of sustainability

- Implementing sustainability controlling can present several challenges. How was this process initiated? Which were the main steps? How was the overall "frame" for sustainability controlling set?
- What are the main differences with the "normal" controlling processes? Were new tools or procedures introduced?
- To what extent is the measurement of sustainability "interfunctional" and shared among different units, and to what extent it is mostly managed centrally?
- Sustainability often goes beyond the traditional financial and monetary aspects, and that is usually a challenge. How are sustainability KPIs identified in Company? Which are the main challenges in this sense? Are there areas that are more difficult to quantify? How is this problem solved?
- What about adaptation of strategy and targets according to location or division? How much are topics changing from country to country and from division to division? And how much do the indicators need to be adapted? What are the most important/challenging aspects?
- How are sustainability indicators perceived around the company? Are there differences between sustainability people, finance world and top management?
- How are the main topics identified? How are the targets set? How does the planning process look like? Which departments are involved?
- Was/is the concern rose about the complexity of introducing new indicators in already probably very complex systems? Are those indicators easy to manage?
- How are indicators developed? Are they relative measures or absolute? Why?
- How was the methodology validated? Is it widely shared?

- How is the measurement of sustainability used to make decisions? And what is the influence on the overall strategy of Company? Could you maybe briefly describe the processes linked to planning and targets for example? How does that impact choices in terms of projects/activities/initiatives etc.? And how does the information coming from sustainability measurement influence the other departments and functions?
- What was the impact on the finance/controlling processes? Did they change to accommodate sustainability, or do they work in parallel?
- Is there a high involvement of the finance organization along the process? Where could they be more involved, if they should?
- What do you think are the main challenges at the moment?
- Do you see any improvement opportunities?

Sustainability reporting

- What are in the first place the main reasons for having a sustainability report? What would happen if you would not have one?
- What are the requests from customers/public? What is the impact on you?
- Is the amount of information that you disclose increasing/changing from year to year?
- Are there law requirements in relation to sustainability reporting? Do you see that changing in the future?
- Do you feel there is also increase in interest in the topic from the investors' world? How does that influence you?
- What is the attitude of the stakeholders to reporting? Is there trust and credibility?
- How can you identify what stakeholders want to know? Stakeholder groups are very diverse and interested in very diverse types of information. How can you provide to all of them the information they want, avoiding an information overload?
- The way you report information (the indicators you include, how you calculate them) is likely to strongly affect the perception of external actors. How do you deal with this fact? Do you consider it when developing your indicators?
- What is the role of standards and frameworks in this sense? How do you choose them, and what is the impact on your way of reporting/measuring sustainability performance? And what about the audit? Is that an important tool?
- These frameworks are also sometimes competing, now GRI at least regarding the reporting part seem to have gained a leadership. Do you agree, and why do you think it is like that?
- Could you maybe clarify the relationship between the measurement for internal steering purposes and the reporting? How much overlap is there, how separately are the two processes managed? Are there for example indicators that you think are important and that are not in GRI?
- What do you think are the main challenges at the moment?
- Do you see any improvement opportunities?

Organizational efficiency

- How was the integration of sustainability and strategy achieved? Which were the main forces behind it? What were, in your opinion, the main challenges?
- How does your role as [position] fit into this picture?
- How was the framework that Company uses developed? Which were the main actors involved? How did the process look like?
- How do you see the role of other departments than the sustainability one in coordinating the sustainability effort?
- How does Company deal with transmitting the strategy to the operations? Which are the main processes in this sense?
- Are there special aspects of sustainability accounting that, I your experience, have a direct impact on the company's efficiency? How can you ensure that that efficiency is not impacted?
- What do you think are the main challenges at the moment?
- Do you see any improvement opportunities?

Organizational legitimacy

- Companies feel an increasing pressure to be legitimate with the external environment and the stakeholders. What are in your opinion the areas in which such pressures are stronger for Company? How has this changed in the last years? What other are the main topics you see at the moment, beside sustainability?
- Are there any Company-specific issues that you can identify and you think are relevant?
- Which are the main actors involved? How does Company identify its major stakeholders?
- How does Company respond to the external pressure? What other are the main topics you see at the moment, beside sustainability? What about internal actors?
- Does Company actively involves its stakeholders in a dialogue? Both regarding sustainability issues or other issues
- Do you monitor/measure stakeholders' satisfaction and support? How?
- Looking at the reporting standards topic, there seems to be a pressure for some sort of standardization of the companies. That might be due to a need for comparability, but on the other hand could also imply a loss of peculiarity/specificity. What is you opinion about it? How is Company, in your opinion, responding to this, and what could be done differently?

Others

- Do you have any concluding remarks? Are there aspects we have not touched upon and that you feel are important to mention?

Appendix II – Overview of interviews

Company	Job Title	Abbreviation	Date
ChemicalCompany	Corporate Sustainability Manager	CC01	23/08/13
EnergyCompany	Manager Health, Safety and Environment Division Alfa	EC01	10/09/13
EnergyCompany	Manager Health, Safety and Environment Division Alfa	EC02	12/09/13
ChemicalCompany	Corporate Sustainability Manager	CC02	18/09/13
EnergyCompany	Regional Head of Sustainability	EC03	26/09/13
EnergyCompany	Senior Sustainability Advisor	EC04	04/10/13
ChemicalCompany	Director Sustainability Division Alfa	CC03	11/10/13
ChemicalCompany	Corporate Sustainability Manager	CC04	11/10/13
EnergyCompany	Senior Sustainability Advisor	EC05	16/10/13
ChemicalCompany	Country Sustainability Council Member	CC05	08/11/13

Appendix III – Overview of GRI categories for indicators

Category	Economic		Environmental	
Aspects [III]	• Economic Performance • Market Presence • Indirect Economic Impacts • Procurement Practices		• Materials • Energy • Water • Biodiversity • Emissions • Effluents and Waste • Products and Services • Compliance • Transport • Overall • Supplier Environmental Assessment • Environmental Grievance Mechanisms	
Category	**Social**			
Sub-Categories	**Labor Practices and Decent Work**	**Human Rights**	**Society**	**Product Responsibility**
Aspects [III]	• Employment • Labor/Management Relations • Occupational Health and Safety • Training and Education • Diversity and Equal Opportunity • Equal Remuneration for Women and Men • Supplier Assessment for Labor Practices • Labor Practices Grievance Mechanisms	• Investment • Non-discrimination • Freedom of Association and Collective Bargaining • Child Labor • Forced or Compulsory Labor • Security Practices • Indigenous Rights • Assessment • Supplier Human Rights Assessment • Human Rights Grievance Mechanisms	• Local Communities • Anti-corruption • Public Policy • Anti-competitive Behavior • Compliance • Supplier Assessment for Impacts on Society • Grievance Mechanisms for Impacts on Society	• Customer Health and Safety • Product and Service Labeling • Marketing Communications • Customer Privacy • Compliance

Source: GRI (2013)