

SUSTAINABILITY WITH(OUT) COMPROMISE:
HOW COMPANIES PERCEIVE, MANAGE, AND COMMUNICATE TRADE-OFF DECISIONS IN THE PRACTICE
OF CORPORATE SUSTAINABILITY

by

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ABSTRACT

Sustainability With(Out) Compromise: How Companies Perceive, Manage, And Communicate Trade-Off
Decisions In The Practice of Corporate Sustainability

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The practice of corporate sustainability is beset with compromise; it involves inevitable trade-offs across competing objectives and across a range of stakeholders and time horizons. These trade-offs create tension points that present the company with strategic choices that ultimately shape its overall approach to sustainability. Accordingly, trade-offs constitute a material aspect of a company's sustainability practice, and ought to be disclosed in sustainability reports. The purpose of this research is therefore to understand how companies perceive, manage, and report on these critical trade-off decisions in the practice of sustainability. To achieve this objective, this dissertation conducted a study in three phases.

In Phase I, this study conducted a review and content analysis of the trade-off literature through the lens of the natural resource-based view of the firm. Through this process, this study proposed a hierarchical framework for the analysis of trade-offs based on their root tensions, their interconnections, and their connection to sustainability synergies.

In Phase II, this study used an organizational cognition perspective to posit that companies perceive and respond to these trade-off decisions in ways that reflect the company's underlying sustainability logic. To explore this link, this study performed a content analysis of interviews with sustainability managers, as well as archival documents. This study found that companies with an instrumental logic saw trade-offs as binary and resolved them by counterbalancing the 'lose' dimension with 'wins' elsewhere. In contrast, companies with an integrative logic saw trade-offs as non-binary, and resolved them through an iterative, risk-based approach.

Finally, in Phase III, this study used a legitimacy perspective to determine whether companies are disclosing these trade-offs in their sustainability reports. To do so, this study analyzed sustainability

reports and interviews with sustainability managers using content analysis. This study found that 92% of all reporting companies had encountered sustainability trade-offs but had not disclosed them in their reports. Evidence of these accounts were nevertheless present in the implicit (or latent) content of the reports. These findings highlight the negative light in which many companies perceive trade-offs, and the legitimacy threat that their disclosure poses.

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DEDICATION

For my beloved parents, Hala and Imad.

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LIST OF ABBREVIATIONS

BoP:	Base of the Pyramid
CDP:	Carbon Disclosure Project
CS:	Corporate Sustainability
CSR:	Corporate Social Responsibility
E/S/FP:	Environmental/Social/Financial Performance
ESG:	Environmental, Social, and Governance
EP:	Environmental Performance
FP:	Financial Performance
GRI:	Global Reporting Initiative
NRBV:	Natural Resource-Based View of the Firm
PD:	Product Development
RBV:	Resource-Based View of the Firm
SP:	Social Performance
T/O:	Trade-off(s)
TBL:	Triple-Bottom-Line

CHAPTER 1:

Introduction

1.1. Introduction to Trade-offs in Sustainability:

Companies are increasingly expected to set and deliver on sustainability targets to manage their sustainability performance. These efforts fall under the banner of corporate sustainability (CS)¹, which is defined as being “a company’s delivery of long-term value in financial, social, environmental and ethical terms” (UNGC 2013:4), or the corporate triple-bottom-line (TBL) (Elkington 1997). Recent literature has emphasized the strategic importance of engaging in corporate sustainability (e.g., Maxfield 2007; Vallaster et al. 2012). These studies have argued that, following the resource-based view of the firm, the practice of corporate sustainability has the potential to generate both tangible and intangible benefits. Through the implementation of pollution prevention, sustainability reporting or other corporate sustainability initiatives, a company may lower its operating costs, emissions, and resource consumption – as well as enhance its reputation, social ‘license to operate’, stakeholder² engagement, and ultimately, its competitive advantage (Porter and van der Linde 1995; Vogel 2005; Minoja 2012; Ambec and Lanoie 2008; Vilanova et al. 2009).

This line of reasoning is known as the ‘profit maximizing conjecture’ (Li and Toppinen 2011), or alternatively, the Business Case for Corporate Sustainability (hereafter ‘the business case’). This holds that a company can ‘do well by doing good’ (first coined by Drucker 1984; Varenova et al. 2013), or that corporate profitability and responsibility are interconnected (Bansal 2005). This idea of “shared value” (Angus-Leppan et al. 2010:242) has generated a market-based incentive for companies to pursue corporate sustainability (Li and Toppinen 2011). In doing so, business case thinking has helped move the concept of sustainability *into* the corporate value-chain (Husted and Allen 2007), where previously it had

¹ A note on definitions: The term corporate sustainability (CS) has been used here interchangeably with corporate social responsibility (CSR), responsibility, and sustainability. It is important to note, however, that some studies (e.g. Bansal and DesJardine 2014) have made subtle distinctions between these terms. Similarly, the terms firm and company have been used interchangeably as well.

² In his seminal book on stakeholder theory, Freeman defines the term stakeholder as “any group or individual who can affect, or is affected by, the achievement of a corporation’s purpose” (Freeman 1984:vi). This definition covers a wide range of potential stakeholder identities. For the purposes of this thesis, the term ‘stakeholder’ (as used in the thesis) specifically refers to “customers, suppliers, employees, communities, and financiers”, as first defined in Freeman (1984). This definition excludes the broader interpretations of the term that have been suggested since then (e.g. nature as a stakeholder; Phillips and Reichart 2000).

existed *outside* of it (an ‘externality’). Business case thinking decoupled corporate sustainability from the notion of ‘compromise’ and replaced it with ‘win-win’.

A large body of research has since emerged on the practical application of business case thinking, particularly on its fundamental proposition that financial performance and non-financial performance are linked (e.g. Epstein and Roy 2003). Many reviews have also been conducted on the empirical research done to-date (see for example: Orlitzky et al. 2003; Margolis and Walsh 2003; Vogel 2005; Ambec and Lanoie 2008; Carroll and Shabana 2010). Many of these reviews have concluded that there is no clear consensus on whether a robust financial performance-non-financial performance link actually exists, or in which direction, using which measures, and under what conditions (e.g. Vogel 2005; McWilliams and Siegel 1997; Salzmann et al. 2005; see also: Husted and Allen 2007). Moreover, authors have recently argued that business-case thinking is too “myopic” (Bansal and DesJardine 2014: 73) in its restrictive focus on sustainability projects that bring a return on investment in the short-term, rather than any significant contribution to environmental or societal progress at a systems-level (Hahn et al. 2010; Figge and Hahn 2012; Bansal and DesJardine 2014).

Teng et al. (2014) and others (e.g. Walley and Whitehead 1994; Martín-Peña et al. 2014) argue that within a company’s own internal constraints, sustainability initiatives face competing claims from non-sustainability projects for the same resources. In undertaking corporate sustainability initiatives, managers face a trade-off between improving either financial or non-financial performance. Following Byggeth and Hochschorner (2006), trade-offs are defined as being “situations when a sacrifice is made in one area to obtain benefits in another ... [whereby] it is usually impossible to optimize them, all at once” (p. 1420). Even within these sustainability initiatives, managers face yet another trade-off among the “growing array of choices they have for how and when they will respond to environmental pressures” (Walley and Whitehead 1994). From the large pool of possible tools and solutions, there is no single ‘silver bullet’ option (Walley and Whitehead 1994), and improvements in one environmental target area may come at the expense of another (Byggeth and Hochschorner 2006; Hahn et al. 2012). As such, corporate sustainability initiatives carry an opportunity cost; they are undertaken at the expense of competing priorities, both within and outside the realm of sustainable development. That is to say, in the course of pursuing corporate sustainability, managers struggle to reconcile competing sustainability-profitability objectives (Li and Toppinen 2011), competing sustainability targets (Byggeth and Hochschorner 2006; Winn et al. 2012), and competing means of achieving them (Hahn et al. 2012; Egels-Zandén et al. 2015).

Accordingly, Hahn et al. (2010) asserts that in the practice of sustainability, trade-offs are indeed “the rule rather than the exception” (p. 218).

As such, the question today is no longer whether trade-offs are encountered in the pursuit of corporate sustainability, but under which circumstances, with which responses, and how best to navigate them (Walley and Whitehead 1994; Winn et al. 2012; Beckmann et al. 2014; Hahn et al. 2014). Trade-off research is essential to gain a deeper understanding of the compromise decision-making involved in implementing corporate sustainability beyond the ‘win-win paradigm’ (Winn et al. 2012). The work published to-date spans a wide range of disciplines as well as application areas. In the past several years alone, three journal issues have been dedicated solely to this topic (*Business Strategy and the Environment*, Vol. 19 (2010), *Corporate Social Responsibility and Environmental Management*, Vol. 19 (2012), and *Journal of Business Ethics*, Vol. 148 (2018)). Although research interest into trade-offs is growing, important gaps still remain; little is yet known about the different categories of trade-offs that are encountered in practice, how they are perceived by managers, and how they are currently evaluated. Furthermore, there exists a dearth of research on whether, and how, companies are disclosing these critical trade-off decisions to their stakeholders, as part of their sustainability reporting process.

1.2. Objectives of the Dissertation:

To remedy this gap, this dissertation conducted a study in three phases (Phases I-III), detailed in Table 1-1. Each phase takes the form of a stand-alone research, with its own methods and theoretical lens. Each of the three phases address a different aspect of the corporate experience with sustainability trade-offs. As shown in Table 1-1, these three aspects include classifying trade-offs (Phase I), managing trade-offs (Phase II), and communicating trade-offs (Phase III). Given the wide scope of the overall dissertation, and the wide range of relevant literature associated with each of the three aspects (and corresponding study phases), a different theoretical lens was chosen for each phase. This ensured that all three aspects of the corporate trade-off experience (classifying, managing, and communicating trade-offs) were explored as deeply as possible, from a diverse range of theoretical perspectives.

Research Phase	I CLASSIFYING TRADE-OFFS	II MANAGING TRADE-OFFS	III COMMUNICATING TRADE-OFFS
Research Objective	Identify the trade-offs that companies encounter in the practice of corporate sustainability	Identify whether (and how) organizational logics influence how companies perceive and respond to sustainability trade-offs	Identify whether (and how) companies are disclosing their trade-off decisions to their stakeholders in their sustainability reports
Theoretical Lens	(Natural) Resource-Based View of the Firm	Social Cognition Theory	Legitimacy and Impression Management Theory
Research Questions	<p>RQ 1-1. What are the trade-offs commonly encountered by managers in the pursuit of corporate sustainability?</p> <p>RQ 1-2. Can trade-offs encountered in the pursuit of corporate sustainability transform into synergies?</p>	<p>RQ 2-1. How do companies perceive trade-offs in the practice of sustainability?</p> <p>RQ 2-2. How do companies resolve these trade-offs when they encounter them?</p> <p>RQ 2-3. How do organizational logics shape the companies' experiences with these trade-offs?</p>	<p>RQ 3-1. Do companies communicate their trade-off experiences in their sustainability reports?</p> <p>RQ 3-2. What motivates companies to do so (or not)?</p>
Domain and Literature	Corporate Sustainability	Organizational Cognition	Social and Environmental Accounting
Research Design	Systematic literature review	Analysis of annual reports (and company webpages), third-party news articles, and interviews with sustainability managers	Analysis of corporate sustainability reports and interviews with sustainability managers
Method	Content Analysis (Thematic/Qualitative)		

Table 1-1. A classification of the theoretical, methodological, and design choices made in this study.

The purpose of Phase I is to identify the types of trade-offs (and where they originate from) that companies experience in the practice of sustainability. The focus of this phase is on 'classifying trade-offs'. Based on this focus, this paper draws on the literature on corporate sustainability. The analysis of this stage of the dissertation involves surveying this literature to identify, and then analyze, articles on sustainability trade-offs. The analysis was conducted through the theoretical lens of the natural resource-based view of the firm, as first described by Hart (1995). This view holds that a company's sustainability strategy generates sustainable competitive advantage. Resource-based theories (such as the natural resource-based view of the firm) have long been used in the sustainability literature to explain win-win (i.e., non-trade-off-based) sustainability gains. This theoretical lens was chosen for use in this trade-off study to explore whether and how trade-offs may be transformed into synergies (and thus, form the basis on which to develop the trade-off model). This phase is guided by the following two research questions:

- RQ 1-1.** What are the trade-offs commonly encountered by managers in the pursuit of CS?
- RQ 1-2.** Can trade-offs encountered in the pursuit of CS transform into synergies?

After the completion of Phase I, once all the various types of trade-offs that companies may encounter in the practice of sustainability have been charted (in Phase I), the research progressed to Phase II. This phase will address the second aspect of the trade-off experience: how trade-offs are managed by companies. Thus, the purpose of Phase II is to understand how companies perceive and resolve the trade-offs identified in Phase I. Given that trade-offs present companies with strategic decisions regarding the design and implementation of sustainability programs, this phase is grounded in the literature on organizational decision-making. Specifically, this phase relies on one domain of this literature, namely, that of the role of organizational cognition in decision-making (otherwise known as 'organizational cognition'). This literature (and its associated theoretical lens) is based on the fundamental assumption of bounded rationality in decision-making. The literature (and corresponding theoretical perspective) of organizational cognition describes how cognitive factors direct managerial attention, filter environmental information, and ultimately influence decision-making.

This perspective was chosen for use in this phase of the dissertation to understand how a company's collective dominant logic related to sustainability (an aspect of organizational cognition) influences the way that this company manages trade-off decisions. This cognitive approach offers an interesting alternative (yet complementary) perspective to the rational, economic-focused decision-making approach taken in Phase I to study sustainability trade-offs. The analysis of this stage of the dissertation involves

first-hand interviews with sustainability managers as well as document analysis of annual reports and third-party news articles. This phase is guided by the following three research questions:

- RQ 2-1.** How do companies perceive trade-offs in the practice of sustainability?
- RQ 2-2.** How do companies resolve these trade-offs when they encounter them?
- RQ 2-3.** How do organizational logics shape the companies' experiences with these trade-offs?

Once this study has established how companies perceive and manage trade-offs, the third and final phase then explores how companies communicate these experiences to their stakeholders. As such, the purpose of the Phase III of this research is to identify whether and how companies (from the same sample as Phase II) disclose on this trade-off experience (described in Phase II) in their sustainability reports. Accordingly, the focus of this third and final stage of the research is on 'communicating trade-offs' (as shown in Table 1-1). Given the focus on sustainability disclosures, this phase relies on the literature on social and environmental accounting, and in particular on the instrumental (or 'symbolic') use of sustainability reports. In this area, legitimacy and impression management theories predominate. These perspectives collectively posit that companies seek to acquire social legitimacy (a resource) through the process of sustainability reporting—even to the extent of issuing purposefully deceptive disclosures as a strategic tool to manage stakeholder impressions. This literature and theoretical lens were chosen based on the preliminary findings of Herzig and Godemann (2010), who (in their analysis of web-based disclosures of German companies) found that any mention of sustainability trade-offs was absent from the reports, despite the companies' claims (via interviews) that they had experienced trade-offs in practice. This reported absence of trade-off discussions in reports revealed a disconnect between the companies' disclosed and actual performance with regards to sustainability. This type of disconnect forms the very basis of the impression management perspective in sustainability reporting. Therefore, this final phase of this study seeks to understand whether, how, and why companies disclose on their trade-off experiences in their sustainability reports, from the perspective of legitimacy and impression management theories. To do this, this phase relies on the analysis of sustainability reports, as well as first-hand interviews with the sustainability managers at these firms. This phase is guided by the following two research questions:

- RQ 3-1.** Do companies communicate their trade-off experiences in their sustainability reports?
- RQ 3-2.** What motivates companies to do so (or not)?

To achieve these objectives, the three phases utilize a qualitative and inductive research design using content analysis. Content analysis is a research technique that is used to distill information from a piece

of text into discrete categories, in order to make inferences about its underlying meaning (Krippendorff 2004). Elo and Kyngas (2007) define it as being “a research method [that] is a systematic and objective means of describing and quantifying phenomena” (p. 108) with the intent “to build up a model, conceptual system, [or] conceptual map” (p. 108). This is achieved through a two-step analytical process which involves coding and then abstraction. During the process of coding, sections of the text relating to the phenomenon-under-study are abstracted into codes (Graneheim and Lundeman 2004). In the subsequent abstraction phase, these codes are then grouped (and reduced further) into categories, from which inferences can then be made about the core message contained in the text (Graneheim and Lundeman 2004). This abstraction process continues until data saturation has been reached (Elo and Kyngas, 2007). As a technique, content analysis can be quantitative or qualitative in nature. This classification is based not on which content is coded (which would be either latent or manifest content), but rather on how the content is analyzed or described after coding, either quantitatively or qualitatively (Krippendorff 2004). Quantitative content analysis refers to a “statistical technique for obtaining descriptive data on content variables” within a text (George 1959 in Franzosi 2008: 222). All three phases of this dissertation utilize both forms of the content analysis method to ultimately provide a detailed and comprehensive look into how companies perceive, manage, and communicate trade-off decisions in the practice of sustainability. Chapters 2, 3, and 4 provide further details on the method used to answer the chapters’ respective research questions. Given that this research involved seeking information from human participants through interviews, it was undertaken with the prior approval of Ryerson University’s Research Ethics Board, as per the published guidelines of the Tri-Council Policy Statement II. Participation in this study was voluntary, unpaid and confidential. To maintain confidentiality, the identities of the study companies (and participants) were withheld.

1.3. Organization of the Dissertation:

This dissertation takes the form of a manuscript-based thesis, which centers on three papers that together make up Chapters 2, 3, and 4. All three chapters, therefore, include an introduction, literature review, method, results, discussion, and conclusion. The findings of each of the three chapters have also been summarized in a series of data tables that have been included within the text itself (lengthy tables have been included in the three appendices instead of the main text). Some modifications have been made to the papers as submitted in order to avoid repetition in the dissertation and to improve the flow of the text. For example, the introductory material for all three chapters has been reduced, as has the literature review sections on sustainability trade-offs.

Each of these three chapters (2, 3, and 4) forms the basis for a peer-reviewed journal article. Chapter 2 is based on a paper published in the *Journal of Business Ethics*:

Haffar, M., and Searcy, C. (2017). Classification of trade-offs encountered in the practice of corporate sustainability. *Journal of Business Ethics*, 140(3), 495–522. <https://doi.org/10.1007/s10551-015-2678-1>.

As the basis of Chapter 2, this paper presents a systematic literature review (and content analysis) of all peer-reviewed journal articles that have been published on trade-offs in corporate sustainability, at the time of the study (June 2014). The objective of this study was to organize the existing literature to assess how much is currently known about trade-offs in corporate sustainability and to identify existing knowledge gaps. Ultimately, the goal of this study was to bring together the wide range of published trade-off research into a single ‘big-picture’ model that would represent the kinds of trade-offs that companies have encountered in the real-world practice of corporate sustainability, thus far around the world. The model that this paper proposed not only identified the categories of trade-offs encountered, but also their sources (their root tensions), as well as their interconnections.

For this paper, the primary author was Ms. Merriam Haffar. Ms. Haffar’s involvement with the development of this paper involved: 1) designing the appropriate study methodology, 2) conducting the review and content analysis, 3) synthesizing the results and developing the conceptual model, and 4) writing the paper within the appropriate journal style, format, and thematic focus. The secondary author was Dr. Cory Searcy. Dr. Searcy’s involvement included: 1) concept development, 2) supervision of the research process, and 3) review of the manuscript in preparation for publication.

The manuscripts that form the basis for chapters 3 and 4 are currently under review at prominent international journals. Similar to the above, Ms. Haffar also led the development of these two papers. These manuscripts, which form the basis of chapters 3 and 4 respectively, are:

Haffar, M., and Searcy, C. (2018). How organizational logics shape trade-off decision-making in sustainability. Manuscript submitted for publication at *Long Range Planning*.

Haffar, M., and Searcy, C. (2018). Legitimizing ‘bad news’: How companies disclose their trade-off experiences in their sustainability reports. Manuscript submitted for publication at *Accounting, Organizations, and Society*.

CHAPTER 2:

Classification of Trade-Offs Encountered in the Practice of Corporate Sustainability

2.1. Introduction:

The practice of corporate sustainability is becoming increasingly institutionalized in large companies. Over 90% of the world's largest companies now consistently report on at least some aspects of their sustainability performance (KPMG 2017). Although many different definitions of the term corporate sustainability have been presented (Bansal and Song 2017), most define it with respect to the 'triple bottom line' of economic, social, and environmental performance (Elkington 1997). For the purposes of this paper, we define corporate sustainability as "meeting the needs of a firm's direct and indirect stakeholders (such as shareholders, employees, clients, pressure groups, communities etc.), without compromising its ability to meet the needs of future stakeholders as well" (Dyllick and Hockerts 2002: 131).

Extant research has affirmed that sustainable development is a wicked problem (Rittel et al. 1973; Pryshlakivsky and Searcy 2013). It is beset with inevitable tensions across conflicting time horizons (between generations), across different levels (individual and systemic), and different sustainability objectives (social, economic, environmental, among others) (Campbell 1996). It comes as no surprise then that the "application of this concept to the organizational-level" (Hahn et al. 2015), otherwise known as corporate sustainability, is similarly beset with inherent tensions and conflicts.

In the practice of sustainability, tensions may be perceived by companies as being either a trade-off or synergy. The former is synonymous with compromise and is defined as being 'win-lose' situations "when a sacrifice is made in one area to obtain benefits in another [whereby] it is usually impossible to optimize [all dimensions], all at once" (Byggeth and Hochschorner 2006: 1420). Synergies, on the other hand, are synonymous with win-win, and the two terms are often considered interchangeable (Van der Byl and Slawinski, 2015). The purpose of this chapter—and Phase I of this dissertation research—is to conduct a systematic review of the literature on trade-offs in corporate sustainability, with the same methodological rigor as has been applied to the numerous reviews that have examined the win-win paradigm. This chapter seeks to explore a key trade-off theme—namely, identifying trade-offs—from both a managerial and company-perspective. The first research question guiding this work is:

RQ 1-1. What are the trade-offs commonly encountered by managers in the pursuit of corporate sustainability?

By conducting this review and by answering this question, this chapter aims to tackle the larger theoretical challenge of determining whether or not these corporate sustainability trade-offs may be overcome. Therefore, after addressing RQ 1-1 and establishing the different kinds of corporate sustainability trade-offs that have been commonly encountered, the second research question becomes:

RQ 1-2. Can trade-offs encountered in the pursuit of corporate sustainability transform into synergies?

Thus, drawing on resource-based theory, this chapter seeks to find the common theoretical ground between trade-off thinking and ‘win-win’ (or business case) thinking, to better understand *if, how, and to what extent* sustainability trade-offs can transform into sustainability synergies. Rather than being mutually exclusive or polar opposites, this chapter posits that the two perspectives of trade-off and synergy (or ‘win-lose’ and ‘win-win’) are in fact in a dynamic relationship, whereby it is possible under specific circumstances to move between one and the other, in the practice of corporate sustainability.

This chapter will achieve this aim by first identifying the fundamental tensions at the root of trade-off decision-making in corporate sustainability. This chapter will then argue that these tensions may be expressed as either competition or complementarity (following Epstein et al. 2014), leading to either sustainability trade-offs or sustainability synergies, respectively. By classifying these tensions and their corresponding trade-offs, and then arranging them into a hierarchical framework, this chapter will describe how compromise situations in corporate sustainability are interconnected through a chain of hierarchy. Based on resource-based theory, this framework will then be used to explain how these compromises may be more effectively managed in the practice of corporate sustainability—either by minimizing the loss dimension in trade-off decisions, or (where possible) transforming these compromises into synergies. To accomplish this goal, this chapter will be guided by the following research aims:

- 1) **Conduct a literature review:** This will involve screening the relevant literature for descriptions of trade-offs and conflicts in corporate sustainability.
- 2) **Perform content analysis:** This will involve extracting prominent trade-offs that have been described in the screened literature.
- 3) **Develop a hierarchical trade-off framework:** This will involve categorizing the identified trade-offs, classifying their underlying tensions, and arranging them into a hierarchical framework.

- 4) **Discuss the implications of this framework to corporate sustainability theory and practice:** This will involve exploring the implications of this hierarchical framework on the basis of resource-based theory.

The analysis of the framework has been informed by the resource-based view of the firm, or RBV (as described by Barney 1991, and earlier by Penrose 1959), and in particular to Hart's (1995) natural resource-based view of the firm (or NRBV). The RBV holds that all firms are in possession of a unique combination of tangible and intangible resources (such as financial assets) and organizational capabilities (such as innovation or stakeholder management). A firm can only achieve 'sustained competitive advantage' and maintain its long-term profitability by strategically developing these resources and capabilities. In 1995, Hart applied this theory to the realm of corporate sustainability and developed it further by taking into account the growing influence of environmental constraints imposed on the firm. Hart posited that corporate responses to sustainability pressures (under constraint) lead firms to undertake corporate sustainability strategies that develop the firm's organizational capabilities — which in turn may lead to both *sustained* and *sustainable* advantage (Orlitzky et al. 2011). Some examples of these types of strategic capabilities include: pollution prevention, product stewardship, and sustainable development (Hart 1995). By connecting corporate sustainability strategy with financial performance and competitive advantage, NRBV formed one of the key theoretical bases of business case thinking, as described earlier (see: Hart and Dowell 2011). For this very reason, NRBV has been used here to inform the analysis of the trade-off framework, in order to better connect business case thinking with trade-off thinking under a single predominant management theory — and to ultimately explain the dynamic interplay between trade-offs and synergies encountered in corporate sustainability.

This chapter therefore makes a number of significant contributions to the literature on trade-offs: firstly, while other excellent trade-off frameworks have been developed (e.g. Hahn et al. 2010 and 2014), this chapter is the first so far to attempt a comprehensive, hierarchical classification of the theoretical- and applied-level trade-offs encountered throughout the implementation process, from policy to practice. Secondly, the framework developed here offers a means of connecting the two disparate perspectives of 'win-win' and 'win-lose' in theory, and subsequently offers guidance on how to shift between the two states in practice. This includes guidance how to effectively maneuver among the various sustainability trade-offs encountered in practice, based on their hierarchical order.

The remainder of the chapter begins with a discussion of the screening methodology, followed by a descriptive and thematic analysis of the references collected. Based on the literature, a hierarchical

framework for conceptualizing trade-offs in corporate sustainability is proposed. This is then used to guide the discussion of the findings.

2.2. Method:

A systematic review was conducted of peer-reviewed literature on trade-offs in corporate sustainability (using a process similar to Seuring and Gold 2012 and Gimenez and Tachizawa 2012). As represented in Figure 2-1, this process included a search-and-screening of published literature based on selected keywords, followed by a content analysis (as described by Seuring and Gold 2012 and Hahn and Kuhnen 2013). The content categories that emerged from the analysis stage were examined and —based on their connections and the contexts in which they appeared —arranged into a conceptual framework.

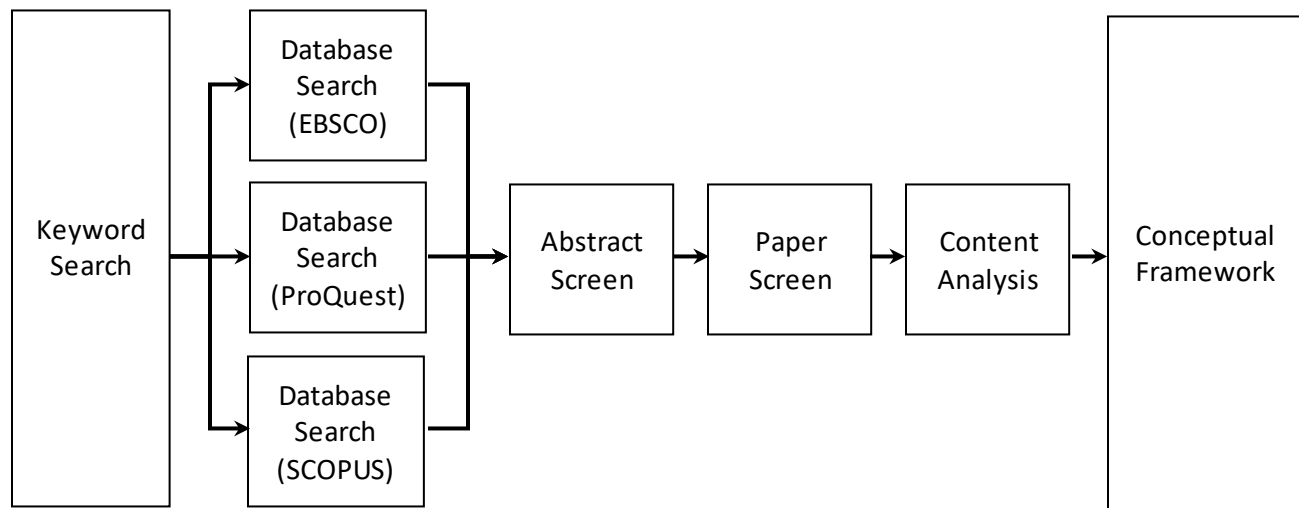


Figure 2-1: The methodology followed for the review and framework, in Phase I of this dissertation.

2.2.1. Database Search:

Ahead of the search, a number of keyword terms were tested using ProQuest. This was a necessary step given the wide variation in the published terms referring to ‘corporate sustainability’ and ‘trade-offs’. Furthermore, the keyword choices made at this stage would impact both the validity and reliability of the review later on. Validity represents “the degree to which a measure assesses what it purports to measure” (Fink 2005; 111), which here would amount to the degree to which the study claims and findings (i.e., the categories and explanatory framework) accurately represent the types of trade-offs encountered in corporate sustainability. On the other hand, reliability “provides assurance that particular research results

can be duplicated” (Krippendorff 2004:212), which here would refer to the reproducibility and ‘trustworthiness’ of the review process and its conclusions (Krippendorff 2004).

By altering the keywords used, the scope of the review may be broadened to better capture more relevant references, making it more comprehensive and thereby raising the validity of the findings. However, this may come at the expense of the reliability of the process, as a larger scope will generate a larger number of references that would then be subject to screening (Tranfield et al. 2003). With this validity-reliability trade-off in mind, the different keyword combinations were systematically assessed based on: 1) whether they captured key trade-off articles (such as Hahn et al. 2010; Byggeth and Hochschorner 2006; Angus-Leppan et al. 2010), 2) how many references they generated overall, and 3) of these, how many overall were relevant to the research topic. Based on this, the keywords selected for use in the title, abstract and keyword fields were: (trade-off*/tradeoff*/tension) and (sustainab*/CSR/environmental) and (corporat*/firm*/manager*). A search was then conducted in June 2014 on three databases with a management focus, namely: ProQuest Business, SCOPUS Business Source Elite and EBSCO Social Science and Humanities. Multiple databases were used to enhance the comprehensiveness of the search, given that trade-off research has been published in a wide range of journals and disciplines, and that journal coverage varies among databases. The search was limited to English-language, peer-reviewed articles published in scholarly journals. It is important to note that although keyword-based searches provide a practical way of screening a large body of literature, these searches are nevertheless limited in their ability to uncover potentially relevant material *outside* the scope of the keywords used. That is to say, in spite of the efforts taken to improve the comprehensiveness of the search used here, other relevant work on trade-offs in corporate sustainability may have been overlooked. In order to mitigate this risk and enhance the search, a wide group of the most relevant keywords were chosen, as described above. These included variations on trade-off-related keywords (e.g., trade-off and tension) and in their spelling (e.g. trade-off and tradeoff). These keywords were also tested ahead of use as described earlier.

2.2.2. Article Screening:

All articles were then screened for relevance based on a reading of the abstracts followed by the papers themselves. To overcome the threats to validity and reliability discussed earlier, a rigorous set of screening criteria was used to determine article inclusion or exclusion. In the abstract review, articles were assessed based on their relevance to the topic. Articles were included if they contained a clear discussion of all of the following: 1) trade-off outcomes or the decision-making process, 2) sustainable development, and 3) from a business or managerial perspective. In the paper review, articles were assessed based on their

relevance to the pre-defined research questions. Articles were included if they offered relevant insight into the types of trade-offs encountered in corporate sustainability, or how these compromise decisions are evaluated or perceived by corporate decision-makers. The screening process yielded 56 results. As a final step, the reference lists for a number of key trade-off articles (the same articles used for the keyword test earlier: Hahn et al. 2010; Byggeth and Hochschorner 2006; Angus-Leppan et al. 2010) were scanned for relevant references not captured by the databases. This was an important step, given that keyword-based searches are limited in their ability to capture relevant work outside the scope of the keywords chosen, as described earlier. This yielded two seminal trade-off articles (namely, Walley and Whitehead 1994 and Kaptein and Wempe 2001) that were then added to the final list. The total number of references that passed the search/screen came to 58.

2.2.3. Content Analysis:

Each of the 58 references were analyzed by content analysis, which included a quantitative (descriptive) and qualitative (thematic) component. This technique has been used here at a top-level to chart the distribution of the trade-off articles by topic, journal, publication date and other descriptive factors (see section 3.1 below). On the other hand, qualitative content analysis (also referred to as ‘interpretive’ or ‘connotative’; Krippendorff 2004) is “more interested in the meanings associated with messages rather than with the number of times message variables occur” (Frey et al. 2000: 237). In other words, it relies on the absence or presence of content categories (which may be either latent or manifest), rather than a frequency count. This form of content analysis has been applied here to aid in the development of a framework to conceptualize trade-offs in corporate sustainability— the various categories, possible interconnections, and sources—and to answer the research questions.

The qualitative (thematic) analysis was done by an iterative process of summarizing the articles, extracting common themes, and classifying the studies based on these themes. The exploratory approach used was based on grounded theory, which is defined as that “in which generalizations are grounded or inferred from the data collected” (Frey et al. 2000: 281). This is an inductive approach commonly used for the purposes of theory-building (Frey et al. 2000). The analysis proceeded as follows: the articles were first categorized according to overall theme — whether they addressed trade-offs at a top-level or within a particular area of application (e.g., supply chain management) — the articles were then read through multiple times, whilst summarizing their information and looking for emerging patterns between their findings or discussions. What emerged was a set of content categories (categories of trade-offs encountered in corporate sustainability), that were then grouped based on a further level of abstraction

(categories of tensions) and then arranged into a framework based on the readings. During the analysis, categories of corporate sustainability trade-offs appeared in both the manifest and latent content of the articles examined³.

2.3. Results:

The results of the descriptive component of the content analysis have been detailed in the section of this chapter titled 'Background on the Sample' (3.1), while the results for the thematic component have been described in the proceeding section titled 'Thematic Analysis' (3.2). This latter section describes the conflict themes and categories that have emerged from the review, and which form the basis of the framework (which is described in the sub-section titled 'Conceptual Framework'). This framework is then used to guide the discussion of the results in more detail in the remainder of the chapter.

2.3.1. Background on Sample:

Figure 2-2 presents a breakdown of these studies by journal. As shown, almost half of the literature on corporate sustainability trade-offs were published 'one-off' in a wide variety of journals. From the references captured in this review, it is apparent that trade-off research varies widely in terms of publications, disciplines, areas of application, research approaches, and methodologies. This variation is likely wider still, given that this screening process did not include the large body of work on trade-offs in sustainability planning (e.g., Morrison-Saunders and Pope 2013) or in sustainability-related consumer purchasing decisions (e.g., Olson 2013, Lekakos et al. 2014). The reason behind this diversity is that trade-offs are a fundamental component of decision-making, which itself extends to multiple disciplines (Retief et al. 2013).

The references captured here were classified according to the overall study category (Figure 2-3); these studies either addressed trade-offs in corporate sustainability in general at a theoretical level, or at an applied level (in a particular application area, such as corporate sustainability reporting for example). The

³ As an example of the former: several articles (such as McWilliams and Siegel 1997; Xepapadeas and De Zeeuw 1999; Vilanova et al. 2009; Cainelli et al. 2013) examined the effect of improved responsibility against various dimensions of profitability, or the manifest trade-off between financial and non-financial performance areas. Alternatively, for latent content: Minoja (2012) discussed the practical application of stakeholder theory to effectively manage multiple company stakeholders with competing objectives. This discussion features two underlying latent trade-off categories: which stakeholders to prioritize, and of these which stakeholder demands to respond to.

latter group of applied studies was then classified further (Figure 2-4) according to the study sub-category depending on the application area.

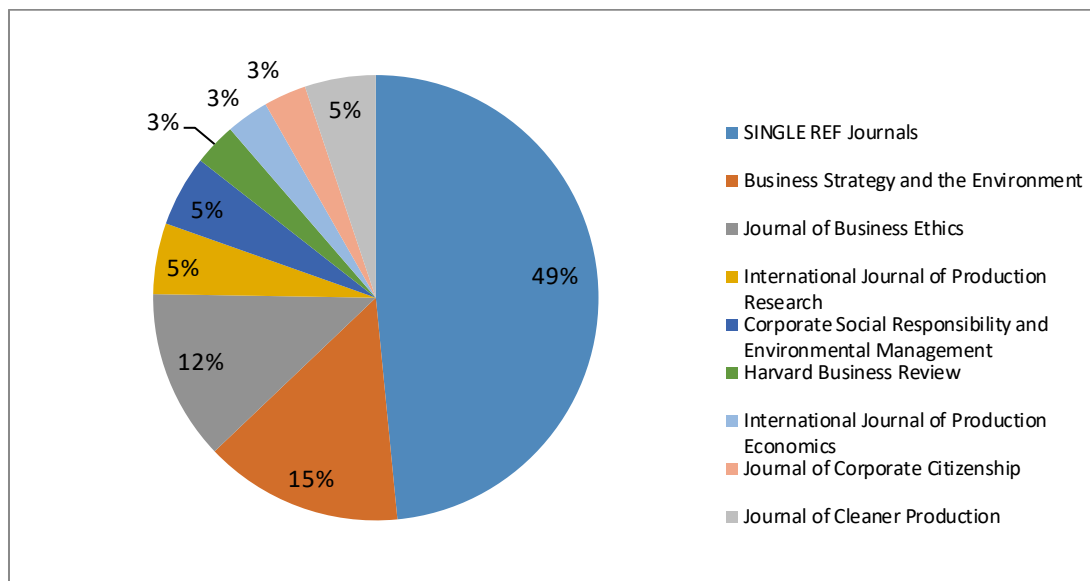


Figure 2-2: The distribution of references by journal. The total number of journals came to 36. Journals that only published a single trade-off study (as captured in this review) were grouped as a single category ('SINGLE REF').

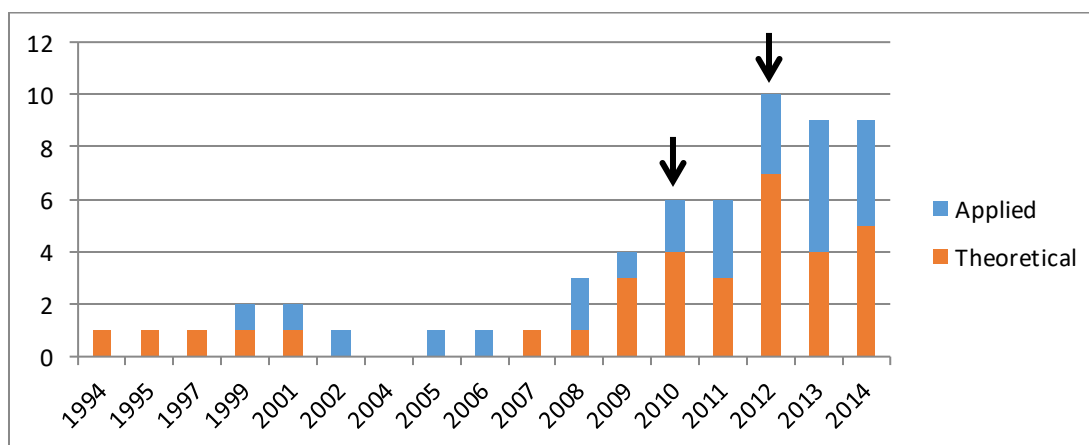


Figure 2-3: The distribution of references over and by trade-off study theme (either as theoretical or applied). The years in which the special issues on trade-offs were published are marked by arrows.

From Figure 2-3, we can see that trade-off research first emerged in the mid-1990s, alongside the arrival of win-win thinking (e.g., Porter and van der Linde 1995; Elkington 1997). As shown, the body of literature generated has been growing in both quantity and scope. As expected, the years that saw the publication of special journal issues showed a spike in trade-off research, for both applied and theoretical studies (as shown in Figure 3). In terms of scope, the earliest studies focused solely on sustainability trade-offs encountered in theory (at a conceptual level). An example is Xepapadeas and De Zeeuw (1999) who conducted a quantitative analysis of the possible trade-off between environmental performance and a firm's competitiveness at a top-level.

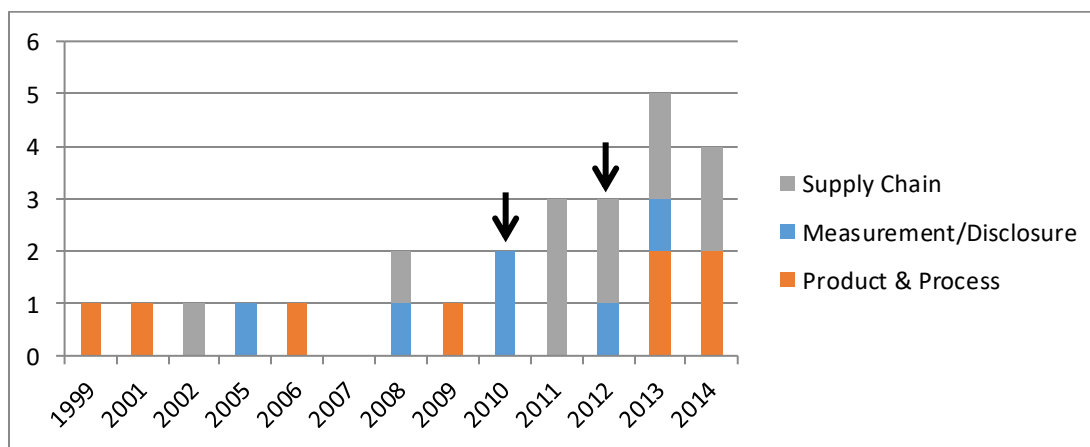


Figure 2-4: The distribution of references (applied studies only) over time and by study sub-theme. Once again, the years in which the special issues on trade-offs were published are marked by arrows.

Over time, the literature has spread to address trade-offs in the practical application of corporate sustainability (at an applied level) in three different corporate sustainability application areas, namely in sustainable supply chain management, reporting and rating ('measurement and disclosure'), and operations ('product and process improvements'). Examples of these studies include: Handfield et al. (2002) who proposed a decision-making model for supplier assessment that incorporates environmental criteria (that may conflict with traditional financial supplier criteria), Joseph (2012) who presented a conceptual discussion of the conflicts encountered in the sustainability reporting process under the Global Reporting Initiative, and Driessen and Hillebrand (2012) who conducted a qualitative study of the challenges encountered by companies attempting to balance conflicting stakeholder issues during the process of green product development. All of these three application areas are characterized by complex decision-making, under resource constraints, across organizational boundaries, and involving multiple

stakeholders. It comes as no surprise then that trade-offs are encountered—and have been studied—in these areas. Figure 2-4 charts the distribution of these applied studies over time. As shown, all three categories have received growing research attention. Research growth appears strongest in the areas of supply chain management and sustainability reporting.

2.3.2. Thematic Analysis:

The qualitative analysis of the articles was conducted at two thematic levels: at the level of the trade-offs themselves, and at the level of their underlying tensions. The trade-off/tension categories that emerged from the analysis were present in either the explicit (manifest) or the connotative (latent) content of the articles examined. Tables 2-1 and 2-2 (Appendix A) summarize the 58 articles reviewed, based on their contribution to trade-off research (and the research question) as well as the trade-off/tension categories they covered.

For either thematic level, some categories appeared throughout the majority of the articles (e.g., the trade-off between the various performance dimensions, or the tension between private value -shared value), while others appeared intermittently and were concentrated mostly in the applied studies (e.g., trade-off between competing implementation approaches, or the tension between the measurement and management of sustainability performance). This distribution mirrors where these conflicts are encountered along the corporate sustainability implementation process; some trade-off/tension categories are encountered early on at the level of strategy and corporate sustainability policy (at a macro level), while others are encountered further along the implementation process (at a micro level).

The results of this thematic analysis are presented in the proceeding sections, as follows: first, the definitions of the key conflict terms are presented based on the literature (3.2.1), then, the conflict categories that emerged from the analysis are described and arranged into a conceptual framework (3.2.2). This framework serves a dual purpose; it not only serves to summarize the results (the content categories of trade-offs and tensions that emerge from the review), but also to provide an outline that guides their discussion (in section 4). It also serves to bring together the wide range of trade-off research captured in this review (as shown in Figures 2-2 and 2-3). Finally, this framework is then compared to other trade-off frameworks that have already been developed (3.2.3).

2.3.2.1. Defining Trade-offs, Tensions and Paradoxes in corporate sustainability:

From the articles analyzed, it is apparent that corporate sustainability is understood as being both an outcome and a process (see for example: Epstein and Widener 2010; Wu and Pagell 2011; Reuter et al.

2012). The former—which refers to a target level of improved performance along some measure of sustainability—is achieved through the latter—which refers to the strategic- and managerial-level decisions involved (Epstein and Widener 2010). Thus, a firm’s sustainability performance is a function of its decision-making (as posited by resource-based theory; Barney 1991), a key component of which are trade-off decisions (Retief et al. 2013). It follows then that an understanding of trade-offs is at the core of corporate sustainability (see also: Walley and Whitehead 1994; Hahn et al. 2010; Winn et al. 2012). At the core of trade-offs themselves are two key issues: *constraint* and *competition*. Trade-offs can be described as decisions made under resource constraints, among competing decision outcomes (e.g., reduced emissions vs reduced water usage), and under competing decision objectives (e.g., responding to local community vs to consumers globally) (Hahn et al. 2010). This competition is a form of tension. Epstein et al. (2014) define tensions as being “two phenomena in a dynamic relationship that involve both competition and complementarity” (p. 3). This means that the notions of trade-off (‘win-lose’) and synergy (‘win-win’) are essentially different outcomes of the same root tension. This can be seen in the literature: the research on win-lose or win-win in corporate sustainability are often connected, yet paradoxically the two debates remain ‘polarized’ (Beckmann et al. 2014). In spite of this, studies have recently shown that managers engaged in corporate sustainability in a new wave of sustainability ‘leader’ companies consistently perceive both the competition *and* complementarity, either at the same time or over time (Angus-Leppan et al. 2010; Dutta et al. 2012; Varenova et al. 2013; Epstein et al. 2014).

For example, Epstein et al. (2014) uses a case study approach to study managerial perception of the triple-bottom-line concept in several best-practice firms. The authors found that in these firms, managers follow a new ‘paradox perspective’ of trade-offs where win-lose and win-win can co-exist in the same firm. Managers interviewed “say they are deciding in favor of financial performance whenever financial performance [and sustainability were] in conflict”, yet they actively chose to “avoid actions that would be really bad for sustainability” (p. 7). The authors found that these decisions were based on pre-set ‘boundary conditions’ that defined minimally-acceptable irresponsible behavior. When making decisions, these conditions delineated ‘trade-off-free zones’ in managerial decision-making; here, managers did not evaluate trade-offs in financial terms, instead decisions were automatic in favor of sustainability. Varenova et al. (2013) conducted a similar study on executives in the UK, using a mixed methods approach. The findings indicated that executives perceived both trade-off and synergistic opportunities between the objectives of responsibility and profitability. Under certain circumstances, the two objectives were believed to be in synergy. The authors found that “companies [that] adhere to [a] narrow view of

stakeholders” (p. 203) were increasing the likelihood of synergy, by being strategically selective of the initiatives they undertake under certain circumstances.

Other studies explained the co-existence of win-win and win-lose conceptually. Beckmann et al. (2014) employed an ordonomic approach, which by definition “engages in an analysis of how the ‘order of thought’ (semantics)... shape[s] the way problems and their potential solutions are framed” (p. 20). Hahn et al. (2014) relied on the use of organizational paradoxes. The authors proposed that paradox strategies (from organizational theory) can be used in support of the “integrative view” (p. 7) of corporate sustainability, which posits that “firms need to pursue different sustainability aspects simultaneously—even if they seem to contradict each other” (p. 7). Minoja (2012) extends this concept further to organizational ambidexterity. The author argued that serving a “plurality” (p. 68) of stakeholders with conflicting demands is ultimately detrimental to a firm, and that a more strategic approach to identifying key stakeholders (based on ambidexterity theory) would improve firm performance as well as stakeholder cooperation. Bansal and DesJardine (2014) indicate that such an ambidextrous perspective can be explained in terms of time; that trade-offs can become synergies under a broader, systems-based perspective that considers a longer time-horizon. According to the authors: “time should be at the center of organizational theorizing, in order to enhance both organizational and societal outcomes over the long term” (Bansal and DesJardine 2014: 71).

All of these studies provide growing empirical and conceptual evidence that in this new wave of paradoxical leader firms, corporate sustainability trade-offs and corporate sustainability synergies can indeed co-exist, and that it may be possible to shift between the two states. Yet there is still no universal mechanism to explain this dynamic win-win and win-lose relationship, or to explain the hierarchy of conflict situations encountered throughout this process.

In addition, these and the remainder of the references used in this review differed in their use of the terms trade-offs, tensions and paradoxes, some with little distinction between the terms. In order to analyze this literature it would be important as a first step to delineate these terms and establish their precise definitions. For the purposes of this chapter, and based on the analysis of the literature captured, the definitions have been clarified as follows: a tension between two or more criteria can result in either trade-off or synergy (following for example Epstein et al. 2014). When both states existed simultaneously, the condition is referred to as a paradox (following for example Ramirez 2012). Under resource constraints, the tension is one of competition, resulting in a trade-off (following for example Gavronski et al. 2012). These definitions were reached by collating the various definitions presented in the 58 articles

reviewed for the three major conflict terms (tensions, trade-offs, and paradoxes), and adopting the most predominant, non-overlapping definitions presented.

2.3.2.2. Conceptual Framework:

From the content analysis, it appears that trade-offs in corporate sustainability stem from three basic tensions: private value-shared value, ‘scope-depth’ (Csutora 2011), and measurement-management. As shown in Table 2-3, these three tensions can be organized in a hierarchy based on the inter-relationships in the trade-offs they generate.

PRIVATE VALUE – SHARED VALUE				<div>MACRO</div> <div>IMPLEMENTATION</div> <div>MICRO</div>
Whether?				
PERFORMANCE DIMENSION	TIME	STAKEHOLDER		
Social/Environmental Performance (S/EP) vs Financial Performance (FP) Or Environmental Performance (EP) vs Social Performance (SP)	Short-term vs Long-term	Among conflicting stakeholder demands		
‘SCOPE – DEPTH’		MEASUREMENT - MANAGEMENT		
Which? <ul style="list-style-type: none">As Stakeholder InclusionAs Stakeholder Communication		How?		
PERFORMANCE TARGETS	IMPLEMENTATION APPROACH	MANAGEMENT APPROACH	MEASUREMENT APPROACH	
Among conflicting performance target areas	Among conflicting implementation approaches (per target)	Centralized vs De-centralized	Relative vs Absolute	

Table 2-3: A breakdown of the tension and trade-off categories (that may be either conflicting or mutually-exclusive) that make up the conceptual framework of trade-offs in corporate sustainability.

At the top of this hierarchy lies the first and most fundamental tension: the tension that exists between the creation of private (company) value versus the creation of *shared* value. Shared value, as defined by Porter and Kramer (2011), refers to the creation of “economic value in a way that also creates value for society by addressing its needs and challenges” (p. 2). It encompasses the notion of private value and then moves beyond it. It is rooted in a systems perspective, whereby societal progress and economic growth are necessarily interconnected and can be ‘simultaneously advanced’ (Porter and Kramer 2011: 2). Porter and Kramer are quick to stress though that while the creation of shared value is focused on ‘win-win’

public and private benefits, it must necessarily take into account the “benefits relative to costs, *not just benefits alone*” (2011: 2, emphasis added).

For the purposes of this chapter and based on the findings of this review, this central tension can be defined as the tension between a company’s pursuit of private company value versus its pursuit of a broader concept of shared value that takes into account societal costs and benefits. Alternatively, this tension can also be described as that between the valuations of private profitability and societal responsibility of corporate sustainability initiatives, from the perspective of the company engaging in these initiatives. In this framework, this private value-shared value tension seeks to ask *whether* a company should engage in corporate sustainability, and appears at the root of all trade-off decisions in both the theoretical and applied studies.

As described earlier, tensions can manifest as either complementarity or competition, leading to either trade-offs or synergies. Under resource constraints, this private value-shared value tension translates into a cost-benefit trade-off among the various company performance dimensions (e.g. Walley and Whitehead 1994), across different time horizons (e.g., Bansal and DesJardine 2014; Teng et al. 2014), and among various key stakeholders (e.g., Epstein and Widener 2010; Minoja 2012), reflecting the three trade-off categories that stem from it (Table 2-3). Alternatively, in the absence of any kind of resource or environmental constraints, a company undertaking corporate sustainability initiatives can ideally create both private as well as shared value. This is the basis of the win-win business case.

From this basic tension stems two others: ‘scope-depth’ (*which* areas to engage in) and measurement-management (*how* to engage in them), which are based on the ‘scope-depth’ and ‘policy-performance’ paradoxes proposed by Csutora (2011). The former was defined as that which “proposes a trade-off... between the scope and the depth of sustainability agendas” (Csutora 2011: 166), such that the larger the agenda, the lower the relevance and meaningfulness of the information ‘captured’. The author defines this tension as both a paradox and a trade-off (Csutora 2011). Here, we propose that under resource constraints (which impose limits on the scope and depth of the corporate sustainability initiatives undertaken), this tension translates into specific categories of trade-offs. These include trade-offs among the performance targets with which to address the stakeholder issues (based on the stakeholder priorities established earlier on in the implementation process at a macro-level) (e.g., Byggeth and Hochschomer 2006), and among the various approaches used to implement these targets (e.g., Hahn et al. 2012; Egels-Zandén et al. 2015). An example of these trade-offs include, respectively, improve energy use vs improve water consumption, and (under the former) operational eco-efficiency measures vs product re-design.

The choice of *which* performance areas to target depends closely on *how* these targets are ‘put into action’ (Hahn et al. 2012). The trade-offs encountered here fall under the final tension category, measurement - management.

This tension category is based on the ‘policy-performance’ paradox found by Csutora (2011), which was defined as that in which “enhanced sustainability efforts may be coupled with a *deteriorating* sustainability performance” (emphasis added:164), as a result of the complexity of the concept of sustainability, as well as the inherent problems associated with its measurement and implementation. The fact that “value destructive actions or practices persist” (Cormier and Magnan 2015: 432) in spite of corporate sustainability policy has led to allegations of corporate greenwashing, disingenuousness, or stakeholder deception (Hess 2008; Csutora 2011). From the references, this tension appeared to generate two trade-offs regarding where the management/measurement took place. These included either: if the improvement was implemented/measured at the level of “autonomous component parts” (Ramirez 2012: 66) or the system as a whole (Ramirez 2012; Egels-Zandén et al. 2015), or whether that intended improvement was relative to a pre-existing internal state of the firm or to the broader context in which the firm is in (Csutora 2011; Joseph 2012).

Based on the framework, these three core tensions are interconnected, such that the trade-offs encountered at a micro-level (further along the implementation process) are influenced by those encountered at a macro-level earlier on. In other words, the trade-off decisions encountered under the measurement-management tension are tied to trade-off decisions encountered under the ‘scope-depth’ tension, as well as those under private value-shared value (as shown in Table 2-3). That is to say, how the company’s sustainability performance will be measured (‘measurement-management’ in Table 2-3) will depend on: 1) the intended performance outcome (as determined by the trade-offs under ‘private value-shared value’), as well as 2) the specific performance target as well as the implementation process used to achieve it (as determined by the trade-offs under ‘scope-depth’). To illustrate: Pinkse and Kolk (2010) discussed the various trade-offs firms encounter when faced with the pressure to innovate, in compliance with climate change policy. Among these was the decision to either invest in innovation or in ‘scale up’ the already-available green technologies (Pinkse and Kolk 2010). Applying this example to the framework proposed here means that these firms— having already decided to embark on corporate sustainability initiatives (*whether*) on addressing climate change (*which*)— must now decide on whether to employ eco-technology “development or deployment” (*how*) (Pinkse and Kolk 2010: 265).

2.3.2.3. Comparison with Pre-Existing Trade-off Frameworks:

Based on the references surveyed, this study found that other frameworks for conceptualizing trade-offs have already been developed. Hahn et al. (2010 and 2014) proposed a comprehensive framework that mapped the trade-offs in three dimensions across performance, time and organizational levels. In Hahn et al. 2014, the trade-offs (termed 'tensions') were described in terms of where they occur conceptually along these interfaces along with some of the conflicts (termed 'paradoxes') that emerge as a result (e.g., personal vs organizational agendas, efficiency vs resilience of systems). The study also described a number of paradox-based resolution strategies that may be used to manage these conflicts. In contrast, the framework suggested here makes a distinction between trade-offs, tensions, and paradoxes. It also provides a detailed classification of the trade-offs encountered (and their root tensions), not based on where they occur across the different temporal/spatial/performance dimensions, but on where they appear along the corporate sustainability implementation process, from policy to project.

As part of their discussion on trade-offs, Kaptein and Wempe (2001) presented a model of implementing the triple-bottom-line concept. While not specifically a trade-off model, the framework presented the practice of corporate sustainability as a pyramid hierarchy of levels starting from company values, to responsibilities, norms, and finally indicators for reporting. This movement parallels the movement of tensions in this framework in two ways: firstly, a valuation of the fundamental triple-bottom-line aspects is at the apex of the firm's priorities, when it comes to implementing the concept of corporate sustainability. The central role of company values (as described by Kaptein and Wempe 2001) mirrors the central tension between private value creation vs shared value creation as described in the framework presented here. The key difference between the two frameworks is that the framework presented here focuses on the company's *creation of value* unlike the Kaptein and Wempe model which focuses on the company's underlying core *value system*. While it is important to note that the terms value and values are distinct and not interchangeable, a company's pursuit of value is nevertheless a reflection of its value system (see for example: Bansal and Roth 2000). The second similarity between the two frameworks is that in both models, implementing the concept of corporate sustainability means that a firm moves down the framework, encountering more detailed decisions –either regarding norms or responsibilities (Kaptein and Wempe framework) or regarding trade-offs the firm will face (framework presented here). The key difference is that the framework presented here builds this 'priority hierarchy' through a taxonomy of the kinds of trade-off decisions encountered along the way.

While these frameworks provide valuable insight into the types of trade-offs encountered in corporate sustainability at a conceptual level, there remains a need for a systematic categorization of trade-offs at a practical level (or the types of trade-offs encountered along the corporate sustainability implementation process), based on empirical findings and managerial perceptions. This study attempts to fill this gap by developing a framework that has been derived from a content analysis of published trade-off literature. The tension and trade-off categories it includes are, consequently, applicable at both a conceptual and an applied level, given the scope of the search-and-screen process.

2.4. Discussion:

In the following sections, the proposed framework is used to guide discussion of the tension and trade-off categories that emerged from the content analysis, and how they relate to one another. In the discussion below, each of the three tension areas (and corresponding trade-off categories) are first addressed sequentially, beginning at a macro-level and proceeding towards a micro-level (Sections 4.1 – 4.3).

2.4.1. Private Value-Shared Value Tension:

According to the NRBV, corporate responses to environmental constraints (and stakeholder pressures) related to sustainable development can bring about sustained and sustainable competitive advantage — a ‘win-win’ scenario in which the firm creates shared societal value as well as private profit. However, this is predicated upon managers recognizing the appropriate corporate sustainability strategy and developing the most appropriate organizational capability to ensure the firm’s long-term profitability (see: Hart 1995; Sharma and Vredenberg 1998). Thus, from a company perspective, depending on the strategy followed, the creation of private value and the creation of shared (or ‘win-win’) value may not always be aligned.

Based on the references analyzed, competition between the creation of private value vs the creation of shared value is at the center of trade-off research. Here, business profitability is pitted against business sustainability in a cost-benefit trade-off between the firm’s environmental/social performance (E/SP) and its financial performance (FP)⁴ (Porter and van der Linde 1995). From a theoretical perspective, this has its foundations in the ‘Trade-off Hypothesis’, which holds that the practice of corporate sustainability

⁴ Some references define it as being the trade-off between all three dimensions, while others consider it only from a binary perspective, either as environmental/social performance (E/SP) vs financial performance (FP) or to a lesser extent, environmental performance (EP) vs social performance (SP) (see: Angus-Leppan et al. 2010).

(either through voluntary or compliance measures) incurs an increasing private cost on the firm that can deter it from pursuing its 'fiduciary obligation' to generate shareholder value (Makni et al. 2009; Li and Toppinen 2011). The mechanism is explained by Dutta et al. (2012), using the case of pollution control. According to the 'law of diminishing returns': 1) firms that adopt pollution control measures face rising abatement costs over time, while 2) the competitive advantage gained by these based on their "greenness" (Dutta et al. 2012: 2) diminishes with time. Furthermore, switching to more innovative prevention technologies raises the up-front private cost, as well as the investment risk should they fail to generate profitable products (Pinkse and Kolke 2010). This argument falls under the neoclassical view of economics and is framed in one of two ways, either that: 1) trade-offs are fixed and inherent (the Friedmanite argument or the "separation thesis"; Varenova et al. 2013 p. 19), or that 2) trade-offs are not fixed, and may be overcome under certain conditions (Figge and Hahn 2012; Beckmann et al. 2014). The majority of the studies examined in this review found evidence of the latter.

Performance Dimension

In the references captured in this review, the existence of the classical trade-off between the triple-bottom-line performance areas was addressed in a number of ways.

At the level of the applied studies, this trade-off category translates into decisions specific to the area of application in which traditional 'financial criteria' run up against 'non-financial criteria', under the recognition that an assessment of profitability without a consideration for sustainability is no longer feasible (Paksoy and Ozceylan 2014). This trade-off has been documented in: the design of supply chain networks (Li 2013; Wang et al. 2011; Chaabane et al. 2011; Paksoy and Ozceylan 2014; Nagurney et al. 2013), supplier selection (Handfield et al. 2002; Dai and Blackhurst 2012), and product/process improvements (Liu and Huang 2014; Ahmed 2001; Chen and Zhang 2013; Stuart et al. 1999). These studies propose the use of multi-objective optimization models to solve the sustainability/profitability trade-off design problem by generating a set of Pareto-optimal solutions. In many of these models, the weighting of the different sustainability/profitability criteria is left to the decision-maker to choose among them based on their objective 'preference', essentially making the trade-off between them (e.g., Chaabane et al. 2011, see also: Byggeth and Hochschorner 2006).

For the theoretical studies, some studies examined this trade-off conceptually: Figge and Hahn (2012) used an econometric model based on game theory and 'investment logic', while Walley and Whitehead (1994) and Kaptein and Wempe (2001) provided conceptual arguments from a practitioner perspective.

These studies concluded that indeed a trade-off exists between pursuing sustainability or profitability, but that it may be mediated through strategic decision-making, as posited by the NRBV. However, decision-making is dependent on decision framing and managerial perception.

Thus, other theoretical studies addressed whether this trade-off was perceived by managers. This is in line with the findings of an emerging stream of NRBV literature that has focused on how managers perceive and interpret 'win-win' business opportunities in corporate sustainability. According to Hart and Dowell (2011): "managers do not find profitable opportunities where they do not look for them, and thus the ability to profit from pollution prevention depends critically on managers' expectations that such opportunities exist" (p. 1468). Thus, trade-offs and synergies are to a certain extent, a product of managerial decision-making, which itself is dependent on the cognitive 'framing' of sustainability-related decisions (as described by Hart and Dowell 2011). To illustrate: using a case study of property development firms in the UK, Bryson and Lombardi (2009) found that the tensions between sustainability and profitability were being 'balanced' at the "board level as well as within project development team[s]" (p. 106). The authors found that the way managers perceived this trade-off shaped the firm's particular business models as well as the firms' own "formulation[s] of profitability and value" (p. 104).

Other studies showed that although managers perceived the sustainability-profitability link as a trade-off, they chose to present it as a win-win to external stakeholders. For example, Laine (2005) found evidence that this trade-off existed in the latent content of sustainability reports. Using a qualitative approach, the author found that: although the firms explicitly defined sustainable development as a 'win-win', the reports revealed that the economic performance was actually given 'a priori' precedence implicitly (Laine 2005). In a similar study using German reports, Herzig and Godemann (2010) also found that sustainability reports only presented the 'win-win' rhetoric. However, based on interviews with the managers, the authors found that this occurred not because trade-offs were *not* being encountered in reporting, but rather because a discussion of trade-offs was considered detrimental to the firm (Herzig and Godemann 2010).

Alternatively, rather than examining managerial perception of the trade-off, a number of empirical studies tested whether or not this trade-off existed in practice by analyzing the link between a firm's sustainability and its competitive advantage (as posited by the NRBV) empirically. This was done by testing the E/SP-FP link directly, and at a top-level. These studies varied widely in their empirical approaches, and reached differing results on whether or not a trade-off did indeed exist between a firm's E/SP and its FP. To illustrate: for these studies, the proxies used for FP were either firm value (e.g., Makni et al. 2009) or firm

competitiveness (e.g., Cainelli et al. 2013). The proxies used for E/SP varied more widely, from sustainability scores (e.g., Makni et al. 2009), to emission reduction (e.g., Cainelli et al. 2013), or Environmental Management System (EMS) certification (e.g., Teng et al. 2014). A meta-review conducted in 1997 by McWilliams and Siegel highlighted the crucial importance of variable selection when testing for this link. The authors found that many of the FP variables commonly used were too prone to confounding effects to be able to use with confidence (Guenster et al. (2011) refer to these measures as being “too noisy”; p. 684). The authors went so far as to replicate a study using the same data, and found their results supported a trade-off link instead of the originally reported synergy (McWilliams and Siegel 1997). Of all of these studies, a portion found evidence of both synergy and trade-off, while others found evidence of a trade-off.

Of these studies, Xepapadeas and De Zeeuw (1999), Cainelli et al. (2013), Venn and Berg (2013), Vilanova et al. (2009), and the meta-review conducted by Blanco et al. (2008) only found partial support for the existence of a trade-off between E/SP and FP. These studies addressed the contextual factors that mediate the E/SP-FP relationship (or how firms might move between trade-off and win-win states). As predicted by the NRBV, a key contextual factor was the firm’s ability to develop its organizational capabilities, and specifically its innovative capacity. According to Sharma and Vredenburg (1998), a firm’s organizational capabilities are defined as being “the coordinating mechanisms that enable the most efficient and competitive use of the firm’s assets” (p. 735).

As an example, Xepapadeas and De Zeeuw (1999) examined the EP-FP (in terms of competitiveness) link, by testing the win-win paradigm under environmental regulation (or the ‘Porter Hypothesis’) using a mathematical model. The authors found that under regulation, firms are incentivized to either ‘downsize’ their capital stock (leading to a trade-off), or to ‘modernize’ (investing more in newer, more efficient stock; leading to synergy), depending on the extent of resources available to cover the acquisition cost. In line with the predictions of the NRBV, the authors found that firms investing in modernizing their stock would see higher rents while those that chose downsizing would see lower. Interestingly, the authors also found that in firms that adopted both downsizing and modernizing strategies simultaneously, the modernization tactic had the effect of minimizing the loss or compromise dimension, in that these firms were predicted to be more profitable than those engaged in downsizing alone. In other words: by developing its organizational capabilities (in this case innovation), a firm can move closer to ‘win-win’, and further from ‘win-lose’. This was also shown by Venn and Berg (2013) in their study of socially-responsible bottom of

the pyramid (BoP) business ventures by a multinational firm (MNC) in poverty-stricken areas (Venn and Berg 2013).

Using a qualitative approach, Venn and Berg examined the Social Performance (SP) - FP link using a case study approach of BoP ventures in South Asia (2013). These ventures provide an interesting avenue of trade-off research because they function as extensions of MNCs, except: under higher resource constraints, in a relatively-unstudied market, under higher pressures to deliver a return within a shorter amount of time (as long-term support is often not guaranteed) (Venn and Berg 2013). The authors found that the ability to achieve win-win solutions was restricted by resource constraints and organizational barriers, ultimately leading managers to trade-off responsibility with profitability (Venn and Berg 2013). The authors did nevertheless find that these barriers were being overcome by means of managerial “socially oriented entrepreneurship activities” such as managers volunteering their private time. This phenomenon, which the authors termed ‘social intrapreneurship’, provides yet another example of how building innovative capacity can mediate compromise situations and encourage synergies.

In addition to innovative capacity, another influential factor that determined whether or not the link between a firm’s sustainability performance and its profitability was one of trade-off or synergy was time.

Time

From the references reviewed, Makni et al. (2009) and Guenster et al. (2011) found evidence of a clear negative relationship (evidence for a trade-off between E/SP and FP) in the short-term (<5 years). Guenster et al. (2011) found that environmental leader firms did not initially “sell at a premium relative to laggards” (p. 679). According to their models, this “time-varying market response” (p. 701) kicked in between 5- 10 years, after which the (formerly) ‘laggard’ firms realized a 2.8-5% relative increase. Similarly, Teng et al. (2014) found evidence of an inverted U-shape between Environmental Performance (EP) and FP, or that: costs are incurred in the short-term, while benefits accumulate steadily with time, to eventually outweigh the costs in the long-term (>5 years).

In all these studies, the trade-off across the three performance areas depended on the time perspective considered in the analysis. Teng et al. (2014) argues that corporate sustainability is inherently “non-monotonic” (p. 17), meaning that there exists a time-lag between the initial cost in one performance area and the realized benefit in another. As such, firms face a trade-off between costs incurred now and benefits reaped later. This time-lag complicates the cost-benefit assessment because the *value* of these costs/benefits itself changes over time, thereby creating an uncertainty in calculating the future benefits

(Martín-Peña et al. 2014). This is due to depreciation, changing market conditions, consumer preferences, employee turnover, changing top management commitment to corporate sustainability initiatives, or finally, to the rising cost of abatement measures beyond ‘low hanging fruit’, as discussed earlier (Wu and Pagell 2011; Martín-Peña et al. 2014). Martín-Peña et al. (2014) found that this outcome uncertainty was a key barrier to the implementation of an EMS in the Spanish automotive sector. From an alternative perspective, Bansal and DesJardine (2014) argue that this cost-benefit time-lag contributes to intergenerational inequity and therefore—following Paul Polman, CEO of Unilever—that ‘short-termism’ is indeed “the bane of sustainability” (p. 70).

From a NRBV perspective, in his seminal article, Hart (1995) describes the strategic importance of establishing a long-term orientation by stating that: “the firm must be concerned not only with profitability in the present and growth in the medium term, but also with its future position and source of competitive advantage” (p. 988). However, pursuing a long-term strategy to sustain competitive advantage necessarily involves a time-lag between the up-front transaction cost (of implementing the strategy) and the anticipated value of the resource/capability developed, in the future. There has been very little research conducted on how this cost-benefit time-lag directly influences managerial decision-making with regards to which sustainability-related strategic capability to develop. More work is needed here in studying the effect of time on the NRBV-theorized link between strategy and competitive advantage.

On the other hand, research has emerged on the application of resource-based theory (including NRBV) to changing market conditions *over time* (Hart and Dowell 2011)—rather than the influence of time-horizons alone, or the influence of the uncertainty in value calculations over time. This is known as the dynamic capabilities perspective (see also: Eisenhardt and Martin 2000; Teece 2007). Under this view, firms encountering changing market conditions (whether in relatively stable industries or volatile ones; Eisenhardt and Martin 2000) can maintain their competitive advantage if they are able to adapt to these changes by developing dynamic capabilities (Teece 2007). This involves making strategic decisions regarding calculating future projections of resource/capability value, under conditions of uncertainty (Teece 2007). This parallels the challenge posed by the cost-benefit time-lag encountered by firms engaging in corporate sustainability described earlier.

More importantly, the literature on dynamic capabilities also argues that dynamic capabilities are connected to innovative capacity. According to Teece (2007), the more effective a firm is at developing these capabilities, handling the decision uncertainty, and adapting rapidly as a result, the more capable it

will be of innovating for long-term success. Applying this to trade-offs: it then holds that how a firm evaluates the cost-benefit valuations over time will inevitably influence its capacity to innovate—a crucial factor in a firm’s ability to transform trade-offs into synergies, as described earlier. Thus, although the NRBV and dynamic capabilities perspectives offer no clear-cut solution to resolving the cost-benefit time-lag, together they suggest that how a firm approaches this key tradeoff is critical to its ability to manage future trade-offs further down the hierarchy.

Stakeholder

The private value-shared value tension across the different dimensions of the triple-bottom-line is not only assessed relative to *when* but also according to *whom* (Driessen and Hillebrand 2012; Reuter et al. 2012). A firm faces a multitude of market and non-market stakeholders, from inside or outside the firm, and upstream or downstream along its supply chain (Driessen and Hillebrand 2013), all of whom have legitimate (albeit conflicting) demands on the firm’s activities (Minoja 2012; Epstein and Widener 2010). Minoja (2012) argues that the inclusion of these stakeholders in firm-level decision-making is justified from both an “instrumental [and] a normative perspective” (p. 69) as these stakeholders include shareholders and consumers, as well as public stakeholder groups. This is consistent with the empirical findings of Cormier and Magnan (2015) who found that a firm’s EP disclosure (through reporting) improved both its social legitimacy and its bottom line.

The references reviewed here indicate that this stakeholder trade-off category is rooted in five different theoretical perspectives. Stakeholder theory holds that “the purpose of the firm is to create and distribute value to a plurality of stakeholders and that the achievement of this purpose depends on the cooperation and support of the stakeholders themselves” (Minoja 2012: 67). Alternatively, signaling and legitimacy theories hold that, through the pursuit of corporate sustainability initiatives such as sustainability reporting, “corporations signal to their stakeholders and society at large that they are meeting societal expectations of sustainable development” (Hess 2008: 466), to secure the benefits that this legitimization process imparts (Hess 2008; Cormier and Magnan 2015). On the other hand, the inclusion of external stakeholders in internal firm decisions can also be based on institutional theory which holds that different types of institutional pressures shape organizational behavior (Bryson and Lombardi 2009). Finally, the RBV holds that stakeholder management is a strategic organizational capability that builds “the firm’s endowment of trust and reputation”, which in turn increases its access to valuable resources, and ultimately enhances its competitive position and long-term profitability (as described by Minoja 2012: 69;

from RBV literature see also: Sharma and Vredenburg 1998; Verbeke and Tung 2013; Escobar and Vredenburg 2013).

While all of these different theoretical approaches stress the crucial importance (and win-win potential) of considering stakeholder needs ahead of engaging in sustainability initiatives, firms implementing this in practice inevitably run into conflicting stakeholder demands. This imposes a trade-off on the firm between prioritizing the interests of one group versus another⁵. One of the most common examples of such a trade-off is the one between the interests of the firm's shareholders versus that of its community stakeholders (Minoja 2012). Here, resource-based theory (including NRBV) offers no prescriptive guidance on how to manage effective stakeholder networks, let alone contradictory ones.

Nevertheless, from the references surveyed here, it appears that how a firm handles this stakeholder trade-off significantly influences how it perceives and manages the fundamental trade-off between the competing objectives of sustainability and profitability. That is to say, the outcome of the E/SP-FP conflict (whether it translates into a trade-off or synergy) is tied to the outcome of the stakeholder trade-off further down the hierarchy.

According to the study by Gavronski et al. (2012), the authors found that the prevailing social climate among a firm's employees significantly influences managerial decisions regarding investments in different forms of eco-technology. Similarly, Reuter et al. (2012) found that managers engaged in supply chain purchasing decisions assess the cost-benefit trade-off between sustainability and profitability based on their stakeholder-orientation, and "assign their priorities [among economic and non-economic criteria] accordingly" (p. 272). According to the study, managerial decision-making regarding corporate sustainability trade-offs is based on whether managers prioritized shareholder, consumer, or public needs (known as 'stakeholder orientation'), with public opinion being a key driver behind sustainability-centered supplier selection decisions (Reuter et al. 2012). The findings indicate that the strength of this influence may be correlated with the proximity of the public stakeholder group exerting it, suggesting the influence of institutional pressure (Reuter et al. 2012).

⁵ As the firm moves further along the implementation process, the trade-off between groups of salient stakeholders translates into a trade-off between which performance areas to target. The framework presented here groups these two types of trade-offs under the same 'stakeholder' trade-off category, given that conflicting stakeholder groups or conflicting stakeholder issues are inter-related and both assessed from a cost-benefit perspective (as described in Driessen and Hillebrand 2013).

Not only does a firm's stakeholder orientation influence the outcome of the responsibility-profitability trade-off (including the managerial decisions taken regarding this trade-off), but it also influences how this trade-off is perceived. Using a sensemaking approach, Angus-Leppan et al. (2010) found that different stakeholder groups (at different levels within and outside of a firm) perceived the link between EP-SP differently, approximately half of whom saw it as a trade-off.

From an alternative perspective, Berens et al. (2007) conducted a study that examined the *significance* of the SP-FP (or 'corporate sustainability and Corporate Ability') trade-off as seen from the perspective of different stakeholders. This study posed the question that: if a firm under resource constraints has traded-off corporate sustainability for improved Corporate Ability (or vice versa), would this decision pay-off for the firm? The authors found that the significance of the link between corporate sustainability and Corporate Ability depends on the type of stakeholder considered and the degree of personal relevance they hold for either dimension (Berens et al. 2007). The authors concluded that: a firm that has traded off corporate sustainability for improved Corporate Ability may in fact be able to compensate one for the other in the eyes of certain stakeholder groups under certain personal relevance conditions (Berens et al. 2007).

These findings indicate that the trade-off between the various performance dimensions and that between stakeholder groups are in fact interconnected. This suggests that: to effectively resolve the conflict between competing sustainability-profitability objectives, a firm must effectively manage the conflict between competing stakeholder priorities. According to one of the key articles surveyed here, this starts with connecting a firm's strategy with its core values, as well as its time orientation (Minoja 2012). This mirrors the hierarchy of the trade-off framework, as shown in Table 2-3.

In Minoja (2012), the author describes a novel 'ambidextrous' approach to managing this stakeholder conflict based on strategic management principles, over time. According to the author, attempting to satisfy all contradictory stakeholder demands is in fact "detrimental" to a firm (p. 70) — just as it is detrimental to prioritize one over the other without due strategic consideration. The author recommends that the key to resolving this conflict is in "adopting an ambidextrous time orientation to stakeholder management" (Minoja 2012: 73). This involves "the construction of meaningful strategies that emphasize the importance of core values to which customers and key stakeholders can relate" (Minoja 2012: 73; quoting Waddock and Graves 1997: 306). The author argues that these core values "orient managers in consistently deciding to which stakeholder demands they respond 'yes' and to which they respond 'no'" (Minoja 2012: 70).

Moreover, firms adopting these ‘purpose’-based strategies must also commit to both short- and long-term performance (or as described by Minoja 2012: committing to an “ambidextrous time orientation”, p. 72). This means that such an approach necessarily entails sacrifices in the short-term for larger pay-offs in the long-term; as described by the author, this approach “entails acknowledging that even in the firms most genuinely committed to stakeholders’ well-being, any stakeholders may be required to accept sacrifices” (p.).

Although Minoja’s (2012) argument is based on strategic management principles, it does not specifically follow resource-based theory (but rather ambidexterity theory and strategic positioning). However, recent RBV-related research has begun to make the connections between competitive advantage, stakeholder management, and time orientation, leading to conclusions that parallel Minoja’s (2012) approach. As an example, in 2013, Verbeke and Tung extended the principles of RBV to include a strategic ‘temporal perspective’, incorporating elements of both institutional and stakeholder management theories.

Nonetheless, Minoja’s (2012) work, alongside the findings of the stakeholder-related references described earlier in this section indicate two important points: firstly, that the three trade-offs that correspond to the private value-shared value tension are interconnected, and are at the root of all trade-off decision-making in corporate sustainability. Secondly, these references also indicate that (as a result of this interconnection), the key to resolving the tension between lies in connecting the firm’s sustainability strategy to its core values, and by making strategic sacrifices in the short-term (with regards to performance and stakeholder management) for larger benefits in the longer-term.

2.4.2. Scope-Depth Tension:

Based on the triple-bottom-line performance dimension/time horizon/stakeholder priorities established in the private value-shared value tension at the very top (or macro-stage) of the framework (Table 2-3), the firm now confronts the decision of *where* to implement these performance improvements. Here, and as described by Csutora (2011), the firm faces a tension between the scope and depth of these initiatives, as resource constraints impose a competition among the two aspects. This implies that widening the scope of corporate sustainability initiatives to cover more performance areas necessarily limits the degree to which performance may be improved in each individual area, as the firm begins to run in to conflicting performance targets within the same area (Byggeth and Hochschorner 2006; Hahn et al. 2012). The trade-off categories encountered here include the performance targets themselves as well as the

implementation approaches used to achieve them. Compared to the previous private value-shared value trade-offs, the trade-off categories encountered here appeared in fewer studies, and largely in the latent content of the study results or their interpretations.

Similarly, and with regards to the applicability of NRBV theory, the guidance offered by NRBV principles does not yet cover the more micro-level tensions that appear further on in the framework. According to Hart and Dowell (2011) in their 15-year review of NRBV research, much of the extant NRBV literature has focused primarily on pollution prevention—and in particular on establishing the NRBV-posed link between improved sustainability performance and improved profitability/competitiveness. As such, with regards to the framework presented here, NRBV theory (and research done to-date) has been applicable primarily at the top of the trade-off hierarchy— at the level of the private value-shared value tension and underlying trade-offs. However, as shown in Table 2-3, as a firm moves further along the corporate sustainability implementation process, and begins to encounter more detailed decisions regarding *which* corporate sustainability strategies to implement and *how*, resource-based theory offers little guidance on how to maintain competitive advantage in the face of competing (or expanding) corporate sustainability strategies.

Interestingly enough, just as there were fewer NRBV-studies describing the applicability of NRBV theory further down the hierarchy, there were also fewer documented examples of trade-off-related articles that addressed resolving the described conflicts, as compared to higher up in the framework. Rather than offering strategies and suggestions for transforming these micro-level trade-offs into synergies, the articles in this portion of the framework were focused primarily on describing and labelling these trade-offs—some of which have not been encountered before in corporate sustainability literature. As such, the following discussion sections focus primarily on classifying (rather than managing) trade-offs.

Scope-Depth Tension as Stakeholder Inclusion

This tension also appeared in the study by Vilanova et al. (2009) under a different name. By means of a qualitative survey of executives in the EU financial sector, the authors identified two forms of tensions which they called the ‘stakeholder paradox’ and the ‘accountability paradox’. These two paradoxes described the conflict between the scope and depth of a corporate sustainability agenda in regards to stakeholder inclusion or to stakeholder communication, respectively. The former holds “that increasing the diversity of stakeholder[s] effectively decrease[s] the [firm’s] capacity” (p. 65) to manage stakeholder dialogue and ultimately, to effectively manage its performance. This paradox parallels Minoja’s (2012)

argument that “simultaneously meeting all stakeholders’ demands [...] is neither realistically feasible nor convenient for the firm” (p. 80). At an applied level, this is encountered in scope-depth conflicts encountered in: sourcing decisions (in supply chain management), product development (PD) decisions (in product innovation), as well as technology investment decisions (in operational management).

To illustrate: Holt and Watson (2008) conducted a conceptual case study of the trade-offs encountered in the cut flower industry, regarding which sustainability performance areas retail firms can pursue along their supply chains. The authors found that the firms that were considering improved responsibility measures had to choose between either Fairtrade certification or improved ‘carbon footprint’ practices (Holt and Watson 2008). These options differed in terms of the performance areas they targeted, forcing managers to make the trade-off between labor rights or environmental protection (Holt and Watson 2008). Similar conflicts were also described by Driessen and Hillebrand (2013) in green product development (PD). The authors noted in the study that during the course of the PD process, expanding the ‘issues agenda’ meant that “addressing one nonmarket stakeholder issue would mean stifling innovation to address other nonmarket stakeholder issues” (p. 370). In their review of eco-design tools, Byggeth and Hochschorner (2005) described that target conflicts are encountered in PD when having to choose between product materials, based on their: physical properties (one of higher weight/low toxicity and the other of higher toxicity/low weight for example), energy efficiency, or cost.

With regards to NRBV: based on the emerging work conducted on product stewardship strategies reviewed by Hart and Dowell (2011), the authors conclude that “considering diverse stakeholder views is valuable” for green product development (p. 1469). However, NRBV (both in its theory and research application) fails to offer specific prescriptive guidance on how to manage this stakeholder diversity, particularly in the case of conflicting demands, as described earlier.

Scope-Depth Tension as Stakeholder Communication

On the other hand, this scope-depth tension (and associated trade-offs) can also appear as conflicts stemming from increased stakeholder communication (rather than from higher stakeholder inclusion), which Vilanova et al. (2009) calls the ‘accountability paradox’. This paradox holds that “the more the company aims to be transparent... the more it loses the capacity to transmit a coherent and central message” (Vilanova et al. 2009: 65). At an applied level, this particular type of scope-depth tension is encountered in reporting and disclosure.

As an example, Egels- Zandén et al. (2015) conducted a case study of the transparency disclosure practices of a sustainability leader firm in the fast fashion industry. The firm attempted to disclose transparency information on three target areas (sustainability conditions/sub-supplier names/ purchasing practices) along its supply chain (Egels- Zandén et al. 2015). The authors observed that the resulting transparency disclosures were inconsistent across the chain: the disclosures on the target areas varied between the firm and its suppliers, and between the suppliers themselves (Egels- Zandén et al. 2015). Based on the findings, it appears that: by expanding the scope of its transparency initiatives to cover a range of stakeholders (i.e., suppliers along its chain), the firm ran into conflicts between these stakeholders regarding the same target area. For example: disclosing sub-supplier names may have been beneficial for one supplier, but imposed a business risk on another (“due to the risk of being bypassed”, Egels - Zandén et al. 2015: 101). Due to this disclosure inconsistency, the firm was forced to make “selective disclosure” (p. 8) decisions regarding how to report these outcomes on its website (Egels- Zandén et al. 2015). As a result, the study concluded that “supply chain transparency in practice, is not about declaring *the* truth... but rather about declaring a particular perspective” (Egels- Zandén et al. 2015: 103) based on the actors involved. Following Villanova et al. (2009), this study demonstrated that by widening the *reach* of its transparency message (to cover a larger group of stakeholders along its chain) the firm was forced to make compromises in its *content* (its “completeness”; Joseph 2012: 101).

2.4.3. Measurement-Management Tension:

However, the choice of *which* performance areas to target also depends on *how* these targets are achieved. This involves both performance measurement and management, which are connected through a cyclical process (Hess 2008). When the tension between the two is one of *complementarity*, performance measurement highlights where improvement (management) is needed (Hess 2008; Joseph 2012). Performance is then continually monitored and further improved by cycling through the measurement-management loop again, through a process known as “double-loop learning (Li and Toppinen 2011: 115). Alternatively, if the tension is one of *competition*, what results is the policy-performance mismatch described by Csutora (2011) and Hess (2008). In this case, corporate sustainability initiatives that were aimed at improving performance in theory, fail to do so in practice. Rather than effecting any meaningful change in the firm’s contribution to sustainable development, these activities “serve as little more than a superficial public relations strategy” (Hess 2008: 465). This measurement-management ‘decoupling’ occurs when a firm undertakes corporate sustainability initiatives that are applied at the level of de-centralized and “self-contained business units” (Hess 2008: 465; see also Ramirez

2012), or that rely on a system of measurement tools that assess performance from a relative rather than an absolute perspective (e.g., eco-efficiency improvements rather than ‘eco-effectiveness’; Csutora 2011). These reflect the two trade-off categories that stem from this measurement-management tension. It is worth noting that the study of corporate sustainability strategies from the NRBV perspective at this level of detail (at this micro-level in the framework) has been sparse. As such, it was not possible to connect this section of the framework to NRBV theory or research.

Management Approach

In the face of increasingly complex supply chains, firms considering where to implement corporate sustainability initiatives must decide on whether they will follow a centralized or a de-centralized approach. This trade-off category corresponds to what Ramirez (2012) refers to as the “paradox of local success” (p. 66), in which sustainability decision-making is handled at the level of individual business units, who are themselves motivated to optimize their own local performance — even if at the expense of the system performance as a whole (Ramirez 2012). These individual units may refer to either the focal firm itself or to the individual suppliers along its chain (as demonstrated in Egels- Zandén et al. 2015).

To reduce this conflict between the performance of a firm’s individual units and the performance of its system as a whole, Ramirez (2012) recommended the “use of rules, procedures, and schedules” (p. 66) that elicit “*coordinated* behavior” (p. 66) across the entire system. These ‘rules’ refer to supplier codes of conduct and other similar guidelines, which are developed in order to standardize management objectives and performance outcomes (Reuter et al. 2012; Egels- Zandén et al. 2015). Ramirez’s (2012) recommendation on the use of these ‘rules’ is supported by the findings of Reuter et al. (2012), who observed that the “formalization of ethical culture” within a firm (i.e., the establishment and enforcement of various supplier guidelines) did indeed promote more sustainable decision-making in supply chain management.

Thus, to sum up: the use of supplier ‘rules’ can help mitigate the conflict between local vs system success, which in turn is the result of the trade-off between adopting a centralized vs decentralized management approach to corporate sustainability. However, in the application of these ‘rules’, firms paradoxically face the *same centralized-decentralized trade-off* once again. According to Egels- Zandén et al. 2015: when a firm undertakes supply chain transparency initiatives, it inevitably faces the “trade-off of standardizing [vs] differentiating [its] transparency work” (p. 8) by either “pushing a ‘one-size-fits-all solution onto its suppliers... [or] by adjusting to the specific circumstances of specific suppliers” (p. 8). As a result, the

authors referred to this centralized-decentralized trade-off alternatively as the “standardization vs differentiation” trade-off (Egels- Zandén et al. 2015: 103).

Measurement Approach

The second trade-off category under this tension corresponds to whether the intended performance improvement (for a particular target) was implemented at a relative or absolute level. The former is based on ‘marginal’ performance improvements over time (Csutora 2011), while the latter is based on a broader, systems-based, ‘sustainability perspective’ (Byggeth and Hochschorner 2006; Joseph 2012). To illustrate this distinction: Csutora (2011) provides the example of corporate sustainability initiatives that aim to improve the firm’s relative eco-efficiency (which the author describes as being ‘escapist’) versus those aimed at improving its overall “eco-effectiveness” (p. 168, described as ‘genuine’). To study the implications of this distinction further, the author performed a two-step cluster analysis of data from a survey of OECD firms. The author examined the type and extent of “environmental management tool[s]” used by the different firms surveyed, compared to their productivity and environmental performance. Csutora (2011) found that the majority of companies surveyed employed relativist (‘escapist’) strategies, in that: they employed more than six EM tools on average, even though their absolute environmental performance (measured as firm-level contribution to global emission levels) fell over time, and their productivity increased. Based on these findings, this study concluded that ‘escapist’ firms relied on relativist performance improvements in eco-efficiency, at the expense of absolute “contributions to global environmental impacts” (in eco-effectiveness) (Csutora 2011, as modelled on p. 172).

Therefore, it appears that by only pursuing relativist measures, firms may run the risk of internally misinterpreting or externally misrepresenting their performance. This parallels the “[failure] in completeness reporting” (Joseph 2012:103) phenomenon described by Joseph (2012) in sustainability reporting (SR). The author argues that this reporting ‘incompleteness’ may result when sustainability efforts are driven by a procedural focus on measurement rather than on the outcomes (with respect to the normative principles of SR and to the wider sustainability context of the firm). Joseph (2012; quoting GRI 2007) defines this context as being: “how an organization contributes, or aims to contribute in the future, to the improvement or deterioration of economic, environmental, or social conditions, developments, and trends at the local, regional, or global level” (p. 99).

2.5. Conclusion:

This study proposed a novel hierarchical framework to classify the types of trade-offs that are encountered in the implementation of corporate sustainability initiatives. This was based on a systematic review and content analysis of the conceptual and applied studies on this topic. This framework proposed that trade-offs stem from three basic, hierarchical tensions which collectively determine: *whether* a company will pursue sustainability, as well as *where* and *how* it may do so. The following sections highlight the key contributions of this review and framework (5.1), its key limitations (5.2), and finally, a number of recommendations for future trade-off research (5.3).

2.5.1. Research Contribution:

This chapter set out to answer two research questions, and in so doing made a number of significant contributions to the literature on trade-offs in corporate sustainability. In response to RQ 1-1, this study conducted a combined literature review-and-content analysis methodology to establish a comprehensive taxonomy of the kind of trade-offs encountered by managers today in the pursuit of corporate sustainability, as described in trade-off literature.

By classifying and arranging trade-offs in a hierarchy, the trade-off framework proposed here has helped trace how these conflicts arise throughout the implementation process, and how they are interconnected. More importantly, this study identified and mapped out the core tensions at the root of these trade-off decisions. These include the tension between the creation of private value-shared value (which is at the top of the trade-off hierarchy, and the center of all trade-off decision-making), followed by the tension between the 'scope-depth' of sustainability agendas, as well as the tension between the measurement and management of firm performance, in the implementation of these sustainability agendas. Together, these three tensions determine *whether* a firm engages in corporate sustainability, as well as *how* and with *which* approach.

Building on the findings of Epstein et al. (2014), who declared that tensions in corporate sustainability may be expressed as either competition or complementarity), this study further proposed that these fundamental hierarchical tensions link trade-offs and synergies, by leading to either competition or complementarity between the different dimensions. This finding implies that rather than being polar opposites, sustainability trade-offs and sustainability synergies are merely opposite sides of the same coin, and transition between the two states is possible—a notion that has its roots in resource-based management theory.

As such, in response to RQ 1-2, this study found that corporate sustainability trade-offs are in fact not fixed and may become synergies. This finding was connected to the principles of resource-based theory, and in particular Hart's (1995) NRBV, such that a firm in possession of a unique combination of resources and capabilities, under environmental (and resource) constraints, will resort to sustainability strategies that develop these resources/capabilities in a way that enhances its competitiveness in the long-term. However, this is dependent on the strategic decisions made by its managers, and their ability to recognize and seek out the most successful win-win strategies, over time (as described by Hart 1995; Hart and Dowell 2011 and others). It follows then that a 'non-optimal' strategy may in fact lead to a compromise, rather than the 'win-win' so often attributed to— and posited by— resource-based theory.

Based on the literature reviewed, this study found overwhelming support for this notion, and specifically that the transition between competition and complementarity may be achieved by managers today through strategic decision-making, as described by the NRBV. However, resource constraints impede this process, and encourage the development of trade-offs by expressing their core tensions in the form of competition, rather than complementarity—particularly at a macro-level in the framework (and in regards to the central private value-shared value tension). Yet, some of the articles reviewed here described that—in line with the principles of NRBV—resource constraints can be overcome to a certain degree through innovation (e.g., Venn and Berg 2013). In NRBV terms, this entails the development of a key organizational capability that enhances a firm's access to resources, which in turn confers a sustained and sustainable competitive advantage.

This chapter also argued that trade-offs may also be resolved through the use of corporate sustainability strategies that are based on a commitment to core values and a dynamic approach to stakeholder management over time (as described by Minoja 2012). This finding follows the hierarchy displayed in the trade-off framework in Table 2-3, further highlighting the central role played by the private value-shared value tension in trade-off decision-making today. More importantly, however, this means that managers facing sustainability trade-offs in the implementation of corporate sustainability initiatives must often strategically sacrifice short-term gains, for larger benefits in the longer-term.

2.5.2. Research Gaps:

Based on the findings of this review, it is apparent that the work published to-date on trade-offs has been extensive and has begun to address conflict decision-making in corporate sustainability not just at a top-

level, but also at the level of the various application areas. Nevertheless, through the course of this review it is apparent that key research gaps remain.

Based on this study and on the various meta-reviews conducted previously (e.g., NBS 2008), it is apparent that empirical research that tests the link between three performance areas to determine whether a trade-off or synergistic relationship exists has been exhausted (Maxfield 2008 refers to the topic as a “theoretical quagmire”: 368). This study provided further support for the previously reported findings that the relationship is highly contextual and highly dependent on the methodology employed to study it (e.g., McWilliams and Siegel 1997; Blanco et al. 2009). However, these studies have demonstrated that trade-offs and synergies exist as two inter-related states, and that it is possible for a firm to move between them. Accordingly, having established here that trade-offs are indeed flexible, more work is needed to examine the conditions under which they may become synergies (or competition to complementarity).

More research is needed particularly at the micro-level tensions at the bottom half of the framework, where trade-off literature (as well as NRBV-literature) has been sparse. Further research into this area would be invaluable in establishing how the micro-level tensions and associated trade-offs are connected to the more macro-level conflicts—and more importantly, how this micro-macro connection between the top and bottom halves of the framework (as shown in Table 2-3) can be used to resolve these micro-level trade-offs, and encourage ‘win-win’ opportunities in these areas. Further work would also be particularly useful at the level of specific industries, to identify any industry-specific influences on the kind of trade-offs encountered by companies, and on the options they may have in resolving them.

From a theoretical perspective, more work is also needed in the realm of NRBV theory on how firms choose between competing corporate sustainability strategies, both of which have the potential to generate sustained competitive advantage. As described earlier, much of the NRBV focus has lay on pollution prevention strategies in particular. Although research is emerging on the use of other corporate sustainability strategies, namely product stewardship and sustainable development, work in these areas is still in an embryonic stage—and in the case of sustainable development “virtually nonexistent” (Hart and Dowell 2011: 1470). As such, there exists a crucial gap in NRBV literature that addresses the application of different competing strategies to engaging in corporate sustainability, as well as the complex interconnections that may exist between these different approaches.

More work is also needed to further explore the evolving managerial decision-making process in the new wave of ‘paradoxical’ firms that perceive both states simultaneously. Vilanova et al. (2009) and Epstein et

al. (2014) found that in certain conditions, trade-offs were not being assessed using financial valuations. Qualitative research into the application of corporate sustainability initiatives in specific application areas (such as reporting or supply chain management) may be useful in this area to further illuminate how sustainability decisions are currently being made in these leader firms. The emerging application of ambidexterity and organizational paradox theory to trade-off research (e.g., Ramirez 2002; Minoja 2012; Bansal and DesJardine 2014; Hahn et al. 2014) provides an interesting avenue for exploring how managers may strategically direct the transition from trade-off to synergy.

Various studies have also noted the need for more effective measurement tools that properly capture the benefits received from the pursuit of corporate sustainability, and their distribution (Kaptein and Wempe 2001). These tools would rely on indicators that assess firm performance from a more context-based perspective, based on the firm's systems-level contribution to sustainable development. The application of these context-based indicators may be applied to develop decision-making tools for use in reporting or in product and procurement decisions. This heeds the call by Byggeth and Hochschorner (2006) for systems-level eco-design tools that offer direct decision-making support beyond guidance in trade-off situations.

CHAPTER 3:

How Organizational Logics Shape Trade-Off Decision-Making in Sustainability

3.1. Introduction:

Extant research has demonstrated that sustainability tensions are inherent in the practice of corporate sustainability (Van der Byl and Slawinski, 2015; Hahn et al. 2015). On a company-level, and as shown in the trade-off model presented in Chapter 2 (Table 2-3), these include the tensions between the creation of private value and societal value, scope and depth of sustainability agendas, and the measurement and management of sustainability performance. These tension points present the company with strategic choices. The extant literature on sustainability tensions has begun to analyze these strategic choices at a managerial level through the study of sustainability-related cognitive frames (Epstein et al. 2015; Hahn et al. 2014; Hahn and Aragon-Correa 2015). In this chapter (Phase II of the dissertation), this nascent line of inquiry is extended to the organizational level, and posits that companies interpret and respond to these tensions in ways that reflect an underlying collective cognitive frame, or sustainability logic.

This argument is based on a growing body of research that explores company experiences with sustainability through a cognitive lens (e.g. Hahn et al. 2014; Sharma and Jaiswal 2017). These studies (e.g. Glac 2008) demonstrate how companies practice sustainability in a way that is guided by their underlying (and mostly unconscious) logic. This cognitive logic has been to influence various sustainability-related decision-making domains, including investment decisions (Glac 2008), the choice of social initiatives (Sharma and Good 2013), and strategic responses to environmental risks (Sharma et al. 1999), among others. What remains unknown however is how these logics influence a key area of sustainability decision-making; that of sustainability trade-offs. There is a dearth of information on how organizational logics shape the way that companies perceive, and respond to, trade-offs in sustainability. This is an important gap because trade-offs have been shown to play a significant role in shaping a company's sustainability practice (Walley and Whitehead 1994).

Accordingly, the objective of this chapter is to understand how organizational logics influence trade-off decision-making in sustainability. To achieve this, this study relies on a qualitative and inductive research design based on the analysis of interviews with sustainability managers, annual reports, and third-party news articles. The specific research questions guiding this work are:

- RQ 2-1.** How do companies perceive trade-offs in the practice of sustainability?
- RQ 2-2.** How do companies resolve these trade-offs when they encounter them?
- RQ 2-3.** How do organizational logics shape the companies' experiences with these trade-offs?

In answering these questions, this chapter makes a number of important contributions to the literature on sustainability trade-offs and on sustainability cognition. Firstly, this chapter demonstrates that trade-offs are inherent to the practice of sustainability (in that all companies in the sample, regardless of their underlying logic, faced the continual challenge of having to juggle competing demands across competing stakeholders, and across performance areas and time horizons, among other types of trade-offs. This notion of 'sustainability as inherent compromise' is at odds with the much-publicized 'win-win' view of sustainability promoted by Porter and van der Linde (1995) and other seminal works in this area. Secondly, this study finds that both instrumental- and integrative-leaning companies experience the same types of trade-offs (for example, between competing stakeholders, or between the scope and depth of sustainability agendas), in terms of both diversity (range of trade-offs experienced) and extent (frequency of trade-offs). Companies nevertheless differ in terms of whether they experience these trade-offs as being binary (with clear-cut 'win-lose' dimensions) or non-binary (less clear-cut/polar 'win-lose' dimensions), as well as in terms of how these trade-offs are resolved. More importantly, this study finds that the way in which companies experience trade-offs (binary or non-binary) and the ways in which they attempt to resolve them are shaped by the companies' underlying logic (be it instrumental or integrative). Finally, this study also finds evidence of the cognitively limiting role that dominant (in this case sustainability) logic can play. These findings have important practical implications for managers engaged in the practice of sustainability, which are described in this chapter's Conclusion.

The rest of this chapter is organized as follows: we begin with a review of the theoretical landscape informing this work, including the literature on organizational cognition and the literature on trade-offs in corporate sustainability. We then describe the content analysis methodology followed in this study, followed by a description of the results. We then discuss the link between logics and trade-off experience through a number of illustrative cases from the study sample. Finally we conclude with a discussion of the managerial implications of these findings, and with recommendations for practitioners on how to more effectively navigate trade-offs in corporate sustainability.

3.2. Theoretical Background:

3.2.1. Organizational Cognition in Management:

Organizational behavior and strategic decision-making have long been studied through the lens of resource-based theories, which assume that companies consist of a “collection of [...] resources” and capabilities upon which their competitive advantage depends (Newbert 2007: 122). These theories relied on the “conventional model of bounded rationality” (Hodgkinson et al. 2009: 278; see also: Forester 1984; Lindblom 1959) and largely disregarded the “interpretive side of organizations” (Kaplan 2008: 666) — that is, managers’ interpretations of their strategic environment (Sparrow 1999; Jenkins 2014; Menon 2018). However, during the 1980s, an alternative line of thinking emerged; one that examines the (largely unconscious) socio-cognitive influences that shape outcomes and decisions in strategic management (Hodgkinson and Healey 2002; Narayanan et al. 2011). This line of thinking — also referred to as managerial and organizational cognition — has focused on exploring the “cognitive phenomenon” that underpin “strategy formulation and implementation” (Narayanan et al. 2011: 307). This body of work assumes two key perspectives: firstly, that organizations can be viewed as “interpretation systems” that are constantly engaged in making sense of (and constructing interpretations of) their environment (Neale et al. 2006: 509). Secondly, organizations can also be viewed as “information processing systems” that use their interpretations of environmental information to guide decision-making and action (Neale et al. 2006: 509).

The theoretical basis of managerial and organizational cognition research lies at the intersection of three theoretical domains, namely, cognitive psychology, organizational behavior, and social cognition (Neale et al. 2006). Studies in this field have demonstrated that “the thinking organization is not just a metaphor, (it) refers to an empirically demonstrated capability of organizations” (Walsh 1995: 294). This notion is built on the idea of a collective organizational script, which provides a “shared interpretive scheme” (Walsh, 1995: 295). This script emerges at the organizational level from the aggregation of the individual cognitive scripts of key actors, often the top management team (Walsh, 1995; Cornelissen and Werner, 2014). Schneider and Angelmar (1993) sum this process up best when they state: “people think (=cognitive psychology), managers are people (=organizational behavior), therefore managers must think (=managerial cognition); and managers happen to think in organizations while engaged in assorted organizational tasks (e.g. decision-making, strategic or otherwise, negotiations, performance appraisal, etc.) (=cognition in organization)” (p. 348).

These individual, managerial-level scripts (alternatively referred to as cognitive frames, schemas, collective beliefs or logics⁶) serve as “mental models” (Hockerts 2015: 106) or “simplified representations of reality” (Wrona et al. 2013: 2). These logics offer decision-makers a way of filtering complex and “ambiguous” (Hahn et al. 2014: 463) environmental information for the purposes of decision-making. When faced with new environmental information, managers refer back to these logics, through the process of sensemaking. Given that these logics are built on the actors’ own past experiences, the outcomes of this sensemaking process are highly individualized. Different managers facing the same strategic choices may interpret and respond to these choices differently, thus resulting in different outcomes. It is important to note, however, that just as these logics allow for managers to filter in new environmental information, they also potentially limit managerial cognition by filtering out potentially-relevant information, and thus, blinding decision-makers to potentially-relevant data (Prahalad 2004; Hockerts 2015). In this way, cognitive scripts can “enhance or detract from the process of organizing” (Walsh 1995: 296), leading to possible organizational myopia.

This “sensemaking failure” (Cornelissen and Werner 2014: 189) notwithstanding, the process of managerial sensemaking ultimately contributes to the emergence of a single (pre)dominant collective organizational logic. A number of different processes have been suggested to describe how this cross-level transition takes place. Kaplan (2008), for instance, describes how these collective constructs (referred to as ‘cognitive frames’) emerge through ‘frame contests’ between individual managerial frames, at the end of which one predominates and supersedes the rest, and is accepted as the collective organizational frame (Kaplan, 2008). According to Kaplan (2008), this process occurs during strategy meetings with top management, where “actors attempt to make sense of ambiguous signals from the environment” (p. 731) and involves a combination of cognitive and political processes. Frame contests occur partly through cognitive processes that involve actors “realign[ing]” (p. 740) their cognitive frames based on new information. Similarly, framing can occur through political processes, in that actors in these frame contests and strategy sessions “can act purposefully to shape the frames of others to mobilize support for (or decrease the resistance to) a project” based on power relationships and legitimacy (Kaplan 2008: 738). This would involve actors’ efforts to “rebut, undermine, or realign the diagnostic and prognostic frames held by the opposing coalition” (Kaplan 2008: 738).

⁶ It is important to note that many different terms have been used to refer to this concept of an individual or group-level, socially constructed, cognitive knowledge structure. Walsh (1995) provides an exhaustive list of these terms, many of which are used interchangeably. Following other cognition studies in the strategic management literature (Bettis et al. 2011 and Prahalad 2004), we will refer to these structures here as ‘dominant logic(s)’.

Regardless of the process involved in the emergence of a collective frame, what this study demonstrates is that collective organizational logics are dynamic in nature, and their evolution contributes to organizational learning. Additionally, this study also affirms that the emergence of a single (pre) dominant organizational-level logic does not preclude the continued presence of other “divergent” (Kaplan 2008: 737) individual or group level logics within an organization. However, unlike the collective frame, these divergent frames do not largely influence organizational learning.

Collective logics influence organizational learning by shaping organizational decision-making. According to Huff (1990), “*expectations*, based on previous experience, *structure* perception; these expectations provide complex hierarchal *frameworks* within which decisions are made” (p. 37). In this way, logics provide a template for organizational decisions by determining pre-set priorities and expectations based on managerial “interpretations of [the company’s] organizational purpose” (Choo 2002: 79). Accordingly, a company’s dominant logic is “in essence, the DNA of the organization ... it becomes *the lens* through which managers see all emerging opportunities” (Prahalad 2004: 172).

3.2.2. Organizational Cognition in Corporate Sustainability:

Dominant logics have been studied in a range of strategic management domains, including the areas of strategy formulation, strategic change, and organizational identity, among many others (see: Narayanan et al. 2011; Kaplan 2011). Recently, this perspective has also extended to the realm of corporate sustainability⁷. In this area, a number of studies have recently identified a range of sustainability logic ‘types’ that managers (or organizations as a whole) exhibit in the practice of sustainability. These studies and typologies are summarized in Table 3-1. As shown in the table, these studies addressed sustainability logics (alternatively referred to as frames or views) at either the individual (i.e., managerial) or collective (i.e., group or organizational) level.

⁷ In this study, we use the term ‘corporate sustainability’ to encompass a company’s social, economic, governance, and environmental sustainability. As such, we consider it interchangeable with the terms corporate social responsibility here (although it is nevertheless important to note that a number of authors have highlighted subtle differences between the two terms; Bansal and Desjardine 2014; Bansal and Song 2017). We considered the terms interchangeable in large part due to the fact that the interview participants in this study also did so.

As shown in Table 3-1, Berger et al. (2007) was the first to develop a typology of sustainability logics at the organizational level, based on company interpretations of “what CSR [corporate social responsibility] meant to them” (p. 133). This study accessed this logic (alternatively referred to as a company’s ‘normative logic’ or ‘frame’) directly using in-depth interviews with business managers and consultants, which were analyzed qualitatively through the lens of institutional theory. Berger et al. (2007) found that the companies under study corresponded to one of three logic types: business case logic, social values-led logic, and syncretic stewardship logic.

Business case logic is market-led at its core (as shown in Table 3-1); it is based on the notion that sustainability projects ought to be pursued only if they present a viable business opportunity. On the other hand, the social values-led logic is normative in nature, in that “CSR was the organization’s lifeblood and was integrated into the organizational fiber in every way” (Berger et al. 2007: 141). Here, “economic [performance] criteria” and business case analysis were considered of “clearly secondary” importance (p. 141). Finally, syncretic stewardship logic is based on “a broad, holistic view of CSR that encompassed larger and more diverse sets of stakeholders than either the business-case or social values-led firms” (p. 143).

Other studies conducted on sustainability logics identified logic types that were analogous to the three mentioned by the York et al. (2016) and Berger et al. (2007) studies, namely a market-led logic, a normative, values-led logic, and a holistic (or ‘integrative’) logic. For example, in their study of individual decision frames used by investors, Glac (2008) identified a market-led logic, which she termed ‘financial’ logic. Similarly, Corbett et al. (2018) termed this logic ‘traditional’, in their study of how sustainability is integrated into projects. Sharma and Jaiswal (2017) further differentiated between business-case logic and business logic in their study of the evolution of managerial frames in Bottom of the Pyramid projects, over time.

In addition to these three logic types, two other studies (namely, Hahn et al. 2014 and Van der Byl and Slawinski 2014) identified a fourth type, termed paradox(ical) logic. This logic “explicitly acknowledges tensions among different desirable, yet interdependent and, at times, conflicting sustainability objectives” (Hahn et al. 2017: 235). A paradox approach, however, “does not mean that firms abandon a profit orientation altogether [...] rather ‘paradoxical resolution denotes purposeful iterations between alternatives in order to ensure simultaneous attention to them over time’” (Hahn et al. 2017: 238; quoting Smith and Lewis 2011: 392). According to Gao and Bansal (2013), there exists some overlap between a paradoxical and an integrative approach to sustainability by stating that through “simultaneous decision-making” across the various competing aspects of sustainability “integrative logics build upon a temporal

and spatial orientation that permits a deep reconciliation of otherwise contradictory elements” (p. 244)—in other words, a paradox. This integrative-paradox logic overlap is echoed by Hahn et al. (2015), who contend that “firms that simultaneously address multiple sustainability aspects—even if these appear to contradict each other—can shake off the straightjacket of the instrumental perspective that establishes a hierarchy of financial outcomes at the organizational level over other sustainability concerns” (p. 311). On this basis, the paradox logic was classified as belonging to the integrative logic type in Table 3-1.

As such, based on this literature on sustainability logics, two primary logic types (or what Gao and Bansal term “two different [sustainability] paradigms”: 242) appear to emerge; these are instrumental and integrative. Instrumental (or market-led) logics were identified in all of the studies highlighted in Table 3-1. Similarly, an integrative logic (whether in the form of holistic or paradoxical logic) was also identified in each of these studies. In all of these studies, instrumental-type logic encompasses market-led business case-thinking approaches to sustainability, while the integrative-type encompasses a wider, systems-level view of sustainability that explicitly acknowledges tensions, or the necessity of compromise, in the practice of sustainability.

3.2.3. A Cognitive View on Sustainability Trade-offs:

As described in Chapter 2, the practice of corporate sustainability is beset with inevitable tension points that are both complex and interrelated (Hahn et al. 2015; Epstein et al. 2012). These include tensions across conflicting time horizons (between generations), across different levels (individual and systemic), and different sustainability objectives (social, economic, environmental, among others) (Van der Byl and Slawinski, 2015). The earliest studies of sustainability tensions may be traced back to the seminal work of Walley and Whitehead (1994), who argued that trade-offs in sustainability were inevitable in the implementation of corporate environmental initiatives, and to Porter and Van der Linde (1996), who were the first to counter this argument by defining sustainability synergies on the basis of the Porter hypothesis, which states that environmental regulations may enhance business competitiveness. This was followed by Margolis and Walsh (2003), who, on this basis, called for more research into sustainability tensions from a wider non-binary perspective, and to “look beyond win-wins and trade-offs” (Van der Byl, 2015: 55). In response to this call, three streams of literature have emerged to address company experiences with tensions in the practice of corporate sustainability, in addition to the antecedents and consequences of these experiences. The first line of research has explored whether companies see tensions as trade-offs or synergies, and why. This line of inquiry has received extensive research attention over the past three decades and has focused predominantly on identifying a causal relationship between different financial

and non-financial dimensions of company performance (e.g. Orlitzky et al. 2003; Vogel 2005). A second line of research has focused in on the tensions themselves, trying to identify the different types of tensions that companies encounter in the practice of sustainability, at various levels (e.g. Hahn et al. 2014).

A third, nascent line of inquiry has now begun to explore the cognitive foundations of how companies perceive, and maneuver around, these different tensions (e.g. Epstein et al. 2015; Hahn et al. 2014 and 2017; Hockerts 2015; Hahn and Aragon-Correa 2015). These studies draw on the literature on organizational cognition, and specifically on how managerial cognitive scripts guide their decision-making around sustainability tension situations. By exploring the cognitive roots of tension decision-making, this line of research aims to advance our understanding of why (rather than whether) companies encounter the tensions that they do, and why they respond to these strategic choices in different ways. This literature has however focused largely on cognition at the managerial level (i.e. individual cognitive processes that managers encounter in the practice of corporate sustainability), rather than at the collective organizational level (see for example: Eberhardt-Toth and Wasielski 2013; Sharma and Jaiswal 2017). As such, there is a dearth of empirical, organizational-level research that describes how firms ‘think’ about sustainability, the collective logic that ‘they’ follow when faced with (in evitable) sustainability conflicts, and, crucially, how this logic translates into problem-solving behavior to overcome these tensions. Accordingly, and based on the literature reviewed above, a research gap exists in three key areas. These are how companies perceive trade-offs in sustainability (from a cognitive perspective), how companies approach trade-off decision-making, and how this trade-off perception and behavior is tied to the company’s underlying dominant logic. Based on this gap, we propose the following three research questions:

- RQ 2-1.** How do companies perceive trade-offs in the practice of sustainability?
- RQ 2-2.** How do companies resolve these trade-offs when they encounter them?
- RQ 2-3.** How do organizational logics shape the companies’ experiences with these trade-offs?

These three questions form the basis of this study, which aims to understand how collective company logics influence company experiences with sustainability trade-offs and company approaches to trade-off decision-making

3.3. Method:

3.3.1. Sampling and Data Collection:

To achieve this objective and answer these three research questions, this study relied on semi-structured interviews with sustainability managers at a group of the largest companies in North America. These companies were chosen based on a ranking of the 100 largest companies (by revenue) in Canada in 2014 (at the start of the study), as published in the *Globe and Mail*. This ranking was based on the companies' Canadian operations and consisted of both private and Crown corporations. This sample also contained Canadian as well as international companies (headquartered and incorporated in Canada and internationally), sustainability leader firms and sustainability laggards, across a wide range of industries. This sample diversity was crucial for the purposes of this study, to capture the widest possible range of sustainability trade-off experiences.

Out of the 100 companies in the sample, 19 companies agreed to participate in this study. The interviewees (managers) agreed to officially speak on behalf of their companies and present their companies' (as opposed to their own individual/managerial) experiences with trade-offs and their disclosure. These companies belonged to eight different industry sectors (as shown in Table 3-2). Just under half (9 companies, or 47%) of the companies in the sample belonged to environmentally sensitive industries, namely: extraction (4, 21%), manufacturing (4, 21%), and transportation (1, 5%). These companies were referred to in the analysis and results using codes (shown in Table 3-2).

Company Code	Industry	
	Industry Type	Frequency (No. of Companies and %)
Company 1 - 4	Extraction	4 (21%)
Company 5 - 8	Finance and Insurance	4 (21%)
Company 9	Wholesale	1 (5%)
Company 10 - 11	Information - Telecom	2 (11%)
Company 12 - 15	Manufacturing	4 (21%)
Company 16	Retail	1 (5%)
Company 17	Transport	1 (5%)
Company 18 - 19	Utilities	2 (11%)

Table 3-2. The codes used to refer to the 19 study companies, alongside their associated industries.

To understand the company's experience with sustainability trade-offs and tensions, this study targeted company personnel responsible for formulating and implementing their company's sustainability

strategy. These include sustainability managers and executives. These individuals were identified via the sustainability sections of the companies' websites, by contacting the head office directly, and through professional networking websites such as LinkedIn. On LinkedIn, potential participants were identified by searching through publicly available company employee lists and looking for sustainability managers and executives. The interviews were conducted over the phone between 2016 and 2017 and lasted between 30-60 minutes each. The interviewees were asked whether their company had encountered trade-offs in the practice of corporate sustainability, and if so, how their company had managed these trade-offs (i.e., how the decision was made, and the rationale behind it). The names of both the interviewees and their companies were held confidential throughout the study. The interviewees were asked about the kinds of trade-off decisions their companies have experienced in the practice of sustainability, and to describe how these decisions were formulated. To capture the company's *collective* (rather than managerial) cognition (and establish construct validity), the interview questions were framed around the *company's* experience with trade-offs, rather than the interviewee themselves. The interviews were recorded and transcribed in preparation for analysis.

This first-hand data on company experiences with trade-offs was also supplemented by archival sources, namely annual reports and corporate (sustainability-related) web-pages, and media articles (following: Crilly and Sloan 2012)⁸. Annual reports provide the company's official approach to sustainability, as described and approved by the company's executive team. This account provides valuable insight into the company's collective view of sustainability. In this study, only the sustainability-related sections of annual reports were included in the analysis. If the annual reports did not contain any sustainability-related sections, then the sustainability-related web-pages from the company's website were used instead. The literature has shown however, that sustainability disclosures (such as annual reports or sustainability reports) often present a 'greenwashed' or strategically manipulated impression of a company's sustainability work as a means of securing legitimacy (see for example: Bozzolan et al. 2015). To counter this threat, and to triangulate the data (Carter et al. 2014), a third data source was used, namely media articles. An internet news search was carried out for each of the 19 companies interviewed, looking for news articles related to sustainability or social responsibility over the past five years. A total of 40 web-based third-party news articles were analyzed, which equates to a rough average of two articles per each of the 19 study companies.

⁸ To maintain the confidentiality of the interviewees and their companies, the annual reports and media articles are not quoted in the study.

3.3.2. Content Analysis:

The transcribed interviews and archival material were analyzed by qualitative content analysis to look for references to tensions related to sustainability, including both trade-offs and synergies. The aim of the analysis is to explore: which types of tensions are encountered by the sample firms (RQ 2-1), and what action is taken to manage or resolve this tension (RQ2-2), and what are the companies' underlying sustainability logics (to help answer RQ 2-3). Content analysis was chosen for use in this chapter because of its ability to extract and then systematically analyze the companies' experiences with tensions, as relayed in the interviews, reports, and articles. This methodology was used to code for explicit (or manifest) references to trade-offs and tensions, in order to look for common patterns between companies in terms of their approach to sustainability (which reflects their underlying logic) and their approach to trade-offs. This thematic approach allowed for the exploration of how companies perceive sustainability tensions, and how they problem-solve in these situations. In keeping with the inductive approach, the coding and abstraction of the texts proceeded iteratively and in tandem (Thomas 2006). A constant comparison approach was used to move between the coded text and the literature on sustainability tensions and strategic cognition. A schematic diagram of the analytical method is shown in Figure 3-1.

Three categories emerged from the analysis of the interviews and archival documents (as shown in Fig. 3-1 and discussed further in the subsequent Results section). To identify the companies' pre-dominant sustainability logic, these categories were compared with the literature on sustainability cognition (summarized in Table 3-1) and classified across the two principal sustainability logic types (instrumental and integrative). As described in the Theoretical Background section, these two logic types were instrumental-type and integrative-type logics. This classification stage is discussed in more detail in the Results. This information was then used to determine each of the 19 study companies' pre-dominant sustainability logic orientation and to explore how organizational logics shape company perceptions of, and decision-making around, sustainability trade-offs

3.3.3. Results:

Three sets of categories emerged from the analysis of the interviews and archival material (as shown in Figure 3-1). Each category consisted of an underlying set of codes.

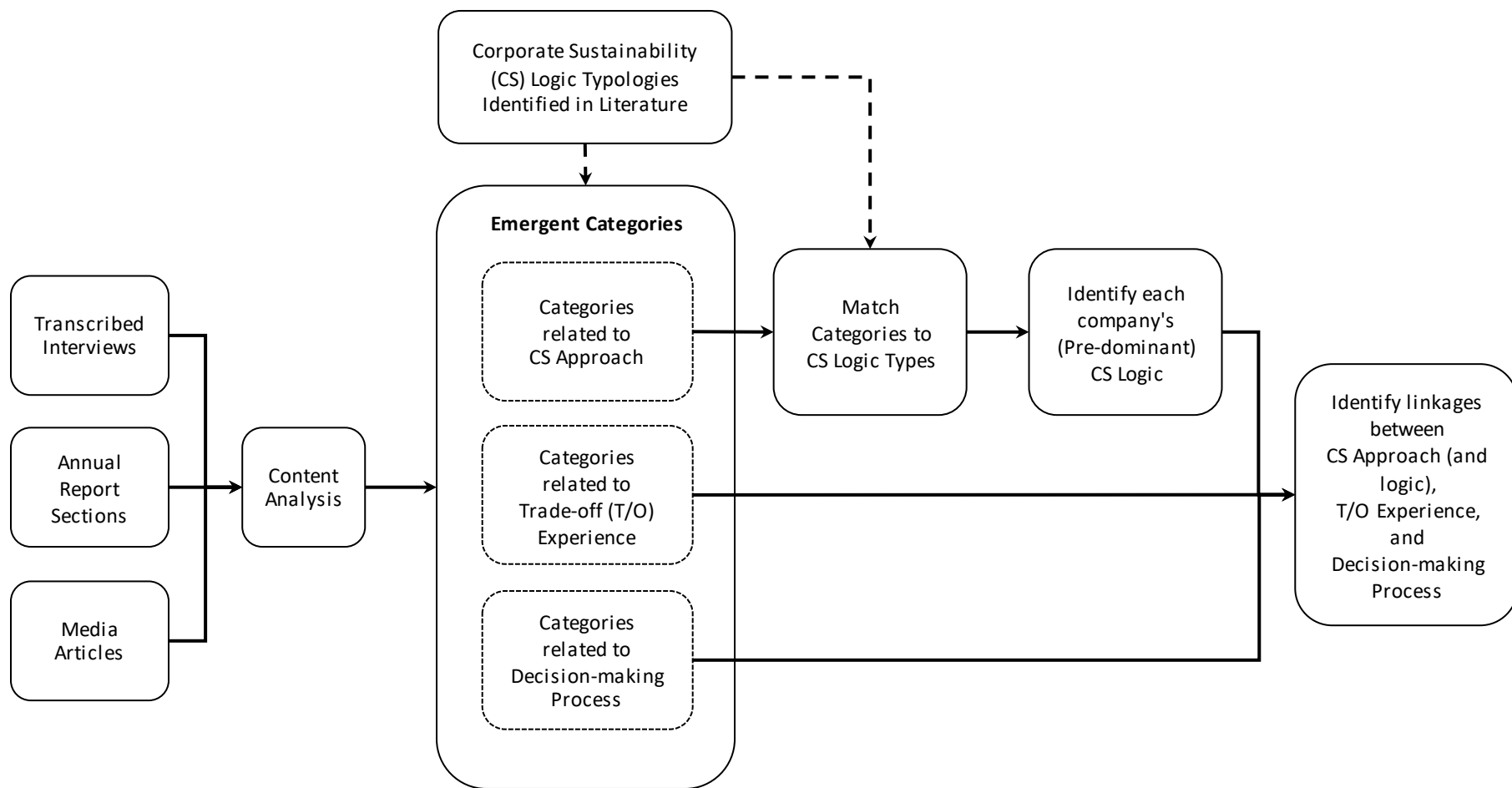


Figure 3-1. Schematic diagram of the method followed in the study.

These three sets of categories were: categories related to how companies practiced corporate sustainability ('corporate sustainability approach categories'), categories related to how companies experienced sustainability trade-offs ('trade-off experience categories'), and finally, categories related to how companies resolved sustainability trade-offs ('decision-making process categories'). The first group of categories—'corporate sustainability approach categories'—represented the companies' sustainability priorities, motivations, and practice, and thus serves as a proxy of the companies' underlying sustainability logic.

The codes related to the companies' corporate sustainability approach are detailed in Table 3-3, along with the code frequencies. In this table, these code frequencies represent the number of companies (and percent) in the study sample whose interviews or archival documents contained the code in question. Similarly, categories related to the companies' perceptions of trade-offs are listed in Table 3-4 (along with frequencies), and the companies' decision-making processes around trade-offs are listed in Table 3-5. Expanded versions of these tables containing illustrative quotes from the interviews, annual reports, web-pages, or media articles analyzed, are listed in Appendix B (Tables 3-6 to 3-8). These codes and categories are described in more detail in subsequent sections 4.1 to 4.3 of this chapter.

3.3.4. Categories of Corporate Sustainability Approach:

The categories related to the companies' sustainability approach, and their underlying codes, are shown in Table 3-3 (and Table 3-6, Appendix B). The analysis revealed four corporate sustainability (CS) approach categories, which were then used to determine the companies' underlying sustainability logic orientation. These four categories were related to: 1) the ways in which the study companies practiced sustainability ('CS Practice'), 2) the motivations behind why they practiced CS ('CS Motivations'), 3) the company's temporal orientation with regards to sustainability planning ('Temporal Orientation'), and 4) descriptions of the company's CS strategy ('CS Strategy'). This section describes these categories and their underlying codes and classifies each of the codes as being instrumental or integrative in nature.

Corporate Sustainability (CS) Practice

With regards to the category 'CS practice', the data revealed that the study companies practiced sustainability through a range of different initiatives. This included initiatives related to eco-efficiency, footprint reduction, supplier engagement, community initiatives (such as charity donations), the development of green product lines, sustainability disclosure, and employee engagement initiatives (such as employee volunteering opportunities). Companies in the study sample also practiced sustainability by

relying on voluntary sustainability standards such as the Global Reporting initiative's sustainability reporting guidelines or the Carbon Disclosure Project (coded under 'CS – align with standards'). All of these 'CS – practice' codes were not included in the logic type classification (i.e. as belonging to either instrumental or integrative sustainability logic), given the fact that they may each be implemented by both integrative- and instrumental-leaning companies. The key difference between the two companies would lie in *how* they would implement these initiatives, rather than *whether*. Given that the 'CS action' codes included in this study only code for instances of sustainability practice (i.e. whether), we consider these codes as being logic-neutral. This is indicated in Table 3-3 as shaded rows under the column labelled 'Instrumental or Integrative' (e.g. in the case of the code 'CS action – align with standards'). As indicated in the table, most of these codes were found in the companies' annual reports, sustainability web-pages, and media articles, which by their nature are meant to describe company sustainability outcomes (i.e. specific initiatives undertaken, or performance demonstrated). The interview discussions, on the other hand, focused instead on the decision-making processes behind the initiatives, rather than on the initiatives themselves, and thus contained very few 'CS action' codes.

Some company initiatives, however, did reveal an instrumental approach to sustainability. These initiatives included instances of symbolic engagement and disclosure as well as noncompliance. In the case of the latter (noncompliance), these codes captured instances where companies were found guilty of tax evasion or were fined for pollution. These 'CS action – noncompliance' codes appeared in both the media articles (which underscored the need for triangulated data sources in the study) as well as in the annual reports, in 2 (11% of) companies in the sample. On the other hand, codes related to symbolic disclosure actually came from the interviews themselves. Four companies (21%) candidly described their reporting "culture" as being one of "good news only".

These companies described how their sustainability disclosures served as an extension of the company's corporate communications department. In these (few) companies, sustainability reports served as an opportunity to project a positive sustainability-friendly impression of the company to its stakeholders. This corresponds to the instrumental (or symbolic) approach to reporting described in the impressions management literature (Bozzolan et al. 2015). These codes were accordingly classified as being instrumental. Similarly, one of the media articles analyzed also described how one study company (5%) had implemented an employee wellness program that the company failed to implement. This instance was coded under the label 'CS action – employee initiatives – symbolic', and (just as with the case of the symbolic disclosure instances described earlier) was classified as being instrumental.

Coding Categories	Corporate Sustainability (CS) Approach Codes	Instrumental or Integrative	Frequency (N, %)
CS Practice	CS action – align with Standards		4 (21%)
	CS action – community		6 (32%)
	CS action – disclosure		7 (37%)
	CS action – disclosure – symbolic	Instrumental	4 (21%)
	CS action – eco-efficiency		3 (16%)
	CS action – employee engagement		4 (21%)
	CS action – employee initiatives -symbolic	Instrumental	1 (5%)
	CS action – green products		3 (16%)
	CS action – impact reduction		13 (68%)
	CS action – noncompliance	Instrumental	2 (11%)
	CS action – supply chain		3 (16%)
CS Strategy	CS as add-on	Instrumental	4 (21%)
	CS based on systems science	Integrative	3 (16%)
	Integrated CS strategy	Integrative	14 (74%)
	Triple Bottom Line (TBL) notion of CS	Integrative	3 (16%)
	Top management – not supportive of CS	Instrumental	1 (5%)
	Top management – supportive of CS	Integrative	3 (16%)
CS Motivation	Business case motivation	Instrumental	8 (42%)
	Business prioritized	Instrumental	10 (53%)
	Competitiveness – benchmark against peers		3 (16%)
	Competitiveness – leader in industry		3 (16%)
	Compliance		7 (37%)
	CS action in reaction to pressure or scrutiny		2 (11%)
	Creating shared value	Integrative	6 (32%)
	Customer demand motivates CS		2 (11%)
	Driven by stakeholder expectations		5 (26%)
	Employee expectation drives CS		4 (21%)
	Ethical values		12 (63%)
	Social license to operate	Integrative	1 (5%)
	Systems-view of community	Integrative	4 (21%)
	Systems-wide benefit	Integrative	3 (16%)
Temporal Orientation	Future orientation	Integrative	6 (32%)
	Short-term orientation	Instrumental	2 (11%)

Table 3-3. Categories and frequencies (N, and percentage of companies in the sample who described the code) of codes related to the corporate sustainability (CS) approach taken by the companies in the sample. All rows under ‘Instrumental or Integrative’ that are left blank and shaded represent logic neutral Corporate Sustainability (CS) Approach codes.

Corporate Sustainability (CS) Strategy

The 19 study companies differed in terms of their strategies regarding sustainability. Most of the companies in sample viewed sustainability as a strategic priority. These companies had a defined sustainability strategy that dictated company priorities with regards to social, economic, environmental, and governance impacts, and set goals and objectives in these areas. These sustainability strategies were described as integrated with the company's core values and mission (coded as 'Integrated CS strategy'; 14, or 74%, of companies in the sample). This approach to sustainability aligns with what Vallaster et al. (2012) term "CSR as ingrained", or highly integrated (p. 49). For example, Company 9 states: "It's [i.e. sustainability] definitely built into the strategy overall and [our] business goals, so our board has developed five-year business goals" (Company 9, Interview).

These companies generally also described their top management teams (broadly conceptualized here as including the board) as being committed to sustainability, and supportive of the company's sustainability programs (coded as 'Top management – supportive of CS'; three companies, or 16%). These companies also tended to view (and define) sustainability from a triple-bottom-line perspective ('TBL notion of CS'; three companies, or 16%,) or a systems-based perspective ('CS based on systems science'; also, three companies, or 16%,). All of these codes were classified as being integrative in nature, given the "embedded" nature of the sustainability strategies followed (Vallaster et al. 2012: 46).

It is important to note here that having a sustainability strategy does not automatically imply that this strategy is 'embedded' in the company's core values, or that the company follows an integrative sustainability logic⁹. A company can plausibly have a "reactive" (as opposed to "proactive") sustainability strategy that is based on "expending only the minimum level of effort required for non-voluntary regulatory compliance" (Torugsa et al. 2013: 384; see also: Carroll's 1979 "responsiveness continuum": 502). In these cases, these sustainability values are not integrated into the company's overarching strategy, emphasizing a perceived 'sustainability-business' divide (and thus, trade-off). This distinction between sustainability strategies as integrated, versus add-on, is seen best in Vallaster et al.'s (2012) study on strategic approaches to CS(R). Vallaster et al. (2013) develop a typology of different corporate branding

⁹ Here, we follow Husted and Salazar's (2006) definition of a strategic approach to CS(R) as being that in which "making a social investment [that] also obtains an additional benefit (good reputation, differentiated products that extract a premium, more highly qualified personnel) by design and thus obtains greater profitability", through "either the positioning of the firm with respect to its competitors or the leveraging of distinctive resources and competences" (p. 81).

approaches to sustainability, including both “ingrained” and “add-on” approaches, but all of which are *strategic* (p. 49).

However, a number of companies in the sample did not have a clearly embedded/integrated sustainability strategy. These companies viewed sustainability as (in the words of Vallaster et al. 2012) an “add-on to be communicated about [only] when needed” (p. 46). As such, sustainability was not integrated into their strategy, core values, and objectives. These four companies made up 21% of the study sample. In these companies, sustainability is viewed as being “peripheral” in that it “is limited solely to “activities that are not integrated into an organization’s strategy, routines, and operations” (Aguinis and Glavas 2013: 315). This was seen for example, in the case of Company 14, who stated: “I would say that we don’t have any aggressive targets or goals really related to our sustainability, as a result of our customers not demanding those targets at this point. We anticipate it at some point down the road, but currently it’s just not on the radar” (Company 14, Interview)

Of these four companies, one manager (Company 18) reported in their interview that their company’s top management was not particularly committed to or supportive of sustainability programs (‘Top management – not supportive of CS’; one company, or 5%). This lack of support took the form of not having a “board-level mandate” for sustainability (Company 18, Interview).

It is also interesting to note that the three of the four study companies whose analysis revealed the ‘CS as add-on’ code also contained a large proportion of instrumental-type ‘Corporate Sustainability (CS) Approach’ codes, meaning that their dominant sustainability logic appears to be largely instrumental.

Corporate Sustainability (CS) Motivation

The study companies reported being driven to undertake sustainability initiatives due to a range of different motivations. From a stakeholder perspective, these included meeting stakeholder expectations (or customer expectations, or employee expectations), compliance with all applicable laws and regulations (seven companies, or 37%), in response to activist or media pressure (two companies, or 11%), or to maintain a social license to operate (one company, or 5%). As an illustrative example, Company 16 described how it undertook a sustainability program (i.e. offering a sustainable product line) in the face of activist pressure.

All of these motivations are in line with the tenets of both legitimacy and stakeholder theories, the former of which states that a company’s legitimacy (or a social license to operate) in the eyes of its stakeholders is a valuable resource upon which the company depends. Furthermore, this sense of

legitimacy is established via a “social contract” between the company and its stakeholders (Deegan 2014: 248). Stakeholder theory similarly refers this social contract in terms of a “license to operate” whereby the firm is “intertwined with stakeholders who can affect and are affected by the operations of the firm” (Sulkowski et al. 2017: 2).

Other companies were motivated by competitiveness-related incentives, specifically by the need to be seen as a leader in the industry (three companies, or 16% of all companies), or to match what peer companies were doing with regards to sustainability (also, three companies, or 16%). These two codes speak to the strategic nature of some companies’ approach to sustainability, be it instrumental or integrative in nature (Orlitzky et al. 2011). As a reflection of this logic-independence, the results of this study show that of the six companies that contained the two codes, two were pre-dominantly instrumental, another two were pre-dominantly integrative, while the remaining two were neither instrumental nor integrative (i.e. had a roughly equal proportion of instrumental and integrative codes).

For all of these aforementioned ‘CS Motivation’ codes, none of these motivations were classified as being specifically instrumental or integrative, given their universal nature. Similarly, many study companies also reported being motivated by intrinsic ethical values such as integrity, a sense of ethical responsibility, and transparency. Although this motivation follows a primarily normative logic, it was not however classified as being either integrative or instrumental in this study, given that “professing ‘good ethics is good business’ has become an organizational ‘dogma’” (Hockerts 2015: 111).

Some motivations described in the interviews, however, did ascribe to an instrumental notion of sustainability. These motivations (coded as ‘business prioritized’ and ‘business case motivation’) were driven largely by a market-led logic that (a priori) prioritized the company’s financial performance over all else. In contrast, some companies were motivated by a more integrative logic, these included those that were driven by a need to create shared value (which echoed Porter and Kramer’s 2011 work), provide an even wider systems-wide benefit (e.g. by tackling systems-wide sustainability challenges such as eradicating poverty), and a system’s view of community (whereby the company views itself as part of a wider community system, as part of a synergistic, mutually-reinforcing relationship). These motivations reflect a wider, systems-based, integrative view of the company in society, and as a result, reflect an integrative logic orientation.

Temporal Orientation

With regards to the ‘Temporal Orientation’ category, companies in the sample differed in terms of their sustainability temporal orientation. Two companies (11%) took a pre-dominantly short-term (less than 5 years) planning approach, relying for example on quarterly financial results or short-term targets. Another six companies (32%) took a pre-dominantly longer-term approach, choosing ten-year (plus) targets, or planning sustainability programs over longer time horizons. Gao and Bansal (2013) argue that integrative-leaning companies take a temporal approach that “[favors] a longer-term perspective ... in order to allow multiple issues to appear on a firm’s radar and permit system level understanding of intertemporal choices” (p. 246). In contrast, the authors argue that companies following an instrumental approach tend to adopt “a conventional single time frame in decision-making ... [whose orientation] tends to be rather short, so that there is little time to accommodate issues that require a medium-to-long time scale to address” (Gao and Bansal 2013: 246). Accordingly, the ‘future orientation’ code was classified as being integrative in nature, while the ‘short-term orientation’ was classified as being instrumental.

Classifying Companies as Pre-Dominantly Integrative or Instrumental

Based on the classification of these aforementioned ‘corporate sustainability approach’ codes, most companies in the sample showed elements of both types of logics (a phenomenon previously described by Gao and Bansal 2013, and by Kaplan 2008 in the continued existence of divergent frames, as discussed earlier). Out of the 19 companies that participated in this study, 6 (32%) demonstrated a pre-dominantly instrumental logic, 7 (37%) demonstrated a pre-dominantly integrative logic, and another 6 (32%) demonstrated elements of both logic types in roughly equal proportions. In order to explore how these logic types influenced company perceptions of, and responses to, trade-offs, a sample of illustrative case companies (and their associated codes) are described in the Discussion section.

3.3.5. Categories of Trade-off Experience:

In addition to the categories of sustainability approaches, this study also identified a number of categories that described the way companies perceived the trade-offs they had encountered. These ‘trade-off experience’ categories, and their underlying codes, are shown in Table 3-4 (and Table 3-7, Appendix B). Two main categories emerged from the analysis; these were related to the kinds of trade-offs that companies reported experiencing (‘T/O Types’), and the qualities of the trade-offs themselves (‘T/O Qualities’).

Coding Categories	Trade-Off (T/O) Experience Codes	Frequency (N, %)
T/O Qualities	T/O are binary	8 (42%)
	T/O are non-binary	5 (26%)
	T/O are strategic allocation decisions	3 (16%)
	T/O are ubiquitous	4 (21%)
	T/O are product of constraint	8 (42%)
	T/O change over time (binary in short-term, non-binary in long-term)	5 (26%)
T/O Types	T/O between CS performance vs business performance	14 (74%)
	T/O between CS performance vs business performance (in investment decisions)	1 (5%)
	T/O between CS performance vs business performance (in reporting)	5 (26%)
	T/O between material CS issues	12 (63%)
	T/O between measurement - management	2 (11%)
	T/O between scope - depth (of report)	4 (21%)
	T/O between competing stakeholders	2 (11%)
	T/O between performance areas over time	2 (11%)
	T/O between personalization vs alignment of CS approach with peers	1 (5%)

Table 3-4. Categories and relative frequencies (percentage of companies in the sample who described the code) of codes related to the study companies' experiences with trade-offs (T/O).

Trade-off (T/O) Qualities

With regards to trade-off qualities, the analysis revealed that even though the sample companies reported the same kinds of trade-offs, they nevertheless perceived these trade-offs differently. For example, eight companies (or 42% of all companies in the sample) perceived trade-offs as being 'binary', with a clear-cut win-lose dimension. As an example, Company 5 described a trade-off between environmental performance versus business performance where the outcome of the decision was a clear win-lose: "the sales imperative always wins over environmental interest" (Company 10, Interview). In another instance, Company 5 describes how they "have stakeholders that want us to divest from oil and gas, and so that's a trade-off" (Company 5, Interview). This trade-off is resolved by choosing not to divest (a 'win-lose' type outcome).

On the other hand, five other companies (or 26% of the companies in the sample) experienced trade-offs as being 'non-binary'. To these companies, trade-offs were less clear-cut than those described by the 'binary'-type companies, with no definite 'lose' dimension. In these companies, trade-offs were perceived more as a matter of prioritization. For example, Company 1 describes how it views the distinction between material and nonmaterial issues (i.e. the 'trade-off between material CS issues') in its interview:

“Certain issues kind of come to the forefront like communities, environment, people, but then also some issues are kind of less material, but I wouldn’t say call it a trade-off because that kind of implies that, we talked about opposite of win-win and balancing conflicting interests. Because when we look at materiality, we’re saying we’re reporting what is most important to people, to us and to our stakeholders, and what we’re not, what we’re reporting less comprehensively on is less important. So, it’s not so much a trade-off as a prioritization if you will” (Company 1, Interview).

These ‘non-binary’-type companies also tended to see trade-offs instead as strategic planning decisions regarding the long-term allocation of resources. Some companies even reported that in the short-term, trade-offs tended to appear as binary win-lose decisions but became less so (non-binary) over the long-term. This is best summarized by Company 1, who stated:

“I think there’s a bit of a nuance there in that maybe in the short term you often do run into those kinds of trade-offs, how are you going to [carry out these operations], where are you going to put that ... what level of priority do you put on [a particular issue], how much do you spend on environmental [monitoring] [...] these are kind of the top level examples. I think at that top level when you actually start looking at some of the longer, your timeline gets expanded a bit, those trade-offs kind of become a lot, how do I put this ... some of the big the money spent on maybe you have to manage these kind of more, you have to manage these sustainability issues in a smart proactive and intelligent way if you’re going to actually operate [...] in that long run. So, I guess in that sense they aren’t so much trade-offs as they are mostly to more smart investments” (Company 1, Interview).

Eight of the nineteen companies in the sample (42%) reported that the trade-offs they experienced stem from some form of constraint, be it budget, time, personnel, or reporting space. Finally, four companies (21%) reported in their interviews on the ubiquity of trade-offs in sustainability, or how commonly encountered they were. This is demonstrated by the fact that all companies in the sample reported experiencing at least one type of trade-off in sustainability. It is interesting to note, however, that despite this ubiquity, trade-offs were not discussed in any of the company reports or web-pages analyzed.

Trade-off (T/O) Types

All 19 companies in the sample reported experiencing at least one type of trade-off, all of which corresponded to the trade-off model presented in Table 2-3 (and described in Haffar and Searcy 2017).

This model described trade-offs across three key tension areas, namely between private and shared value, scope and depth, and measurement and management. Trade-offs identified in this study corresponded to all three tension areas in the model presented in Table 2-3. All companies described at least one instance of trade-offs between private and shared value, which represents the foundational level of the model presented in Table 2-3. These included trade-offs between different performance dimensions (all 19 companies, or 100% of the companies in the sample), competing stakeholders (two companies, or 11%), and across time (one company, or 5%). A typical example of the kind of trade-off experienced by all companies across different performance dimensions comes from Company 2, who stated:

“I think maybe the biggest trade-off is from a business perspective how we continually have to challenge internally the importance of sustainability topics, and they relate to the company’s success, and thinking of them more as integral or essential part of how we do our business rather than additional cost for our business” (Company 2, Interview).

This example illustrates how companies who experience this trade-off see it as a somewhat simplistic “either/or” decision between ‘the environment and business’ or ‘society and business’.

Twelve companies (or 63% of all companies in the sample) described this same private-shared value trade-off from a slightly different perspective. These companies experienced this trade-off in terms of materiality, that is, the decision about which sustainability issues were material to the company and its stakeholders. These trade-off instances were coded under ‘T/O between material CS issues’, in order to distinguish them from the other, more general, ‘T/O between performance dimensions’ instances, following the distinction that the study companies themselves made.

As an example of this distinction, Company 10 describes their experience with the challenge of balancing between environmental performance and business performance (which reflects the ‘T/O across performance areas’): “most environmental things aren’t revenue generating, they’re ... cost saving and even that is not very high a cost save because our energy costs are low compared to other countries ... so cost savings is important, but for investing now to save later is not as interesting as if we do this marketing campaign [where] we’ll sell more [product]” (Company 10, Interview).

In contrast, Company 11 describes the process of choosing which of its large range of sustainability issues are most material (or ‘T/O between material CS issues’), based on where it can have the most meaningful societal impact:

“[we decide on which sustainability programs to pursue based on] looking at what’s secure for our stakeholders and where we have an impact, and then you know looking at where can we make a difference, so you know, we’re a company we can’t change the world. So, we have this [sustainability issue] that’s our specialty and that’s where we have an influence” (Company 11, Interview).

This quote, in comparison to the previous quote from Company 10, emphasizes the theme of choice (between different options, and which is most material) in this trade-off situation. The Company 10 quote, in contrast, emphasized the tension aspect.

Other companies experienced this trade-off in the context of investment decisions specifically (5%; e.g. the decision to divest from environmentally sensitive industries), or sustainability reporting (26%, e.g. whether or not to publicly disclose on sustainability performance). An example of the latter comes from Company 12 who stated:

“In terms of reporting it’s the same, it’s a cost for stuff they need to report, and how do we make sure that the information that we publish is relevant to everyone and shows really the issues that are the most relevant to everyone” (Company 12, Interview).

Two companies experienced this type of trade-off across time (coded as ‘T/O between performance areas across time’), specifically with regards to setting sustainability targets: “let’s say investing in targets, like a longer-term sustainability target that would take a larger capital investment” (Company 2, Interview). This highlights the trade-off between sustainability and profitability over time (“a longer term”). Similarly, Company 17 states:

“So, there’s only two levers, right, in the business world, really. So, if the revenues aren’t coming in then you look at costs. And typically, the trade-off is that, typically to advance a sustainability agenda, a company needs to invest. So, we’re looking for capital, and our capital is... cutback, just like everybody’s capital if it’s low they cut back, in every organization, but that’s a balancing conflict I guess. We’re balancing the economics of the business against the long term, you know, or more sustainable investments” (Company 17, Interview).

It is interesting to note that all of these kinds of private-shared value-type tradeoffs were in fact experienced by companies that were (identified here as being) both instrumental- and integrative-leaning, in terms of their dominant logic. All companies in the sample reported dealing with the challenge of balancing attention to, and performance across, all the various pillars of sustainability.

Under the scope-depth tension areas, a smaller number of companies (four or 21%) reported experiencing trade-offs in terms of the scope and depth of their sustainability agendas, and specifically in terms of sustainability reports. All of these trade-offs were related to the tension companies face in the process of developing their sustainability reports—specifically between the comprehensiveness of the report and its readability—while working within the constraints of budgets, personnel, time, or reporting space.

Finally, under the measurement-management tension area, only two (11%) companies reported experiencing a trade-off here. One of these two companies experienced a trade-off between the choice of relative and absolute indicators for reporting on greenhouse gas (climate change) impacts, while the second company experienced a trade-off between taking a centralized (top-down) versus decentralized (grassroots, employee-led) approach to sustainability initiatives.

It is interesting to note however that smaller number of companies described experiencing trade-offs between the tension areas of scope and depth (four companies, or 21% of all companies in the sample), and a smaller number still across measurement and management (three companies, 11%). This follows the hierarchal nature of the model presented in Table 2-3 (and described in Haffar and Searcy 2017), which posits that as companies move through the process of implementing sustainability, they encounter various interconnected stages of trade-offs, starting with those related to the central private-shared value theme first, and then moving onto the subsequent scope-depth, and then measurement-management levels.

Only one company identified a trade-off that lay outside the model presented in Table 2-3; this trade-off was experienced between a company's need to establish a personalized approach to sustainability versus its need to align its approach with that of its peers for the sake of benchmarking and standardization.

3.3.6. Categories of Decision-Making Process:

In addition to identifying codes related to how companies perceived trade-offs in sustainability, this study also identified codes related to how companies decide to manage trade-offs that they encounter. These codes were grouped into six distinct 'Decision-Making Process' categories, which included: reflexivity, decision-making, target-setting, learning, capabilities, and cognitive limitations. These categories, and their underlying codes, are shown in Table 3-5, along with their frequencies (as well as Table 3-8, Appendix B).

Reflexivity

The study companies differed not only in terms of the kinds of sustainability initiatives they adopted but also in terms of whether they solicited feedback on their work (and decisions), to facilitate continuous improvement. Three of the nineteen companies sought feedback from a range of stakeholders (16%), while another company limited their feedback internally to employees only (1 company only; 5%). One other company, on the other hand, described not soliciting feedback at all (or the need to do so). Previous research has described how seeking stakeholder feedback (and particularly from a range of stakeholders) helps foster a “climate of reflexivity”, which is described in Hahn et al. (2016: 226) as being a culture of “concern with reviewing and reflecting upon objectives, strategies, and work processes” (Patterson et al. 2005: 386)—a quality of paradoxical (and integrative) approaches to sustainability (Hahn et al. 2016). This aligns with the findings of this study. Of the four study companies that contained the ‘solicit feedback from employees/stakeholders’ codes, two companies were classified as being integrative, while the remaining two contained a roughly equal number of integrative and instrumental codes (classified here as being). None were classified as being instrumental.

Decision-Making

The companies in the study sample approached trade-off decision-making from a number of different angles. Two companies (11%) attempted to resolve trade-offs by counterbalancing the ‘lose’ dimension with a sustainability ‘win’ elsewhere. Company 5 for example, chose to invest in renewable energy to counter its decision not to divest from the fossil fuel industry. This company also perceived trade-offs as being binary, in that it saw the trade-off between competing performance areas (in this case, environmental/social investment criteria versus business criteria) as a clear-cut win-lose, in which the business criteria ‘won’ and ‘sustainability lost’. This loss was then countered by another (binary-type) environmental ‘win’ elsewhere, in this case the purchase of renewable energy.

Two other companies resolved trade-offs through innovation (11%), be it technological (improved processes to achieve eco-efficiency) or ‘soft’ innovation (e.g. improved decision-making routines). This speaks to the role of innovation as the source of sustainability synergies, and overcoming trade-offs as argued by Porter and van der Linde (1995).

Coding Categories	Decision-Making Process Codes	Frequency (N, %)
Reflexivity	Solicit feedback from employees	1 (5%)
	Solicit feedback from stakeholders	3 (16%)
	Solicit feedback - lack of	1 (5%)
Decision -making	Continuous improvement	4 (21%)
	Follow pre-determined decision criteria	4 (21%)
	Resolve T/O by counterbalancing elsewhere	2 (11%)
	Shared decision-making	3 (16%)
	T/O decision tied to stakeholder power	1 (5%)
	Set minimum baseline of CS commitments	3 (16%)
	Risk-based assessment of T/O	3 (16%)
	T/O resolution needs integrated CS strategy	8 (42%)
	T/O resolution needs integrated CS strategy - case of no strategy	1 (5%)
	T/O resolved through innovation	2 (11%)
Target-setting	Break down long-term goals into short-term as well	2 (11%)
Learning	Measurement drives change	3 (16%)
	Track wider trends in sustainability	1 (5%)
	Early in sustainability journey	3 (16%)
	Knowledge sharing	4 (21%)
CS Capabilities	CS system and processes in place – lack of	1 (5%)
Cognitive Limitations on CS	Previous CS experience impacts current decisions	2 (11%)
	Missed opportunity for sustainability win-win	3 (16%)

Table 3-5. Categories and frequencies (N, and percentage of companies in the sample who described the code) of codes related to the study companies' approaches to trade-off (T/O) decision-making.

Three other companies (16%) approached some trade-offs by setting a minimum level of sustainability commitments that they carry out regardless of their financial performance. This allows companies to maintain a minimum baseline of sustainability commitments and effectively establish a 'trade-off free zone' with regards to decision-making. In the interviews, it appears that these minimum 'trade-off free' commitments are tied to company core values. For example, during the 2008/2009 financial recession, Company 15 faced the challenge of maintaining its various sustainability goals and targets while "trying to maintain survivability" (Company 15, Interview). To do this, Company 15 describes:

"We wanted to make sure that we continued to serve our customers, we wanted to make sure that the enterprise was still viable, we wanted to make sure that we could still focus on things that are critical values for the company like protecting our people, so the safety goals were immutable during that time, so the rest of the long term goals survived and were accomplished

during that time, it was just the energy efficiency goal that we said no we can't make these large capital investments that we would need to make to improve our processes and meet our energy efficiency targets (Company 15, Interview).

As an additional side point, this example also demonstrates how conditions of constraint and change (in this case, in the company's environment) tend to make latent tensions more salient, as described by Hahn et al. (2014).

Other companies approached trade-off decision-making following a more structured decision-making framework using pre-set decision criteria (21%), or a formalized risk-based assessment of trade-offs (16%). As an example of the latter, Company 4 describes its risk-based trade-off decision-making process:

"When we look at trade-offs or when you look at these different issues we're always looking at it through a risk lens. You know, what is the risk, what are we trying to manage, what are the different variables or factors that go into that particular issue, and the solution may not always be win-win necessarily, the solution always has an element of what is necessary to mitigate the risk that we're trying to manage and as you dissect those particular issues, which particular risk are we most focused on" (Company 4, Interviews).

In the interviews, some companies stressed the importance of following a collaborative decision-making process (three companies, or 16%), as well as the need for continual decision improvement (four companies, or 21%). With regards to the collaborative process, as an illustrative example, Company 13 describes how it tackles trade-off decisions:

"What ends up happening is you would get the environment group, the business group, and discussing all the options, and it would usually be the operations VP making that [final] decision ... So, I guess it's a bit of a discussing what [is] the best all-around solution" (Company 13, Interview). Similarly, Company 8 states its trade-off discussion often take the form of "round-table discussions" (Company 8, Interview).

From these examples and the other interviews, it is apparent that the notion of 'shared decision-making' refers to two distinct yet interrelated issues. These are the democratic decision-making process itself ("round-table discussion" described by Company 8), and the outcome of this process (what Company 13 describes as the "best all-round solution"), which is a "shared vision" of the company's objectives with regards to sustainability (Torugsa et al. 2013: 386). Research has shown that such a "shared vision" of the company's objectives among the company's employees and top management is in fact connected to the

company taking an integrative approach to sustainability. In their study of “proactive” (or what this study refers to alternatively as ‘embedded’) CSR, Torugsa et al. (2013) describe how, from a resource-based perspective, “firms that develop a shared vision capability are able to accumulate and harness the resources and skills necessary for developing proactive CSR more quickly” (p. 387). This ‘shared vision’ (here considered an aspect of the ‘shared decision-making’ code)—integrative logic link is evident in this study as well. All three companies that approached trade-offs from a ‘shared decision-making’ perspective (i.e. contained this code) followed a pre-dominantly integrative logic.

Regardless of the actual decision-making process followed when managing trade-offs, many companies stressed the need for an overarching, defined sustainability strategy when faced with trade-offs (eight companies, or 42% of companies in the sample). Among this group of companies, some described how their integrated strategy helped guide them through trade-off decision-making. For example, Company 9—who in the Results Section 4.1 earlier was described as having an integrative sustainability strategy—describes how it approaches trade-off decisions guided by its sustainability strategy:

“No [trade-off] decisions are made in a vacuum ... definitely built into the strategy overall and those business goals, so our board has developed five-year business goals, and so we have to see which ones those decisions or trade-offs align with, those goals that have been made going forward, and it’s definitely a group effort in that regard” (Company 9, Interview).

A manager at one other company, on other hand, described how an absence of strategy left them directionless, without a clear vision of the company’s priorities and objectives with regards to sustainability (‘T/O strategy needs integrated CS strategy – case of no strategy’; one company, or 5% of companies in sample). This company noted how challenging trade-off decision-making was under these circumstances, by stating:

“So, the trade-off has been we have a lot of different groups that are really energetic and really have a lot of different visions on sustainability, but it’s very, not ad hoc, but very uncoordinated, if that makes sense. So without a clear vision from the board level that aligns CSR with the company objectives or with the theme of the company, it’s been very tough to pull together all of the very good elements into one kind of report or one type of strategy” (Company 18, Interview).

Target-Setting

The analysis also revealed that two companies (11%) resolved trade-offs (particularly over time) through target-setting, and specifically through breaking down long-term targets into smaller, incremental ones.

For example, Company 17 states: “we would work at [our longer-term targets] internally in increments. So we wouldn’t scare our people away by talking to them right away about 2050, science based targets are set to 2020 right now, as a first step” (Company 17, Interview). Additionally, Company 8 describes the additional morale benefit of setting incremental shorter-term targets:

“It’s always good to have some quick wins, right, like not all of the goals we can build can be [set to]... 2025 or 2030 ... you need goals that are short term as well, so people, everybody wants to be part of the team that is achieving. And especially, executives move around quite a bit, championing, giving them short medium and long-term goals is good because it gives them something to celebrate in the short term” (Company 8, Interview).

As illustrated in the Company 17 quote, two companies in the sample described setting a specific category of environmental targets known as science-based targets. An additional third company also described its awareness (but not necessarily practice) of this target-setting methodology. Science-based targets are a form of organizational-level targets that are based on wider, systems-level performance targets based on sustainability science (most often climate science, for example: CDP 2015).

Learning

The analysis also revealed a number of common themes with regards to organizational learning. Some companies (three, or 16%) claimed to be in “early in [their] sustainability journey” (as described by Company 9, Interview), and still learning how best to manage trade-offs. Other companies (three, or 16%) reported that the availability of performance measurement helps formulate informed decisions, potentially easing the challenge of trade-off decision-making and driving improved decision-making and learning. For example, Company 8 describes the importance of setting a quantifiable and measurable target:

“So, I negotiated with our human resources executive, instead of saying increase, let’s say we want to get [X]% next year and make it specific. And so it’s a lot of explanations to what the benefits were, and why it was important to put a specific number around it. A commitment to a number, even though it’s exactly the same thing as saying we’re going to increase it, right. So, a lot of it is semantics, but [it is still important nevertheless]” (Company 8, Interview).

This theme of ‘measurement drives change’ echoes the common business maxim, ‘what cannot be measured cannot be managed’. In addition to these trends and codes, one company (5%) also described how it track wider trends in sustainability, in anticipation of any potential future learning opportunities.

Capabilities

One company (5% of the sample) described the need to have systems and processes in place in order to practice sustainability (coded as 'CS systems and processes in place –lack of'). These capabilities included for example, performance measurement systems that support sustainability reporting. The presence or absence of these capabilities influenced company trade-off decisions around whether to adopt sustainability initiatives (which corresponds to trade-offs between the creation of private versus shared value).

Cognitive Limitations

The final category of codes that emerged under the 'decision-making process' theme contained captured interesting examples of how an instrumental business-case-motivated approach to sustainability actually led companies to miss out on valuable synergistic sustainability opportunities. This code category was labeled as 'cognitive limitations', given how they demonstrated the cognitive limitations of practicing sustainability from an instrumental perspective. These two codes were 'Previous CS experience impacts current decisions' and 'Missed opportunity for sustainability win-win'.

As an example, one manager's account of trade-offs demonstrates how their (utility) company's business-case-driven approach to sustainability meant that the company viewed business performance at odds, rather than aligned, with environmental performance (in the context of clear-cutting tree-covered service areas) and as a result, missed out on a potential sustainability synergy. Here, the manager described how their company is obligated to clear cut its services areas in order to ensure service reliability (a typically business imperative). This clear-cutting activity nevertheless has the potential to deliver a valuable sustainability 'win' in terms of synergistic biodiversity initiatives that could conceivably be run alongside the clear-cutting—an opportunity that the company fails to capitalize on. The manager states:

"From a reliability perspective ... we need to go in and ... cut back brush that could potentially impact the lines, but in doing that, if you want to tie it to [the company's brand slogan], you can say, you're taking a naturalized corridor that may have just been basically [...] mechanically cleared for years and years, you have the potential for an invasive species to come in, things like that which have negative impact on the environment, and you can say, we have biodiversity initiatives that actually, if we come in and do trimming we can re-plant different seed mixes for increasing the biodiversity of that structure of corridor, encourage pollinator species [...] and

other types of animals and wildlife to come back, to help actually make that corridor more user friendly for pedestrians” (Company 18, Interview).

What this example demonstrates is that by taking an instrumental and non-systems-based approach to sustainability (based on business-case motivations; this company’s codes reflected this in that they were predominantly instrumental in nature), this company missed out on valuable sustainability wins.

This example also demonstrates the clash between Company 18’s collective logic and the manager’s own individual-level logic. By identifying such a synergistic sustainability win-win opportunity, Company 18’s manager is demonstrating elements of an integrative logic. This logic is at odds with the company’s largely instrumental organizational-level logic and represents a divergent frame. This echoes the continued existence of individual-level divergent frames after the emergence of a single pre-dominant collective logic, as described earlier. According to the quote, the manager attempted to shape the collective logic (to make it more integrative) through “frame realignment” (Kaplan 2008: 740) but failed to do so.

With regards to other ‘cognitive limitation’s codes, another company in the sample described how previous sustainability trade-off experience has a carry-on effect on current trade-off decisions. This was the case for the retail company interviewed. In this case, the sustainability manager described how the company’s past attempt at releasing a green product line was not duly recognized by its consumers (“we didn’t resonate with our customers, they were giving us no credit for it”, Company 16, Interview). Here, the anticipated business case—built upon consumer sales of the green product—for this sustainability initiative failed to materialize. This had dire implications for any similar future sustainability initiatives. According to the manager:

“Even though [consumers] didn’t give us credit for [the initiative] we didn’t stop doing it, but I mean that was a huge negative that we didn’t get the effect that we were looking for ... Huge. Big, because when we’re trying to push another initiative through, they’re going to look at the seafood example and they’re going to say, well, you know, that didn’t really resonate with the customer, do you want to do this all over again? And spend this amount of money again?” (Company 16, Interview).

By following an instrumental-leading logic driven by business case motivations (that is, the pursuit of sustainability initiatives only if they enhance the company’s financial position *now*), both of these two case companies, be the retail company or the utility, severely limited the scope of sustainability initiatives that they could possibly undertake, and thus missed out on potential future sustainability synergies. Both

of these instances speak to the “blinder” function of dominant logic, which is to say that dominant logics oftentimes provide a “limited view of value creation” (Prahalad 2004: 171).

3.4. Discussion and Illustrative Cases:

The objective of this study is to understand how organizational -level logics (specifically, instrumental and integrative) shape company experiences of trade-offs and their decision-making. With regards to RQ 2-1, which focused on company perceptions of trade-offs, this study found that companies perceived trade-offs as being either binary or non-binary in nature. This view was shown to be connected to the companies’ underlying logics, with more instrumental-leaning companies taking a binary view, and the more integrative companies taking a less polar, non-binary view. Many companies in the sample, irrespective of their underlying logic, saw trade-offs as being inherent to the practice of sustainability, and directly related to the challenge of constraint.

With regards to RQ 2-2, in terms of trade-off decision-making approaches, this study found that companies manage trade-offs decisions using a variety of different methods, from the more structured (risk-based, or based on pre-set criteria) and iterative (continuous improvement) formats to the less so (e.g. lack of feedback solicitation). Finally, and in regard to RQ 2-3, this study found that the ways in which companies perceive and respond to trade-offs does in fact appear to depend on the type of logic that the company ascribes to. The results demonstrate that more instrumental-type companies saw trade-offs (particularly in the short-term) as clear cut, binary, ‘win-lose’ choices that ought to be ‘counterbalanced’ with sustainability ‘wins’ elsewhere, while companies taking a more integrative approach saw tradeoffs as being a matter of continual and strategic prioritization. These companies tended to have decision-making structures and routines in place to handle these decisions. These findings are demonstrated and described in more detail in the subsequent cases.

To explore the linkages between sustainability logics and organizational-level trade-off experiences, a number of illustrative case examples (including the companies’ individual corporate sustainability approach codes, trade-off experience codes, and decision-making process codes) are provided in Tables 3-9 and 3-10. Table 3-9 describes three companies that demonstrated a pre-dominantly instrumental approach to sustainability, while Table 3-10 details the three companies that demonstrated a pre-dominantly integrative approach.

The three case companies with a pre-dominantly instrumental logic (shown in Table 3-9) belong to 3 different industries, namely: retail (Company 16), information-telecom (Company 10), and utilities

(Company 18). On the other hand, the three integrative-leaning companies (Table 3-10) belonged the environmentally-sensitive extraction (Company 4) and manufacturing (Company 15) industries, as well as the financial industry (Company 3). This comes as no surprise, given that companies in environmentally sensitive industries have a higher exposure to sustainability-related risks (Neu et al. 1998), and are thus more motivated to take action on controlling for these risks (e.g. in the case of sustainability disclosures, see: Cho and Patten 2007; Reverte 2009; Cho et al. 2012), and to formulate sustainability strategies as a result.

In terms of the types of trade-offs that both types of companies make (instrumental- or integrative-leaning), this study finds that the diversity and extent of sustainability trade-offs experienced by companies in the sample appears independent of the company's underlying logic. This finding demonstrates that trade-offs are thus ubiquitous (inherent) to the practice of sustainability. The two types of companies (instrumental versus integrative) do nevertheless differ in terms of how these trade-offs are experienced, and how they are resolved.

These findings suggest that companies of different logics all experience the same kinds of trade-offs. What these companies differ in, however, is how they *viewed* and *responded to* these decisions (as described in more detail in the subsequent Discussion). This notion of 'sustainability as compromise' is at odds with the much-publicized 'win-win' view of sustainability described by Porter and van der Linde (1995) and other seminal works in this field.

The codes described in Tables 3-9 and 3-10 demonstrate that more instrumental-leaning companies saw trade-offs as being binary (e.g. Companies 10 and 16, Table 3-9). This trend was also evident in the remainder of the study companies (i.e. those companies not described in Tables 3-9 and 3-10) as well. These companies described trade-offs as clear-cut win-lose options, where a compromise is inevitable. Instead of attempting to achieve both competing objectives (i.e. move closer towards a simultaneous win-win), these companies tended to look for counterbalancing 'wins' elsewhere (as shown in the case of Company 10, Table 3-9). This counterbalancing tactic corresponds to the paradox resolution strategy of 'splitting' (Lewis 2000). By counterbalancing trade-offs, companies split out their 'wins' and 'losses' across different sustainability areas as a means of resolving the tension, instead of trying to "transcend" the tension. Lewis (2000) describes the ultimate futility, and reinforcing nature, of splitting-based tension strategies; these strategies "initially reduce discomfort and anxiety [associated with the tension or paradox], yet eventually intensify tensions" (p. 762).

Company	Corporate Sustainability (CS) Approach		Trade-off (T/O) Experience	Decision Making Process
Company 16	CS action - green products		T/O between CS performance vs business performance (in reporting)	T/O resolution needs integrated CS strategy - case of no strategy Previous CS experience impacts current decisions Set minimum baseline of CS commitments
	CS action - community		T/O are product of constraint	
	CS as add-on	<i>instrumental</i>	T/O are binary	
	Customer demand motivates CS		T/O between CS performance vs business performance	
	Business case motivation	<i>instrumental</i>	T/O between CS performance vs business performance (in investment decisions)	
	Business prioritized	<i>instrumental</i>	T/O are ubiquitous	
	CS action - impact reduction			
	CS action - supply chain			
	Ethical values			
	Systems-view of community	<i>integrative</i>		
Company 10	Triple Bottom Line (TBL) notion of CS	<i>Integrative</i>	T/O between CS performance vs business performance	Resolve T/O by counterbalancing elsewhere
	CS action - impact reduction		T/O are binary	
	Competitiveness - benchmark against peers		T/O between material CS issues	
	Short-term orientation	<i>instrumental</i>	T/O are product of constraint	
	CS action - employee engagement			
	Business prioritized	<i>instrumental</i>		
	Ethical values			
	CS action - disclosure - symbolic	<i>instrumental</i>		
	Business case motivation	<i>instrumental</i>		
	Competitiveness - leader in industry			
	Compliance			
	CS action - employee engagement - symbolic	<i>instrumental</i>		

Company	Corporate Sustainability (CS) Approach		Trade-off (T/O) Experience	Decision Making Process
Company 18	CS action - impact reduction		T/O between material CS issues	Early in sustainability journey Missed opportunity for sustainability win-win T/O resolution needs integrated CS strategy - case of no strategy
	Ethical values		T/O between personalization vs alignment of CS approach with peers	
	CS as add-on	<i>instrumental</i>	T/O are product of constraint	
	CS action - align with standards		T/O between measurement - management	
	CS action - disclosure			
	Top management - not supportive	<i>instrumental</i>		
	Business prioritized	<i>instrumental</i>		
	Competitiveness - benchmark against peers			
	Employee expectation drives CS			
	Compliance			

Table 3-9. Illustrative case examples of three companies (from retail, information-telecom, and utilities industries) that displayed a pre-dominantly instrumental logic. All 'Corporate Sustainability (CS) Approach' rows left blank and shaded represent logic neutral codes.

Company	Corporate Sustainability (CS) Approach		Trade-off (T/O) Experience	Decision Making Process
Company 3	Triple Bottom Line (TBL) notion	<i>integrative</i>	T/O between scope - depth (of report)	Continuous improvement Follow pre-determined decision criteria Set minimum baseline of CS commitments
	CS action-align with standards		T/O between material CS issues	
	Future orientation		T/O are ubiquitous	
	Driven by stakeholder expectations			
	Ethical values			
	Business case motivation	<i>instrumental</i>		
	Creating shared value	<i>integrative</i>		
	Integrated CS strategy	<i>integrative</i>		
	CS based on systems science	<i>integrative</i>		

Company	Corporate Sustainability (CS) Approach		Trade-off (T/O) Experience	Decision Making Process
Company 4	Integrated CS strategy	<i>integrative</i>	T/O between CS performance vs business performance	Risk-based assessment of T/O
	CS action - align with standards		T/O between CS performance vs business performance (in reporting)	T/O resolution needs integrated CS strategy
	Ethical values		T/O between scope - depth (of report)	Resolved through innovation
	Systems-wide benefit (beyond shared value)	<i>integrative</i>	T/O are non-binary	Knowledge sharing
	Creating shared value	<i>integrative</i>	T/O are ubiquitous	Solicit feedback
			T/O are product of constraint	Continuous improvement Track wider trends in sustainability
Company 15	CS based on systems science	<i>integrative</i>	T/O between CS performance vs business performance	Measurement drives change
	Ethical values		T/O between scope - depth (of report)	Resolved through innovation
	Systems-wide benefit (beyond shared value)	<i>integrative</i>	T/O are product of constraint	Set minimum baseline of CS commitments
	Future orientation	<i>integrative</i>	T/O between measurement - management	Continuous improvement
	Creating shared value	<i>integrative</i>	T/O between CS performance vs business performance (in reporting)	

Table 3-10. Illustrative case examples of three companies (from finance, extraction, and manufacturing industries) that displayed a pre-dominantly integrative logic. All 'Corporate Sustainability (CS) Approach' rows left blank and shaded represent logic neutral codes.

This study demonstrated that the reverse is also true: the results indicate that the more integrative-leaning companies (i.e. companies that presented a higher relative frequency of integrative codes) were more likely to perceive trade-offs as being non-binary (as in the case of Company 4, Table 3-10). These companies described trade-offs using the terms “balancing” and “prioritizing” (as one participant noted: “there are balances that have to get struck”) and did not see a clear-cut win or lose in the decision-making process. One company summed up this non-binary view as:

“I wouldn’t say it’s a black and white trade-off where you would say yes we have to do this and no we’re not doing that and sort of a simple yes or no pass, it is more of how do we look at the spectrum of risks we’re trying to manage and navigate through it in a way that mitigates those risks to be possible?” (Company 4, Interview).

The fact that these companies see trade-offs as being non-binary also means that they approach trade-off decision-making from an integrative, systems-based perspective. This includes following formalized decision routines (‘following pre-determined decision criteria’, and ‘risk-based assessment of trade-offs’), as well as methods for continuous decision improvement. This perspective on trade-off decision-making is summed up best by one participant who stated that:

“You sort of find you have to find a sweet spot in that spectrum of risks so that you’re managing it in a way that manages all the inputs. So back to your original question, it’s not a binary yes or no in terms of trade-off, it has to be a conversation and it has to look at all the moving parts and doesn’t deal with it in a sort of simplistic aggregate way” (Company 4, Interview).

This aligns with the definition of integrative logic proposed by Gao and Bansal (2013), as well as the “transcendence”-style paradox strategy described in the paradox literature (Lewis 2000). Through this strategy, companies “immerse themselves within the tensions” (Lewis 2000: 764) inherent to sustainability, and “shifts the notion of “managing” [tensions] from modern definitions based on planning and control to coping” (Lewis 2000: 764).

Instrumental-leaning companies on the other hand, reported having little to no formalized trade-off decision frameworks (or even sustainability strategies to underpin these decisions), as shown in Table 3-9. These companies tended to approach trade-off decision-making reactively, in an ad-hoc manner. One company stated that its trade-off decisions with regards to material sustainability priorities were based on which “lobby was more powerful at the moment” (Company 6, Interview). These companies tended to

have shorter time horizons—an aspect of their sustainability approach that further amplified the trade-offs they experienced (i.e. saw more frequent trade-offs).

Just as these findings demonstrate the importance of logics in helping companies navigate trade-offs, these findings also point to the cognitively-limiting role that logics (and other cognitive knowledge structures) can play. The accounts of two instrumental-leaning companies (Companies 16 and 18, Table 3-9) demonstrate how an instrumental approach to sustainability lead to instances of organizational myopia, whereby the company missed out on valuable opportunities for synergistic sustainability wins, because of their exclusive focus on business-case thinking.

3.5. Conclusion:

The purpose of this study was to understand how logics shape trade-off decision-making on an organizational level. It made a number of important empirical contributions to the literature on both organizational cognition and sustainability trade-offs.

In answering RQ 2-1, on how companies experience trade-offs in sustainability, this study found that, in fact, all companies in the sample experience trade-offs regardless of their industry type, or dominant logic. As such, trade-offs can be said to be inherent to the practice of sustainability, particularly over the short-term.

With regards to RQ 2-3, on the role of organizational logics in trade-off decision-making, this study also demonstrated that the way companies perceive trade-offs (as either binary or non-binary) does differ and is shown to be influenced by the company's underlying logic. This study demonstrated that companies with a more instrumental approach to sustainability tend to experience trade-offs as clear-cut win-lose decisions. These companies tended to view sustainability as being peripheral (as opposed to embedded or integrated in) to a company's core mission and values. On the other hand, this study also demonstrated that companies that viewed sustainability as "embedded", or followed an integrative-type logic, tended to experience trade-offs as being strategic allocation decisions with no clear-cut win-lose dimensions.

With regards to RQ 2-2, on how companies attempted to manage trade-off decisions, this study found that companies that took a pre-dominantly instrumental approach to sustainability (and were thus more likely to see trade-offs as being binary) appeared to lack the decision-making routines (e.g. structured risk-based decision-frameworks) and capabilities (e.g. sustainability reporting systems) to help them in resolving any trade-offs that they encounter. As a result, these companies found trade-off decisions to be particularly challenging. On the other hand, companies taking a more integrative approach applied

systems-thinking and risk-based analysis to their trade-off decision-making. Their decision processes were also collaborative and iterative in nature, focusing on continuous improvement and stakeholder feedback.

From a managerial perspective, these findings suggest that effective trade-off decisions start with a strong clear foundation—an integrated sustainability strategy that lays out the company's goals and objectives with regards to sustainability. This also necessitates taking an iterative and systems-based decision-making approach. Here, social, environmental, and economic issues in both the long and short-term are assessed simultaneously, in an iterative decision-loop.

Future work is needed in this area to further explore the individual-level, cognitive micro-processes that guide how managers interpret trade-off decisions, how they formulate responses on this basis, and how this individual-level interpretation is translated onto the organizational-level (i.e. the emergence of a collective dominant logic). This would include uncovering the managerial sensemaking and sensegiving processes that emerge as companies face trade-off decisions (from a cognitive perspective). Another interesting area for further work would build on the notion that trade-offs are inherent to the practice of sustainability but have here appeared completely absent in the companies' public self-disclosures (i.e. annual reports and web-pages). More work is needed in this area to understand why companies have not reported on their trade-off experiences, which no doubt has shaped the direction of their sustainability practice.

CHAPTER 4:

Legitimizing 'Bad News': How Companies Disclose Their Trade-Off Experiences in Their Sustainability Reports

4.1. Introduction:

Companies are increasingly expected to embrace sustainability as a basic competency by setting and delivering on sustainability targets. They are recognizing the need for assessing non-financial impacts and managing their performance in this area. One of the formalized methods of disclosing non-financial performance is the use of corporate sustainability reports (Peloza et al. 2012). These are publicly-available, company-generated reports that “contain qualitative and quantitative information” on the firm’s impacts and mitigation activity within a specified reporting period (Daub 2007). These reports typically include disclosures on the company’s sustainability performance, over the specified reporting period, as well as information on its overarching sustainability values, vision, and overall management approach. A key component of this management approach involves the decision-making processes that companies face in formulating and implementing their sustainability agendas. In the realm of sustainability, these decisions more often than not include trade-offs. These decisions are defined as those where “a sacrifice is made in one area to obtain benefits in another [such that] it is usually impossible to optimize them, all at once” (Byggeth and Hochschorner 2006: 1420).

Phases I and II of this dissertation have demonstrated that the practice of corporate sustainability involves inevitable trade-offs across competing social, environmental, and economic objectives, across a wide range of divergent stakeholders, and across differing time horizons (Hahn et al. 2010). These trade-offs, as a result, ultimately shape a company’s overall approach to sustainability. They therefore constitute a significant and material aspect of a company’s sustainability practice to disclose on in sustainability reports. However, there is a dearth of research that explores the extent to which companies are disclosing (or deliberately not disclosing) on the trade-offs that they make of their sustainability practice. In a study of web-based sustainability reporting by European companies, Herzig and Godemann (2010) concluded that: “trade-offs between sustainability dimensions has so far been a largely neglected area of research in the field of [corporate sustainability], in general, and communication, in particular” (p. 1078). In particular, this study provided preliminary empirical evidence that companies were in fact deliberately choosing not to disclose on trade-offs in their sustainability reports.

In order to fill this gap, this phase of the research (Phase III) explores the ways in which companies communicate (or do not communicate) their trade-off experiences in their reports. To do so, this phase of the study uses an inductive approach, and involves a content analysis of a sample of North American sustainability reports and interviews with sustainability managers, both from a group of business leader firms. Accordingly, this study seeks to understand how these experiences are framed in the reports—and what this says about the way companies are using reports in sustainability. As such, the objective of this phase of the study is to investigate trade-off disclosures in company reports, and is guided by the following two research questions (as outlined in Chapter 1):

- RQ 3-1.** Do companies communicate their trade-off experiences in their sustainability reports?
- RQ 3-2.** What motivates companies to do so (or not)?

In answering these questions, this study makes a number of contributions to the literature on sustainability trade-offs, and sustainability reporting. This phase finds that the overwhelming majority of companies in the sample had encountered trade-offs in the practice of sustainability—despite not having disclosed on these experiences (and decision-making processes) explicitly in their reports. This finding is expected and aligns with the findings of Herzig and Godemann (2010). Evidence of these accounts are nevertheless apparent in the implicit (or latent) content of the reports, in the form of discussions of compromise outcomes and of trade-off antecedents ('plurality, change, and scarcity'). Furthermore, this phase of the study finds that these (latent) descriptions of trade-offs are also surrounded by 'legitimizing talk'—affirmations of the companies' commitment to (and demonstration of) sustainability principles. When viewed through the lens of legitimacy and signaling theories, this 'talk' may be understood as a company's effort to maintain its social license in the eyes of its report readers. These findings highlight the negative light in which many companies perceive trade-offs (as 'bad news'), and the potential legitimacy threat that their disclosure in reports poses.

It is important to note that although we may not necessarily expect most reporting companies to disclose trade-offs—given the preliminary evidence provided by Herzog and Godemann (2010)—this work is more concerned with understanding the extent of, and reasons behind, the *absence* of such trade-off disclosures. In doing so, this work seeks to ask: what would trade-off disclosures ideally look like, and, based on this, what motivates companies to *not* include them in their reports? This means that the objective of this study is not to *confirm* legitimacy theory per se (for this, please see the rich literature on confirming legitimacy: e.g. Patten 1991; Cho and Patten 2007; Chauvey et al. 2015), but to use legitimacy theory principles to identify what it is about trade-off disclosures that companies may find so threatening.

4.2. Theoretical Background:

4.2.1. Sustainability Reporting from a Legitimacy Perspective:

One of the most formative ways in which companies have worked towards improving their non-financial performance is through sustainability reporting. A sustainability report is a form of publicly-available corporate disclosure with information on a company's sustainability activity and performance (Roca and Searcy 2012). Reports are developed with the intent of communicating the company's sustainability strategy, initiatives, and performance to its stakeholders (Lozano and Huisinigh 2011) — the report's target audience. Companies that report on their non-financial impacts do so at an expense, and under the belief that sustainability reporting is a value-add process that has the potential to offer 'win-win' gains (Comier and Magnan 2015).

It is not surprising, then, to note that sustainability reporting is a growing trend among companies in Canada and across the world (Searcy and Buslovich 2014; KPMG 2017). This trend is due in part to the heightened stakeholder "appetite for sustainable firms" (Stubbs et al. 2013: 458). However, despite the growing numbers of reporting firms year over year, studies have shown that many of the reports being produced are inconsistent in their scope, format, and content — even across competitors within the same industry (e.g. Jenkins and Yakovleva 2006). The reason behind this heterogeneity is that (unlike financial reporting) sustainability reporting in most jurisdictions remains a voluntary activity that has not yet reached a necessary level of "standardization and enforcement" (Christofi et al. 2012: 158; CGAAC 2011). Even though a growing number of voluntary reporting frameworks are available, there is yet no global, standardized, mandatory framework in place that informs the reporting process (CGAAC 2005; Crowther 2012).

As a result, sustainability reports vary widely in their titles and formats. These range from: 1) 'stand-alone' sustainability reports focused exclusively on non-financial performance (such as corporate social responsibility reports, corporate citizenship reports, and Public Accountability Statements [a form of mandatory reporting for certain companies in Canada]; e.g. Paul 2008), 2) single-topic "one-dimensional" reports (Hahn and Kuhnen 2013: 7) that have an exclusive environmental or social focus (e.g. Cho et al. 2015), 3) online sustainability-related disclosures (such as isolated pages on the company website with information on the company's sustainability vision and/or performance data), 4) sections within (or 'addendums' to) the annual financial report (e.g. Amran et al. 2015), and, finally 5) integrated annual

reports which offer a combined perspective on both the company's financial and non-financial performance (e.g. Barth et al. 2017).

Sustainability reports also vary widely in their content: in the absence of a mandatory standard (in most jurisdictions worldwide), the content of a sustainability report is determined primarily by what a company voluntarily chooses to measure and how it chooses to measure it. As a result, the choices of measurement tools and performance indicators have been shown to vary widely as well (e.g. Cho and Patten 2007; Roca and Searcy 2012).

Ideally, engaging in the sustainability reporting process creates a “concrete opportunity for the company to identify strengths and weaknesses across the whole corporate responsibility spectrum” (Perrini 2006: 74) and is a first step towards taking action on improving them (GRI 2016). As a form of non-financial accounting, sustainability reporting, ideally, “may offer a means for executives to convey relevant and reliable information about a firm's underlying environmental activities and performance to the firm's stakeholders, especially financial ones such as analysts or investors” (Cormier and Magnan 2015: 431). In addition to this accounting and transparency role, sustainability reports also offer a way for the company to engage with its stakeholders who may then “[hold] the organization to account” based on the information disclosed (Gray, 2007: 176)” (p. 245).

This perspective on sustainability reporting is grounded in a broad range of overlapping theoretical perspectives, which include, first and foremost, legitimacy ‘theory’¹⁰, as well as signaling, and stakeholder theories. These theories collectively posit that all companies, as part of their operations, enter into a “social contract” (Patten 1991: 298) with their stakeholders; this contract is based on a mutual acknowledgement of the interrelationships between the firm and its stakeholders (Sulkowski et al. 2017). This contract forms the basis of the company's legitimacy in the eyes of its stakeholders, endowing it with a ‘social license to operate’ that the company depends on for its success. In this context, legitimacy may be seen as an organizational resource, and is 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: 574; Deegan 2014). As such, “in order to maintain

¹⁰ It is important to note that although the concept of legitimacy is fundamental to the study of company disclosures, a number of studies have taken issue with labelling this perspective as a stand-alone ‘theory’ (e.g. Killiam and O'Regan 2016). For example, Bebbington et al. (2008) argue that legitimacy (as) theory “suffers from problems that include apparent conceptual overlap with political economy accounting theory and institutional theory” (Bebbington et al. 2008: 372; quoting Parker, 2005, p. 846). On this basis, this study alternatively refers to legitimacy using the traditional term, ‘theory’, as well as the broader term, ‘perspective’.

legitimacy companies need to demonstrate congruence between their social and environmental activities and performance with the expectations of society” (Barkemeyer et al. 2014: 245). Signaling theory further posits that companies actively engage in activities that ‘signal’ or demonstrate to their stakeholders their commitment to this ‘social contract’ (Sulkowski et al. 2017). Of these three theoretical perspectives, legitimacy theory has been one of the most widely referred to in the social and environmental accounting literature (see: Patten 1991; Milne and Patten 1992; Deegan 2002). According to Tilling and Tilt (2010), this theory can be applied at two different levels in the context of organizations in society, namely the “macro” level of “organizational structures” and institutions (Tilling and Tilt 2010: 57), and the meso level of organizations themselves.

At the macro level, “institutional” (Tilling and Tilt 2010: 57) legitimacy theory deals with how these structures “as a whole” acquire legitimacy (for example, through the process of coercive isomorphism; Suddaby et al. 2017). In contrast, “strategic” or “instrumental” legitimacy theory and deals with organizations’ attempts to secure “organizational legitimacy” (Tilling and Tilt 2010: 57), by demonstrating how organizational norms align with those of society. Much of the literature that deals with social and environmental accounting from a legitimacy perspective is based on this latter ‘meso’ level (Tilling and Tilt 2010). This literature addresses how companies use social and environmental disclosures in annual or sustainability reports “as a legitimizing tool” to shape social perceptions (Cho and Patten 2007: 646). In doing so, this literature focuses on confirming the link between companies’ sustainability disclosures and their sustainability performance—a connection that lies at the heart of strategic legitimacy theory.

This link between sustainability disclosures and performance can be explained as follows: from the perspective of strategic legitimacy theory, companies with lower levels environmental or social performance face a legitimacy threat, and therefore face greater “exposure” (Cho and Patten 2007: 640) to public pressure to conform to social expectations with regards to this performance (Patten 1991). Consequently, and in the face of this pressure, these companies are more likely to engage in enhanced social and environmental disclosures in their annual and sustainability reports. According to the literature on legitimacy and disclosure, this typically takes the form of “extensive off-setting” of negative disclosures or increased “positive environmental disclosures” (Cho and Patten 2007: 639). These disclosures however may not accurately reflect the company’s actual performance. This is due to the fact that organizational legitimacy is based on *perceptions* of “organizational conduct” rather than the “actual” conduct itself (Deegan 2014: 249). Accordingly, not all approaches to sustainability reporting achieve the ideal of accounting and accountability.

4.2.2. 'Substantive' Versus 'Symbolic' Sustainability Reporting:

The social and environmental accounting literature has demonstrated that many companies report on sustainability from an instrumental perspective. This 'symbolic' approach (as opposed to 'substantive') involves the strategic disclosure (or omission) of sustainability accounts in order to purposefully paint an overtly positive picture of the company's actual performance. This leads to what is termed the "performance-portrayal gap" (Michelon et al. 2016: 4). Bebbington and Larrinaga (2014) refer to such instrumental disclosures as "narratives decoupled from underlying organizational realities, intended (at best) to construct a plurality of discourses about sustainable development and among which it is impossible to adjudicate" (p. 396). These disclosures tend to be "self-laudatory" in nature, and "non-integrated" (or disparate) in approach (Montecchia et al. 2016: 49). Unlike more symbolic approaches, the singular objective of these instrumental approaches to reporting is the "quest for legitimacy" in and of itself (Michelon et al. 2016: 4), that is, "to show that the company is legitimate" (Hooghiemstra 2000: 58). Seeking legitimacy in this (instrumental and symbolic) way constitutes a form of "opportunistic ... impressions management" (Cormier and Magnan 2015: 431). This phenomenon of impression management (and its underlying theory) can be defined as being the "process in which managers select the information to release and present it in a way that distorts readers' perceptions of corporate achievements" (Michelon et al. 2016: 11). Some studies even go so far as to consider the legitimacy perspective on sustainability reporting effectively synonymous with impression management. For example, Cormier and Magnan (2015) consider the legitimacy-based explanation of sustainability disclosures to be synonymous with the symbolic impression management-based notion. Similarly, Barkemeyer et al. (2014) argue that "legitimacy theory takes a managerial view and supports the notion that sustainability reporting is a management tool used to legitimize company activities rather than a tool to inform a company's internal and external publics about its actual sustainability performance" (p. 242). Either way, such symbolic approaches to reporting offers neither accounting nor accountability.

The literature on social and environmental accounting has provided evidence of companies' symbolic practices. In their longitudinal study of over 500 CEO statements in sustainability reports, Barkemeyer et al. (2014) found "that the rhetoric in the CEO statements of sustainability reports is indicative of impression management rather than accountability, despite increasing standardization of sustainability reporting" (p. 241). Similarly, from perspective of the quality of stakeholder engagement in the sustainability reporting process, Lai and Manetti (2011) found that companies were engaging in a more symbolic version of stakeholder engagement, which the authors termed "stakeholder management". This

involved “mere involvement of stakeholders to ‘mitigate’ or manage their expectations (stakeholder management)” as opposed to “creat[ing] a network of mutual responsibility” (stakeholder engagement proper; Lai and Manetti 2011: 111). Hrasky (2012) also found evidence of symbolic reporting among the sustainability reports of Australia’s largest companies, and particularly among companies belonging to less-carbon-intensive industries.

The extant research has also demonstrated that the proliferation of reporting standards, such as the Global Reporting Initiative guidelines, has done little to prevent this instrumental (and in some cases, purposefully deceptive) reporting. Although the standardization of reporting via these standards ought to “have supported a shift towards accountability rather than sustainability reports being an exercise in legitimacy or impression management” by influencing “companies’ willingness or ability to create balanced and realistic representations of their sustainability performance”, Barkemeyer et al. (2014) find no evidence of this (p. 242).

4.2.3. Reporting on Trade-offs in Sustainability:

Given the large extent to which companies report on their sustainability performance in such instrumental (and indeed, camouflaging) ways, Bebbington and Larrinaga (2014) reach the unfortunate conclusion that “we seem unable to observe in practice, or realize in academic experimentation, robust accounts of organizational (un)sustainability” (p. 396). One important aspect of the ideal of ‘substantive’ reporting would include disclosures on the trade-off decisions that companies face in the practice of sustainability.

According to the management literature, all companies experience organizational ‘tensions’ between conflicting objectives, in various organizational domains, including, but not limited to, sustainability (Hahn et al. 2014; Smith and Lewis 2011). These tensions cause companies to face trade-off decisions between competing sustainability objectives, across competing stakeholders, and across competing time horizons. According to Smith and Lewis 2011, these tensions (or, ‘trade-offs’, as referred to in this chapter) are experienced as either being latent (“dormant, unperceived, or ignored”; p. 390) or salient (consciously experienced) in nature. What brings tensions to the fore (i.e. what “render[s] latent tensions salient to organizational actors”; Smith and Lewis 2011: 388), are the company’s environmental conditions of “plurality, change, and scarcity” (Smith and Lewis 2011: 390). In this context, plurality refers to “a multiplicity of views in contexts of diffuse power” that the company must consider in decision-making, while scarcity refers to “resource limitations, whether temporal, financial, or human resources” that the company is under when making these decisions (Smith and Lewis 2011: 390). Under these three

conditions, companies experience tensions that would, it follows, necessitate a trade-off, and as a result, generate some form of compromise outcome.

As an illustrative example, a company whose sustainability department functions under a tight budget constraint may face a trade-off between implementing a carbon footprint reduction program, or a water use reduction program, without having the necessary resources to implement both simultaneously. However, based on the findings of Haffar and Searcy (2017), it would be possible, under certain circumstances, to achieve both objectives simultaneously and thus transform the trade-off situation into a synergy. The literature on trade-off decision-making (e.g. Gao and Bansal 2013; Hahn et al. 2014) has described that this transformation is more likely to occur in companies that follow an integrative approach to sustainability (an example of which would be the triple bottom line approach to sustainability developed by Elkington 1997). This approach is valuing competing sustainability objectives (e.g., the three pillars of 'people, planet, profit') equally, and working towards achieving all three simultaneously in the course of trade-off decision-making. In contrast, an instrumental approach to sustainability involves prioritizing one pole (the win dimension) of the win-lose trade-off decision over the other, and thus compromising on the other pole (the lose dimension) in the process. Thus, in summary, company approaches to sustainability (integrative or instrumental) influence trade-off decision-making. Therefore, it is expected that trade-off disclosures would, as a result, differ between companies following different sustainability approaches.

Nevertheless, currently, very little research exists on how companies (following either an integrative or substantive approach) disclose their sustainability trade-off decisions to their stakeholders in their sustainability reports, in practice. As one of the very few studies in this area, a study of online sustainability disclosures of European companies, Herzig and Godemann (2010) found that, although most companies defined sustainability in terms of the triple bottom line, any "possible conflicts and trade-offs between the three sustainability dimensions [were] virtually, not mentioned" in the online disclosures themselves (p. 1072). Instead, the study found the companies largely made "only a general reference to all three dimensions being considered and harmonized" (Herzig and Godemann 2010: 1073). The study further concluded that such an omission was not due to the possibility that the companies had not experienced trade-offs (which the authors confirmed via interviews with company employees), but that they had purposefully omitted disclosing them in their reports.

Such an omission of trade-off discussions, however, is problematic for two reasons. Firstly, in not disclosing a key aspect of their sustainability practice (i.e., the trade-off decision-making processes and

their compromise outcomes), the study companies have developed reports that lack substantial transparency and thus, accountability, to their stakeholders. Secondly, and more importantly, through these reports, these companies have painted a false picture of the way in which they perceive sustainability. According to Herzig and Godemann (2010), the study companies experienced the practice of sustainability as being inherently fraught with tensions and conflicts. What these companies chose to project to their stakeholders however, was precisely the opposite picture. The study reports portrayed the companies' experience of sustainability as being one of harmony and innate integration, rather than a process of continual conflict and prioritization. This speaks to the instrumental and legitimizing role that sustainability reports play in the field of corporate communications (Cho and Patten 2007; Cho et al. 2010).

As this study illustrates, the disclosure of company trade-off experiences in sustainability reports is only a significant aspect of *substantive* sustainability reporting. This is because trade-off disclosures lay bare the critical prioritization decisions that companies face when attempting to balance between the multiple competing dimensions of the sustainability paradigm. However, what remains unexplored however, is the extent to which companies are *not* disclosing these trade-off experiences, and what motivates this omission. Accordingly, the two research questions that guide this work are as follows:

RQ 3-1. Do companies communicate their trade-off experiences in their sustainability reports?

RQ 3-2. What motivates companies to do so (or not)?

4.3. Method:

The objective of this study is to explore the extent to which companies disclose or omit their experiences with sustainability trade-offs to their stakeholders in their sustainability reports. This objective is achieved through a content analysis of corporate sustainability reports (and comparable disclosures) and interviews with sustainability managers (from the same companies as the reports). Sustainability reports provide the official authorized version of a company's sustainability strategy and performance (Crowther 2012: 111; see also Makela and Laine 2011). This data collection mode was chosen because it reflects "what corporations themselves [have to] say" (Bondy et al. 2004: 451) about their experiences with sustainability, including trade-offs. These reports were supplemented by interviews with sustainability managers and executives at the same group of study companies. Interviews with the company personnel responsible for the formulation and implementation of sustainability strategies offers insight into the decisions made 'behind the scenes' in the practice of sustainability and in the development of a

sustainability report (as shown by: Angus-Leppan et al. 2010; Wu and Pagell 2011). These decisions would decisions regarding how trade-offs are managed, and crucially, whether (and how) this trade-off management process is then described in the reports.

4.3.1. Sampling and Data Collection:

To achieve the objective, this study relied on a group of the 100 largest companies in Canada (by revenue), as published in the *Globe and Mail*. This purposive sampling strategy was chosen as it is likely to generate a diverse set of companies covering a wider range of industry sectors (Fifka and Drabble 2013). Such a set of companies would more likely contain a wide diversity of reporting approaches as well as a wider diversity of sustainability performers (from laggards to leaders). As a result, such a sample of business leaders would likely contain a wider diversity of trade-off experiences and communication approaches.

A classification of the study sample companies by sector has been shown in Table 4-1. As shown, the 100 study companies belonged to 14 different industry sectors. Of these 100 companies, the largest proportion belonged to the Extraction sector (22 companies or 22% of the entire study sample), followed by Finance and Insurance (18%), Retail (16%), Information (10%), and Manufacturing (9%). The other nine industry sectors made up the remaining 25% of the companies in the study sample. The companies' latest sustainability reports (and comparable disclosures) were collected from the company websites between 2013 and 2014. These reports varied widely in length, from a single page to over 570 pages. The total volume of sustainability disclosures analyzed across the entire sample of companies came to 5872 pages, or approximately 70 pages per report.

The study companies also varied in their approaches to sustainability reporting. A portion of these companies (15, or 15%) did not issue any disclosures at all. From the remaining 85(%) of companies in the study sample, the reporting approaches varied widely from among the five different types of disclosures (discussed in the Theoretical Background section). Out of the 100 companies in total, more than half (56%) issued a stand-alone sustainability (or similarly-themed) report. Another 16(%) made disclosures online in the form of separate web-pages with information on the company's sustainability policies and commitments, and/or information on their sustainability performance and initiatives. The remaining 13(%) of companies in the study sample were divided evenly among the three remaining report types, namely: Public Accountability Statements (PAS; 5%), integrated reports (4%), and addendums to financial reports (4%). The variation in reporting approaches seen here corresponds to the heterogeneity in report type that has been previously described by other studies (see: Hahn and Kuhnen 2013).

Company Code	Industry Sector	% of Companies
Company 1 - 17	Finance and Insurance	17%
Company 18 - 34	Manufacturing	17%
Company 35 - 50	Extraction	16%
Company 51 - 65	Retail	15%
Company 66 - 74	Information - Media and Telecom	9%
Company 75 - 80	Transportation	6%
Company 81 - 85	Utilities	5%
Company 86 - 90	Wholesale Trade	5%
Company 91 - 93	Food Manufacturing	3%
Company 94 - 96	Professional Services	3%
Company 97 - 98	Real Estate/Rental	2%
Company 99	Management	1%
Company 100	Public Admin	1%

Table 4-1: A classification of the companies in the study sample, by industry sector. The study sample consisted of 100 companies across a total of 14 sectors.

It is also interesting to note that even within the same reporting type, there was still a marked variation in how companies issued their sustainability reports. This heterogeneity was evident in the very names of the reports themselves. Of the 56 stand-alone reports published, 45% were titled ‘sustainability’ reports, 32% were titled ‘responsibility’ reports, and another 13% were given unique (‘one-off’) miscellaneous titles unrelated to sustainability or social responsibility (despite their content). Some of these miscellaneous report titles include ‘The Review’. To consider this variation from an alternate perspective, Table 4-2 represents a classification of these different reporting approaches, according to industry sector.

As shown in Table 4-2, this kind of reporting heterogeneity exists even within the same sector. For example, within Finance and Insurance, some companies issued stand-alone reports (6% of the overall company total), others issued or PAS (4% of the overall total), others made online-disclosures (1%), others issued integrated reports (1%), and some made no disclosures at all (6%). Some of the sectoral trends seen in Table 4-2 may indeed be explained by sector-specific reporting pressures that have been previously described in the literature. For example, the Extraction and Manufacturing sectors are commonly characterized as being environmentally-sensitive industries (see: Cormier and Magnan 2015), while Retail is under higher pressure for stronger transparency and more responsible action on supply chain issues (such as labor conditions or ethical sourcing) (Egels-Zandén et al. 2015). These three sectors are thus more likely to issue more ‘traditional’ stand-alone formats, as seen in Table 4-2.

Industry Sector	Report Type						Total No. of Reports
	Stand-Alone	Web	PAS	Integrated	Addendum	None	
Extraction	77%	5%	-	9%	-	9%	22
Finance and Insurance	33%	6%	22%	6%	-	33%	18
Retail	56%	25%	-	-	6%	13%	16
Information	60%	30%	-	-	-	10%	10
Manufacturing	78%	22%	-	-	-	-	9
Transportation	80%	-	-	20%	-	-	5
Professional Services	75%	-	-	-	-	25%	4
Utilities	50%	25%	-	-	25%	-	4
Agriculture and Forestry	33%	33%	-	-	0%	33%	3
Food Manufacturing	-	100%	0%	0%	0%	0%	3
Management	-	-	50%	-	50%	-	2
Wholesale Trade	-	-	-	-	-	100%	2
Construction	100%	-	-	-	-	-	1
Real Estate	-	-	-	-	100%	-	1

Table 4-2: A classification of the type and percentage of reports issued by companies in the study sample, according to the companies' industry sectors.

All 100 companies in the study sample were invited to participate in, and be interviewed, in this study. Of these, a total of 19 companies agreed to take part. This meant that the managers who were interviewed had agreed to officially speak on behalf of their companies and present their companies' (as opposed to their own individual/managerial) experiences with trade-offs and their disclosure. These interviews took place between June 2016 and October 2017. The interview participants consisted of sustainability managers and executives—the highest decision-makers on sustainability issues at each company. The identities of the personnel interviewed and their companies (including any identifiable information such as industry sector) were held confidential throughout the study and in the final results. In order to fully ensure this confidentiality, a number of participants also requested that their interview responses not be matched with their individual report data and analysis. This request speaks to the negative perception that many companies appear to have of sustainability trade-offs, and of the possible adverse reactions that they believe they might face when speaking about them—an idea that appears prominently in the findings of this study and is described in the subsequent Results section.

As a result, the entire set of 19 interviewed companies are referred to in the results presented here as Companies A to S. The interviews with these companies were conducted over the phone, following a prepared script consisting of a series of semi-structured questions. As part of this script, all interviewees were asked if their company had encountered any trade-offs in the practice of sustainability, and if so, how their company had managed these trade-offs (i.e., how the managers' companies perceived trade-offs, whether they had encountered them in the practice of sustainability, and whether these experiences were communicated to stakeholders in the company sustainability reports (or comparable disclosures). The interviews ranged in length from 30 to 45 minutes. The interviews were recorded and then transcribed for analysis. Due to the focused and specific nature of the questions posed, the interviews generated a relatively short but very focused set of information on the companies' experiences with trade-offs. The interviews generated a total of approximately 116 pages of transcribed text, which amounted to roughly six pages per interviewed company.

4.3.2. Content Analysis of Sustainability Reports and Interviews:

The company reports and interviews were then analyzed by content analysis, to look for descriptions of the companies' experiences with sustainability trade-offs (as summarized in Figure 4-1). Both the reports and interviews were analyzed separately (i.e. not matched together by company) and inductively. This meant following an open coding process that iterated back and forth between the texts themselves, the literature on sustainability trade-offs (e.g. Hahn et al. 2014), the literature on legitimacy in sustainability accounting (e.g. Cho et al. 2015; Killian and O' Regan 2016), and finally, the literature on the use of discursive legitimation strategies in social texts (e.g. Van Leeuwen and Wodak 1999; Alvesson and Kärreman 2000; Suddaby and Greenwood 2005; Vaara and Tienari 2008; Sewell 2010). Given the large difference in the volume of text to be analyzed from the interviews (116 pages) and reports (over 5000 pages), the content analysis method was applied somewhat differently between the two sets of documents.

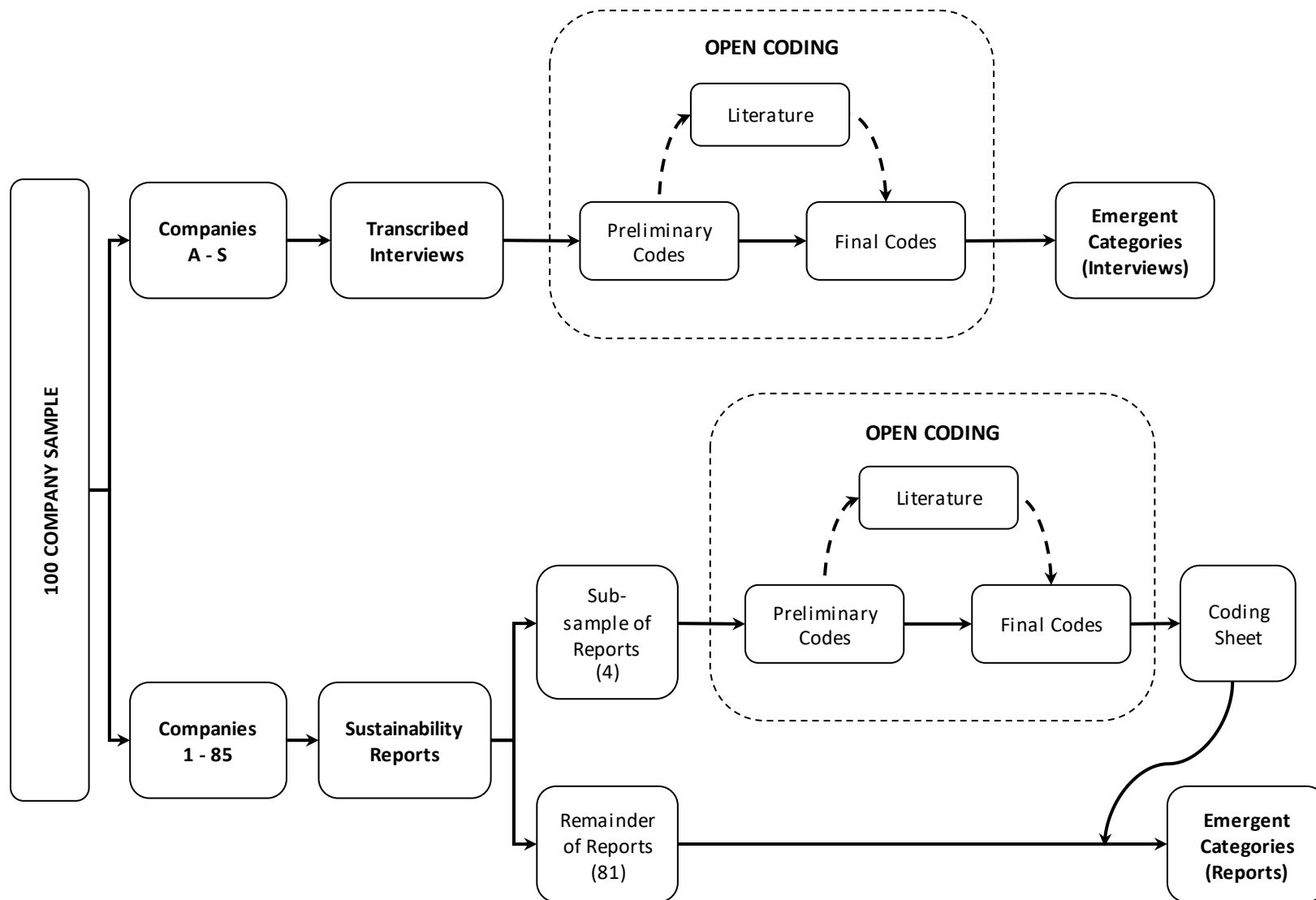


Figure 4-1. Schematic diagram of the method followed in Chapter 4.

Firstly, the interviews were analyzed entirely by open coding, using a single sentence as the basic coding unit. This method was chosen because the phenomenon of interest (trade-off experiences) featured in the manifest content of the texts analyzed, given that the interview questions directly probed this issue with the participants. As such, the purpose of the open coding was then to identify whether the companies interviewed had: 1) encountered trade-offs, 2) described their trade-off experiences in their reports, and 3) why they had (or had not) done so. The first round of analysis of these documents yielded a list of preliminary codes, which were then refined and abstracted further (i.e. grouped into categories) in subsequent rounds. The entire procedure ultimately yielded 15 distinct codes, across three overarching categories (which are described further in the Results section).

The reports, on the other hand, were analyzed using a pre-designed coding sheet. This was due to two reasons. Firstly, due to the large volume of disclosures (>5000 pages), a more structured and streamlined approach to the coding process was necessary. Secondly, unlike the interviews, and in line with the findings of Herzig and Godman (2010), none of the reports in the sample had described the issue of sustainability trade-offs in their manifest report content. This was established by means of a text search for the terms 'trade-off' and 'tension', across all of the study reports¹¹. This finding comes as no surprise however, given the negative connotation that these terms appear to carry (e.g. Walley and Whitehead 1994), and the largely symbolic role that the reports themselves may play in managing stakeholder impressions (e.g. Bozzolan et al. 2015; Barkemeyer et al. 2014). However, although trade-offs were not found in the manifest content, they were nevertheless found in the latent content of the reports. This took the form of descriptions of environmental conditions that necessitate a trade-off, or of evidence of compromise that the study companies made among competing objectives. An example of the former would be a report mention of a limited budget allocated for sustainability programs that forced companies to choose between implementing an eco-efficiency initiative or making a community donation, while an example of the latter would be a report that states that the company has chosen not to report on certain business indicators (mandated by a reporting standard) over privacy concerns, and thus compromising transparency over competitiveness. These specific trade-off-related codes, and how they were formulated, are discussed in more detail in the Results section.

¹¹ The term 'compromise' did, however, appear in 14 of the 85 reports; in all of these instances, this term was used in the negative, that is, it was used to confirm the companies' commitment *not* to compromise. For example, Company 20 states: "We will not compromise our products' quality and safety, nor our customers' satisfaction" (Company 20, Report).

Based on this, the coding sheet helped to not only structure and streamline the coding process, but also to identify the relevant sections of the report text to be analyzed (i.e. the sections of text that contained trade-off-related codes, and thus latent descriptions of trade-off experiences). Accordingly, instead of analyzing the entire sample of reports using the same inductive open-coding procedure used for the interviews, only a small subset of reports was analyzed using this method. This subset was comprised of four reports, one from each of the four most common sectors in the sample. This selection decision (i.e., the choice of one report from each of the four most-represented industries in the sample) ensured that the four reports analyzed (and the subsequent trade-off-related codes that emerged from this analysis and then formed the basis of the coding sheet) contained the widest possible range of trade-off experiences in the sample. As with the interviews, the purpose of this analysis was to identify whether the reporting companies had: 1) encountered trade-offs, and 2) described their trade-off experiences in their reports. The final list of codes that emerged from the analysis of these four reports served as the coding sheet that would guide the analysis of the remainder of the reports.

4.3.3. Coding Reliability:

A key credibility threat of concern in this study involves reliability. This is defined as the ability to accurately replicate the findings of an analysis “regardless of the circumstances” within which that analysis is performed (Krippendorff 2004: 211). In content analysis studies, reliability threats stem from human coding errors—either in interpreting (and then abstracting) the text, or in applying the chosen codes consistently (Krippendorff 2011).

In content analysis, the notion of reliability includes the two separate yet parallel concepts of stability and reproducibility (Jones & Shoemaker 1994; Krippendorff 2004). Reproducibility is defined as being as “the degree of correlation between two or more coders using the same text” (Jones & Shoemaker 1994: 5). This reliability measure is checked by comparing the coding results among different analysts (what is known as an ‘inter-rater test’). Alternatively, stability is defined as the “degree of variance in coding over time” by a single coder (Jones & Shoemaker 1994: 5) and is assessed by means of a ‘test re-test’ procedure. In assessing the overall reliability of a content analysis study, both reproducibility and stability are important.

To improve the stability of the coding process, a test-re-test was conducted as part of the pilot test, for the report coding sheet developed. The test-retest proceeded as follows: of the 100 companies in the study sample, a subsample of four reports was selected for use in a pilot study of the content analysis

procedure. These included: An Oil and Gas company (Extraction), a Grocery chain (Retail), a Manufacturing company (Manufacturing), and a Bank (Financial & Insurance). As described in the methodology section, the pilot study of the four chosen reports began with the design of the coding scheme (or sheet). The test-retest procedure involved coding the four reports over two rounds of coding and evaluating the degree of coding stability between the two coding rounds, for each of the four individual reports. This was performed automatically in NVivo under the coding comparison function. In this test, reliability was assessed using the coefficient known as Cohen's kappa (κ), which measures the degree of agreement between the two rounds of coding by either a single or two coders (Oleinik et al. 2013). In order to use κ to assess reliability, the κ value is calculated for the whole test-re-test procedure, and then compared to pre-defined κ ranges described in the literature to see whether or not the coding process is deemed 'reliable'. The average κ values for each of the individual reports are: 0.7522 for Oil and Gas, 0.7862 Bank, 0.8151 for Grocery, and 0.8826 for Manufacturing. These values fall under the category of "excellent" agreement (greater than 0.75) based on the κ scale described in Fleiss et al. (2003) and McHugh (2012). Based on this and the strong percentage agreement values obtained, the coding procedure of this study was deemed sufficiently 'reliable'.

4.4. Results:

4.4.1. Content Analysis of Company Interviews:

In their interviews, all 19 companies described having experienced trade-offs in the practice of sustainability. These ranged, for example, from trade-offs in setting sustainability targets, to choosing which company to invest in. In the former, the trade-off lies between shorter-term targets that require lower capital investment now but smaller overall sustainability gains, or more ambitious and longer-term targets that would require a higher investment now, but a larger sustainability gain further out into the future. In the case of choosing which company to invest in, the trade-off lies between investing in companies with higher sustainability performance (a decision which would prioritize Environmental, Social, and Governance, or ESG, criteria) versus companies with higher financial performance (a decision which would prioritize traditional investment criteria), under conditions of constraint.

When asked whether these trade-off experiences were described in their sustainability reports, the companies in the interview sample distinguished between trade-offs related to which sustainability impacts were material (i.e. the process of a materiality assessment), and all other (non-materiality-related) types of sustainability trade-offs. Of the 19 companies interviewed, 9 companies (47% of the 19)

limited their trade-off discussions in their reports solely to the materiality trade-off process. Furthermore, none of the companies interviewed described the other non-materiality-related trade-off decisions in their reports. This omission aligns with the study finding that explicit discussions of trade-off decision-making were absent in sustainability reports.

Overall, three categories of trade-off related codes emerged from the interview analysis. These were related to the companies' perceptions of trade-offs, their reasons against reporting on trade-offs, and their reasons for reporting on trade-offs. These codes and their frequencies are listed in Table 4-3. Additional information on these codes (in the form of illustrative quotes and examples) are also provided in Table 4-4 (Appendix C).

Company Perceptions of Trade-offs

In terms of how the study companies perceived trade-offs, six (32%) of the 19 companies interviewed defined trade-off-related disclosures as being descriptions of the decision-making processes behind trade-off decisions, rather than merely disclosing on the compromise outcome itself. Another five companies (or 26% of the 19 companies) interviewed described trade-offs as having a negative connotation, as shown in Table 4-3. These companies considered trade-offs synonymous with "bad news" (Company B, Interview), "underperform[ing]" on sustainability (Company E, Interview), "shortcomings" (Company N, Interview), "what didn't work" (Company M, Interview), and business mistakes ("where you spend your money stupidly over the year ... where you made a mistake", Company B, Interview).

Reasons Against Disclosing on Trade-offs

Given the negative light in which many of the interviewed companies saw trade-offs, it comes as no surprise that these companies described having purposefully omitted mentioning them in their reports, as described earlier. These companies explained this omission using a variety of reasons (listed in Table 4-3, under 'Reasons against including Trade-off-related disclosures'), namely: 1) trade-off discussions are internal company discussions and thus immaterial to report on, 2) trade-off discussions present a legitimacy threat to the reporting company, and 3) trade-off discussions necessitate a level of transparency that does not align with current approaches to reporting.

Six of the 19 companies interviewed (or 32%) argued that trade-offs are strategic-level decisions that have no relevance to stakeholders (i.e., immaterial), and are thus left out of the report. This argument against not disclosing trade-off discussions aligns with the legitimization strategy known as "rationalization"—that

is, the attempt to acquire organizational legitimacy “by reference to the utility of specific actions based on knowledge claims” (Vaara and Tienari 2008: 988). Company E, for example, states:

“Those trade-offs are strategic anyway ... they’re strategic to the organization and trade-offs are made every day, not just on sustainability agendas, right? Nobody has enough budget or enough people to do everything, business leaders are constantly making trade-off decisions on strategy all the time, and there’s strategic decisions that are not necessarily communicated out externally” (Company E, Interview).

Categories	Codes	Frequency of Companies (N and %)
Perceptions of Trade-off-related disclosures	Trade-off-related disclosures as descriptions of decision-making process	32 %
	Trade-off-related disclosures as ‘bad news’	26 %
Reasons against including Trade-off-related disclosures	Due to limited messaging space	5 %
	Immaterial - under standardized reporting process	5 %
	Immaterial – Trade-offs are internal business decisions	32 %
	Immaterial – Due to lack of stakeholder demand	5 %
	Immaterial – Reporting is ‘story-telling’ (positive outcomes only)	21 %
	Negatively impact reputation	11 %
	Negatively impact stakeholder relationships	5 %
Reasons for including Trade-off-related disclosures	Standards organizations encourage ‘balance’	5 %
	Motivated by employee expectations	5 %
	Gives stakeholders confidence in firm’s sustainability management capacity	5 %
	Enhance transparency and authenticity, and build stakeholder trust	21 %
	Reporting as “comprehensive reference document” (vs story-telling)	5 %

Table 4-3. Categories and codes related to trade-off disclosures in sustainability reports that emerged from the interview data. The code frequencies represent the number and percentage of companies in the 19-company interview sample, whose interviews contained the particular code.

Another three companies (or 16%) did not communicate their trade-off experiences in their reports due to the potential legitimacy threat that these discussions may pose. These companies believed that a discussion of trade-offs may harm the company’s reputation (two companies, or 11%), or its relationships with its stakeholders (one company, or 5%). Unsurprisingly, all three of these companies defined trade-off disclosures along the lines of ‘bad news’. As an example of this, Company B states: “Our [reporting] culture is only to talk about how good we are and so we don’t put negative stories out there [related to

trade-offs], and we don't do that because it could negatively impact our reputation" (Company B, Interview). This 'trade-off discussions as legitimacy threat' argument is in line with the literature on the legitimizing role that reports play in the eyes of company stakeholders.

Of these three companies, one company (Company B) even described the 'meta-trade-off' that it faces when disclosing publicly on its sustainability efforts:

"I think [our communications team] have a culture of 'you can only have so many messages out there about a company in one week, and if you minimize, or if you take away from that number the number of times you can positively talk about your company, then it is a detriment'" (Company B, Interview).

When faced with a limited messaging space, this company argues, 'good news' (non-trade-off discussions) will always trump 'bad news' (trade-off discussions).

Along the same vein, another six companies (or 31% of the 19) explained their decision not to communicate their trade-off discussions to their stakeholders on the basis that this level of transparency does not align with current approaches to reporting. Four of these companies (or 21% of the 19) referred to sustainability reporting as a form of 'storytelling'—an impression management exercise that was limited to 'good news' only. These companies equated trade-offs with 'bad news' (as described earlier), and thus omitted them from their reports. As an example, Company M states:

"So, we wouldn't really talk about the trade-offs. We would still rather talk about the benefits still of why we did it, and you know and the impacts that it's having, and the partnership that was built and the fact that other [companies] joined and did the same thing, so we would always try to find the positive and not focus on what didn't work. We would look at that internally and assess it internally, but we wouldn't really talk about it publicly." (Company M, Interview).

This reason for not disclosing on trade-offs is in line with the impression management perspective of sustainability reporting, which highlights the largely instrumental (and oftentimes manipulative) role that reporting has in shaping the company. This literature views sustainability reporting as a strategic form of communication that can be used to project a positive image of the company in the eyes of its stakeholders. In this case, the positive image projected may be that the company does not 'compromise' on sustainability (and thus does not experience trade-offs), or that it pursues a 'win-win' sustainability ideal (that negates the notion of trade-offs).

One other company declared that trade-off disclosures were immaterial to stakeholders (in the report) on the basis that they are not required under any of the existing reporting standards (coded under ‘Trade-off-related disclosures are immaterial – follow a standardized reporting process’). Such an argument corresponds to a form of authorization, which is “legitimation by reference to the authority of tradition, custom, law, and persons in whom institutional authority of some kind is invested” (Vaara and Tienari 2008: 988). In this case, the authority lies with the reporting organization—namely the Global Reporting Initiative, the Carbon Disclosure Project, and the Dow Jones Sustainability Indices—whose reporting guidelines do not explicitly require trade-off related disclosures. Another company explained that it believed trade-off discussions in reports to be immaterial, not due to the nature of the discussions themselves, but due to the lack of stakeholder demand for this level of transparency.

Reasons for Disclosing Trade-offs

Despite not (overtly) disclosing on trade-offs, some companies (six, or 32% of the 19 companies interviewed) paradoxically described reasons why communicating these discussions may be important to stakeholders, despite largely not having done so in their reports.

Three of these reasons for disclosing on trade-offs were based on a normative approach (i.e., one “governed by a moral purpose”, Sulkowski et al. 2017: 2) to sustainability reporting. All three of these arguments in support of trade-off disclosures are in line with the tenants of stakeholder theory. This theory posits that “firm performance, and the license to operate, are intertwined with stakeholders who can affect and are affected by the operations of the firm”, and as a result, companies are driven to practice sustainability in such a way as to effectively maintain this license (Sulkowski et al. 2017: 1). This perspective aligns with that of legitimacy theory in that both perspectives are based on the interconnected, and mutually-reinforcing relationship between companies and their stakeholders. As described earlier, both theories posit that companies rely on a social license to operate, and that this license is bestowed by publicly demonstrating how a company’s norms align with that of society (and its stakeholder groups) (Dowling and Pfeffer 1975; Ashforth & Gibbs 1990; Suddaby et al. 2017). In this sense, legitimacy (in the form of social license), can be seen not just as an act of “congruence” in terms of norms (Dowling and Pfeffer 1975: 122), but also as an active, two-way “communicative *process* [emphasis added]” between companies and their stakeholders (Suddaby et al. 2017: 458). This company-stakeholder link is evident in the three reasons for disclosing on trade-offs that emerged from the interviews.

The first of these three reasons is that these trade-off discussions enhance company transparency and authenticity, and thus help build stakeholder trust (four, or 21%, of the 19 companies interviewed). This link between transparency and trust has been addressed a range of different research contexts within the organizational studies literature (Schnackenberg and Tomlinson 2016). This literature states that transparency, in the context of company and stakeholder relationships, may be defined as being “the *perceived* [emphasis added] quality of intentionally shared information” (Schnackenberg and Tomlinson 2016: 1788). Trust on the other hand, may be defined (in the context of trust theory), as being “the willingness of stakeholders to be vulnerable to the actions of the organization” (Schnackenberg and Tomlinson 2016: 1794). The link between the two concepts—transparency and trust—is based on the fact that disclosure of information from a sender to a recipient carries an inherent risk to the sender “that this information might be subsequently used against” them, and this risk increases with the extent of disclosure (Schnackenberg and Tomlinson 2016: 1794). As a result, voluntary disclosure (such as that of trade-off discussions), “signal[s]” to the recipients (company stakeholders) that the company is willing to accept this risk in order to benefit stakeholders—which ultimately enhances the company’s legitimacy.

The second reason for disclosing on trade-offs is based on the notion that trade-off discussions (in the context of a report) give stakeholders confidence in the company’s ability to effectively manage its sustainability impacts (5%, or 1 company). Finally, the third reason for disclosing on trade-off discussions is based on the notion that reporting is a substantive accountability exercise whose purpose is to generate a “comprehensive reference document” (in the words of the company itself, Company G) on the company’s sustainability performance, values, and objectives. This normative perspective on reporting stands as an interesting counter-point to the notion of ‘reporting as story-telling’ described earlier. It is also interesting to note that only one company professed the normative perspective on reporting (5% of the 19 interviewed companies), while 4 companies (21%) described the ‘reporting as story-telling’ approach.

Another company (5% of the 19 companies interviewed) described how it was motivated to disclose on a singular aspect of its trade-off discussions (namely, its materiality process), in order to fulfill employee expectations for this level of transparency. Given that employees are a key stakeholder group for companies, this argument can also be explained on the basis of stakeholder theory, as described earlier.

Another company (5%) stated that reporting standards organizations actively encourage companies to include a ‘balance’ of strong and poor sustainability performance. This company equated trade-off discussions with ‘bad news’ (‘trade-off-disclosures perception’ described earlier), and as a result,

understood the concept of reporting balance as tied to that of trade-off disclosures. This company was referring to the Global Reporting Initiative's 'balance' reporting principle. This refers to presenting "an unbiased picture of the organization's performance" by reporting on both "positive and negative aspects of the organization's performance", as well as providing sufficient "information that can influence the decisions of stakeholders in proportion to their materiality" (GRI 2016: 11). By reporting according to this principle, companies can ideally "enable a reasoned assessment of [their] overall performance" (GRI 2016: 11). Thus, from the perspective of this company, disclosing on trade-off discussions (considered synonymous with the GRI principle of 'balance') would be in line with reporting to the GRI standards, which in turn may enhance the company's organizational legitimacy by adhering to the accepted norms and expectations for rigorous and standardized disclosure (Hahn and Lulfs 2014).

It is nevertheless interesting to note that, despite all of these arguments in support of trade-off disclosures, none of the companies stated that they had disclosed their trade-off experiences outside of describing their materiality assessments.

4.4.2. Content Analysis of Sustainability Reports:

As described in the Methods section, a word-search query of all of the company reports (and comparable disclosures) for the terms 'trade-off' and 'tension' revealed that these terms were not used in any of the reports analyzed. This confirms the findings of Herzig and Godemann (2010), who demonstrated that any discussion of tensions between aspects of profitability and responsibility were absent from the explicit (manifest) content of the sustainability reports analyzed in their study. This speaks to the negative connotation of the term trade-off, and the potential legitimacy threat including such a term in the report may present as a result. In spite of this, implicit references to trade-offs did nevertheless appear in the latent content of the reports.

4.4.2.1. Latent Descriptions of Trade-off Experiences: Emergence of Trade-off Codes:

Smith and Lewis (2011) were the first to point out that conditions of environmental change, resource constraint, and a multiplicity (of objectives or stakeholders) turn latent sustainability tensions salient (as described in the Theoretical Background section). Based on this, report disclosures of "plurality, change, and scarcity" would, consequently, indicate a salient tension that the company has experienced. As a result, these disclosures correspond to indirect (i.e., latent) descriptions of trade-offs. Accordingly, in order to study how the companies describe their trade-off experiences, it would be necessary to analyze sections of the reports that contained these themes.

These themes of ‘plurality, change, and scarcity’, as well as of the outcomes of trade-offs (the compromises themselves), were evident in the four company reports included in the development of the coding sheet. These themes, as a result, formed the basis of the six ‘trade-off codes’ that were included in the coding sheet. These ‘trade-off’ instances helped pinpoint and uncover the latent trade-off points described in the reports. These codes are described in Table 4-5, along with their frequency (in terms of the percentage of companies that contained these codes in the 85-reporting-company sample). An expanded version of the table containing Illustrative quotes for each of the codes (from the company reports) has been included in Appendix C (Table 4-6).

As shown in Table 4-5, the analysis of the reports generated six codes, across four categories. These trade-off codes were: 1) negative sustainability impacts, 2) materiality, 3) competing objectives, 4) changing priorities, 5) stakeholder demand, and 6) constraint. These six codes corresponded to the three themes of ‘plurality, change, and scarcity’ as well as evidence of trade-off outcomes (i.e. the compromises made, or priorities chosen). Each of these six codes indicates an underlying trade-off point in the report text, which further indicates a trade-off decision that the company must have faced.

Trade-off Category	Trade-off Codes	Frequency (N and %)
Outcome	Negative sustainability impacts	68 (80%)
	Materiality	52 (61%)
Change	Changing priorities	24 (29%)
	Stakeholder demand (for sustainability action)	28 (33%)
Scarcity	Constraint	47 (56%)
Plurality	Competing objectives	40 (47%)

Table 4-5. Categories and codes related to trade-off disclosures in sustainability reports that emerged from the report data. The code frequencies represent the number and percentage of companies in the 85-company interview sample, whose interviews contained the particular code.

Only seven out of the 85 (or 8%) company reports did not contain any of the six trade-off codes, that is, any latent descriptions of trade-offs. The remaining 92% (77) of all reporting companies in the sample included reference to at least one trade-off code, indicating that the overwhelming majority of companies in the sample had encountered trade-offs in the practice of sustainability—despite not having disclosed on these experiences (and decision-making processes) explicitly in their reports. The six trade-off codes were found throughout the reports, all the way from the introductory material at the front-end of the

report (including CEO letters and annual performance summaries) to the performance indices in the back-end.

Negative Sustainability Impacts

The most common trade-off instance that emerged from the report analysis was ‘negative sustainability impacts’; 80% (68) of all reports in the 85-report sample contained at least one reference to this code. This frequency is unsurprising given that one of the primary functions of a sustainability report is to demonstrate transparency regarding corporate sustainability impacts (Hahn and Kuhnen 2013). This code refers to any descriptions of negative company externalities¹²—that is, any mentions of harmful social, environmental, economic, or otherwise, impacts that the company generates as a result of its business activities, and discloses on in its report. These are impacts that have physically occurred in the course of the reporting period (i.e., not abstract, hypothetical impacts that the company may encounter at a point in the future). When seen through the lens of the literature on sustainability trade-offs, it is evident that these ‘externalities’ are in fact the compromise outcomes of the commonly-encountered trade-off between sustainability performance (and objectives) versus traditionally ‘business-only’ performance and objectives. When companies express some form of this code in their report—that is, disclose on a harmful consequence of their operations—these companies, in effect, demonstrate that they have prioritized their business objectives (to a certain extent) over sustainability objectives. As an example, Company 96 states:

"In 2012, our construction sites recorded 14 such reportable spills or incidents. None of these smaller spills resulted in environmental damage, or led to any prosecution, injunction, sanction or fine [...] Can we do better? We absolutely believe we can" (Company 96, Report).

In this quote, the company discloses on its negative impacts (spills), and (inadvertently) the outcome of its environmental health-business profitability compromise (the ‘outcome’ dimension of this trade-off).

Materiality

The second most commonly-occurring trade-off instance (found in 52 companies, or 61% of the 85 reporting companies) also referred to another type of trade-off outcome. This code (‘materiality’) referred specifically to the particular sustainability issues or impact areas that were prioritized by the company,

¹² Within the field of environmental economics, the term ‘externality’ refers to “a situation where the actions of some firm or individual have consequences for someone else who has no say in the matter” (Smith 2011: 12). Externalities may be positive or negative in nature, depending on whether they benefit or harm the receiving party. A common example of a negative environmental externality is pollution (Smith 2011).

from across its wide spectrum of possible impacts. As described in Haffar and Searcy (2017), the choice of material issues is rooted in the choice of salient (and prioritized) stakeholders. This is reflected in the materiality assessment process itself, which involves input from the company's key stakeholders. In this way, materiality decisions are a form of trade-off decisions, based on choosing the most material issues and the most salient stakeholders. For example, Company 29 describes its materiality assessment as follows:

"One of the objectives of the dialogue with all [Company] stakeholders is to determine which commitments and topics are considered most important and crucial. These topics are those that allow the Group to continue creating value in the short-, medium- and long-term for all its stakeholders. We conducted an analysis to update the [Company] materiality diagram [...] This analysis has allowed us to identify the most relevant aspects that reflect significant Group economic, environmental and social impacts and that greatly influence the assessments and decisions of stakeholders" (Company 29, Report).

Competing Objectives

One of the three factors described by Smith and Lewis (2011) that causes companies to experience trade-offs is 'plurality'. In the realm of corporate sustainability, this corresponds to a range of sustainability objectives, across a range of affected stakeholders. This plurality exposes the inherent tension experienced in trying to achieve all objectives simultaneously, leading to a trade-off between competing objectives. This trade-off code was present in 47% (40) of the reports analyzed. As an illustrative example of this code, Company 65 describes how its commitment to expand its business operations, and specifically the use of refrigerators in its grocery stores, conflicts with the goal of lowering its carbon footprint:

"Refrigerants account for 12 percent of our global GHG footprint, contributing nearly twice that of the fuel used in our trucks. As demand for our retail services expands globally, especially for fresh and frozen food, the need for refrigerated equipment will continue to grow. We're committed to becoming more sustainable in this area, while working to ensure safe, reliable and affordable food to our customers around the world" (Company 65, Report).

Changing Priorities

Another factor that Smith and Lewis (2011) described as key to making latent tensions salient was 'change'. In the reports, this theme took the form of either environmental changes (e.g. changes to

regulations) or organizational-level changes (e.g. company restructuring or downsizing). A total of 29% (24) of the 85 reporting companies in this study contained this code in their reports. These environmental or organizational changes necessitate a reordering of priorities, and thus present the company with new trade-off decisions. As an example of the kinds of changes that companies reported experiencing, Company 91 states:

"In 2013 we sold several businesses that were not core to this vision, including our [specific business lines]. We also completed a strategic review of our [particular] business, which culminated in the sale of our 90% ownership of [details of business sale] [...] While we have executed significant changes to our business mix and assets, our organizational values are constant and underpin everything we do. A cornerstone of the "new [Company]" will be to increasingly define and integrate corporate social responsibility and sustainability into our operations and decision-making." (Company 91, Report).

Stakeholder Demand

Some of these changes were also prompted by stakeholder demand for a particular line of action. These instances were coded under a separate code ('stakeholder demand') and were found in 33% of the reporting companies studied. In this case, companies face new (and often vocal) expectations from salient stakeholders, which in turn, necessitates a reorganization of priorities in order to meet this new demand, and results in the company facing yet another set of trade-off situations. As an example of this case, Company 38 states:

"Stakeholder concern related to spills within the oil and gas industry remains high. To support our transition to increased liquids production and to ensure compliance with developing regulations, we initiated an exhaustive review of our Canadian well sites, facilities and pipeline crossings in 2013" (Company 38, Report).

Constraint

The final trade-off code was found in 56% (47) of the reporting company sample. This code dealt with one of the foremost factors that elicit a trade-off, namely, constraint. The literature on sustainability trade-offs has described how constraints in resources, time, personnel, and even reporting space cause companies to experience trade-offs (Epstein et al. 2015). In this study, an example of this would be the case of Company 35, who states: "It is not usually possible to restore a mine site exactly as it was prior to

mining, but it is possible to restore a healthy, thriving ecosystem, with lands that support productive post-mining land use” (Company 35, Report).

4.4.2.2. Legitimizing Trade-off Experiences: Emergence of Non-Trade-off Codes:

These trade-off codes, however, were not found in isolation. These codes were used in the context of other non-trade-off codes that explained how the company has responded to the tension represented by the trade-off codes. Companies in the study sample responded to trade-offs (presented in their reports) in one of two ways, namely: 1) by highlighting their commitment to the company’s core (sustainability) values, or 2) by describing taking concrete action on the tension. These two ways corresponded to two categories of codes that emerged from the reports, specifically in the sections of reports that contained trade-off codes. These two categories were labelled as ‘Company Values’ and ‘Company Action’. The former category (Values) contained the codes ‘compliance’, ‘responsibility’, and ‘systems-thinking’, while the latter (Action) contained the codes ‘company policy’, ‘target-setting’, ‘innovation’, and ‘collaboration’.

The entire sample of reports analyzed contained a total number of 1452 individual occurrences of the six trade-off codes. This equated to approximately one trade-off code to every four report pages, or an approximate average of 17 trade-off codes per company report. Of these 1452 trade-off codes, 55% were presented alongside (either directly before, or directly after) a non-trade-off code. These non-trade-off codes belonged either to the ‘Company Values’ or the ‘Company Action’ category. The ‘Company Values’ codes consisted of ‘compliance’ (associated with 7% of trade-off codes), ‘responsibility’ (associated with 5%), and ‘systems-thinking’ (associated with 49%), while the ‘Company Action’ codes consisted of ‘company policy’ (7%), ‘target-setting’ (6%), ‘innovation’ (20%), and ‘collaboration’ (8%).

Company values codes served to affirm the companies’ commitment to universal principles of sustainability. This corresponds to the legitimizing tactic of “moral evaluation” (Vaara and Tienari 2008: 988), which is described by Ashforth and Gibbs (1990) as “espousing socially acceptable goals” (p. 180). For example, when a company reported an episode of noncompliance (e.g. a spill that resulted in a pollution fine, or an ethical violation that was exposed and resulted in a lawsuit), this noncompliance (or ‘negative sustainability impact’) is often followed with a commitment to future compliance. This is illustrated in the following quote:

“[Company] continues to focus on reducing the number of spills in our operations. While we reduced the number of spills in our ... operations ... the total spill volume increased. Through historical trending and weekly event analysis, we are identifying common causes of events and

using that information to help reduce the number and volume of spills. Improving our environmental performance remains a key objective for 2014 and beyond” (Company 45, Report).

Companies also associated their trade-off codes with references to the wider system within which they operate, often in the form of the wider systems-level benefit they may bring (at the expense of the noncompliance or other negative impacts). As an example, Company 96 states:

“The firm’s past challenges in the ethics arena have provided a platform from which to create a world-class ethics and compliance program. As you will read in this part of the report, we implemented a host of remedial measures ... which have served to greatly reinforce our compliance procedures” (Company 96, Report).

In this case, the company’s negative sustainability impact (ethics violation) is countered with a promise towards future compliance. This promise is further demonstrated via the reference to a ‘company policy’ (an example of a ‘company action’ code), in the form of a “world-class ethics and compliance program”.

Companies also referred to the concept of collaboration alongside their trade-off codes. As an example, Company 49 states:

“There is a growing demand by communities for the industry to do more to manage impacts ... What does this focus area mean for [our Company]? We are dependent on community support for our activities. This is why communities are the bedrock of our sustainability strategy ... We continually engage and collaborate with communities and Indigenous Peoples through all phases of the mining life cycle to identify opportunities to minimize impacts and to maximize shared value in a way that contributes to their long-term well-being.” (Company 49, Report).

Here, the company faced ‘changing priorities’ (trade-off) in terms of the “growing demand by communities for the industry to do more to manage impacts”. This trade-off code is presented alongside the promise of stakeholder ‘collaboration’, as a means of neutralizing the legitimacy threat posed by this disclosure.

Companies in the report sample also couched their trade-off codes in the sustainability principle of ‘systems-thinking’. This refers to a conceptualization of the firm as part of a broader interdependent system that encompasses the firm’s social, economic, and ecological environment (see for example: Milne and Gray 2013; Bebbington and Larrinaga 2014). This is demonstrated in the following example from Company 39:

“A mine brings jobs, economic growth and long-term prosperity. It can also disrupt livelihoods, strain public services and require some people to move their homes. The impact of change must be sensitively managed, with everyone working together to find the best solutions” (Company 39, Report).

This example illustrates how the company surrounded the trade-off code (‘negative impact’; “disrupt livelihoods, strain public services and require some people to move their homes”) with references to the wider systems-level benefit that the company offers (“brings jobs, economic growth and long-term prosperity”), effectively cushioning this ‘bad news’ (as described by the interview participants).

Companies in the sample also presented their trade-off codes/instances alongside an acknowledgement of their responsibility for their stakeholders’ well-being (vis a vis company operations). As an example of this, Company 19 describes: “It takes an enormous amount of energy to design, assemble, ship, and use hundreds of millions of products all over the world. A portion of that energy comes from burning fossil fuels, which creates carbon emissions. Those emissions make up our carbon foot-print—our share of the climate change problem” (Company 19, Report). In this way, this company discloses on its ‘negative sustainability impact’ before acknowledging its responsibility to counter the global “climate change problem”.

Companies in the sample also referred to the theme of innovation as a means of overcoming the potential legitimacy threat posed by a trade-off situation (and code). As an example, Company 7 describes its trade-off (constraint of being unable to recycle paper products) alongside a form of incremental innovation (newly-implemented system of using biodegradable bags): “While paper towels can’t be recycled the way other paper products can, they’re ideal for composting. Washrooms throughout the building now have biodegradable bags that can be composted along with towels.” (Company 7, Report). Other companies referred to this innovation code from a more transformative perspective. In this case, Company 31 overcomes a technological constraint (trade-off code) through eco-innovation:

“In our pursuit of technologies to replace petroleum, we do not want to become dependent upon yet another material for which supplies or access is limited. Accordingly, our strategy is to design the use of these materials out of our products when possible, something we have been able to achieve in the new motors used in our [innovation name] technology” (Company 31, Report).

Finally, companies also described trade-off codes alongside mentions of target-setting—a concrete demonstration of company action to remedy any sustainability compromises. As an example, Company 46 states: “this year we made great strides toward realizing our goal of no harm to our people ...

In 2013, we set an ambitious target to be one of the safest resource companies in the world within five years” (Company 46, Report). Here, the negative impact of “harm to our people [from our own operations]” is countered with the safety target, as a concrete demonstration of the company’s commitment to employee health and safety.

4.5. Discussion

4.5.1. Extent of Trade-off Disclosures in Reports:

The findings indicate that the overwhelming majority of the study companies faced trade-off decisions in the practice of sustainability. Of the 85 companies that issued sustainability reports, 92% disclosed on either the compromise outcomes of sustainability trade-offs, or on the environmental factors that bring about (or make salient) trade-off situations. In the interviews, all 19 of the companies interviewed described facing trade-offs in the practice of sustainability. In all of these cases, these trade-off decisions necessitated some form of compromise—that is, the balancing and weighing out of competing demands from groups of stakeholders. Although these trade-off decisions influenced the companies’ practice of sustainability (e.g. by prioritizing one program over another or attending to one stakeholder group more than another), these discussions were wholly absent from the company reports in manifest form. The outcomes of these discussions (i.e., the compromises or prioritizations) as well as their antecedents (i.e., the conditions of “plurality, change, and scarcity”; Smith and Lewis 2011: 390) were nonetheless present in the reports. This evidence demonstrates that the (reporting) companies had in fact experienced trade-offs but had not described them overtly in their reports. This was confirmed via the interviews with some of these study companies, many of whom confirmed that they had purposefully chosen not to communicate these ‘trade-off conversations’ in their sustainability reports. Specifically, nine out of the 19 companies interviewed stated that they had only disclosed on their materiality trade-off process in their reports (as the sole trade-off discussion), and all 19 companies stated that they had not disclosed on any other non-materiality related trade-offs that they had indeed encountered.

Thus, in response to RQ 3-1, companies in the study sample did not communicate their trade-off experiences in their reports overtly and purposefully. Evidence of these companies’ trade-off experiences was nevertheless present (implicitly) in the latent content of the reports. This was further confirmed by

the interviews; all interview participants declared having experienced sustainability trade-offs in the practice of sustainability at their individual companies, even though these experiences were omitted (explicitly) from the reports.

The interviews also provided valuable insight into the reasons behind this omission. In response to RQ 3-2, this study demonstrated that the three key motivations that drove companies not to disclose on their trade-off decision-making processes were that trade-off discussions were seen as an exclusively-internal process that carries no relevance to stakeholders, that trade-off discussions correspond to a level of transparency that does not align with current approaches to reporting, and, finally, that trade-off discussions in reports present a potential threat to the legitimacy of the organization, in the eyes of its stakeholders. This 'legitimacy threat' theme was also visible in the reports. In these accounts, implicit mentions of trade-off experiences (i.e. trade-off codes) were couched in legitimizing references to the companies' commitment to the principles of sustainability (and social responsibility), and companies' demonstrations of having taken action in support of these principles. This finding supports the findings of Herzig and Godemann (2010) and underscores the legitimacy threat that trade-off disclosures appear to pose, as well as the largely instrumental and strategic impressions-management role that sustainability reporting appears to play, in the eyes of many of the study companies.

4.5.2. Trade-off Discussions as Legitimacy Threat:

What the interviewees and reports did not directly reveal, however, was the reason *why* trade-off discussions in particular (as opposed to all other forms of sustainability disclosures) were perceived as being so threatening as to warrant an omission in the reports. To understand the nature of this threat, it is necessary to examine what such disclosures would ideally look like.

As described in Chapter 3, a company's sustainability approach (whether instrumental or integrative) influences how it approaches trade-off decisions (by prioritizing either one objective or all objectives simultaneously). In the absence of any substantial evidence of trade-off disclosures (from either this work and the literature on trade-offs) we can theorize that these trade-off decisions should in turn, influence how a company discloses on these trade-offs. This link between performance and disclosure of these trade-off decisions alongside their outcomes is based on the principles of legitimacy theory. This theory dictates that disclosure is a "legitimizing tool" that companies use to shape public perceptions of their behavior and performance, in the face of poor performance (Cho and Patten 2007: 641; Patten 1991). In the case of trade-offs, this poor performance would take the form of the compromise outcomes of trade-

off decisions (e.g. greenhouse gas emissions from day-to-day company operations), while the disclosure would take the form of a description of the outcome itself, as well as of the trade-off decision that produced it.

Any company—whether integrative or instrumental in their sustainability approach—seeking to disclose on its trade-off decisions would ideally need to first acknowledge the trade-off and tension they face. This acknowledgement is a necessary component of transparency—a key objective of disclosure (Lozano and Huisinigh 2011). To qualify as a *trade-off* disclosure, this admission would then be followed by an explanation of how the trade-off decision was made, and the rationale behind it. This is where companies following different approaches would differ in their disclosures. Companies that follow an instrumental approach to sustainability would ultimately need to acknowledge their a priori prioritization of one of the trade-off dimensions over the other (e.g., business profitability over environmental sustainability)—essentially, how it has compromised sustainability. For these companies, such trade-off disclosures pose a significant legitimacy threat given that they expose the misalignment of a company's values with that of society. These companies would as a result, be less motivated to disclose on trade-offs in a substantive way and may thus resort to the tactics of impression management and omission, as shown here. In contrast, companies that follow an integrative approach would describe their trade-off decision-making process as being based on simultaneously achieving all competing objectives, without prioritizing one over the other. These companies have less of an incentive to resort to of impression management and omission with regards to trade-off disclosures.

Thus, in summary, companies that are compromising on sustainability perceive trade-offs as a larger legitimacy threat, and as a result, are less motivated to report on them, while companies that are not compromising on environment perceive trade-offs as relatively less threatening and would be more motivated to report on them.

4.5.3. Unsustainability of Sustainability Reporting:

These findings also highlight an important point, namely that companies are not currently incentivized to report at a level of transparency that would include disclosures on their sustainability decision-making process (beyond merely its outcome, or performance). This would entail a shift towards a “stronger focus on corporate processes and governance systems [as a means] to reduce the [reporting-performance] portrayal gap” (Michelon et al. 2016: 4), a change that Michelon et al. (2016) and Adams (2004) advocate. Instead, increased transparency beyond the level prescribed by these frameworks only brings with it

increased costs. Several companies interviewed described how trade-off discussions require a lot more reporting space to describe fully and contextualize. This additional level of transparency would either come at the expense of ‘positive story-telling’ (under limited messaging and reporting space), or would simply add to the (already wide) breadth of reports—a challenge several of the interviewed companies struggle with today. Indeed, this is demonstrated by the huge size of some of the reports analyzed (e.g. lengths of upwards of 500 pages). Moreover, recent empirical evidence has called into question the long-held assumption that sustainability reporting is a value-add process (i.e., valued by investors and shareholders; Cho et al. 2015).

On this basis, the interviewed companies appear divided on the future of sustainability reporting in its current (largely impressions-management driven form). One company (Company N), believes that trade-off disclosures represent the “next frontier” in corporate transparency. This company states:

“I think some of the organizations that are on the forefront of sustainability initiatives and reporting, like Wal-Mart, Unilever, even like [names specific sustainability leader firms]... I think they’ve reached a point where they do admit some of their shortcomings and challenges and use those as targets to address. I think that obviously makes for more robust and honest dialogue with stakeholders that are interested in this sort of reporting. I think it’s valuable, I think it’s the next frontier, but for an organization like ourselves, we’re not necessarily at that level. It’s not necessarily on our radar to disclose our shortcomings, or really aggressively be transparent about the trade-offs that we face” (Company N, Interview).

On the other hand, several other companies lament the ‘unsustainability’ of (this form of) sustainability reporting. Company D, for example, sums this argument up well, by stating:

“ There’s also a conflict in ... sustainability reporting ... I think a lot of companies are faced [with the challenge as to] who the audience is that [we] are preparing that material for, and there’s a tension between the use of that material and the use of a sustainability report for a broad audience, ... the way the content is formulated, how things are described [...] is at a much higher level than say on the other end of that spectrum if you were preparing the sustainability report for a responsible investment organization [...], so that trade-off is actually very challenging [...] In my view, that increasing [disclosure] volume is an unsustainable trend [...] the work it takes and the organizational drag that gets created trying to pull together all of that submission, [yet] the value associated with that exercise is diminishing. If I talk to responsible investors, a number of

them don't even look at the DJSI rankings or ratings. So, the question then becomes why does a company like ours do it then? That trend is going to have to reconcile itself" (Company D).

In this quote, Company D's manager decries the challenge of balancing a report's scope and depth. From the perspective of standards organizations and rating agencies, Company D faces pressure to increase the quality and extent of its disclosure (i.e., its depth), while from the perspective of a broader audience (e.g. consumers and community groups), the company faces pressure to similarly increase the scope of its disclosure (i.e., by targeting a wider audience). This challenge to increase these two competing dimensions of disclosure is made more difficult due to the diminishing business incentives of engaging in reporting (the "diminishing" "value" of the reporting "exercise", as described in the quote). This ultimately translates to an unsustainable trend in sustainability reporting.

4.6. Conclusion:

The purpose of this study was to explore whether, and how, the largest companies in Canada were disclosing on their experiences with sustainability-related trade-off decisions. This is important because trade-off decisions are integral to the practice of sustainability. This is due in large part to the way many companies define sustainability, as the practice of balancing a range of (competing) stakeholder needs, across a range of (competing) sustainability domains, and across both the short- and long-term horizon (van der Byl and Slawinski 2014). Sustainability trade-offs are not only central to the way sustainability is defined, but also in how it is achieved; trade-off decisions determine, for example, which corporate sustainability programs to undertake, which targets to set (and over which time horizon), and what to report on, if at all (Haffar and Searcy 2017).

Based on this, this study sought to discover whether or not companies were reporting on their sustainability trade-off decisions in their publicly-available sustainability reports, and their rationale for (not) doing so. To achieve this, this study followed an inductive methodology and a qualitative content analysis procedure to capture references to trade-off discussions in company sustainability reports. As a complement to this information, this study also relied on a content analysis of interviews with a subset of these firms. In summary, this study demonstrated that trade-offs are indeed "the rule rather than the exception" (Hahn et al. 2010: 279) in the practice of sustainability and play a significant role in shaping company priorities and action on sustainability issues. Despite their importance, companies are reluctant to disclose on how these decisions are made, or indeed, whether they are even faced at all. As a result, these discussions are largely left out of company disclosures (particularly in trade-off areas outside of

materiality analyses). This omission is driven principally by the intent to protect the legitimacy of the firm from the potential threat of 'bad news' (what trade-offs are considered synonymous with). Moreover, trade-off discussions require a level of transparency that companies are currently not incentivized to reach.

Based on these findings, this study also made a number of practical suggestions for strengthening the substantive (as opposed to instrumental) role of sustainability reporting—by, for example, emphasizing the process (including trade-off decision-making) dimension of sustainability, as much as its outcome (i.e. performance)—as well as exploring the implications of reporting on sustainability from a symbolic impressions-management standpoint. Further work is needed to explore other potential reasons why companies may not be reporting on trade-offs, which are outside the scope of those covered here (and the scope of the theoretical perspectives adopted in this study). These reasons may include for example, issues of control with regards to what companies may or may not be able to disclose, and the company's financial conditions and past environmental performance, and the relationship of these factors to the company's disclosure quality and scope. These findings presented in this study demonstrate that further work is needed to explore ways in which companies may be better incentivized to be more transparent around their trade-off decision-making, and how companies can effectively achieve this in their reports. Extending this even further, another interesting avenue of research would also be exploring ways in which companies may be encouraged to engage stakeholders around these discussions (just as with materiality assessments) and allow for stakeholder input and feedback into these decisions.

CHAPTER 5:

Conclusion

5.1. Summary:

Much of the existing academic and practitioner literature on corporate sustainability has endorsed a win-win (or 'business case') view of sustainability (see: Carroll and Shabana 2010; Salzmann et al. 2005). This perspective holds that by engaging in sustainability initiatives (including green product development), companies can realize both financial and social/environmental¹³ gains. This win-win ideal has become so popular among practitioners that it has begun to dominate the public corporate discourse on sustainability. As an illustrative example, 62 of the 85 (or 73%) reporting companies studied in Chapter 3 advertised some form of win-win thinking in their publicly-available sustainability reports (i.e., their reports contained the terms 'win-win' or 'business case'). Similarly, win-win thinking has also become widespread in corporate advertising: among other firms not studied here, at least 16 different companies now advertise their sustainability products or services under the exact same win-win slogan—'sustainability without compromise'¹⁴.

Although such business case thinking is a valuable ideal that may help motivate companies to undertake sustainability initiatives, it nevertheless limits the scope of these initiatives. This was demonstrated in Chapter 3, in the case of the two companies that missed out on potential sustainability gains due to their instrumental logic. More importantly still, in addition to being limiting, win-win thinking also ignores the inevitable tensions that are inherent to the very definition of corporate sustainability¹⁵, and the trade-offs that are typical of its practice.

The reason why trade-offs are often the "rule rather than the exception" in sustainability practice (Hahn et al. 2010: 217), is due to the fact that companies implement sustainability initiatives under conditions

¹³ Under this line of thinking (otherwise known as the instrumental approach to sustainability), a company's social and environmental performance are considered as being disconnected from its business performance. In other words, a company's financial success is not considered an aspect of its overall sustainability.

¹⁴ These include: Clorox, Xerox, 3M, Roy Farms, Paintfinity, 1 Hotel, Garden Court Hotel, Talbott Hotel, Aquadyne, CleanPlanet, A.BCH, Eco Ezee Ltd., Cigma, Atlas Packaging (EcoDesk 360), Volkswagen New Zealand, and SCANPAN.

¹⁵ As an example, Dyllick and Hockerts (2002) define corporate sustainability as "meeting the needs of a firm's direct and indirect stakeholders (such as shareholders, employees, clients, pressure groups, communities etc.), without compromising its ability to meet the needs of future stakeholders as well" (p. 131). This definition illustrates the tensions that companies face in meeting the needs of competing stakeholders, across competing time dimensions.

of ‘plurality, scarcity and change’. Companies face a range of competing stakeholders (whose expectations change over time), as well as budgetary and technical constraints, and changing financial conditions (which in turn, impact budgetary constraints). As a result of these constraints, companies engaged in the practice of sustainability face a range of sustainability trade-offs that inhibit the realization of win-win gains. This was recently demonstrated by Wright and Nyberg (2017), in their longitudinal study of how five Australian companies “respond to climate change over time” (p. 1633). In this study, Wright and Nyberg (2017) found that companies who projected an ideal of win-win thinking related to their climate change initiatives in their sustainability communications actually struggled to implement it in practice, over time. According to the study, this was due primarily to the persistent “tensions between the demands of the grand challenge [of decarbonization] and business imperatives” (Wright and Nyberg 2017: 1633).

In spite of the widespread presence of trade-offs in corporate sustainability, there is a dearth of research on how companies experience and maneuver around these critical decisions in practice. To remedy this gap, the aim of this research is to explore how companies perceive, resolve, and disclose their experience with trade-offs in the process of formulating and implementing their sustainability programs. To achieve this, this dissertation conducted a study in three phases. Each phase addressed a different aspect of the corporate trade-off experience, namely, how companies perceive trade-offs, how they manage them, and how they communicate them to their stakeholders. To explore these three diverse aspects, each phase relied on a different theoretical lens for the analysis. These lenses were the natural resource-based view of the firm (Phase I), organizational cognition theory (Phase II), and legitimacy and impression management theory (Phase III). To maintain continuity between all three phases, and to explore the companies’ own experiences with trade-offs (from their own perspective), the same thematic content analysis methodology was used throughout all three phases.

In Phase I, this study conducted a systematic review and content analysis of the trade-off literature published to-date at both conceptual and applied levels. The literature was analyzed through the theoretical lens of the natural resource-based view of the firm in order to determine the types of sustainability trade-offs that companies have reported experiencing, and whether these trade-offs may be transformed into synergies. This phase was guided by the following two research questions:

- RQ 1-1.** What are the trade-offs commonly encountered by managers in the pursuit of CS?
- RQ 1-2.** Can trade-offs encountered in the pursuit of CS transform into synergies?

Through this process, and in response to RQ 1-1, a hierarchical framework is proposed for the analysis of trade-offs based on their different categories, their root tensions, their interconnections, their links to sustainability synergies, and where they are encountered in the practice of sustainability, from policy to implementation. Through this framework, and in response to RQ 1-2, this study found that corporate sustainability trade-offs are in fact not fixed and may become synergies.

Phase II used an organizational cognition perspective, and posited that companies interpret and respond to these tensions in ways that reflect the company's underlying collective sustainability logic. The purpose of this phase of the dissertation was to explore this link. To achieve this, this phase of the study performed a qualitative content analysis of interviews with sustainability managers, as well as archival documents. This phase was guided by the following three research questions:

- RQ 2-1.** How do companies perceive trade-offs in the practice of sustainability?
- RQ 2-2.** How do companies resolve these trade-offs when they encounter them?
- RQ 2-3.** How do organizational logics shape the companies' experiences with these trade-offs?

In answering RQ 2-1, on how companies experience trade-offs in sustainability, this study found that, in fact, all companies experience trade-offs regardless of their industry type, or dominant logic. Companies that displayed elements of an instrumental logic saw trade-offs as binary and tended to resolve them by counterbalancing the 'lose' dimension with 'wins' elsewhere in other impact areas. Companies that displayed elements of a more integrative logic, on the other hand, saw trade-offs as non-binary, long-term, strategic allocation decisions. These companies approached trade-off decision-making using an iterative, risk-based approach that relied on partnerships and knowledge sharing. As such, trade-offs can be said to be inherent to the practice of sustainability, particularly over the short-term. With regards to RQ 2-3, on the role of organizational logics in trade-off decision-making, this study also demonstrated that the way companies perceive trade-offs (as either binary or non-binary) does differ and is shown to be influenced by the company's underlying logic. With regards to RQ 2-2, on how companies attempted to manage trade-off decisions, this study found that companies that took a pre-dominantly instrumental approach to sustainability (and were thus more likely to see trade-offs as being binary) appeared to lack the decision-making routines (e.g. structured risk-based decision-frameworks) and capabilities (e.g. sustainability reporting systems) to help them in resolving any trade-offs that they encounter.

After identifying how companies perceive and manage trade-offs in practice, the purpose of the final phase (Phase III) of this study was to determine whether, and how, companies are reporting on these

trade-off decisions in their sustainability reports. Using an inductive approach, this phase of the study analyzed 85 sustainability reports and 19 interviews with sustainability managers using qualitative content analysis. This analysis was guided by the following two research questions:

RQ 3-1. Do companies communicate their trade-off experiences in their sustainability reports?

RQ 3-2. What motivates companies to do so (or not)?

This final phase of this study found that the overwhelming majority of companies surveyed (92% of all reporting companies in the sample and all 19 companies interviewed) had encountered trade-offs in the practice of sustainability but had not disclosed these discussions (and decision-making processes) explicitly in their reports. Evidence of these accounts were nevertheless present in the implicit (or latent) content of the reports. These (latent) descriptions were also surrounded by ‘legitimizing talk’—affirmations of the companies’ commitment to (and demonstration of) sustainability principles. These findings highlight the negative light in which many companies perceive trade-offs (as ‘bad news’), and the potential legitimacy threat that their disclosure in reports poses. This final phase of the dissertation demonstrated that trade-offs are indeed “the rule rather than the exception” (Hahn et al. 2010: 279) in the practice of sustainability and play a significant role in shaping company priorities and action on sustainability issues. Despite their importance, companies are nonetheless reluctant to disclose on how these decisions are made, or indeed, whether they are even faced at all. As a result, these discussions are largely left out of company disclosures (particularly in trade-off areas outside of materiality analyses). This study found that this omission was driven principally by the intent to protect the legitimacy of the firm from the potential threat of ‘bad news’ (what the companies considered trade-offs synonymous with). Moreover, this study also found that trade-off discussions require a level of transparency that companies are currently not incentivized to reach. This is due to the fact that the majority of voluntary reporting frameworks focus on reporting outcomes of corporate sustainability practice, as opposed to the process itself (and the trade-off decisions that this would entail).

5.2. Contribution:

In addition to these findings, this study made a number of contributions to the three bodies of literature on corporate sustainability, sustainability decision-making, and sustainability reporting. At a top level, these include:

1) Insight into the link between sustainability trade-offs and sustainability synergies:

On a conceptual level, this study established that trade-offs stem from a series of hierarchical root tensions. This tension hierarchy implies that trade-offs and synergies are different sides of the same coin, and as a result, sustainability trade-offs may (ideally) be transformed into synergies. In practice, however, this study demonstrated that this was not always possible. This dissertation provided empirical evidence in support of the idea that trade-offs are inherent to the practice of sustainability. This finding confirms that instrumental win-win thinking is an ideal that is difficult to implement in practice, particularly further along the sustainability implementation process, due to the factors of 'plurality, scarcity, and change'.

2) Evidence of the limiting nature of instrumental logics in sustainability:

Secondly, this study demonstrated that organizational logics influenced how companies managed trade-offs. From a decision-making perspective, this study demonstrated that companies with a more integrative-leaning logic tended to see trade-offs from a narrow, binary perspective, which in turn limited the company's options with regards to resolving these trade-offs. For example, companies that described trade-offs as being clear-cut win-lose decisions tended to resolve these decisions by counteracting the lose dimension elsewhere. Such a strategy does little to resolve the actual tension, and only offers a superficial solution that perpetuates the need for compromise.

This study also provided empirical evidence that instrumental sustainability logics have a cognitively-limiting (or 'blinder') effect on the companies. These companies, in their pursuit of instrumental sustainability and short-term business-case gains, missed out on additional, wider sustainability gains due to the blinding effect of their underlying logic.

3) Indication of the 'unsustainability' of current approaches to sustainability reporting:

Finally, this dissertation also demonstrated that a significant percentage of companies studied demonstrated an instrumental approach to sustainability reporting (as shown in Chapter 4). These companies likened reporting to 'story-telling'—a strategic impressions management exercise dominated by the quest for legitimacy, at the cost of full transparency. Voluntary reporting standards appear to have done little to quell this trend (as described by the interviewees in this study). Several companies described how a higher degree of transparency (that would include trade-off discussions) would require going above and beyond these standards, and issuing longer and longer reports, which ultimately translated to larger and larger capital investments in the reporting process. In addition to the rising costs of substantive disclosure, the companies surveyed in this study also described the lack of incentives for this level of

transparency, and the pull towards ‘story-telling’. As a result, several companies described the challenge of continuing to provide transparent, substantive disclosures within a system that does little to incentivize more transparent reporting—and does not consistently push back at ‘story-telling’ approaches. In this way, this study revealed the dangerous unsustainability of current approaches to sustainability reporting and highlighted the need for stronger incentives for substantive reporting (including trade-off disclosures).

5.3. Research Limitations:

It is important to note, however, that, as with all studies, this study suffered from several limitations. With regards to Phase I, it is important to note that although the framework that was developed in the study is comprehensive, it is by no means exhaustive. More empirical work is needed to further refine the trade-off categories identified, as well as their inter-connections and their arrangement in the framework. Empirical testing may also establish which categories have been overlooked; a limitation which may be due to two reasons. Firstly, the categories that emerged from the content analysis were dependent on the study sample of trade-off articles captured by the search-and-screen process. This process was limited in scope, as per the study boundary, which was limited to articles with a focus on trade-off outcomes or decision-making in corporate sustainability at the level of a firm or manager. This boundary was expressed in: 1) the search terms selected (based on a consideration of the reliability/validity of the process), and 2) the inclusion/exclusion criteria for the article screens.

On the other hand, some studies examined here also suggested other categories of trade-offs that were purposely not captured in the model (see for example: Byggeth and Hochschorner 2006; Delmas and Blass 2010; Hahn et al. 2012; Ramirez 2012). Examples of the kind of trade-offs that were not incorporated in the framework include: the trade-off between sustainability ranking schemes (Delmas and Blass 2010), and the individual-level trade-offs that exist between the preferences of different decision-makers within an organization (Hahn et al. 2010). The reason for this exclusion is that this framework was based on recurring conflict themes (trade-off, tension, or paradox) that were encountered across multiple studies. These and the other excluded trade-off categories are indeed valid yet may need further research to assess whether and where else they occur, outside of the context of their original studies.

With regards to Phase II, one limitation of this study stemmed from the use of self-disclosures such as annual reports and managerial interviews, which carry a possible impression management bias, which present a potential threat to the validity of the results. This threat was overcome in two ways: firstly, by keeping the names and identities of all study participants and their parent companies confidential, and

secondly, by triangulating these self-disclosure data sources with third-party media articles in order to paint a more accurate picture of the company's approach to sustainability and its trade-offs. Another validity threat came from the use of managerial interviews to study an organizational level knowledge construct. This threat was similarly overcome through the use of annual reports to supplement the interviews; annual reports represent the company's collective logic.

Finally, with regards to Phase III of this study, the first threat stems from the potential bias that the self-disclosures (be it interviews or reports) may contain. This threat stems from the fact that the data sources chosen in this study were limited to what the 'speakers' disclose—whether this disclosure comes from the companies themselves ('speaking' through their reports) or from the individual practitioners (speaking through the interviews). These source materials may be skewed by two different types of source bias (or what Krippendorff (2004) terms 'textual contamination' [p. 31]). On the one hand, the reports may be beset with 'green-washed' information, or purposefully positive news on the company's sustainability initiatives or performance (Seele and Gatti 2017). This type of source bias speaks to the promotional role of company-controlled communication and the persuasive power of positive sustainability contributions. On the other hand, the interview responses may also be similarly influenced by "social desirability bias" (Angus-Leppan et al. 2010: 242). In this study, these 'source bias' threats were overcome by keeping the identities of the interviewed companies and individuals confidential, and furthermore, using two separate yet complementary data sources (official reports and interviews), which serves as a form of triangulation.

5.4. Future Research:

These threats notwithstanding, this study also shed light on interesting potential avenues of further research. During the course of this dissertation research, the literature on corporate sustainability has seen continued growth in the area of trade-off research, as demonstrated in Chapters 2 to 4. This research (e.g. Van der Byl and Slawinski 2015) has focused predominantly on establishing whether and how trade-offs occur in the practice of sustainability. In reviewing this growing body of (predominantly descriptive) work, this study has demonstrated that the next stage of trade-off research lies in the realm of the prescriptive—in developing practical decision aides to help companies more effectively maneuver sustainability trade-offs from an integrative sustainability perspective. One particularly promising (and growing) avenue for future work involves the application of the twin domains of paradox thinking and organizational ambidexterity (in the face of paradoxes) to the field of corporate sustainability (following: Hahn et al. 2014; 2017).

According to the strategic management literature, organizational paradoxes (Putnam et al. 2016) may be defined as being “interdependent and mutually exclusive opposites ... [that] [persist] over time and [make] choice difficult” (Putnam et al. 2016: 76). In the area of corporate sustainability, these organizational phenomena can be seen in the persistent and paradoxical need for managers to “accommodate competing yet interrelated economic, environmental, and social concerns that reside at different levels and operate in different logics and time frames” (Hahn et al. 2014: 467). To effectively manage these types of paradoxes, a small yet growing number of studies have begun to apply the concept of organizational ambidexterity. This concept may be defined as being the ability to resolve organizational paradoxes and “complexity through embracing both poles [of the paradox] simultaneously” (Putnam et al. 2016: 74). The application of this concept to the issue of sustainability tensions would allow companies “to simultaneously pursue both instrumental and moral [sustainability] initiatives – despite the tensions and contradictions that exist between them” (Hahn et al. 2016: 214).

The literature on sustainability tensions, paradoxes, and ambidexterity, therefore, explores how the principles of organizational paradoxes and ambidexterity can be applied to explain and prescribe company behavior in the face of sustainability tensions. Thus far, this (largely conceptual) literature has focused on the descriptive aspects of a paradox/ambidextrous approach to sustainability tensions. This includes for example, identifying the types of responses to sustainability tensions that companies may display (e.g. Hahn et al. 2014; Mason and Doherty 2016). More work is needed to understand how companies can effectively cope with the persistent presence of tensions without resolving them in a traditional sense (that is, while keeping the paradox ‘open’), as opposed to merely trying to overcome the tension, by attempting to transform the trade-off into a synergy (which this study has demonstrated cannot always be achieved). On this basis, more work is also needed to develop decision support tools and strategies based on this type of paradox thinking, to help guide companies in more effectively managing tensions and trade-offs in the practice of sustainability.

A second avenue for future work lies in the area of sustainability reporting. Based on the findings of this study (and in particular, Chapter 4), more work is needed to develop stronger incentives for companies to shift away from instrumental reporting approaches to more substantive ones. This dissertation recommended the move towards process-based sustainability disclosures, alongside the standard outcome-based disclosures that currently predominate sustainability reports (and reporting frameworks). Along this line, more research is needed on how companies may better improve the substantive quality

of their reports, including disclosing their decision-making processes—particularly for trade-offs, which play a key role in shaping a company’s practice of sustainability.

APPENDIX A: TABLES—CHAPTER 2

Reference	Contribution to Trade-off Research	Contribution to Framework (Tension and/or Trade-off Category)
Walley and Whitehead 1994	This study argued that the difficulty of realizing win-win gains in CS is mounting—or that trade-offs between profitability and environmental sustainability are inevitable in the practice of CS— and that as a result, managers need to strategically select CS initiatives ‘to enhance environmental spending’.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-FP</i>
Porter and van der Linde 1995	This study argued that firm-level innovation is key to enhancing resource productivity and overcoming trade-offs between environmental sustainability-profitability.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-FP</i>
McWilliams and Siegel 1997	This study found that management studies examining the link between social responsibility-profitability (all of which found evidence in support of ‘win-win’) suffered from a number of critical errors in research design, which undermines the validity of their results.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>SP-FP</i>
Xepapadeas and De Zeeuw 1999	This study found that in the face of environmental regulation, firms face the decision of either downsizing or ‘modernizing’ (upgrading eco-efficiency) their capital. Using a mathematical model, it found that the negative compromise (‘loss’ dimension) of the trade-off between environmental sustainability and profitability would be minimized if the firm chooses to invest in efficiency improvements.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-FP</i>
Kaptein and Wempe 2001	This study argued that the practice of CS necessitates a consideration of ethics, values, and dialogue to balance conflicting demands — particularly in the implementation of sustainability management systems and in sustainability reporting. It also proposed a conceptual model for the implementation of CS.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-FP-FP</i> <i>Time</i> <i>Stakeholder</i>
Berens et al. 2007	This study examined the implications of the trade-off between social responsibility and profitability (here considered as ‘corporate ability’, which encompasses: product/service quality, reputation, perceived value by customers), in the eyes of certain stakeholders.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>SP-FP</i>

Reference	Contribution to Trade-off Research	Contribution to Framework (Tension and/or Trade-off Category)
Maxfield 2008	This study discussed the relationship between social responsibility (here considered as 'citizenship') and profitability ('competitive strategy') under two economic theories: the neoclassical approach and the alternative Austrian/evolutionary perspective. It argued that under the former, citizenship and strategy cannot be "easily reconciled" (p. 367) (i.e. trade-offs would be inherent to CS initiatives).	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>SP-FP</i>
Makni et al. 2009	This study found empirical evidence for a negative/trade-off link between individual measures of social responsibility (based on available social performance scores) and profitability (specifically using return on assets), in the short-term. A test using composite measures showed no link.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>SP-FP</i> <i>Time</i>
Blanco et al. 2009	This study analyzed empirical studies testing the link between environmental sustainability-profitability, with an exclusive focus on voluntary environmental initiatives with a long-term effect. It found that there was no consensus on whether the relationship was a trade-off or synergy, and that instead, the relationship is determined by a number of factors such as the type and extent of abatement initiatives undertaken.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-FP</i>
Vilanova et al. 2009	This study argued that trade-offs between social responsibility and profitability ('competitiveness') result from a number of 'inherent' sustainability paradoxes (in strategy, competitiveness, accountability and stakeholders).	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>SP-FP</i> <i>Time</i> <i>Stakeholder</i> • Scope-Depth
Angus-Leppan et al. 2010	This study found empirical evidence that the perceptions of the conflict between environmental sustainability and social responsibility varied across stakeholder groups (either as a trade-off or synergy); this variation was explained from a sensemaking perspective.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-SP</i>
Epstein and Widener 2010	This study proposed a model for firms to systematically identify impacted stakeholders, to help overcome the conflict among competing stakeholder demands and to enhance managerial decision-making.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>SP-FP</i> <i>Stakeholder</i>

Reference	Contribution to Trade-off Research	Contribution to Framework (Tension and/or Trade-off Category)
Hahn et al. 2010	This study proposed one of the earliest models for the analysis of trade-offs and conflicts in CS. These were categorized according to various dimensions (outcome, temporal, process) and 'action' levels (individual, organizational, industry, societal).	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-SP-FP</i> <i>Time</i> <i>Stakeholder</i>
Pinkse and Kolk 2010	This study identified three types of trade-offs encountered by firms as they undertake technological innovation in response to climate change pressures.	<ul style="list-style-type: none"> • Measurement – Management
Csutora 2011	This study proposed a classification of firms (such as escapist, conformist) based on empirical evidence of their relative and absolute eco-performance (eco-efficiency or eco-effectiveness, respectively). It proposed the 'scope-depth' and 'policy-performance' (measurement-management) paradoxes in CS.	<ul style="list-style-type: none"> • Private Value-Shared Value • Scope-Depth • Measurement – Management
Guenster et al. 2011	This study found empirical support for a negative/trade-off relationship between sustainability (using eco-efficiency scores) and profitability (measured using Tobin's Q, a forward-looking measure of firm value) in the short-term (<10 years), beyond which the relationship became one of synergy.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-FP</i> <i>Time</i>
Li and Toppinen 2011	This study identified a range of factors that either 'impede or enhance' the impact of CS in the forest-based industry. Impeding factors result in a conflict between the responsibility/sustainability-profitability goals, while enhancing factors result in win-win.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-SP-FP</i> <i>Stakeholder</i>
Dutta et al. 2012	This study argued that managerial perceptions of (and reactions to) the conflict between social responsibility-profitability varied depending on the manager's theoretical inclination (with respect to: agency theory, stewardship theory or the proposed social stewardship perspective).	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-SP-FP</i>
Figge and Hahn 2012	This study proposed a cost-benefit assessment approach based on opportunity cost logic (as opposed to business case thinking) to evaluate the trade-off between environmental sustainability and profitability, and to identify win-win strategies.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-FP</i>

Reference	Contribution to Trade-off Research	Contribution to Framework (Tension and/or Trade-off Category)
Gavronski et al. 2012	This study identified a trade-off between different approaches for abatement (pollution prevention vs control or abatement vs environmental management systems), encountered by manufacturing firms undertaking CS initiatives.	<ul style="list-style-type: none"> • Scope-Depth: <i>Implementation approach</i>
Hahn et al. 2012	This study demonstrated a cost-benefit assessment (based on efficiency targets) to evaluate the trade-off between the financial and environmental aspects (as well as among the different environmental aspects themselves) of an emissions-reduction project.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>SP-EP-FP</i> • Scope-Depth
Minoja 2012	This study argued that a company must adopt an ambidextrous and dynamic approach to balancing the conflicting needs of its stakeholders, and to meet its dual profitability-social responsibility goals.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-SP-FP</i> <i>Stakeholder</i> • Scope-Depth
Ramirez 2012	This study argued that paradoxes are inherent to sustainable development and CS, and identified four types (e.g. paradox of autonomy, paradox of renewal). It proposed that these paradoxes represent tensions between conflicting objectives that may result in either competition or complementarity.	<ul style="list-style-type: none"> • Measurement – Management: <i>Management Approach</i>
Winn et al. 2012	This editorial highlighted the need for new approaches (in management theory, in the practice of CS, and in sustainability education) that would strengthen decision-making in the face of CS trade-offs.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-SP-FP</i>
Cainelli et al. 2013	This study found empirical evidence that the relationship between sustainability (as GHG emissions intensity) and profitability (as firm growth) was negative but dependent on contextual factors (i.e., depends on the type of GHG under analysis, and the extent of regulatory emissions constraint).	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-FP</i>
Varenova et al. 2013	This study examined managerial perceptions of the conflict between social responsibility-profitability; found that the majority of corporate executives perceived the conflict instead as synergy, but did nevertheless hold a “narrow view” (p. 190) of social responsibility.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>SP-FP</i>

Reference	Contribution to Trade-off Research	Contribution to Framework (Tension and/or Trade-off Category)
Venn and Berg 2013	This study found that in Base of the Pyramid ventures, the conflict between responsibility-profitability leads to a negative compromise (trade-off) due to certain organizational barriers (including resource constraints), and the inability to measure intangible benefits by traditional metrics. It found that these barriers were being partially overcome through social intrapreneurship initiatives.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>SP-FP</i> <i>Stakeholder</i>
Wood et al. 2013	This study examined the decision-making process by which managers evaluate 'unethical' decisions involving the trade-off between environmental, social, and financial aspects. It found that the way managers approach unethical decision-making involving trade-offs was influenced by how they "mentally represent the decision context" (p. 118, or 'psychological distance').	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>SP-FP</i>
Bansal and DesJardine 2014	This study argued that inter-temporal trade-offs are central to the concept of CS, and inherent in its practice (thus differentiating sustainability from responsibility).	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-SP-FP</i> <i>Time</i>
Beckmann et al. 2014	This study proposed the use of an ordonomic approach (involving effective corporate governance and stakeholder engagement) for firms to transform trade-off scenarios (between environmental, social and financial aspects) into win-win gains.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-SP-FP</i>
Epstein et al. 2014	This study found that tensions are the source of trade-offs and synergies in CS (or 'competition' and 'complementarity'), and that these tensions tend to translate into trade-offs in the short-term due to a number of factors, chiefly resource constraints. It also found evidence of an emergent paradoxical perspective of tensions (whereby managers pursue both trade-off and synergy strategies).	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>SP-EP-FP</i>
Hahn et al. 2014	This study extended the application of the trade-off framework presented in Hahn et al. 2010 to cover sustainability paradoxes and resolution strategies aimed at resolving them.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-SP-FP</i> <i>Time</i> <i>Stakeholder</i>

Reference	Contribution to Trade-off Research	Contribution to Framework (Tension and/or Trade-off Category)
Teng et al. 2014	This study found empirical evidence for U-shaped relationship between profitability and responsibility (implying that CS carries a non-monotonic effect on financial performance). It also found support for the mediating effect of organizational learning on value creation/overcoming trade-offs.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-SP-FP</i> <i>Time</i>

Table 2-1: A summary of the references reviewed based on their contribution to trade-off research and to the proposed framework (in terms of the emergent tension and/or trade-off categories they included). This table is limited to the theoretical studies (described in Figure 2-3), which have been listed chronologically.

Reference	Contribution to Trade-off Research	Contribution to Framework (Tension and/or Trade-off Category)
SUPPLY CHAIN		
Handfield et al. 2002	This study proposed an AHP (Analytical Hierarchy Process) model for supplier assessment that incorporates traditional and (conflicting) environmental selection criteria; this model may be used as a decision-support tool in trade-off situations.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-FP</i> <i>Stakeholder</i>
Holt and Watson 2008	This study discussed the various conflicts encountered in sustainable sourcing decisions in the cut flower industry and their implications. These conflicts appear as trade-offs between various competing objectives, such as for example emission reductions vs labor rights.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-SP-FP</i> • Scope-Depth: <i>Performance targets</i> <i>Implementation approach</i>

Reference	Contribution to Trade-off Research	Contribution to Framework (Tension and/or Trade-off Category)
SUPPLY CHAIN (CONTINUED)		
Chaabane et al. 2011	This study proposed a model for optimizing the trade-offs between traditional and environmental criteria when designing 'green' supply chains.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-FP</i>
Wang et al. 2011	This study proposed a model for optimizing the trade-offs between traditional and environmental criteria when designing 'green' supply chains, using a 'total cost' approach.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-FP</i>
Wu and Pagell 2011	This study examined how firms incorporate environmental considerations into supply chain management decisions, and how they face the trade-offs (across time horizons and performance dimensions) inherent in this process. It found that the firms under study successfully navigated these trade-offs through the use of decision-support 'rules'; the study was able to identify several company-level archetypes based on the pattern of 'rules' followed (termed 'postures').	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-SP-FP</i> <i>Time</i>
Dai and Blackhurst 2012	This study proposed a model that combines QFD (Quality Functional Deployment) with AHP (Analytical Hierarchy Process) for supplier assessment that incorporates traditional and triple-bottom-line sustainability criteria; this model may be used as a decision-support tool in trade-off situations.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-SP-FP</i> <i>Stakeholder</i>
Reuter et al. 2012	This study investigated the sustainability-profitability trade-off faced by purchasing managers in supplier assessment (which manifested as either 'cost-prevalence' or 'sustainability-prevalence' in supplier-selection decisions), when considering three different groups of stakeholders. It found that the degree of 'formalization of ethical culture' and the proximity of the stakeholder group considered were partial mediating variables in the selection decisions.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-SP-FP</i> <i>Stakeholder</i>
Li 2013	This study proposed a model for optimizing the trade-offs between traditional and environmental criteria when designing closed-loop supply chains.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-FP</i> <i>Time</i>

Reference	Contribution to Trade-off Research	Contribution to Framework (Tension and/or Trade-off Category)
SUPPLY CHAIN (CONTINUED)		
Nagurney et al. 2013	This study proposed a systems-based, game-theory model for the optimization of supply chain networks. This model incorporates traditional and (conflicting) environmental criteria and considers the effect of multiple firms in non-cooperative competition.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-FP</i>
Paksoy and Özceylan 2014	This study proposed a model for optimizing the trade-offs between traditional and environmental criteria when designing 'green' supply chains, using a 'total cost' approach. Unlike Wang et al. 2011, this study considered the amount of 'noise pollution' generated and factored in different transportation variables (such as road roughness).	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-FP</i>
Egels-Zandén et al. 2015	This study examined the different conflicts and trade-offs that emerge in the practice of supply chain transparency at a case-study firm, which ultimately lead to differing 'transparency outcomes' along its supply chain.	<ul style="list-style-type: none"> • Scope-Depth • Measurement – Management: <i>Management Approach</i>
MEASUREMENT/DISCLOSURE		
Laine 2005	This study found empirical evidence that the majority of firms under study defined sustainable development in their published sustainability reports in win-win terms; a discussion of trade-offs in the practice of CS was notably absent.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-SP-FP</i>
Hess 2008	This study proposed a conceptual model of social reporting based on three key reporting objectives ('pillars'): disclosure, development, and dialogue. It discussed the tensions present within each (and among the different) objective (e.g., the conflict between disclosing relevant information and disclosing favorable information), and their implications.	<ul style="list-style-type: none"> • Scope-Depth • Measurement – Management
Delmas and Blass 2010	This study examined the trade-offs encountered in the rating of firms' environmental performance within the domain of SRI (Socially Responsible Investing). It identified a number of these trade-offs (e.g. trade-offs between conflicting environmental targets, between short and long-term indicators, and between "what can be measured and what should be measured" based on the overall relevance of the information captured, p. 248), and provided recommendations on how they may best be navigated.	<ul style="list-style-type: none"> • Private Value-Shared: <i>Time</i> • Scope-Depth: <i>Performance targets</i> • Measur. – Manag.

Reference	Contribution to Trade-off Research	Contribution to Framework (Tension and/or Trade-off Category)
MEASUREMENT/DISCLOSURE (CONTINUED)		
Herzig and Godemann 2010	This study found that most of the sustainability reports under study did not make any mention of trade-offs or conflicts between the various aspects of sustainability, and that the managers developing these reports perceive discussions of trade-offs to be detrimental to the company's image or its legitimacy.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-SP-FP</i>
Joseph 2012	This study described the various tensions and ambiguities encountered in sustainability reporting under the GRI (Global Reporting Initiative), despite the framework's effort at enhancing the objectivity of the reporting process.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-SP-FP</i> <i>Stakeholder</i> • Measurement – Management: <i>Measurement Approach</i>
Cormier and Magnan 2015	This study tested the link between a firm's environmental report disclosures, its social legitimacy (based on news media content), and its economic performance (represented by analyst earnings forecasts) and found evidence of synergy. It also found that this synergy exists regardless of the motivation behind the disclosure (whether the disclosures were driven by financial or sustainable development considerations).	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-SP-FP</i> <i>Stakeholder</i>
PRODUCT and PROCESS		
Stuart et al. 1999	This study proposed a model for product/process improvements in manufacturing that incorporates traditional and (conflicting) environmental criteria, using a life cycle approach.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-FP</i>
Ahmed 2001	This study proposed a framework for integrating environmental considerations into operations management using the TQM (Total Quality Management) model; this framework may be used as a decision-making tool in trade-off situations.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-FP</i>

Reference	Contribution to Trade-off Research	Contribution to Framework (Tension and/or Trade-off Category)
PRODUCT and PROCESS (CONTINUED)		
Byggeth and Hochschorner 2006	This study examined the effectiveness of various Eco design tools in evaluating trade-off decisions encountered in product development and procurement. It identified various trade-off situations encountered by managers/designers, for which they would need decision-making support. It also highlighted the need for stronger decision-support tools that incorporate a weighting system for the different (conflicting) criteria.	<ul style="list-style-type: none"> • Scope-Depth: <i>Performance targets</i> • Measurement – Management: <i>Measurement Approach</i>
Bryson and Lombardi 2009	This study explored how two real-estate development firms in the UK perceived and evaluated the trade-off between sustainability and profitability, as they actively work sustainability considerations into their business models and operations. It found that a 'discursive formulation' of the notion of profitability helped mediate the trade-off.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-SP-FP Time</i>
Chen and Zhang 2013	This study examined the trade-off decisions faced during the green product design process when considering both traditional and environmental design criteria, under different technology frontier curves. Based on the shape of the frontier curve, this study proposed the optimal design/marketing strategies that would allow for win-win solutions.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-FP</i>
Driessen and Hillebrand 2013	This study examined the various trade-offs encountered in the product development process as product developers attempt to incorporate sustainability considerations into the product design, and to balance the conflicting needs of various stakeholder groups. It found that organizational learning can improve the firm's ability to effectively integrate multiple stakeholder issues during product development, which can impart a competitive advantage.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-SP-FP Stakeholder</i> • Scope-Depth: <i>Performance targets</i>
Liu and Huang 2014	This study proposed a model for production scheduling that incorporates traditional and environmental considerations; this model may be used as a decision-support tool in trade-off situations.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-FP</i>

Reference	Contribution to Trade-off Research	Contribution to Framework (Tension and/or Trade-off Category)
PRODUCT and PROCESS (CONTINUED)		
Martín-Peña et al. 2014	This study identifies the costs and benefits (and the conflicts between the two) faced by a case-study firm, when investing in an EMS (Environmental Management System) to manage its environmental impact. It found that in this case, the benefits outweighed the costs of adoption.	<ul style="list-style-type: none"> • Private Value-Shared Value: <i>EP-FP</i>

Table 2-2: A summary of the references reviewed based on their contribution to trade-off research and to the proposed framework (in terms of the emergent tension and/or trade-off categories they included). This table is limited to the applied studies (described in Figures 2-3 and 2-4), which have been listed chronologically.

APPENDIX B: TABLES – CHAPTER 3

Coding Categories	Corporate Sustainability (CS) Approach Codes	Illustrative Quotes and Examples
CS Practice	CS action - align with Standards	e.g. reporting to GRI guidelines (Company , annual report) (Company 18, Annual Report)
	CS action - community	e.g. stakeholder educational programs (Company 17, Annual Report)
	CS action - disclosure	e.g. issuing sustainability report (Company 1, Annual Report)
	CS action - disclosure - symbolic	"Our culture is positive news" [in reports] (Company 10, Interview)
	CS action - eco-efficiency	e.g. energy efficiency (Company 12, Annual Report)
	CS action - employee engagement	e.g. community volunteering opportunities for employees (Company 11, Media Articles)
	CS action - employee initiatives - symbolic	e.g. media reports indicate that company fails to effectively implement employee wellness program (Company 8, Media Articles)
	CS action - green products	e.g. re-engineering product lines (Company 15, Annual Report)
	CS action - impact reduction	e.g. switching over to renewable energy sources (Company 15, Interview)
	CS action - noncompliance	e.g. pollution fines (Company 1, Media Articles)
	CS action - supply chain	e.g. supplier audits (Company 13, Media Articles)
CS Strategy	CS as add-on	"if sustainability were more of a strategic priority which it probably isn't right now [for us]" (Company 14, Interview)
	CS based on systems science	"drove us towards the metrics that we have in terms of the cap on emissions as well as having science-based targets for our own emissions and our own products" (Company 4, Interview)
	Integrated CS strategy	"it's not like you're saying here's the environment here's operations, it's kind of seen as part of operations as much as exploration or any sort of long term part of the business, it's kind of really fairly well [embedded]" (Company 1, Interview)
	Triple Bottom Line (TBL) notion of CS	"This idea of triple bottom line where everything is balanced and considered equally" (Company 3, Interview)
	Top management - not supportive of CS	"That's a function of not necessarily having board level mandate [for CS]" (Company 18, Interview)
	Top management – supportive of CS	"And so, you know, possibly we've experienced less trade-offs than the other organizations, because we dedicate these resources in a way that's you know maybe a little bit more robust compared to other organizations [...]. We are really proud of that and I know that our executive level are (sic) really proud of [our CS report] and speak about it a bit" (Company 7, Interview) "There is very strong support here for the work that we're doing" (Company 7, Interview)

Coding Categories	Corporate Sustainability (CS) Approach Codes	Illustrative Quotes and Examples
CS Motivation	Business case motivation	<p>"Do our customers care [about particular CS issue]? Do our investors care? We don't seem to think so" (Company 16, Interview)</p> <p>"So in terms of our approach and allocation of resources to it, I would say it's an extension of our overall business philosophy that we attempt to be as efficient as possible, and until there's a clear incentive or motive for us to do more, until it impacts our business operations or our personnel or there can be a business case for us to increase the resources associated with it, we would not make that decision" (Company 14, Interview)</p>
	Business prioritized	"If we are struggling in the market then our decision would be, a more cost-effective decision would be made, but if we're doing well, then they might be looking, look into some further options that might, in the long run will increase the viability of the facility, however in the short term it looks like a big outlaying of money, so. I think it's based on how we're doing in the market" (Company 13, Interview)
	Competitiveness - benchmark against peers	<p>"I mean, some of them [investors] might [care about a particular CS issue] if we're ranked amongst our peers at certain things, but if they're not, there really isn't a business benefit to do it" (Company 16, Interview)</p> <p>"Our organization tends to try to norm towards its peers" (Company 7, Interview)</p>
	Competitiveness - leader in industry	"In order to be considered leaders we sort of internally want to have investments in renewable energy" (Company 10)
	Compliance	"We consider ourselves compliance heavy" (Company 14, Interview)
	CS action in reaction to pressure or scrutiny	<p>"There's a reputational cost for the kind of negative stories that come out about [particular CS issue]" (Company 11, Interview)</p> <p>"it's not our customers that are giving us more of the pressure, some are, but it's mostly the [...] activists groups, and their campaigns targeting [our company]" (Company 16, Interview)</p>
	Creating shared value	e.g. a telecom company that provides its customers with internet access, and society with enhanced opportunities for connectivity (Company 11, Annual Report)
	Customer demand motivates CS	"I would say our company at this stage because we have not necessarily been incentivized by our customers, that we don't go the full extent of executing sustainability reporting to the same level that our customers do or that other organizations in the industry do" (Company 14, Interview)
	Driven by stakeholder expectations	"There's quite a bit of stakeholder demand for that" (Company 11, Interview)

Coding Categories	Corporate Sustainability (CS) Approach Codes	Illustrative Quotes and Examples
CS Motivation (continued)	Employee expectation drives CS	"This general perception that's out there that millennials and others are looking for companies that align to their values and one of those values increasingly relates to environment, I would say" (Company 7, Interview)
	Ethical values	"We really want to build a sense of confidence, a sense of trust, a sense of integrity, with our stakeholder audiences" (Company 15, Interview)
	Social license to operate	"Maintaining a social... license to operate" (Company 2, Interview)
	Systems-view of community	"Our communities in which we operate" (Company 9, Annual Report)
	Systems-wide benefit (beyond shared value)	"If you're adding value to society by some measure [in terms of setting science-based GHG targets]" (Company 15, Interview)
Temporal Orientation	Future orientation	"You have to think 15 - 20 years ahead because when you start creating a new [transportation product], it's going to go out maybe 10 years, so what will be the landscape of the industry the world in 15 years, you have to think ahead, and I think that being a visionary you have to say that maybe you won't see the benefits now" (Company 12, Interview)
	Short-term orientation	"[Our] world is very much driven by quarterly financial results and annual results" (Company 17, Interview) "If we can save money now, that's a better proposition than if we can save money later" (Company 10, Interview)

Table 3-6. Categories and codes related to the corporate sustainability (CS) approach taken by the companies in the sample, alongside illustrative quotes from the interviews and archival material. All rows under 'Instrumental or Integrative' that are left blank and shaded represent logic neutral Corporate Sustainability (CS) Approach codes.

Coding Categories	Trade-Off (T/O) Experience Codes	Illustrative Quotes
T/O Qualities	T/O are binary	<p>"So, we're always struggling to do the best in business and do the best in environment, and not always being able to accomplish that" (Company 13, Interview)</p> <p>"I mean I see the benefit of [CS initiative] just because I'm in sustainability, but if I'm talking to somebody in the operation or someone on the management board, they you know, they're going to wonder well how's it hitting our bottom line, and if it isn't, then why are we wasting time" (Company 16, Interview)</p>
	T/O are non-binary	<p>"I wouldn't say it's a black and white trade-off where you would say yes we have to do this and no we're not doing that and sort of a simple yes or no pass" (Company 4, Interview)</p> <p>"So back to your original question, it's not a binary yes or no in terms of trade-off, it has to be a conversation and it has to look at all the moving parts and doesn't deal with it in a sort of simplistic aggregate way" (Company 4, Interview)</p>
	T/O are strategic allocation decisions	"I think at that top level when you actually start looking at some of the longer, your timeline gets expanded a bit, those trade-offs kind of become a lot, how do I put this ... some of the big the money spent on maybe you have to manage these kind of more, you have to manage these sustainability issues in a smart proactive and intelligent way if you're going to actually operate the mining in that long run. So I guess in that sense they aren't so much trade-offs as they are mostly to more smart investments" (Company 1, Interview)
	T/O are ubiquitous	"Well there's a lot of trade-offs we have to do because there's a lot of challenges we face" (Company 19, Interview)
	T/O are product of constraint	"I think there will always be certain trade-offs that have to do with available budget for a certain activity" (Company 11, Interview)
	T/O change over time (binary in short-term, non-binary in long-term)	"I think really when you actually start looking at the medium and long run, these aren't kind of, obviously when capital is scarce or when you're only actually going to do business decisions you have to be very kind of smart about it, but I don't think they become, it's more like what kind of things you can invest in as opposed to your trading off x versus y" (Company 1, Interview)

Coding Categories	Trade-Off (T/O) Experience Codes	Illustrative Quotes
T/O Types	T/O between CS performance vs business performance	"And in the past, I think that sustainability because we're so reliability focused, I think people haven't, or executives in the past have not seen the linkages between reliability and sustainability" (Company 18, Interview)
	T/O between CS performance vs business performance (in investment decisions)	"A lot of banks have already pulled out of investing in coal, so that would have been the other one. Now it's just oil and gas, that could still be a concern for some shareholders and stakeholders but that's really the only one where we have a trade-off" (Company 5, Interview)
	T/O between CS performance vs business performance (in reporting)	<p>"As a business we find ourselves most accountable amongst our stakeholders to our shareholders, and the business performance of our operations, and so some of the costs and the resources associated with sustainability reporting, I would say would counter some of that business performance objectives" (Company 14, Interview)</p> <p>"Some of the indicators we might see as competitive intelligence where we wouldn't be able to disclose" (Company 11, Interview)</p> <p>"In sustainability reporting one of the challenges that I think a lot of companies are faced is who the audience is that are preparing that material for, and there's a tension between the use of that material and the use of a sustainability report for a broad audience" (Company 4, Interview)</p>
	T/O between material CS issues	"The ability to do a process such as a materiality assessment allows you to sort of put everything on the table and rather than saying yes and no to one or another topic, it allows you to just put it into a format that facilitates discussion and maybe the trade-off is it's not so much yes we're going to do this and no we're not going to touch that, it's we're going to spend our majority of time and energy in this area but we also can't forget about this other thing" (Company 2, Interview)
	T/O between measurement - management	"So, I guess the trade-off would be you have, you go from multiple smaller maybe local projects, that are just coordinated at local levels, or not coordinated at local levels, to a more centralized coordinated maybe larger scale type initiatives that maybe don't have the breadth and the reach of the little ones, but I think have, are more sustainable from a business perspective" (Company 18, Interview)

Coding Categories	Trade-Off (T/O) Experience Codes	Illustrative Quotes
T/O Types (continued)	T/O between scope - depth (of report)	<p>"You can't include everything and the kitchen sink in your report, you know, you try to keep it streamlined [by focusing on] what was relevant this half year, versus putting every single initiative that you've done as a bullet point, so I think that's a trade-off too, to make sure that you're giving enough information that you know... but not too much, where it's just no longer a good communication document, you know" (Company 11, Interview)</p> <p>"One of the things we struggle with historically is whether to report on absolute greenhouse gas emissions or greenhouse gas emissions intensity, and what I mean by intensity is the emissions per kilogram of product or some other, or revenue, or some sort of indicator that is managed as an index. And we thought a variety of different ways about that kind of trade-off over the years" (Company 15, Interview)</p>
	T/O between competing stakeholders	<p>"I guess the trade-off would also be if you're trying to approach one audience or message to one audience, it comes back to the stakeholder thing, who is your audience? So determining who your audience is going to determine the messaging and maybe the direction of your reporting and of your strategy" (Company 18, Interview)</p> <p>"... Competing stakeholders, different stakeholders had different ideas of what would help advance sustainability for the planet and for the company" (Company 15, Interview)</p>
	T/O between performance areas over time	"There's definitely trade-offs in terms of say you know how far we can go in setting longer term targets" (Company 17, Interview)
	T/O between personalization vs alignment of CS approach with peers	"So, looking across the ... industry and saying what does this company do, what does this company do, how do they release their reports, and that's a bit of a trade-off too because the objectives of our company might be different than say a [different] company, even though we're under the broad [industry] sector umbrella" (Company 18, Interview)

Table 3-7. Categories and codes related to the study companies' experiences with trade-offs (T/O) , alongside illustrative quotes from the interviews and archival material.

Coding Categories	Decision-Making Process Codes	Illustrative Quotes and Examples
Reflexivity	Solicit feedback from employees	e.g. through internal CS messaging and feedback system (Company 12, Interview)
	Solicit feedback from stakeholders	"We would get external views on that sort of our stakeholders view on that [issue]" "So, we spent a lot of money doing the research, we backed it up with lots of communication and outreach, PR, in-store signage, lots of things" (Company 16, Interview) "[...] and the feedback is helpful to be able to go back to those stakeholders we interviewed for the assessment and show them what the end results were and the output, and that I think to continually build trust with our stakeholders as well. It's a good feedback mechanism" (Company 2, Interview)
	Solicit feedback - lack of	"I don't know [if human resources department at company] whether they've gone out and tested that people were trying to recruit find environment to be a more important value than what our customer results came to be showing" (Company 7, Interview)
Decision - making	Continuous improvement	"I think the idea that decision on a particular risk or a particular trade-off ends with that decision I don't think is accurate, in most of the ways that we would operate, you're looking at a continuous model where even if you make a decision, that decision is revisited" (Company 4, Interview)
	Follow pre-determined decision criteria	"We also have a very structured risk assessment process, that has various criteria in it, everything from a, you know, environment to financial to social reputational health and safety risks, all of those things that have different criteria associated with them on what and how that would provide a steer to how you would assess the risk" (Company 4, Interview)
	Resolve T/O by counterbalancing elsewhere	"Well, you have to try and balance it with the other things that you are doing that have positive impact on the environment [...] So that's how you can counterbalance" (Company 5, Interview)
	Shared decision-making	"You would get the environment group, the business group, and discussing all the options" (Company 13, Interview)
	T/O decision tied to stakeholder power	"It depends on which lobby is more, efficient or effective or powerful" (Company 6, Interview)

Coding Categories	Decision-Making Process Codes	Illustrative Quotes and Examples
Decision – making (continued)	Set minimum baseline of CS commitments	"We didn't have the capital availability once the recession started in 2008/2009. So, we had to make some trade-offs and didn't end up achieving that energy efficiency goal, we focused on the other goals [...] so the way we looked at that particular decision was that we really needed to make sure that we kept several other things in play that ended up being a higher [CS] priority than spending capital on energy efficiency" (Company 15, Interview)
	Risk-based assessment of T/O	<p>"I wouldn't say it's a black and white trade-off where you would say yes we have to do this and no we're not doing that and sort of a simple yes or no pass, it is more of how do we look at the spectrum of risks we're trying to manage and navigate through it in a way that mitigates those risks to be possible?" (Company 4, Interview)</p> <p>"The way I think about it is more around a risk management exercise. And so, when we look at trade-offs or when you look at these different issues we're always looking at it through a risk lens. You know, what is the risk, what are we trying to manage, what are the different variables or factors that go into that particular issue, and the solution may not always be win-win necessarily, the solution always has an element of what is necessary to mitigate the risk that we're trying to manage and as you dissect those particular issues, which particular risk are we most focused on" (Company 4, Interview)</p>
	T/O resolution needs integrated CS strategy	"It's definitely built into the strategy overall and those business goals, so our board has developed five-year business goals, and so we have to see which ones those decisions or trade-offs align with, those goals that have been made going forward" (Company 9, Interview)
	T/O resolution needs integrated CS strategy - case of no strategy	"So, without a clear vision from the board level that aligns CSR with the company objectives or with the theme of the company, it's been very tough to pull together all of the very good elements into one kind of report or one type of strategy" (Company 18, Interview)
	T/O resolved through innovation	"A lot of the intellectual capital that we produce is a result of the way in which we do things and how we do things [with regards to T/O decision-making], and that to me is equally valuable from an innovation perspective and so that's how I would take a look at this, is this is soft innovation, but it's equally important to drive performance in the long run" (Company 15, Interview)

Coding Categories	Decision-Making Process Codes	Illustrative Quotes and Examples
Target-setting	Break down long-term goals into short-term as well	"Well, we would work at it internally in increments. So, we wouldn't scare our people away by talking to them right away about 2050, science-based targets are set to 2020 right now, as a first step. So, you want to say you have a science-based target, you would at least need a target to 2020. That's five years out. So, one of the ways we would get towards a science-based target is to talk mainly about 2020 first, five years out, and then the other you know" (Company 17, Interview)
Learning	Measurement drives change	"We saved, or we helped 200 people or something like that, it's something that can influence the decision. And a financial institution will love numbers" (Company 6, Interview)
	Track wider trends in sustainability	"And the other thing that we're going to see a lot of change happening is [particular CS trend]" (Company 4, Interview)
	Early in sustainability journey	"That we're still early in our sustainability journey so we're learning" (Company 9, Interview)
	Knowledge sharing	"where I see a lot of sustainability going is more partnerships, I'm sure you've noticed this too in other businesses, so one example where we've done that [is in our supply chain] to help manage our [supply chain impacts] [...] we're actually now a member of a group of [...] other global [industry] companies who audit [...] tier one suppliers, we share the audit results [...] so [that] each company is assigned an audit to do, but we share them together. So we do our five [audits] but then we're getting the five [other audit reports] everybody else is doing among the other companies, so it's kind of a finding a way to scale things that are issues that we can't tackle on our own" (Company 11, Interview)
CS Capabilities	CS system and processes in place – lack of	"Like many organizations we actually don't have the systems and processes in place necessarily to aggregate the information required to aggressively set targets. Or report at a certain level, even in particular for the social indicators or human resource indicators within sustainable reporting, so that is a trade-off that we accept" (Company 14, Interview)

Coding Categories	Decision-Making Process Codes	Illustrative Quotes and Examples
Cognitive Limitations on CS	Previous CS experience impacts current decisions	"[previous experience has had a] Huge [impact]. Big, because when we're trying to push another initiative through, they're going to look at the [previous CS initiative] example and they're going to say, well, you know, that didn't really resonate with the customer, do you want to do this all over again? And spend this amount of money again?" (Company 16, Interview)
	Missed opportunity for sustainability win-win	"From a reliability perspective, we're regulated that we need to go in and we need to trim down trees we need to cut back brush that could potentially impact the lines, but in doing that, if you want to tie it to [company's brand mission], you can say, you're taking a naturalized corridor that may have just been basically clear cut trimmed or mechanically cleared for years and years, you have the potential for an invasive species to come in, things like that which have negative impact on the environment, and you can say, we have biodiversity initiatives that actually, if we come in and do trimming we can re-plant different seed mixes for increasing the biodiversity of that structure of corridor, encourage pollinator species like monarch butterflies and other types of animals and wildlife to come back, to help actually make that corridor more user friendly for pedestrians, and before we go in to cut, being able to reach out to the community of people and say, yes, we are mandated to do this clearing, however, as part of this job we'd also like to do this, from a biodiversity and sustainability perspective, it actually prevents the community from being resistant to us doing our work" (Company 18, Interview)

Table 3-8. Categories and codes related to the study companies' approaches to trade-off (T/O) decision-making, , alongside illustrative quotes from the interviews and archival material.

APPENDIX C: TABLES – CHAPTER 4

Categories	Codes	Illustrative Quote
Perceptions of Trade-off-related disclosures	Trade-off-related disclosures as descriptions of decision-making process	<p>"[On why trade-off discussions are not included in the report] We want to make sure we're reporting on the outcomes of [our sustainability programs]. So, what we've identified as being important [...] then we want to make sure we're reporting on the actual issues as opposed to the process that we've used to get there, because we are using industry standard process so it's not necessarily that the process is as important as the outcome in our view." (Company H, Interview)</p> <p>"So [discussions of the materiality trade-off process are] a helpful story to tell [...] to raise awareness with our readers on the process we go through" (Company I, Interview)</p> <p>"So we wouldn't really talk about the trade-offs. We would still rather talk about the benefits still of why we did it, and you know and the impacts that it's having, and the partnership that was built and the fact that other [companies] joined and did the same thing, so we would always try to find the positive and not focus on what didn't work." (Company M, Interview)</p>
	Trade-off-related disclosures as 'bad news'	<p>"I'm wondering if there's anything where we underperform and talk about trade-offs". (Company E, Interview)</p> <p>"To make an analogy again with the financial reporting side [...] [in annual reports] you're not being asked to talk about where you spend your money stupidly over the year. Where you made a mistake." (Company B, Interview)</p> <p>"It's not necessarily on our radar to disclose our shortcomings, or really aggressively be transparent about the trade-offs that we face." (Company N, Interview)</p>
Reasons against including Trade-off-related disclosures	Due to limited messaging space	<p>"I think [our communications team] have a culture of 'you can only have so many messages out there about a company in one week, and if you minimize, or if you take away from that number the number of times you can positively talk about your company, then it is a detriment.'" (Company B, Interview)</p>

Categories	Codes	Illustrative Quote
Reasons against including Trade-off-related disclosures (continued)	Immaterial - under standardized reporting process	"[On why trade-off discussions are not included in the report], because we are using industry standard process so it's not necessarily that the process is as important as the outcome in our view." (Company H, Interview)
	Immaterial – Trade-offs are internal business decisions	<p>"You know, those are kind of internal conversations that I don't think hit the public domain very often" (Company R)</p> <p>"Those trade-offs are strategic anyway [...] they're strategic to the organization and trade-offs are made every day, not just on sustainability agendas, right? Nobody has enough budget or enough people to do everything, business leaders are constantly making trade-off decisions on strategy all the time, and there's strategic decisions that are not necessarily communicated out externally" (Company E)</p> <p>"We would look at that [trade-off discussion] internally and assess it internally but we wouldn't really talk about it publicly" (Company M)</p>
	Immaterial – Due to lack of stakeholder demand	"I wouldn't say [trade-off discussions] should be withheld [...] I know we communicate our materiality [trade-off] process. I know in the past there was a report we had in the GRI or wherever we said when we don't disclose something we give them a why [...] We've found over the years things we didn't include in the report too or things we didn't include in the GRI index because we didn't consider them material and we'd get various questions from people [...] and we end up including it in the report because we get questions [...] So when there's stakeholder feedback [requesting trade-off related discussions] [...] we'll respond" (Company O)
	Immaterial – Reporting is 'story-telling' (positive outcomes only)	<p>"I mean likeability for a brand is based on all kinds of stuff [...] There's so much other stuff going on, why do we need to add this to the mix [...] And how could we tell a bad story in a good light?" (Company B)</p> <p>"I mean honestly from my perspective when I'm developing our sustainability report, a big part of my [...] objective is to position the company in the most favorable possible way" (Company E)</p> <p>"When I'm telling our sustainability story, I'm looking for the best story to tell, and the highlighting of our best track records, and listing of our best data, and I tend to put a lot of time and effort and energy in telling that (sic) so we don't get a lot into the trade-off area" (Company E)</p>

Categories	Codes	Illustrative Quote
Reasons against including Trade-off-related disclosures (continued)	Immaterial – Reporting is 'story-telling' (positive outcomes only) (continued)	<p>"[On why trade-off discussions are not included in the report] businesses you know, are they really going to write 'this was a real struggle for us to be able to publish this information'? ... There's very little reward for sustainability reporting, and until ... analysts start rewarding transparency and you know candidness, then something [i.e. some discussion on trade-offs] probably" (Company R)</p> <p>"[Reporting] is not about religion, we're not going to confession, right. This is business, and the fact is, if a company is doing something wrong, they're going to cover it up anyway, so why make companies make sort of like these simple level irrelevant things, right? [At another, scandal-ridden company], people went to jail. It wouldn't have mattered if they had transparency in their report, those things still would have happened" (Company B)</p>
	Negatively impact reputation	"Our [reporting] culture is only to talk about how good we are and so we don't put negative stories out there [related to trade-offs], and we don't do that because it could negatively impact our reputation" (Company B)
	Negatively impact stakeholder relationships	"We wouldn't have mentioned the trade-off. That's something that internally we talk about how it didn't really resonate with customers ... it's not something that we would put in a report. It's not something that we would say well you know we didn't get any credit for [particular sustainability initiative that demonstrated a sustainability trade-off] and our customers didn't really support it for us ... because then [if we report on the initiative and its underlying trade-off] it would seem like we were assigning blame or something to our customers which we would never want to do. We would never want to accuse them of not supporting us or something, so we wouldn't take that angle" (Company M)
Reasons for including Trade-off-related disclosures	Standards organizations encourage 'balance'	"Reporting groups and standards are saying that balance actually helps your reputation because it shows the more human side of a corporation, but the internal culture at our company is not that, they say no that is not true, and in our marketing stuff we will not do that" (Company B)
	Motivated by employee expectations	"[On what motivated the company to include a discussion of the materiality trade-off process in their report] For [our] employees ... Because there are employees that work a lot to have some social engagement or environment ... and it's important to recognize that" (Company F)

Categories	Codes	Illustrative Quote
Reasons for including Trade-off-related disclosures (continued)	Gives stakeholders confidence in firm's sustainability management capacity	"What we do is everyone wants to talk about that everyone wants to hear about, but how we manage these issues on behalf of our shareholders, on behalf of the communities [and] the stakeholders that have a vested interest in how we operate, that's equally important for people to understand. We need to provide the confidence to people that we have these issues under control, they're well managed, they are well understood, and we have good programs in place to mitigate any residual risk or any issues that may arise that are out of the ordinary. That's what gives ... the communities and our stakeholders' confidence in the organization and its approach to these issues. A good organization should be able to describe that and describe it well. If they manage it well" (Company D)
	Enhance transparency and authenticity, and build stakeholder trust	"[On why company would consider reporting on trade-off discussions, e.g. materiality trade-off process] To keep a balanced report, to be transparent, to build trust with our stakeholders, to have some level of accountability" (Company I)
	Reporting as "comprehensive reference document" (vs story-telling)	"[Our sustainability report is] pretty thick, and we've tried to make it readable ... but it's readable kind of like an encyclopedia, it's more like a reference document. And we've had a lot of people come back and say it's boring, it's not readable, you know, and we put stories and we put pictures in there but at the end of the day I'm trying to create a comprehensive reference document so that nobody can legitimately say ... you're not being transparent about this important indicator" (Company G)

Table 4-4. Categories (and underlying codes) related to trade-off disclosures in sustainability reports that emerged from the interview data, alongside illustrative quotes.

Trade-off Category	Trade-off Codes	Illustrative Quote
Outcome	Negative sustainability impacts	<p>"In 2012, our construction sites recorded 14 such reportable spills or incidents. None of these smaller spills resulted in environmental damage, or led to any prosecution, injunction, sanction or fine [...] Can we do better? We absolutely believe we can" (Company 96, Report)</p> <p>"[Company] made a strategic decision to significantly invest in our Canadian operations to increase scale, technology and productivity. The Company is investing more than \$1 billion to establish a highly efficient supply chain on a North American basis. While this will result in a net job reduction, it will increase long-term security for thousands of skilled jobs and provide a platform for sustainable growth. It will also secure domestic markets for grain, hog and poultry farmers that supply [Company] and, ultimately, in the distribution system of our products into stores and restaurants –everything along the value chain from farm to fork. [Company] is strengthening the Canadian food sector and further securing our role as a global agribusiness leader." (Company 91, Report)</p> <p>"To mitigate any direct impact on the turtles' habitat during development, [Company] has taken steps to keep construction activities off the beach." (Company 39, Report)</p> <p>"There were two fatalities associated with our construction activities in 2012. Both of these events were fully preventable, unnecessary and unacceptable. In response, we issued lessons learned reports company-wide reiterating the need to always fully comply with existing [Company] Critical Risk Control Protocols. This document sets the minimum safety standards for all our high-risk activities." (Company 96, Report)</p>
	Materiality	<p>"We have chosen to largely focus our [report] discussion on 10 issues that key stakeholders have found to be most material to our business. These issues were identified through a materiality assessment [...] [which] was based on the process outlined in the Technical Protocol of the Global Reporting Initiative (GRI)." (Company 31, Report)</p> <p>"We use a materiality assessment to focus our report on our most significant sustainable development issues. Our process was developed in line with the GRI guidance on materiality and completeness [...] It involves identifying and prioritizing issues affecting our business and stakeholders over the next three years from internal and external perspectives." (Company 24, Report)</p>

Trade-off Category	Trade-off Codes	Illustrative Quote
Change	Changing priorities	<p>"Given the emergence of industry best practice standards and the evolution of the shale regulatory environment, in 2013, we began transitioning away from our own ... Operating Principles toward emerging industry best practices. As we move forward, we remain committed to developing shale resources in a safe and responsible manner, engaging with stakeholders, providing real benefits to local communities and protecting the environment." (Company 48, Report)</p> <p>"Although [sustainability] is critical to our long-term success, challenging market conditions required us to take steps to improve our competitive position and balance the anticipated near-term production requirements of our facilities. This resulted in an announced reduction to our workforce (1,045 people), most significantly in [particular business lines] [...] For those impacted by the reductions, we provided financial and transition resources that exceed those typical of the industry. [...] As we look ahead, the continued support and development of the more than 4,800 employees who remain part of our team will be a key priority." (Company 46, Report)</p> <p>"In 2013 we sold several businesses that were not core to this vision, including our [specific business lines]. We also completed a strategic review of our [particular] business, which culminated in the sale of our 90% ownership of [details of business sale] [...] While we have executed significant changes to our business mix and assets, our organizational values are constant and underpin everything we do. A cornerstone of the "new [Company]" will be to increasingly define and integrate corporate social responsibility and sustainability into our operations and decision-making." (Company 91, Report)</p> <p>"Although we reduced our workforce, we redeployed over 90 people into new roles. We are driving more accountability deeper into the business, creating jobs that are more rewarding and challenging. As we reshape the way we run our business, our people saved us millions of dollars through programs that encouraged them to suggest and implement operational and cost efficiencies. We have invigorated a grassroots focus on operational excellence that means our employees are at the core of improving our business." (Company 48, Report)</p> <p>"In 2014, [Company] completed its reorganization, consolidated the positioning of its banners, all the while placing our customers at the center of our decisions. These three fundamental pillars will help ensure the long-term health of the company and preserve our ability to operate in a socially responsible manner. Today, [Company] sits on stronger foundations and is in a position to maintain its commitment to sustainable development" (Company 61, Report)</p>

Trade-off Category	Trade-off Codes	Illustrative Quote
Change (continued)	Stakeholder demand	<p>"Interest in [corporate responsibility] and sustainable business is shifting both internally and externally. We're seeing a greater number of customer requests for sustainability-related information and data to help them deliver value." (Company 67, Report)</p> <p>"Preventing, mitigating and quickly responding to spills within our operations are important for a number of reasons, including mitigating environmental disturbance, preserving operational integrity, avoiding costly fines and managing reputational and social risks. These factors are of particular importance given increasing stakeholder concern regarding the safe transportation of oil and natural gas liquids as it relates to pipeline infrastructure." (Company 38, Report)</p> <p>"In workplace surveys, our employees told us that work- life balance is a top priority for them. We're addressing this need through a [...] [flexible employee work schedule program], which builds on traditional arrangements such as job sharing and compressed work weeks to provide employees with more options for part-time and full-time mobility." (Company 11, Report)</p> <p>"The ability to confidently measure, report and manage the emission of methane, carbon dioxide and other air emissions like Sulphur dioxide and nitrogen oxides ensures that we are able to meet our regulatory obligations and creates opportunities to improve operational efficiency. Moreover, by creating effective and efficient management programs, we can proactively address concerns related to climate change and air emissions –important stakeholder issues that can impede our social license to operate over the short and long term." (Company 38, Report)</p>

Trade-off Category	Trade-off Codes	Illustrative Quote
Scarcity	Constraint	<p>"[On switching to renewable energy] It's no easy feat, because in many cases a store's electric meter is in a landlord's name, not [Company's]. And many states and countries don't offer the ability to directly purchase renewable energy." (Company 19, Report)</p> <p>"When it is necessary to flare or divert gas, we adhere to regulatory requirements and take every possible action to reduce the duration of each incident. We will also decrease the amount of bitumen feed into the Coker in order to minimize emissions" (Company 20, Report)</p> <p>"Reducing our business travel contributes to our energy conservation goals [...] When travel is required, [our] employees are asked to combine trips and meetings to make each business trip as efficient as possible. Our travel policy also encourages employees to walk, bike, and carpool and use public transportation or hotel shuttles whenever possible." (Company 25, Report)</p> <p>"We are proud of the progress we've made – and the path to 50% recycled inputs by 2015 is clear. To be candid, however, achieving the remaining 30% is less clear. It will test the limits of our company and require us to move even more aggressively toward a closed-loop model across all of our operations and products." (Company 34, Report)</p>
Plurality	Competing objectives	<p>"[Target:] Reduce company-wide greenhouse gas (GHG) emissions per ton of product from 2012 levels ... [target status:] Not achieved [...] We did not achieve a reduction in GHG emissions due to the restart of our [location name] ammonia plant where we produce a greater proportion of more GHG intensive products." (Company 46, Report)</p> <p>"As our business activity increases, the number of employees increases, as does their associated office area. This business increase results in increased GHG emissions, as shown on the chart above. Conversely, when business activity decreases, the company's GHG emissions decrease." (Company 94, Report)</p> <p>"We made some progress across our sustainability pillars in 2013; however, our focus on completing our [specific product line] strategy has meant we have not achieved the pace of progress we want. Our focus and progress behind pursuing a strong sustainability program with clear goals will accelerate in 2014 and beyond" (Company 91, Report).</p>

Table 4-6. Categories and underlying codes related to trade-off disclosures in sustainability reports that emerged from the report data, alongside illustrative quotes and examples.

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