



Norwegian University of
Science and Technology

Green Innovations, Black Numbers

A Qualitative Study of Shared Value Creation
in Norwegian Small and Medium-Sized
Enterprises

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Problem description

This thesis seeks to enhance the knowledge on how shared value creation can be achieved by companies and does this in a context where environmental value is created through the introduction of innovative products and services. Our way forward is to identify factors discussed in literature as features of shared value creating companies. We then explain how these play out by studying small and medium sized enterprises we suggest are creating shared value.

Preface

This master thesis is the concluding work of our Master of Science degree at the Norwegian University of Science and Technology (NTNU). It has been written during the spring 2016 for the Strategy and International Business Development section at the Department of Industrial Economics and Technology Management. The master thesis is part of the Sustainable Innovation and Shared Value Creation in Norwegian Industry (SISVI) project.

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Abstract

The world is facing severe societal challenges. Globalization, resource scarcity and climate change, shifting economic and political power, technological advances and changing demographics are megatrends affecting lives of humans worldwide, today and for decades to come. Business is increasingly expected to contribute in solving these challenges. The proposals on how business should contribute are many. This study is a contribution to the understanding of one of these suggestions, namely the concept of ‘shared value creation’ proposed by Michael E. Porter and Mark R. Kramer. We explore how small and medium-sized enterprises offering innovations that address environmental challenges create shared value. We conduct a qualitative study where the empirical data constitutes 26 interviews with employees of nine different companies, as well as six interviews with experts in environmentally concerned innovations. This study contributes to theory by enhancing the knowledge on shared value creation and how it can be achieved. In particular we illuminate the microfoundations of shared value creation within small and medium-sized enterprises offering innovations that address environmental challenges.

Sammendrag

Verden står overfor alvorlige samfunnsproblemer. Globalisering, ressursknapphet og klimaendringer, endringer i økonomiske og politiske maktforhold, teknologiske fremskritt og demografiske endringer er store trender som påvirker mennesker verden over, både i dag og i tiårene fremfor oss. Næringslivet forventes i økende grad å bidra til å løse disse samfunnsutfordringene, og forslagene om hvordan bedrifter best kan bidra er mange. Denne studien er et bidrag til forståelsen av ett av disse forslagene, nemlig ideen om ‘shared value creation’ foreslått av Michael E. Porter og Mark R. Kramer. Vi utforsker hvordan små og mellomstore bedrifter som tilbyr innovasjoner som adresserer miljøproblemer, skaper ‘shared value’. Vi utfører en kvalitativ studie hvor det empiriske grunnlaget består av 26 intervjuer med ansatte i ni ulike bedrifter, samt seks intervjuer med eksperter innen miljørettede innovasjoner. Studien bidrar til teori ved å forklare hvordan ‘shared value’ skapes i små og mellomstore bedrifter med innovasjoner som adresserer miljøutfordringer.

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1 Introduction

The world cries out for repair.

Joshua D. Margolis and James P. Walsh

Globalization, resource scarcity and climate change, technological advances and changing demographics are megatrends affecting lives of humans worldwide, in the present and for decades to come. Business is found to play an important role both when searching for causes and solutions to societal challenges. On one hand, companies are held responsible for economic, environmental and social problems; as described by Porter and Kramer (2011) “the legitimacy of business has fallen to levels not seen in recent history” (p. 4). On the other hand, eyes are turned towards business to come up with solutions and ways forward to solve societal problems (Margolis & Walsh, 2003; Eccles, 2015). Business is increasingly expected to contribute, as in these words by United Nations Secretary General, Ban Ki-Moon: “I urge the private sector to take its place at the table and plot a path forward for the next 15 years, reaffirming once again that responsible business is a force for good” (USCIB, 2016). Given the magnitude and complexity of the societal challenges ahead there is no lack of work awaiting companies willing to step up to the task.

The relationship between business and society has been a main topic of discussion among business scholars for decades (Aguinis & Glavas, 2012). From revolving around whether or not companies have moral obligations beyond that of profit generation, the debate has developed into a quest to find ways for business’ to contribute in solving the major societal challenges ahead (Margolis & Walsh, 2003). The proposals on how business should contribute are many. This thesis explores the concept of ‘shared value creation’ proposed by Michael E. Porter and Mark R. Kramer in their seminal article “Creating Shared Value” from 2011. The two authors define shared value creation as “policies and operating practices that enhance the competitiveness of a company while simultaneously advancing the economic and social conditions in the communities in which it operates” (Porter & Kramer, 2011, p. 6). In other words, the expression entails looking upon societal problems as business opportunities. The authors call for value creation both in terms of economic benefits for business and societal value created by addressing social and environmental needs. In their article Porter and Kramer (2011) suggest three ways forward to bring their idea to life: Reconceiving products

and markets, redefining productivity in the value chain and enabling local cluster development (p. 7). Moreover, in the aftermath of their article, a range of scholars have brought forward suggestions on what could be said to be features of shared value creating companies. We have identified and categorized these suggestions and hereafter refer to them as factors for shared value creation. Based on these factors, we have formulated a set of propositions which has guided our research. Our aim is to explain how these factors play out in companies seeking to create shared value.

Shared value creating companies address a variety of societal challenges. Improved health conditions and food security, access to housing, technology and new jobs as well as increased literacy are among the issues addressed by different companies in their shared value creating efforts (Dembek, Singh, & Bhakoo, 2015). Another recurring issue is environmental challenges. Among the six risks perceived to most significantly impact countries or industries within the next ten years, are failure of climate change mitigation and adaptation, water crisis and biodiversity loss and ecosystem collapse (World Economic Forum, 2016). Business is a contributor to these challenges, for instance through greenhouse gas emissions, extensive water usage and destruction of habitats. At the same time these risks affect and could threaten companies' value creation and existence – as stated by the late environmentalist David Brower: “There is no business to be done on a dead planet” (Quoted in Hollender & Breen, 2010, p. 114).

We suggest environmental challenges provide an interesting context in which to explore shared value creating companies. Twenty years ago, Michael Porter, then together with Claas van der Linde, described the relation between ecology and economy as a stalemate where “the prevailing view is that there is an inherent and fixed trade-off: ecology versus the economy” (Porter & van der Linde, 1995, p. 120). However, it has also been suggested that from the tension between environmental progress and economic value, new sources for innovation could be found (e.g. Porter & van der Linde, 1995; Nidumolu, Prahalad, & Rangaswami, 2009). This is why we, when exploring shared value creating companies, have chosen to focus on companies addressing environmental challenges. Our empirical foundation consists of nine Norwegian small and medium-sized enterprises (SMEs) we suggest create economic value through environmental value creation, as well as interviews with experts within the

field. In so doing, we explore how green innovations can provide black numbers for the companies.

1.1 Practical application

There are several reasons why contributing to solve societal challenges are important for today's companies. First, these challenges are so far-reaching they might be impossible to solve without business' involvement. Save the children (2012) states that "Climate change and the global financial crisis have shown us that business as usual is no longer an option" (p. 1) and voice that major development challenges cannot be solved without business' engagement. The United Nations Global Compact affirms that "Businesses today are expected to be part of the solution to our world's greatest challenges – from climate and water crises, to inequality and poverty" (Eccles, 2015, para. 7). Second, the challenges facing society also influence the foundation on which businesses are built: Resource constraints are potentially harming companies' value chains (Porter & Kramer, 2011) and limit the potential for value creation (Mohammed, 2013). Third, by striving only for increased profits business risks losing its "social license to operate" (Mohammed, 2013, p. 249). The public expects companies to expand their horizon beyond short term profit maximization and rather take on a broader view of human needs (Eccles, Perkins, & Serafeim, 2012).

Beyond securing the grounds for future value creation and public support thereof, the reasons why business should contribute in solving societal challenges could be brought forth on a more positive note. Societal problems could also be viewed as sources of innovation and value creation. Porter and Kramer (2011) describe that creating value for society "opens up many ways to serve new needs, gain efficiency, create differentiation and expand markets" (p. 7). This reason for business to address societal challenges is by itself crucial, as innovation is imperative for organizations to survive in today's complex business environment (McGrath, 2013). McGrath (2013) emphasizes the importance of finding way for companies to be innovative to endure and grow over time, and argues that "being systematic about innovation will not be optional" (p. 165). On this basis, we suggest that the addressing of societal challenges provide a way forward for companies to be innovative.

1.2 Theoretical application

Although Porter and Kramer's article on shared value creation has gained remarkable attention among academics and business practitioners (Crane, Palazzo, Spence, & Matten, 2014), the term has not developed much further as a theoretical concept from the initial proposal in 2011 (Williams & Hayes, 2013), and it is still at a nascent stage (Dembek et al., 2015). In a literature review on the topic, Dembek et al. (2015) find that "its current conceptualization is vague, and it presents important discrepancies in the way it is defined and operationalized" (p. 1). The authors emphasize the need to "provide shared value with meaning and organizations with guidance of how to implement it" (p. 15). Our aim is to contribute in filling this knowledge gap.

To enhance the understanding of the shared value creation concept and how it can be achieved, there is a need to paint a more fine-grained picture of shared value creating companies than what is found in literature today. Therefore we seek to illuminate the microfoundations of shared value creating efforts. By 'microfoundations' we refer to behaviors, characteristics and processes underpinning the aggregate phenomenon of shared value creation. The first step of our research was to conduct a literature review on shared value creation and related terms, through which we found factors describing shared value creating companies. To move from these overarching descriptions in literature to a more fine-grained picture of shared value creating companies, we have formulated propositions based on the identified factors and explain how these play out when the companies introduce shared value creating innovations.

There is a broad variety among the companies which form the empirical foundation of the shared value creating literature in terms of size, age and country of origin. However, it seems fair to say the most famous examples of shared value creating companies are large, multinational corporations such as Nestlé, Novo Nordisk and Yara. We explore shared value creation in SMEs as our literature review shows that smaller companies seems to be understudied in the shared value literature. By SMEs we refer to companies with less than 250 employees (European Commission, 2016), and in our cases, the number of employees range from below 20 to around 130. We argue that exploring shared value creation in smaller companies is important. First, it is a relevant setting as these companies form the majority of

businesses both in Norway (Nærings- og handelsdepartementet, 2012) and the European Union (European Commission, 2016). Second, we suggest that companies started on the basis of shared value creating innovations could form a forefront among companies addressing societal challenges. To established companies described in the shared value literature, societal considerations as a basis for value creation seems to come about as an afterthought. It is our hope that exploring how companies start out with this thinking at the center – as is the case for a number of the case companies – illuminates the shared value creation term and facilitates it being taken into use.

1.3 Research question

We enhance the knowledge on how organizations can achieve shared value creation and do this in a context where the societal value is primarily created through innovations addressing environmental challenges. Our way forward is to take the theoretically deduced propositions and explain how these play out by studying companies we suggest are creating shared value. Common for these companies is that they are SMEs offering innovations addressing environmental challenges. This leads to the following research question:

How do SMEs offering innovations that address environmental challenges create shared value?

An important premise is that the SMEs in question introduce what we understand as innovative products or services. By this we refer to products and services that are “new or significantly improved”, as suggested by OECD (2005) in their definition of ‘innovation’¹ (p. 46). Further, our study goes beyond understanding ‘innovation’ as the generation of ideas; it entails harnessing these ideas by producing products and services and thereafter offering them to potential customers. This is in line with Trott (2012) who suggests innovation is not merely about creating ideas, but also involves exploiting these ideas. This is a common feature for the companies providing our empirical foundation, as they are all formed on the basis of developing a business case for an innovative product or service. This means we only explore

¹ The whole definition reads: “An innovation is the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations” (OECD, 2005, p. 46).

one of the three pathways to shared value creation suggested by Porter and Kramer (2011), namely the reconceiving of products and markets. The two other pathways, i.e. redefining productivity in the value chain and enabling local cluster development, are not emphasized. This choice was made for two reasons. First, we see it as advantageous that the approaches applied by the case companies to create shared value are similar as this allows for a more thorough assessment of how the suggested propositions play out. Second, due to the imperative role of innovation for companies' ability to develop and endure, and for finding solutions to societal challenges, we suggest the process of finding new solutions through products or services is vital and particularly interesting.

1.4 Review of the content

Following this introduction, we present the background needed to understand the concept of shared value creation in Chapter 2. This chapter also derives the propositions guiding the study. In Chapter 3 we provide information on how the study was conducted, methodological choices made and an assessment of the quality of the study.

Our empirical findings are presented on a case-by-case basis in Chapter 4. In Chapter 5 we answer our research question. Here we explain the extent to which the propositions are confirmed within the case companies and discuss how this plays out in relation to theory. Further, we present the implications of our findings to practitioners and theory. Also, a discussion of the limitations of the thesis is provided. This chapter is concluded with suggestions for future research. Finally, the conclusion of the thesis is presented in Chapter 6.

2 Conceptual background

The earth, the air, the land and the water are not an inheritance from our forefathers, but on loan from our children. So we have to handover to them at least as it was handed over to us.

Mahatma Gandhi

This chapter provides the theoretical foundation of the thesis. To answer our research question, it is necessary to define and clarify terms and concepts used. We illuminate the term ‘shared value creation’ and what it entails, but also its antecedents and the context from which it was derived.

Section 2.1 describes the theoretical context from which the shared value creation idea sprung out, namely the discussion on business and its role in society. Then, we move to section 2.2 which delve into the concept of shared value creation. We look at how the term has developed and what it implies for business strategy. Further, we present some of the critique the term has received. The section is then concluded by a discussion of what literature describes as features of shared value creating companies, summarized in six factors. Section 2.3 provides an overview of the environmental context in which the case companies operates. Finally, the conceptual background is concluded in section 2.4 by stating a set of propositions which is derived based on the theoretical foundation and the context.

2.1 Business and society

For decades, the relationship between business and society has been an important topic within business literature (Aguinis & Glavas, 2012). Calls have been made for business to help solve severe societal challenges (Margolis & Walsh, 2003). These calls have given rise to what de Wit and Meyer (2014) refer to as the “paradox of responsibility and profitability” (p. 126); the main question being whether organizations’ purpose is profitability for shareholders or responsibility for stakeholders.

The historically dominating assumption has been that serving the interest and maximizing the profits for shareholders is the main purpose of companies (Margolis & Walsh, 2003). Proponents of this view – perhaps most famously formulated by Milton Friedman in his influential article “The Social Responsibility of Business is to Increase its Profits” (Friedman,

1970) – is that it is governments’ role to address social problems, not business’. He argues that social welfare is maximized when all firms maximize total firm value and – though it might be wise to take the needs of stakeholders beyond the company into consideration – this is no moral obligation for the company.

Profit-making as the primary, if not sole, purpose of companies is a view that has been challenged by a range of scholars (e.g. Freeman and Reed, 1983; Elkington, 1994). Rather than discussing whether or not business should take other considerations than profit making, these academics have searched for a role for companies’ that attend to shareholders’ expectations while simultaneously looks beyond it (Margolis & Walsh, 2003). Several business practices have been suggested with the intent of bringing to life what Kofi Annan describes as a “happy convergence between what your shareholders pay you for, and what is best for millions of people the world over” (United Nations, 2001, para. 44). Although companies’ social concerns have been studied for years, it was not until the 1980s the issue also entered the strategy field (de Wit & Meyer, 2014). However, the issue of balancing profitability and responsibility reached the “mainstream strategy field” only quite recently through the proposal of ‘shared value creation’ (de Wit & Meyer, 2014, p. 136.) The term is suggested as a way forward to “create a synthesis between firm profitability and societal responsibility” (De Wit & Meyer, p.136) and was introduced by Michael E. Porter and Mark R. Kramer.

With their seminal article “Creating Shared Value” from 2011, Porter and Kramer greatly influenced the strategy field, the private sector and public management (Crane et al., 2014; Dembek et al., 2015). Shared value creation is defined as “policies and operating practices that enhance the competitiveness of a company while simultaneously advancing the economic and social conditions in the communities in which it operates” (Porter & Kramer, 2011, p. 6). In the following, we take a closer look at the concept by explaining how it developed.

2.2 Shared value creation

2.2.1 Arriving at the concept of shared value creation

The starting point for the shared value creation concept is the debate concerning corporate social responsibility (CSR). CSR has been debated and discussed, especially during the latter

half of the twentieth century and onwards (Carroll, 1999). Although a range of definitions exist, Aguinis and Glavas' (2012, p. 933) suggestion of "context-specific organizational actions and policies that take into account stakeholder's expectations and the triple bottom line of economic, social, and environmental performance" provides a basis which could be recognized in the works by Porter and Kramer.

The expression 'creating shared value' was first used in 2005 when describing a business principle introduced by Nestlé (Christiansen, 2014). The business principle stated that "Nestlé's business objective is to manufacture and market its products in a way that creates value that can be sustained over the long term for shareholders, employees, consumers, business partners and the national economies in which Nestlé operates" (Nestlé, 2012, p. 36). In 2011 the same term was defined by Porter and Kramer in their seminal Harvard Business Review article. By this, the term made its way into the strategy literature and the wider debate of CSR and business' relation to society at large (de Wit & Meyer, 2014).

Porter and Kramer's (2011) proposal of the shared value creation concept emerged through several articles published in the Harvard Business Review, starting in the late 1990s. The first article from 1999, "Philanthropy's New Agenda: Creating Value" focused on how charitable foundations can enhance their impact on society by creating value beyond the purchasing power of their grants. This was followed by an article in 2002, "The Competitive Advantage of Corporate Philanthropy", discussing how corporate philanthropic activity can lead to both economic and social benefits, linking a company's social programs to improvements of its competitive environment. Four years later, the term shared value was introduced in the article "Strategy & Society – The Link between Competitive Advantage and Corporate Social Responsibility" (Porter & Kramer, 2006). This article entails an exploration of how CSR activities could be linked to the firm's value chain and its core business strategy. The authors refer to this as strategic CSR and suggest that it will "generate opportunity, innovation, and competitive advantage for corporations – while solving pressing social problems" (p. 1). The mentioned articles forms the background for the 2011 article, "Creating shared value", where Porter and Kramer suggest that the principle of shared value "involves creating economic value in a way that also creates value for society by addressing its needs and challenges" (Porter & Kramer, 2011, p. 5). The article recognize that despite increased welcoming of

corporate social responsibility within the business community, the responsibility assigned to business for society's challenges is also increasing. It suggests three paths which can be followed to create shared value, namely reconceiving products and markets, redefining productivity in the value chain and enabling local cluster development (Porter & Kramer, 2011). In the following subsections we take a closer look at suggestions brought forth by the two authors – as well as other scholars in the aftermath of Porter and Kramer's article – on how shared value is created and what strategic implications the term has.

2.2.2 Implications of shared value creation

The shared value creation concept could be seen both as a mindset guiding strategic decisions on how to relate to societal challenges, and on a more operational level as business activities and tools for value creation. Porter and Kramer's (2011) article has at least three important implications for companies' view on their own responsibility and how to attain to it: (1) Societal considerations should be understood as a source of business opportunities, (2) these considerations should be moved from the periphery to the center of companies' operations, and (3) this entails both a quest for and a source of innovation.

Societal challenges as opportunities for business

The first implication of the idea of shared value creation implies that companies should leave behind the perception that their own economic performance and societal needs are at odds. Already in their 2006-article Porter and Kramer stated that "CSR can be much more than just a cost, constraint, or charitable deed. Approached strategically, it generates opportunity, innovation, and competitive advantage for corporations – while solving pressing social problems" (p. 1). Five years later, in the 2011-article, the authors argue that shared value is neither philanthropy nor does it concern responsibility; it can lead to economic success. This view is shared by a range of scholars (e.g. Elkington, 1994; Kanter, 1999; Prahalad & Hart, 2002), who in various ways have proposed that societal challenges represent business opportunities. A recent example is Robert Eccles (2015) who argues new policies, such as the UN sustainable development goals, are good news for business:

Indeed, the 2030 Agenda² is very good news for the corporate community. Its goals represent clear business opportunities for those companies that understand sustainable change can be met through innovative products and services. (para. 8)

In section 2.2.4 we give a brief overview of some of the related terms to shared value creation that describes this approach to business' concern for societal challenges: As opportunities to be seized.

In their exploration of sustainable business models, Jørgensen and Pedersen (2015) provide a useful distinction between two approaches to how economic performance and societal needs can be combined: On one hand, there are companies that innovate with the aim of reducing negative impacts caused by their own activities. These are reducing their own negative externalities. Other companies innovate with the aim of addressing societal problems which they themselves have not created, for instance through reconceiving their products or the markets in which these are sold. The goal of this latter approach is to create positive externalities from core business activities (Jørgensen & Pedersen, 2015). As we show in Chapter 3, the companies forming the empirical basis of this thesis all have in common that they belong to the latter group, i.e. companies that – through their innovations – create positive externalities for society.

Societal issues from the periphery to the center

The second strategic implication is that companies must move societal issues from the periphery of its business to the center of its operations. The extent to which measures directing societal concerns should also influence operations at the heart of the companies, is well-known from the CSR-debate (e.g. Jørgensen & Pedersen, 2011; Porter and Kramer, 2006). For instance, Jørgensen and Pedersen (2011) draw an “integrative dividing line” (p. 130) in their development of a typology of approaches to CSR. They distinguish between the companies where CSR-activities influence central business activities and those where they do not. Porter and Kramer (2011) make it clear that shared value creation requires the latter

² ”Agenda 2030” refers to the UN’s Sustainable Development Goals, approved by the 193 member states in September 2015 (United Nations, 2016).

approach, arguing “it is not on the margin of what companies do but at the centre” (p. 4). To illustrate the difference, one can consider the popular shoe label Toms that – for every pair of shoes the company sells – give a new pair of shoes to a child in need (Toms, 2016). Though this could without doubt be considered valuable for those children who are granted free shoes, it can hardly be said to influence the core activities of the company. An example of contrast is given by Pfitzer et al. (2013) who describe an initiative where Nestlé thorough research on micronutrient deficiencies in India, launched a spice product for low-income consumers which was reinforced with important micronutrients (Nestlé, 2013). We suggest this demonstrates that business efforts directed towards societal challenges can be performed along a spectrum: Initiatives are performed both at the periphery and center of the main business activities. An important feature of shared value creation is however that it is placed at the centre. Again, as we show in Chapter 3, this is why we have chosen to explore companies built on what we suggest to be shared value creating innovations.

Innovation as a source and consequence

A third strategic implication is that innovation becomes a necessity. Shared value creation calls for new business approaches to value creation: Reconceiving products and markets challenge the status quo and demand new and innovative ways for business to create value. The importance of innovation for business to contribute in solving societal problems is confirmed by several other scholars: Eccles and Serafeim (2013) argue that creating a sustainable society will be a task for the world’s most innovative firms. Also, Kanter (1999) suggests that “innovators build a reputation of being able to solve the most challenging problems” (p. 123). As societal needs define markets, Porter and Kramer (2011) argue that societal needs “will drive the next wave of innovation and productivity growth in the global economy” (p. 4). We draw from this that innovation is not only necessary for shared value creation, the search for societal value could also provide new sources of innovation.

Despite claims of the importance of innovation in addressing societal challenges, there are also initiatives found in the shared value creation literature where the level of innovation is modest. For instance, a supply chain initiative by Walmart aiming to reduce packaging waste by up to 5% has been used as an example of shared value creation (Maltz, Thompson, & Ringold, 2011). Fearne, Martinez and Dent (2012) suggest efficiency measures might well

cause cost and waste reduction, but argue it falls short of creating shared value. Given the magnitude of the challenges ahead and the potential for impact shared value creation entails according to Porter and Kramer (2011), we agree with Fearn et al. (2012). We suggest there should indeed be a substantial innovative component present when terming business efforts as shared value creating. In literature, the dimension of the level of innovation is often referred to as the incremental–radical innovation dichotomy (Ettlie, Bridges, & O’Keefe, 1984). We take as our starting point that radical innovation is necessary in order to create the kind of shared value that contribute in solving societal problems. This thesis is based on case companies where we suggest innovations are radical rather than incremental.

2.2.3 Critique of the concept

Even though the shared value creation idea has greatly influenced strategy research as well as public and private management, critique against the idea has been raised (e.g. Crane et al., 2014; Pirson, 2011). The critique seems to be revolving around three aspects. First, the feasibility of moving beyond trade-offs between social and economic goals is questioned. Second, it is claimed that shared value creation is skewed towards corporate interest. Third, the concept is claimed to be unoriginal.

Porter and Kramer’s (2011) view of the feasibility of “moving beyond trade-offs” (p. 4) is criticized by several scholars. For instance, Aakhus and Bzdak (2012) argue that shared value creation “rests on the potential that economic and social interests can be integrated without explicitly addressing how to deal with fundamental tensions between business and society” (p. 241). The point made by Aakhus and Bzdak (2012) is that all societal problems are not profitable business opportunities, meaning that companies sometimes have to choose between solving societal problems and making profits. They argue this represent trade-offs, in conflict with Porter and Kramer’s proposal of moving beyond them.

Further, Aakhus and Bzdak (2012) argue that shared value creation is a “model for social innovation that is skewed toward corporate interest” (p. 240). They argue that Porter and Kramer see the organization as the center of any network of stakeholders and that “any value for others is essentially spillover from the company’s success” (p. 240). This view is shared by Crane et al. (2014) who claim that shared value creation is based on a narrow view of

companies' role in society. They argue shared value creation can be perceived as just another way of seeking to differentiate the company from its competitors.

Finally, a response to the introduction of the shared value creation idea is that there is no novelty in the suggestion by Porter and Kramer. Crane et al. (2014), Hart (2013), and Aakhus and Bzdak (2012) argue that shared value creation is closely connected and possibly overlapping with other concepts and theories. Dembek et al. (2015) identify several concepts and theories closely related to shared value creation such as social technology, CSR, stakeholder theory, social innovation, social entrepreneurship, and the bottom of the pyramid-approach. In the following subsection, the relatedness of these terms to shared value creation will be discussed. This is important in order to understand the specificities of shared value creation. We will briefly go through the terms we have found to be most related to Porter and Kramer's term and illuminate similarities and differences between them. How we relate to the presented critique will be discussed in section 2.2.5.

2.2.4 The relationship between shared value creation and related terms

The debate about the proposed unoriginality of shared value creation has to a large extent revolved around its relationship to CSR. Although Porter and Kramer in their 2006 article struck a blow for 'strategic CSR', they reason in their 2011 article that "creating shared value should supersede CSR in guiding the investments of companies in their communities" (p. 16). They hold that CSR focus mostly on reputation and non-core business activities as opposed to shared value creation that creates social value through the business model. Crane et al. (2014) however argue this view of CSR is outdated, as more recent work on CSR focus on building it into the core strategy of the firm. Despite the notion 'strategic CSR', CSR still seems to be a broader concept than shared value creation, as many scholars and business managers still perceive non-core business activities as part of the concept.

Another related term is Prahalad and Hart's (2002) idea of doing business with the world's socio-economically poorest, often referred to as the bottom of the pyramid (BOP). They suggest low income markets represent an opportunity for firms to increase profits while simultaneously bringing prosperity to the poor. Later on, the term has been expanded to also entail co-venturing business with the poor (London & Hart, 2011). BOP seems closely

interlinked with shared value creation, and the term is mentioned in Porter and Kramer's 2011-article. Both concepts emphasize business' opportunity for profit growth, while simultaneously increasing the poor's prosperity. However, the BOP approach focus solely on societal problems in developing countries, implying that shared value creation can be understood as a broader concept because it can be achieved within developed country markets. This thesis is based on a developed country markets context.

Shared value creation has also been compared to the term 'social technology', but as with BOP, this term seems somewhat narrower than shared value creation. Social technology focuses on using new technologies as development options for less-developed countries (Leandro & Neffa, 2012). Dembek et al. (2015) describe that concept of social technology resembles shared value creation as it entails benefiting society through developing new products and services. However, as Porter and Kramer (2011) suggest that shared value creation also entails innovating in the value chain and building local clusters, shared value creation appears to be a wider term than the concept of social technology.

Shared value creation has also been seen as a rehash of the debate on social entrepreneurship. Social entrepreneurship is defined as "a process involving the innovative use and combination of resources to pursue opportunities to catalyze social change and/or address social needs" (Mair & Marti, 2006, p. 37). Studying this definition, Crane et al. (2014) state "it is hard to see much difference to shared value creation" (p. 135). Indeed, Porter and Kramer in their 2011-article highlight social entrepreneurs as corporations to learn from. Social entrepreneurship enterprises could therefore be understood as examples of shared value creating firms.

Several authors comment on the similarity between stakeholder theory and shared value creation, but they also acknowledge the role shared value creation can play in further developing stakeholder theory. Stakeholder theory – most commonly linked to the works of R. Edward Freeman – identifies the stakeholders of a firm and seeks to create value to these stakeholders, not only to shareholder interests. Strand and Freeman (2015) argue that for the most part, stakeholder theory is consistent with Porter and Kramer's term. They consider the shared value concept "to be useful means to further advance the stakeholder concept" (p. 81). Still, they argue that "Porter and Kramer indicate their belief that company interests should be

prioritized above all else” (p. 81) and suggest a difference between the concepts is that shared value creation entails a more narrow view of the firm than what the stakeholder theory do.

Although it is beyond the scope of this thesis to delve further into differences and similarities between Porter and Kramer’s idea and the above mentioned – and possibly also other – related terms, we find that exploring these relations illuminate the shared value creation concept. Some terms are more specific, focusing on a certain product type, such as technology for the social technology concept, or markets as with BOP. CSR and stakeholder theory on the other hand seem to be terms even broader than shared value creation. In the next section we explain how we relate to the critique and why we – notwithstanding the arguments brought forth – find it important to explore Porter and Kramer’s idea.

2.2.5 Shared value creation and our point of departure

The previous sections have shown that there are unresolved questions and deficiencies to the shared value creation concept. However, we believe it is valuable to explore the idea further. First, exploring ideas on how business can contribute in solving societal problems in a time where the world is experiencing dramatic challenges is vital. The article “A stress test for good intentions” (2009) shows that CSR and sustainability investments falls in economic downturn. This makes it seem particularly important to explore ideas that align corporate self-interest and societal progress. Second, as we will show in the next paragraphs, we do not believe the presented critique in subsection 2.2.3 is sufficient to reject the shared value creation concept.

The first critique presented in subsection 2.2.3 was the difficulty of pursuing economic and social goals simultaneously. Pursuing multiple objectives is described as a demanding process and even as a barrier for shared value creation (e.g. Pirson, 2011). Rather than stating it is impossible to resolve the tension between pursuing economic and societal goals, we believe it is important to explore whether organizations actually manage this, and in that case, how it is done.

The second vein of critique is that shared value creation has a “corporate centric focus” (Crane et al., 2014, p. 150). We recognize that shared value creation can be perceived as just a new way of differentiating the firm from its competitors. However, as Crane et al. (2014) also

recognize, shared value creation has already shown potential to urge an awareness of business' role in society among large corporations. Whereas some interrelated terms, such as CSR, have gained critique for presenting corporate responsibility merely as an ethical duty, shared value creation urges managers to perceive such problems as real business opportunities. As long as societal value is created, we suggest corporations keeping a corporate centric focus are not necessarily problematic.

As shown, there are also unquestionably similarities between shared value creation and related concepts. This thesis is based on the premise that the relatedness of other concepts is no impediment to exploring shared value creation further. Given its position within the strategy field (de Wit & Meyer, 2014) and appeal to practitioners and scholars alike (Crane et al., 2014), we suggest the term is worthwhile illuminating and exploring further. Rather than suggesting that shared value creation should replace the discussed adjacent or possibly overlapping terms, we share Elkington's (2011) view; "Although CSV³ has many virtues, it is unlikely to deal with the thornier CSR issues such as human rights or corruption" (para. 1). In other words, our position is that the concept should complement other business efforts to address societal challenges. It should not be understood as a panacea, and Porter and Kramer (2011) themselves argue there are societal challenges which cannot be solved by the concept. Rather, the idea provides a mindset which could direct business strategies to create both societal and economic value.

2.2.6 Key factors for shared value creation

Despite the remarkable attention sparked by Porter and Kramer's article, the term has not developed much further as a theoretical concept (Williams & Hayes, 2013) and is still at a nascent stage (Dembek et al., 2015). Dembek et al. (2015) emphasize the need to "provide shared value with meaning and organizations with guidance of how to implement it" (p.15) and suggest this can be done through clarifying the means through which shared value is created. Scholars suggest important factors in order to create shared value. These suggestions are presented in somewhat different manners: Some scholars explicitly state steps or elements

³ CSV is used as an abbreviation for creating shared value.

they recommend for companies (e.g. Pfitzer et al., 2013; Eccles et al., 2012), others refer to characteristics or success factors found through case studies (e.g. Schmitt & Renken, 2012; Maltz & Schein, 2012), while again others have more general descriptions from which we have interpreted what could be said to be important factors for shared value creation (e.g. Brown & Knudsen, 2012; Moon, Parc, Yim, & Park, 2011). Some suggestions are brought forth by Kanter (1999), Yunus, Moinegeon and Lehmann-Ortega (2010), Eccles et al. (2012), Eccles and Serafeim (2013), and Eccles, Ioannou and Serafeim (2014). They do not use the term shared value creation, but nevertheless address the same kind of companies as those Porter and Kramer refer to as shared value creating companies. Therefore these articles inform the presented factors. We address this approach further in Chapter 3 on the methodology of the thesis.

The shared value literature is focused on a wide variety of companies, both in terms of their size, what kind of societal challenge they address, and their approaches to shared value creation (i.e. whether they choose to reconceive products and markets, to redefine productivity in their value chain, or to enable local cluster development). We have chosen to focus on SMEs creating shared value that follow the first approach suggested by Porter and Kramer (2011), namely reconceiving products or markets. Notwithstanding the potential for positive societal impact by the two other approaches to shared value creation, this choice was made as we believe exploring only one of the approaches allows for a more precise exploration of the propositions stated in section 2.4. Also, we have chosen to look at innovative products or services due to the profound importance of innovation both to tackle societal challenges ahead and for companies' long-term survival.

Factor 1: Selling an innovative and societally focused value proposition

In order to create shared value, products and services that allow for societal progress are increasingly needed (Porter & Kramer, 2011). When Porter and Kramer (2011) suggest reconceiving products and markets, this entails offering products and services with an innovative value proposition, i.e. the proposed combination of benefit and price offered to the customer (Lanning & Michaels, 1988). Companies must deliver products and services not only valuable to the end customer, but also to society at large. This resembles what Muhammad Yunus and his colleagues' describe as a key element of social business models:

“the value proposition and constellation are not focused solely on the customer, but are expanded to encompass all stakeholders” (Yunus et al., 2010, p. 318). Shared value creating companies therefore continuously identify societal needs that might be included in the company’s portfolio of products or services (Porter & Kramer, 2011). This identification of new products and markets could also be ignited by suggestions of new regulations and policies which might – if realized – open up new markets, according to Moon et al (2011). In their suggestions on how to extend the shared value creation concept, they for instance provide the example of car manufacturers who met new emission regulations by innovating and producing more environmentally friendly cars, whereas other car companies at the time opposed these regulations.

A barrier for shared value creating companies is customers’ unwillingness to change or to pay if the societal value offered also entails extra costs (Eccles, 2016). Products and markets might well be reconceived, but these products need to be sold in the proposed markets for economic value to be created. Porter and Kramer (2011) claim this is where business comes in: “Businesses will often be far more effective than governments and nonprofits are at marketing that motivates customers to embrace products and services that create societal benefits, like healthier food or environmentally friendly products” (p. 7). We draw from this that shared value creating companies introduce measures that might help overcome customers’ reluctance to buy different products.

Factor 2: Recognition and inclusion of stakeholders

Scholars emphasize the importance of a broad consideration of relevant stakeholders for shared value creation companies. As we show in our section on terms closely related to shared value creation, stakeholder theory – as advocated by R. Edward Freeman – is closely related to Porter and Kramer’s term. Freeman seeks to “revitalize the concept of managerial capitalism by replacing the notion that managers have a duty to stockholders with the concept that managers bear a fiduciary relationship to stakeholders” (Freeman, 2001, p. 39). Within the literature stream following Porter and Kramer (2011), there are two aspects of stakeholder management which seem to be recurring: Recognition (“who” should be considered) and inclusion (“how” they should be considered and included) of stakeholders.

Recognition of stakeholders

Eccles et al. (2012) describe that profitable companies succeeding in creating societal value “realize the importance of reaching beyond their own internal boundaries to a variety of external stakeholders” (p. 46). Different scholars emphasize recognition of different stakeholders. Porter and Kramer (2011) emphasize the importance of local clusters for shared value creation, thereby applying a broad definition of which stakeholders that should be identified and recognized as contributors to the value creation process. In this context, clusters are defined as consisting of firms, related businesses, suppliers, service providers and logistical infrastructure, institutions, trade associations and standards organizations (Porter & Kramer, 2011).

Kanter (1999), Pfitzer et al. (2013) and Schmitt and Renken (2012) highlight recognition of a range of stakeholders, such as actors from governments, civil society, non-governmental organizations (NGOs), academia and competing businesses. Kanter (1999) describes recognizing government and civil society as collaboration partners as important because they might be sources of profitable and sustainable innovations. Pfitzer et al. (2013) emphasize the possibility of getting government funding and suggest this may be necessary to bring forth innovations that require substantial investments over long time periods before they deliver return on invested capital. Moreover, Schmitt and Renken (2012) find that shared value creating companies collaborate with their competitors and refer to this as “co-opetition” (p. 93). They suggest this result in new practices beneficial for the whole industry. These views suggest a broad perception of which stakeholders that should be identified and recognized as contributors to the value creation process.

Subsequent articles suggest an even broader recognition of the relevant stakeholders for shared value creating companies: Due to “the ever-increasing importance of internationalization in today’s global economy” (Moon et al., 2011, p. 60), it is suggested that companies should create global clusters, implying a recognition of not only local collaboration partners, but also global. Moreover, Spitzeck and Chapman (2012) find that a shared value creating chemical company they evaluated considered stakeholders as those affected by the life-cycle of the product. Using this approach, stakeholders included “employees, the international community, future generations, consumers as well as local

communities” (Spitzeck & Chapman, 2012, p. 505). This illustrates how literature finds examples of stakeholder recognition both crossing borders and generations.

Inclusion of stakeholders

Literature shows that shared value creating companies do not only recognize who their stakeholders are, but also include the stakeholders in the value creation processes. This is important as stakeholders possess unique information and knowledge needed in order to understand all of the dimensions of the problem the company tries to address (Pfitzer et al., 2013). This inclusion could be done in a variety of ways.

Porter and Kramer (2011) suggest the inclusion of stakeholders could be done by collaborating with cluster participants. Collaboration will “improve company productivity, while addressing gaps or failures in the framework conditions surrounding the cluster” (Porter and Kramer, 2011, p. 12). Pfitzer et al. (2013) are more concrete in their suggestions on *how* to include external stakeholders: They suggest funding their research, getting them to serve as consultants and hiring people with experience from the social sector.

Lee, Olson and Trimi (2012) focus on including external stakeholders by ‘co-innovating’ with them. ‘Co-innovation’, they suggest, is “where new ideas and approaches from various internal and external sources are integrated in a platform to generate new organizational and shared values” (Lee et al., 2012, p. 817). Emphasis is put on co-creation with customers, as they claim this result in value creation beyond customers’ needs and also provides value to society on a broader scale.

Further, Eccles and Serafeim (2013) emphasize the importance of appropriate investors, as these provide substantial investments necessary for the long term success of shared value creating companies. They suggest communicating actively, for instance through integrated

reporting⁴, both in order to attract appropriate investors, as well as getting them to serve as advisors for the companies' strategic decisions.

Factor 3: Internal knowledge and capabilities

Creating shared value is knowledge-intensive (Schmitt & Renken, 2012) and attending to environmental or social challenges frequently call for new and different skills (Eccles & Serafeim, 2013). Three types of knowledge are emphasized as necessary for companies to create shared value: (1) Traditional product and process knowledge, which we refer to as domain knowledge, (2) knowledge about the commercial processes needed to bring products to a market, as well as (3) knowledge about the social and environmental issues the company tries to address (Schmitt & Renken, 2012). The last point is also emphasized by Porter and Kramer (2011) who suggest shared value can be created through a better understanding of the social or environmental problem at hand. In order to achieve this understanding, companies need to gain knowledge about not only the customers' needs, but also of the society's needs. Pfitzer et al. (2013) suggest distinct steps in order to gain such knowledge: "conduct extensive research to develop a comprehensive view of the problem, the people affected and their numbers, the barriers to progress, the options for driving change, and the parties that can help" (p. 4). This shows how scholars argue that a broad and holistic knowledge base is important to create shared value. In addition to these three types of knowledge, collaborative capabilities are also emphasized (Schmitt & Renken, 2012; Maltz & Schein, 2012). This can be seen in relation to the described importance of recognizing and including stakeholders, but is also important in regard to retrieving necessary knowledge from external actors. To companies with limited resources, having access to the required knowledge and capabilities can be challenging, making collaborative capabilities a way forward to enlarge the knowledge base.

⁴ Eccles and Krzus (2010) define integrated reporting as "producing a single report that combines the financial and narrative information found in a company's annual report with the nonfinancial (such as on environmental, social, and governance issues) and narrative information found in a company's "Corporate Social Responsibility" or "Sustainability" report" (p. 10).

Factor 4: Innovation structure

The fourth factor important for shared value creating companies is the importance of organizational structures enhancing innovation due to the strong link between innovation and shared value creation. Having studied companies such as Nestlé, Vodafone and Intel, Pfitzer et al. (2013) emphasize the importance of establishing structures and mechanism within the organization in order to ensure innovation. This is a point also brought forth by Eccles et al. (2012). They put special emphasis on the importance of organization wide and cross-divisional collaboration to enhance innovation. Further, they suggest introducing mechanisms that facilitate lateral communication so that employees share ideas is important to ensure innovation.

Pfitzer et al. (2013) suggest companies should structure their shared value creating activities based on the extent to which the firm (1) has the capabilities and knowledge needed to create shared value within the organization, and (2) whether the path to profitability is clear or not. These factors prescribe where on a spectrum – ranging from the integration of innovation activity with the legacy business on one end, to delegating these activities to external actors on the other – a company should place its innovation efforts. If the firm is well equipped to understand societal problems and possess the capabilities to solve them, and the path to profitability is clear, the shared value activities should be integrated within the organization. In the opposite case, the firm should fund independent entrepreneurs to tackle the challenge (Pfitzer et al., 2013). In other words, even though the authors argue that finding an expedient innovation structure is vital, this does not necessarily imply that the innovative activities must be performed in-house.

Factor 5: Measuring societal value

Scholars emphasize the importance of measuring the social and economic value generated by shared value creating efforts and suggest there is a need for more measuring tools. Eccles and Serafeim (2013) argue that “Companies need to consider an expanded definition of value that takes into account the environmental and social worth of a project and what that means for a company’s brand, ability to attract employees, and license to operate” (p. 10). However there is currently no comprehensive universal system available for doing this (Pfitzer et al., 2013),

and the measuring of societal value is found challenging (Driver & Porter, 2012). In wait of measuring standards, “rules of thumb” and estimates are suggested to be valuable (Pfitzer et al., 2013; Eccles & Serafeim, 2013). Several shared value creating companies are found to use estimates to measure the impact of their activities (e.g. Spitzeck & Chapman, 2012; Pfitzer et al., 2013). Also, companies with a sustainability focus are working to identify and implement new measures (Eccles et al., 2012). This illustrates that despite the lack of agreed-upon standards for measurements of societal value creation, this is nevertheless done by a number of companies.

In particular, one reason for the importance of measuring is emphasized in literature. Different measuring frameworks are pointed to as analysis tools to assess where improvements could be made, such as a socio-eco-efficiency analysis evaluating triple-bottom line indicators⁵ at the Brazilian company BASF (Spitzeck & Chapman, 2012). Further, Fearn et al. (2012) emphasize how value chain analyses (VCAs) can be used in this regard. However, they find that existing VCAs are not incorporating social and environmental consequences of companies’ activities. They suggest this leads to societal harm and the ignoring of opportunities for environmental improvements.

Factor 6: Organizational culture and values

Eccles et al. (2012) find that profitable companies succeeding in creating societal value have an organizational culture characterized by high levels of trust among employees. This level of trust encourages employees to air diverse point of views, rather than suppressing conflicts. This in turn leads to innovative ideas necessary in order to create shared value. Further, they suggest the employees of these companies are motivated by the societal issue they seek to address. Working with issues that matters for the employees makes work meaningful and people engaged and productive (Eccles et al., 2012). Personal engagement from the employees seems paramount in shared value creating companies, as this contribute to enhance necessary innovation and employee motivation.

⁵The “triple bottom line” was suggested by John Elkington in 1994 and proposes to measure both corporate profit, socially responsibility, as well as a final line of the company's “planet” account. The triple bottom line consists of three Ps: profit, people and planet.

Shared value creating companies do not only have a supportive organizational culture, authors such as Brown and Knudsen (2012), Schmitt and Renken (2012), and Eccles et al. (2014) also finds explicitly stated organizational values to be an important element in these companies. The values are given different roles: They could serve as key motivators for business to include societal needs in their value creation process (Schmitt & Renken, 2012) and give guidance on which societal needs the company might address (Brown & Knudsen, 2012). Moreover, Schmitt and Renken (2012) find that corporate values guide both operational and strategic decisions within the company, through for instance taking societal considerations in the company's value chain.

2.3 The environmental issues context

As we have chosen to explore SMEs who offer products or services addressing environmental problems, we give a brief introduction to the environmental issue context in the following subsections. First, we clarify our use of the term 'societal value'. Thereafter, we give a short description of major environmental challenges facing society. Finally, we conclude the section by discussing how this context represents opportunities for innovation.

2.3.1 How do we define societal value?

To describe the value created beyond that of economic value, we suggest referring to value created to society as 'societal value'. We perceive this as a term including both social and environmental value. When defining social and environmental value we turn to the works of John Elkington on the concept of the 'triple bottom line'. Here he proposes measuring both corporate profit, socially responsibility ("people"), as well as a final line of the company's "planet" account. This often referred to as the 'People, Planet, Profit'-triangle. In this thesis we use the term 'social value' to refer to the 'people' corner of this triangle, which entails improved conditions for citizens' well-being (Elkington, 1998). Further, we use 'environmental' value to refer to the 'planet' corner of the triangle, which relates to decreased negative impact on the environment (Elkington, 1998).

2.3.2 Environmental challenges facing the world today

It is beyond the scope of this thesis to give a thorough description of the environmental challenges facing people and ecosystems for the decades to come. Climate change – well known through the seminal reports by the Intergovernmental Panel on Climate Change (IPCC) – has received widespread attention. Ecosystems and cultures are already at risk due to a changing climate. Also, as greenhouse gas emissions continue to increase, the risk of extreme weather events also increase, access to food and water are reduced, and health conditions are aggravated (IPCC, 2014). Moreover, loss of biodiversity continues with the consequence that opportunities to address hunger and poverty reduction, health improvements and sustainable supply of food, water and energy, are also lost (CBD, 2014). Continued use of hazardous chemicals and contaminate water and soil resources affects wildlife and harm human health (UNEP, 2013). These challenges are severe, they are interconnected and they are embedded in other environmental issues such as extensive resource use and polluting energy sources. As will be shown, the case companies in this thesis address different environmental issues, but which are all related to the trends described in this paragraph.

2.3.3 Sustainability as a driver for innovation?

In 1995, Porter and van der Linde described the relation between ecology and economy as a stalemate where “the prevailing view is that there is an inherent and fixed trade-off: ecology versus the economy” (p. 120). The authors describe environmental progress as a battle between two sides either pushing for or opposing regulations, with the winner depending on shifting political views. Fourteen years later, a similar description was suggested by Nidumolu, Prahalad and Rangaswami (2009). They describe how “many companies are convinced that the more environment-friendly they become, the more the effort will erode their competitiveness” (p. 57). The basis for Porter and Kramer’s shared value creation concept is the reconciliation between societal challenges and companies’ competitive strategies. Exploring whether the proposed tension between ecology and economy do in fact entail business opportunities, therefore provide an interesting context for exploring shared value creation efforts.

Scholars suggest the environmental issue context substantiates the importance of innovation: Nidumolu et al. (2009) leave no doubt on the importance of new solutions to relieve pressure currently being put on the planet. They argue that “Traditional approaches to business will collapse, and companies will have to develop innovative solutions. That will happen only when executives recognize a simple truth: Sustainability = Innovation” (p. 64). Again, we find that this illustrates the environmental issues context as an interesting context for exploring shared value creating companies.

2.4 Propositions

The key factors for shared value creating companies discussed in section 2.2.6 as well as the environmental context described in section 2.3 lay the basis for constructing a set of propositions characterizing companies that create economic and environmental value. These propositions form the basis for explaining how SMEs offering innovations that address environmental challenges create shared value. They also guide the data collection as well as the analysis, as will be shown in Chapter 4 and 5.

P1: Companies creating economic and environmental value are selling an innovative and environmentally focused value proposition.

P2: Companies creating economic and environmental value apply a broad recognition and inclusion of stakeholders.

P3: Companies creating economic and environmental value possess domain knowledge, knowledge about the commercial processes needed to make a viable business case, as well as knowledge about the environmental issues the companies seek to address.

P4: Companies creating economic and environmental value have a structure that facilitates innovation.

P5: Companies creating economic and environmental value measure their environmental impact.

P6: Companies creating economic and environmental value have a supporting organizational culture and the addressing of environmental needs as part of their vision and/or values.

3 Methodology

To many of those whom the world seems to be out of control, there appears to be little to be done about it. But as long as there is even a little that can be done about it, we ought to be doing it.

Russell L. Ackoff

In this chapter we present the methodology of the thesis. We first describe our research process and strategy. This is followed by a description of the research design in section 3.2. Section 3.3 describes the chosen research method, whereas section 3.4 describes our analysis process. Section 3.5 concludes the chapter by an assessment of the quality of the study.

3.1 Research strategy

3.1.1 Research process

The research process of the thesis is illustrated in Figure 1. The process was initiated by a literature review on shared value creation, which we elaborate on in subsection 3.1.2. Based on the knowledge gaps found through the literature review, a research question was formulated. This research question and the literature review then guided the establishment of the set of propositions suggested in Chapter 2, as well as the choice of research design and methods. After these choices were made, a sampling process of case companies was conducted, with subsequent interviews and transcription of these. The interviews were then analyzed and discussed, and provided the foundation for conclusions and implications. It is important to note that the process was rather iterative than linear, meaning we revised several early decisions along the way. For instance, after conducting the interviews, we revisited both the theoretical foundation and research question in order to narrow down and refine the scope of the study.

Conduct literature review	A literature review on shared value creation was conducted. Presented in subsection 3.1.2.
Define research questions	Based on the literature review, the research question was defined. Presented in section 1.3.
Establish propositions	Six propositions for successful shared value creation were created. Presented in section 2.4.
Choose research design	A multiple case study with interviews was chosen as the research design. Presented in section 3.2.
Select of cases	Ten case companies and six experts were chosen on the basis of a set of selection criteria. Presented in section 3.3.
Create interview guides	Interview guides were created through an iterative process. Presented in section 3.3 and Appendix 1 and 2.
Conduct and transcribe interviews	26 interviews were conducted and transcribed. Presented in section 3.3.
Conduct analysis process	The cases were analyzed using a coding process in NVivo. Presented in section 3.4.
Answer research question	The findings were discussed and the research question answered. Presented in Chapter 5.
Find implications and conclude	Implications for practitioners and theory were made. Presented in section 5.2 and 5.3. The thesis was concluded. Presented in Chapter 6.

Figure 1: The research process.

3.1.2 Theoretical foundation of the conceptual background

The six factors forming the basis for the propositions described in 2.4 were identified through a literature review on shared value creation. The literature review was based both on a key word data base search and a reference search. The majority of the literature was collected through an online search in Scopus. Scopus was selected for two reasons: First, a database making it possible to cover multiple terminologies in one search was needed. Scopus allows for structuring the search by the use of synonyms and AND-/OR functionality. Second, Scopus is the largest abstract and citation database of research literature and quality web sources (Bryman, 2012). We considered a reliable database as important in order to find the most significant literature in the field of shared value creation.

When using a keyword search, there is a risk of not including all appropriate keywords, which calls for a trial-and-error approach. For instance, we found that though using keywords such as ‘shared value’, ‘creating shared value’ or ‘create shared value’, relevant articles such as Dembek’s et al. (2015) “Literature Review of Shared Value: A Theoretical Concept or a Management Buzzword” did not appear due to use of synonyms for ‘create’, such as ‘achieve’. On the other hand, by using the keywords ‘shared value’ the search returned articles in the magnitude of thousands. By using the keywords ‘shared value’, ‘Porter’ and ‘Kramer’, a manageable amount of articles appeared. Also, to ensure articles of high academic quality the search was restricted to articles and reviews published in journals.

In addition to the trial-and-error approach, we conducted a reference search to reduce the chances of missing relevant literature in the keyword search. This entailed following up on references used in articles that were provided by the key word search. This lead to an increase in the number of identified articles and gave a total of 93 articles.

To decide which articles from the search process to keep for the literature review, two criteria were set. The first criterion was that the article had to use ‘shared value creation’ in a similar manner as Porter and Kramer (2006; 2011). The second criterion was that the purpose of the article had to be exclusively focused on shared value creation. Articles using the term to form part of an argument for something else were discarded. For instance, Aakhus and Bzdak

(2015) discuss shared value as part of a framework for stakeholder engagement. In this article, the main focus is on stakeholder engagement, not shared value creation.

Some exceptions were made from the criteria described above due to their similarities to the shared value concept: Kanter’s (1999) descriptions of social innovations, Yunus’ et al. (2010) article on social business models, as well as a number of articles written by Eccles and co-writers’ suggestion on aligning environmental, social and governance (ESG) issues with economic value (Eccles et al., 2012; Eccles & Serafeim, 2013; Eccles et al., 2014; Eccles, 2016). These articles were handled equivalent to those concerning shared value creation as they describe seeing societal problems as business opportunities, in line with Porter and Kramer’s definition of shared value creation. This gave a total of 29 articles (Table 1), which we thoroughly reviewed to identify factors describing how companies create shared value.

Table 1: Number of relevant articles at different stages in the search process.

Number of relevant articles	
After keyword search	62
After reference search	97
After selection process	29

3.1.3 Choosing a qualitative research strategy

We undertake a qualitative research strategy, which means that words are used over quantification in the collection and analysis of data (Bryman, 2012). A qualitative research strategy was chosen due to the epistemological and ontological foundation of the study. The epistemological position of research defines what is regarded as acceptable knowledge in a discipline, whereas the ontological position defines what is perceived as the “nature of social entities” (Bryman, 2012, p. 32) and whether these are objective entities independent of social actors or social constructions built by social actors. Our epistemological stance is interpretivism, implying the perception that it does not exist only one true recognition of the reality, but rather many competing recognitions which cannot be viewed as more true than others (Bryman, 2012). Further, our ontological position is constructionism where the social reality is viewed as continually accomplished by social actors (Bryman, 2012). The stance taken on these two positions has implications for the choice of research strategy: Basing the

study on interpretivist and constructivist positions is normally associated with qualitative study (Bryman, 2012), as is the case in this thesis.

3.1.4 The relationship between theory and research

This study has a deductive approach to the relationship between theory and research, implying that propositions are deduced based on theory, which in turn is subjected to empirical scrutiny (Bryman, 2012). The opposite of a deductive research strategy is an inductive one, implying that theory is the outcome of empirical observations (Bryman, 2012). The latter approach, where observations and findings lead to generation of theory, is predominantly chosen for qualitative studies (Bryman, 2012). However, scholars also suggest a deductive approach can be used in qualitative research: Hyde (2000) suggests qualitative research can be effective for deductive studies when propositions can be stated before data gathering, which is the case in this thesis. Also, Yin (2014) advocates using propositions to direct “attention to something that should be examined within the scope of the study” (p. 30) – a stance in line with a deductive research approach based on theoretically derived research propositions.

Though this study mainly has a deductive approach, it also has some inductive tendencies. According to Bryman (2012), the distinction between the two approaches should be thought of more as strategies than a straightforward choice of one over the other. Further, Hyde (2000) suggests that “a balance of induction and deduction is required in all research” (p. 88). He argues that even when the main approach is deductive, one should always look for alternative explanations, and that “beyond theory-testing the researcher is likely to seek inductive insights and interpretation of his or her results” (p. 88). With this in mind, we were open to other topics than those covered by our propositions being important to explore how shared value is created by the case companies.

3.2 Research design

3.2.1 Unit of analysis

Companies with an innovation that contributes in solving environmental problems and that have potential for profit generation are the units of analysis chosen for this thesis. At the outset of the research process we found two alternatives for the unit of analysis; (1)

companies with innovations creating shared value and (2) shared value creation *projects* within companies. We chose companies as the unit of analysis for two reasons. First, through the process of finding cases for the thesis (described in section 3.3.1) we selected SMEs primarily based on one innovation. We suggest choosing the project as the unit of analysis in practice the same as looking at the whole company. Second, when using a deductive approach, Yin (2014) suggests choosing the same unit of analysis as the existing literature in order to compare findings with previous research. The majority of existing shared value literature uses companies as the unit of analysis, which implies that as our propositions are based on this literature, the same choice should be made for this thesis. However, as we focus on SMEs reconceiving products we apply a narrower approach to shared value creating companies than what is found in literature. We still believe it is necessary to base our propositions on literature describing shared value creation in all kinds of companies. This is because limiting relevant theory only to SMEs or companies merely reconceiving products would give an insufficient number of articles on which to deduce the propositions.

In addition to interviewing companies, we have interviewed resource persons with knowledge in the field, hereafter referred to as experts. These interviews are used as a source of triangulation, which in social research refers to “the observation of the research issue from (at least) two different points” (Flick, von Kardoff, & Steinke, 2004, p. 178). As these experts have experience with companies trying to create both societal and economic value, they were considered providing a holistic overview of key factors for shared value creation. By this, they enable us to “study a social phenomenon so that findings may be cross-checked” (Bryman, 2012, p. 717) and complement the findings from the case companies. We describe how the case companies and experts were selected in further subsections.

3.2.2 Case company study design

We conduct a case study. This was decided based on Yin’s (2014) three conditions for when to use different research strategies: (1) the type of the research question posed, (2) the extent of control an investigator has over actual behavioral events, and (3) the degree of focus on contemporary as opposed to historical events (p. 10). Our research question has the form of a “how”-question, and Yin (2014) describes that “how” questions are “likely to lead to the use of a case study, history, or experiment as the preferred research method” (p. 10). Further, Yin

(2014) argues that the choice between conducting a case study, history study or experiment, depends on whether the researcher has control over the events to be studied and whether contemporary, historical events or both, are the scope of the study. The relevant behaviors for our research cannot be manipulated, and we must examine both historical and contemporary events in order to answer our research question. Yin (2014) suggests a case study design is preferred over a historical study and experiment when this is the case.

A multiple case design was chosen over a single case design as Yin (2014) suggests multiple cases are considered more robust than its single case counterpart when the unit of analysis is not considered being an unusual, rare nor critical phenomenon. Even though there exist a limited number of companies that can be said to create shared value, such companies cannot be considered neither unusual, rare nor critical cases. Moreover, Hyde (2000) suggests using a multiple case study design is preferred when having a deductive research approach.

3.2.3 Anonymity

We treat the case companies anonymously, using pseudonyms, on request from some of the companies. As we wanted to treat the data material in a consistent way, the obvious choice was then to treat all the companies anonymously. Moreover, the interviewees shared more information when told of the opportunity to be treated anonymously. Also, we believe not identifying the companies does not affect our conclusion. The companies we interviewed are referred to as Alpha, Beta, Gamma, Delta, Epsilon, Red, Yellow, Blue, Green and Purple. We chose using these pseudonyms – and particularly the mix of the Greek alphabet letters and colors – on the basis of advice from scientific staff at IØT.

We treat the experts partly anonymously, meaning they are mentioned by names in this chapter, but will be referred to by pseudonyms (Expert 1, 2 etc.) when presenting the empirical findings and the discussion. The order in which the experts' names are referred in Table 3 in subsection 3.3.2 does not coincide with the numbering of each expert. We chose this approach as that some of the experts requested that particular answers should not be traceable to their names. However, we still mention the experts by name initially as we find it important to illustrate their background and expertise, and how this is relevant for this thesis. The chosen approach to anonymity is clarified with each expert. An implication of this choice

is that we have written the empirical findings in Chapter 4 in a form where it should not be possible to single out the various experts based on the description of them in subsection 3.3.2. To ensure this, subsection 3.3.2 and Chapter 4 was revised by an external person to see if there were any elements making it possible to identify the expert behind the pseudonym.

3.3 Research method

3.3.1 Case selection

Criteria for company case selection

Our sampling approach is generic, fixed, a priori and purposive. Bryman (2012) describes a ‘generic purposive sampling’ approach as a process where the “researcher establishes criteria concerning the kinds of cases needed to address the research questions, and then samples from those cases that have been identified” (p. 422). Further, ‘fixed’ imply the cases are fixed early in the research process, and ‘a priori’ means the criteria for selecting the cases are established before the data collection starts (Bryman, 2012). As using this approach implies that the case selection criteria are established to select cases addressing the research question (Bryman, 2012), we carefully chose the case selection criteria. Also, the cases were selected based on their potential for literal replications, meaning that we expected they would provide similar results.

Our first criterion was that the value proposition of the company entailed a product or service addressing an environmental challenge, fulfilling the “societal side” of the shared value creation definition. As described in Chapter 1 and 2, we have chosen the environmental issue context as the background for this thesis implying that societal improvements in our case means environmental progress.

Our second criterion entailed that the company must have an innovation at the radical part of the innovation spectrum. The consideration on whether the company’s innovation was more radical than incremental was based on a thorough assessment of their value proposition. Recognitions from external actors such as Innovation Norway, specific innovation awards, and news media were used during this assessment.

Our last criterion was that the company had to create economic value. By setting this criterion, the “economic side” of shared value creation would be fulfilled. We define economic value in line with Porter and Kramer (2011) as; “profitability that supports employment, wages, purchases, investments and taxes” (p. 6). However, when searching for relevant cases, it came clear to us that many of the companies working with innovations contributing towards environmental progress are in an early phase when it comes to profitability. In order to get enough interesting cases, we decided that creating economic value in this setting would either imply that the company already is profitable, or that there are clear indications from the internal and external environment it has a future potential for profitability. This being said, it was important that the companies had moved beyond a research and development (R&D) phase, so the path to profitability was relatively clear. We consider the fact that some of the chosen case companies are not profitable yet a limitation and discuss this further in section 5.4.

Our sample consists of nine companies. There are many opinions in literature on how large the sample size should be (Bryman, 2012). Onwuegbuzie and Collins (2007) argue that the sample size should be large enough to achieve data saturation, but at the same time not be so large that the researchers are unable to conduct a deep analysis of the cases. Further, Bryman (2012) argue the broader the scope of the research question, the more cases should be chosen. The fact that our research question is broad resulted in an attempt to obtain a relatively big pool of case companies. Time constraints made it impossible to include further cases. This was because organizing interviews, travel, preparations, conducting interviews, as well as post-interview work such as transcribing and analyzing interviews in sum are time-consuming activities.

Final sample of case companies

We used three strategies during the sampling process. All provided potential case companies, but in order to ensure anonymity we will not mention the number of companies sourced through each strategy. First, we went through a publicly available list of companies having received support from a scheme for environmental technology (Miljøteknologiordningen) from Innovation Norway (Innovasjon Norge, 2014; Innovasjon Norge, 2015). The support is given to companies with innovations fulfilling certain criteria: (1) The innovation must have a

quantifiable positive effect on the environment and (2) the innovation must have a commercial profitability potential (“Miljøteknologiordningen”, 2014). These criteria are consistent with our criteria for case selection. We identified several relevant cases from this list and studied them in greater detail to check if the cases were in line with the predefined criteria. We invited those who were to join the study.

The second sampling strategy entailed reviewing technology, innovation and sustainability awards and listings. Through this process, we found an annual international technology innovation list particularly relevant. Each year, an expert panel of representatives of technology corporations and leading financial investors from Asia, Europe and North America evaluate and score a range of international corporations based on a set of predefined criteria. The list consists of companies considered to make great environmental and economic impact the next years. We studied whether the Norwegian companies listed met the predefined criteria. The ones who did were invited to join the study.

The third sampling strategy entailed asking for input on relevant cases from personal connections and scientific staff at Department of Industrial Economics and Technology Management (IØT) at NTNU. We received several suggestions and these were explored before we did an assessment of whether the companies met the criteria for selection.

The final sampling strategy was investigating companies of the IØT project Sustainable Innovation and Shared Value Creation in Norwegian Industry (SISVI). The purpose of the project is to “develop knowledge that strengthens the industry’s long-term competitive capabilities in a way consistent with the concept of shared value” (“About SISVI”, 2016). Those who were considered to fulfill the criteria were contacted.

All case companies were contacted by either email or phone. For a minority of the companies we had personal contacts that knew specific persons who were contacted. For the rest of the case companies, we contacted the CEO.

Selection and sample of experts

We chose experts we perceived as knowledgeable about and with experience from working with companies addressing environmental challenges. The sampling strategy was purposive

and the experts were sampled from different contexts in order to cover a wide area of knowledge. The chosen contexts were the private sector, the public sector and civil society.

From the public sector, we contacted Innovation Norway. The mandate of Innovation Norway is to contribute to enhanced innovation, development and competitiveness in Norwegian business (“Om Innovasjon Norge”, 2016). Innovation Norway offers both financial support and consulting for Norwegian companies, and several of our selected case companies have received such support, for instance through the already mentioned Miljøteknologiordningen. Two persons were available for interviews at Innovation Norway; Bergny Irene Dahl, special advisor for Miljøteknologiordningen, and Sigrid Gåseidnes, senior advisor.

From the civil society sector, we contacted Zero Emission Resource Organisation (ZERO), which is an independent, ideal foundation with a mandate of reducing anthropogenic climate change (Zero, 2016). ZERO works with actors within the Norwegian private sector, by informing, advising and connecting companies to each other and the government. The leader of ZERO, Marius Holm, was available for an interview.

From the private sector, we searched for investors and/or investor groups with experience from investing in companies within the environmental field. Investinor was contacted due to their investments in environmentally focused companies. Investment director and responsible for clean tech investments Stig Andersen was available for an interview. Further, the founder of the Scandinavian Advanced Technology (Scatec) Alf Bjørseth was contacted. Bjørseth was contacted due to his long experience and pioneering role in building industrial companies with focus on environmental technology. Moreover, in order to get a more general overview of the investor field, the CEO of the Norwegian Venture Capital & Private Equity Association (NVCA), Rikke Eckhoff Høvdning, was contacted and was available for an interview. She was included because we wanted to hear a more general impression of companies offering innovations that address environmental challenges. In particular, we considered this important as there has been a lack of early phase capital for companies within the environmental sector in Norway (Menon, 2014).

3.3.2 Data collection

Our main source of evidence has been interviews with case companies and experts. Because Yin (2014) recommends relying on at least two or more evidences in a case study design, documentary evidence – such as internal documents from the case companies as well as publicly available information – has also been used.

Interviews

Yin (2014) suggests interviews are essential when conducting case studies, because they can be designed to focus directly on the research questions and illuminate casual interferences and explanations. Further, Bryman (2012) argues that using semi structured interviews – as we have used – is an advantage when the researcher has a relatively clear image of what to investigate, as with this deductive study.

Except for two companies (Purple and Yellow), we conducted separate interviews with two or more persons in the management group in each case company (see Table 2). Due to time constraints only one interview was conducted in Purple and Yellow. We interviewed the persons found to be most involved in decision regarding innovation and value creation. This were the CEOs, as well as the person mostly involved in the innovation processes according to the CEO. Eisenhardt and Graebner (2007) explains it is important to choose “highly knowledgeable informants” (p. 28) to mitigate the risk of impression management; i.e. a process where the interviewee attempt to influence the perception of the interviewer. We believe we have been able to do this.

We chose to conduct the interviews separately, speaking to one person at the time, in order to get the necessary amount of information, as well as an opportunity to cross reference and corroborate information. Yin (2014) suggests that “any case study finding or conclusion is likely to be more convincing and accurate if it is based on several different sources of information, following a similar convergence” (p. 120). We draw from this that two or more interviews within each company serve as a source of data triangulation, which is emphasized as important in case study research (Yin, 2014).

As recommended by Bryman (2012) all interviews were recorded and transcribed, with approval from the interviewees. Recording the interviews made us alert to what was said and gave the opportunity for follow up questions, instead of concentrating on making notes. Also, transcribing the interviews made it possible to analyze the data in a structured way, as described in section 3.4. In total, 26 interviews – each lasting between 22 and 100 minutes – were conducted (see Table 2 and 3). This constitutes approximately 25 hours of interview data and 170 300 transcribed words.

Table 2: Overview of case company interviews.

Company	Inter- viewee	Position	Date and place	Duration [min]	Number of words
Alpha	1	Chief Marketing Officer (CMO)	06.04.2016, Mid-Norway	47	7140
Alpha	2	CEO	06.04.2016, Mid-Norway	68	7367
Beta	1	Chief Financial Officer (CFO)	17.03.2016, Eastern Norway	35	3984
Beta	2	CEO	17.03.2016, Eastern Norway	57	7321
Blue	1	CEO	09.03.2016, Eastern Norway	45	6080
Blue	2	Business Development Manager	09.03.2016, Eastern Norway	51	5294
Delta	1	CEO	18.03.2016, Southwest Norway	66	7423
Delta	2	Project leader	18.03.2016, Southwest Norway	47	5608
Delta	3	Founder	18.03.2016, Southwest Norway	22	3017
Epsilon	1	CEO	08.03.2016, Eastern Norway	90	10123
Epsilon	2	Chief Operations Officer (COO)	14.03.2016, Eastern Norway	37	3324
Gamma	1	CEO	11.04.2016, Eastern Norway	39	4929
Gamma	2	COO	11.04.2016, Eastern Norway	42	6703
Green	1	Chief Technology Officer (CTO)	16.03.2016, Eastern Norway	83	12223
Green	2	CEO	16.03.2016, Eastern Norway	65	7626

Purple	1	CEO	07.04.2016, Western Norway	65	5846
Red	1	CEO	17.03.2016, Eastern Norway	89	3984
Red	2	Assisting Manager	08.04.2016, Eastern Norway	57	7000
Red	3	Department Manager	08.04.2016, Eastern Norway	85	9604
Yellow	1	CEO	07.04.2016, Western Norway	100	9179
Total				1190	133775

After conducting the interviews at Purple, it came clear that the company did not meet the criteria for selection. Despite an increased focus on societal value creation, there are not yet any specific innovation made that address environmental challenges. Due to this, the company was left out of the sample. The interview was nevertheless informative, though the results are not used directly in our analysis.

Table 3: Overview of expert interviews.

Company	Informant	Position	Date and place	Duration [min]	Number of words
Innovasjon Norge	Bergny Irene Dahl	Special Advisor	Trondheim, 14.03.2016	39	5702
Innovasjon Norge	Sigrid Gåseidnes	Senior Advisor	Oslo, 29.03.2016	73	8143
Investinor	Stig Andersen	Investment Director	Trondheim, 04.04.2016	63	6833
NVCA	Rikke Eckhoff Høvding	CEO	Oslo, 08.04.2016	35	4251
Scatec	Alf Bjørseth	CTO	Oslo, 29.03.2016	52	6128
Zero	Marius Holm	CEO	Oslo, 11.04.2016	39	5461
Total				301	36518

Constructing the interview guides

The interview guide for the case companies (see Appendix 1) consists of 23 questions revolving around the propositions. The questions are open-ended not just to identify whether or not the propositions can be identified within the case companies, but also to describe how

they play out. This was important in order to get the data needed to answer the research question. It should be noted that minor adjustments to the guide was made before each interview. This was done because we interviewed people with different positions within the company, and because the companies provide different products or services. The interview guide was constructed based on Bryman's (2012) suggestion on how to do this. This means we constructed the guide through several iterations to ensure the questions would give the information needed to answer our research question. First, a preliminary guide was created based on the findings from the literature review and the stated propositions. This guide consisted of 49 questions. It was then evaluated by our supervisor, and adjustments were made accordingly. Thereafter, the guide was tested through a one-hour long pilot interview with Bård Benum, the CEO of a company called Powel. Yin (2014) suggests a pilot interview can help refine the data collection both in terms of content and procedure. During the pilot interview we found that some questions did not direct attention to the topics we sought to address, and we only got the time to cover approximately 20 questions during a one hour long interview. This led to another round of refining the questions and one more iteration of feedback from our supervisors, resulting in the final interview guide.

The interview guide for the experts (see Appendix 2) was constructed in a similar way as for the case companies. The themes were mainly the same as in the interview guide for the case companies, but the main point was to get a more holistic and general impression of shared value creating companies. Many of the questions revolved around the experts' perception of characteristics of successful shared value creation Norwegian companies.

Documentary information

Our secondary source of evidence is documentary information, found through two sources. The first source is publicly available information about the companies from the companies' websites, press releases, and news articles. The second source is material provided by the companies themselves, such as presentation slides and annual reports. This information is not publicly available and only served as a source for preparing the interviews.

Yin (2014) argues that documentary information is a stable, unobtrusive and exact source of evidence with broad coverage. We have two reasons for using documentary information.

First, we used it to prepare for the interviews. This allowed for more effective use of time with the interviewee, as we did not need to ask basic questions about the company or its innovation which could be found through publicly available information. Second, we used it to corroborate and confirm the collected data. Yin (2014) suggests a weakness of documentary information is that it is written with an objective in mind, and this objective is not always clear for the reader. To ensure critical interpretation of the documentary information, we have followed Yin's (2014) advice on continuously trying to understand the objectives of the person(s) writing the documents. A specific tactic was to read news articles to ensure information about the topics in focus not only provided by the company.

3.4 Data analysis

In this section we give an overview of how the data analysis was performed. Yin (1994) suggests that the ultimate goal of the analysis process is “to treat the evidence fairly, to produce compelling analytic conclusions, and to rule out alternative interpretations” (p. 103). Yin (1994) suggests applying both a general analysis strategy and specific analytical techniques. Our general analysis strategy relies on theoretically derived propositions which Yin (1994) describes as the preferred strategy. This strategy is especially appropriate when the purpose of the study is to analyze how theory plays out in the chosen cases (Yin, 1994), as is the case for this study. The propositions regarding shared value creating companies informed the data collection process as they provided the basis for constructing the interview guide. They also guided the data analysis, as we describe in the following subsection.

3.4.1 Analytic techniques

We chose pattern matching as the main analytic technique. This technique “compares an empirically based pattern – that is, one based on the findings from your case study – with a predicted one” (Yin, 2014, p. 143). The pattern matching process was divided into four steps.

First we established constructs for the analysis. These were based on the predicted pattern, i.e. the propositions. In this process, we followed the advice of Ali and Birley (1999) of establishing constructs rather than variables when conducting a qualitative, deductive study. These authors suggest the fundamental difference between constructs and variables is that constructs are wider than variables, as variables take a certain ‘value’. They illustrate the

distinction by arguing that ‘performance’ is a construct, whereas ‘sales’ is a variable. Using constructs rather than variables makes it possible to collect the process related data needed in a qualitative study. It should be noted that we also created new constructs during the data analysis process when the already established ones were not sufficient to capture interesting findings. A final overview of the constructs is given in Appendix 3.

The second step of the pattern matching process was coding the transcribed interviews. We separately coded each interview according to the established constructs. Then we compared this coding in a joint review where we agreed upon final codes. We did this to reduce inconsistencies due to individual bias, creating investigator triangulation as is recommended by Yin (2014). The coding process was finalized by registering the codes in NVivo, a computer-assisted qualitative data analysis (CAQDAS) program (Bryman, 2012). The main arguments for using NVivo was the opportunity for easy and fast management of big amounts of data, as well as the opportunity for enhancing the transparency of the analysis process, as is recommended by Bryman (2012).

In the third step of the pattern matching process we revisited the constructs. This was done by choosing main constructs, placing ‘sub constructs’ under these, and merging some of the constructs that were similar. This process resulted in groupings of constructs, as shown in Appendix 4, based on the six propositions. Then output data, i.e. the parts of the data material that were coded as parts of the main constructs, was generated for further analysis. This data was used to write the case descriptions presented in Chapter 4.

After writing the case descriptions, the fourth and final step of the analysis was conducted. Here we did a cross-case analysis, where the cases were compared to each other. The cross-case findings on how the propositions play out were then compared to our propositions, which resulted in the discussion in Chapter 5.

3.5 Quality of study

Yin (2014) mentions four tests often used to assess the quality of the research design; construct validity, internal validity, external validity and reliability. In the following subsections, we assess the quality of our research design according to these tests.

3.5.1 Construct validity

Construct validity concerns developing sufficiently operational sets of measures for the concepts at study. These constructs are valid if the research studies what it claims to study, and the research strategy leads to a precise and correct observation of reality (Yin, 2014).

When conducting semi structured interviews, there is a risk that the interviewer and the interviewee do not have the same understanding of the discussed concepts, and that the interviewer interpret the information differently than what is intended by the interviewee. This reduces the construct validity of the study. A tactic to reduce this risk was to avoid ambiguous terms which could be interpreted in different ways. We did this by first testing the interview guide in a pilot interview. Further, we did not use the term ‘shared value creation’, as we believe it is not very well known in the Norwegian business context and could be interpreted in different ways. Instead, we used concepts and descriptions that are less ambiguous, such as referring to shared value creation as creation of economic value for the firm and contributing in solving environmental challenges at the same time. Where possible we followed up on the interviewee’s own terminology and concepts. Sometimes this meant that the concepts discussed during the interviews slightly differed from our understanding of the concepts, but this was considered a finding rather than a problem. For example, when we asked about competences the firm perceived as important to create environmental and economic value, some interviewees focused on recruiting of employees – even though our initial understanding of ‘competences’ could include knowledge from external sources as well as knowledge the company was missing.

A further tactic to increase the construct validity was using multiple sources of evidence, as this increases construct validity by providing “multiple measures of the same phenomenon” (Yin, 2014, p. 46). By conducting at least two interviews within each case company, expert interviews as well as using documentary information, we have sought to achieve data triangulation, providing opportunity to corroborate the same facts.

3.5.2 Internal validity

Yin (2014) defines ensuring internal validity as “seeking to establish a causal relationship, whereby certain conditions are believed to lead to other conditions, as distinguished from

spurious relationship” (p. 46). He argues internal validity is of concern if the research is trying to determine whether one specific event led to another. Bryman (2012) suggest ensuring internal validity can be hard in case study research, as the researcher doesn’t have control over the environment.

The most obvious causal relationships in this thesis are the ones between the creation of shared value, and the identified key factors that explain how this is done. For instance, do extensive stakeholder relations lead to shared value creation, or does the fact that a company creates shared value lead to extensive stakeholder relations? To increase the internal validity we used pattern matching as our main analytical technique. This is recommended by Yin (2014) who suggests that if patterns coincide, this strengthens the research’s internal validity. As we have also sought to understand how the various propositions play out– not merely rejecting or confirming them – this led to interview data which emphasize relationships between shared value creation and the propositions, such as how stakeholder relations affect the companies’ shared value creating efforts. We suggest this increases the internal validity as we have got a more thorough description on how the conditions and theory relate.

3.5.3 External validity

Yin (2014) describes external validity as the “problem of knowing whether a study’s findings are generalizable beyond the immediate study” (p. 48). In general, case study findings cannot be generalized to a whole population (statistical generalization) (Yin, 2014). However, case studies give the opportunity for generalizations to theory (analytical generalization), and this opportunity is increased when more cases are explored as in this multiple case study.

Though a multiple case design lays the foundation for analytical generalization, there are still choices made in the research process that may limit the external validity. As described, existing literature on shared value creation discuss a wide variety of companies, both in terms of size and the approaches to shared value creation. This literature has been the basis for formulating our propositions. The case companies investigated are primarily SMEs who offer innovative products and services that contribute in solving environmental problems. The consequence of choosing case companies more narrowly is that this study primarily is relevant to companies with characteristics similar to the case companies explored.

3.5.4 Reliability

Yin (2014) argues that a study is reliable if the researcher can demonstrate the operations of the study in a way such that the “operations of a study – such as the data collecting procedures – can be repeated, with the same results” (p. 46). This implies that the research procedures should be thoroughly documented, and as we will show, we have done this throughout our process. As Yin (2014) underlines that for case studies, reliability entails being able to arrive at the same results by studying the *same* case, it is clearly a limitation for the reliability that our cases are anonymous. This implies that an external researcher cannot replicate the same study using our case companies without us clarifying this with the interviewees in advance. We have nevertheless documented the steps of the research process and have followed three strategies in order to improve the reliability; creating a case study database, creating a case study protocol, and conducting the analysis process in a CAQDAS-software.

We created a case study database during the initial phase of our work, as recommended by Yin (2014). This database is stored electronically and its main content is documentary information about the cases and experts, interview guides, plans for the data collection, transcribed material and audio files, as well as notes made during the research process.

Second, we established a case study protocol, as is also recommended by Yin (2014). This was done to ensure high quality in the data collection and analysis process, and to ensure the possibility for replicating the study given that the necessary consents from interviewees are given. The protocol includes four main sections; research objectives and tentative research questions, information about the case companies and the experts, the interview guides, and a tentative outline of the thesis. It should be noted that some of the content, such as the research questions and the outline of the thesis, has changed as the research proceeded.

The last measure taken in order to ensure a reliable research process, was conducting the analysis in NVivo. NVivo made it easy to store information about the constructs used in the coding process, data segments, and relationships between different data segments. The whole project is saved within one file, making it easy to access for researchers with valid access.

4 Empirical findings

A business that makes nothing but money is a poor kind of business.

Henry Ford

In this chapter we present the empirical findings from our research. In section 4.1 we present the findings from the case company interviews, whereas in section 4.2 we present the findings from the expert interviews.

4.1 Case company findings

In this section, we present the findings on a company-by-company basis. For each company, the findings are structured according to the propositions. The amount of data related to each proposition varies from case to case as the interviewees in each company emphasized different topics. If there is no empirical data related to a proposition, it is not listed in the text.

We do not distinguish between interviewees from the same company except from when we quote an interviewee directly. This is because the interviewees' answers for the most part coincided. There are topics where interviewees from the same company complement each other, but we have not found elements in the data where it has been necessary to comment on contrasting views or explanations. We hope this eases the readability of the findings. Sentences marked with quotation marks and italic writing (*“for instance like this”*) are quotes from one of the interviewees from the company in question.

4.1.1 Company Alpha

Alpha was founded in the early 2000s and operates in the food industry. The company's headquarters and production facilities are located in Mid-Norway. In total, the company has around 40 employees.

Alpha produces and offers a variety of food products both to the business-to-consumer (B2C) and business-to-business (B2B) market, all based on organic ingredients. They use local and traditional recipes and source most of their ingredients locally. In addition, they aim at having environmentally innovative production facilities. We suggest societal value is created both by

using organic input factors and environmentally friendly production facilities. As for economic value creation, Alpha has shown increasing positive results for several years.

Selling an innovative and environmentally focused value proposition

Alpha fills a market niche by producing and selling environmentally friendly products. They offer an alternative value proposition provided only by a few other companies in Norway and describe this as the innovative element of their business. Alpha describes their market niche as growing due to consumer trends which increasingly focus on more environmentally friendly food. The company is confident these trends will continue and that their market will grow and secure their profitability also in the time to come. Alpha also seeks to be innovative when it comes to the way production is carried out. The company wishes to continuously improve their production process by using new solutions to reduce environmental impact and allow for technology development.

Brand building is important to Alpha as the company is a small player among large industry incumbents. As the financial resources spent on marketing are modest, the CEO and later on a CMO has spent a lot of time on gradually developing and spreading the brand. They emphasize the use of experts and trend-setters, such as chefs, to promote their products. These experts and trend-setters contribute in advising their product mix and in the development of their products. The company describes their brand as strong and closely associated with the environmental value they create. This has led to a communication strategy where transparency is emphasized, to explain how production is done and why certain methods and input factors are chosen over others. This is also done to avoid people or media questioning their motives or routines:

We always think that no matter what we do, we must be able to stand up for who we are, regardless of who comes knocking on our door to ask. And if there are elements where we think that “ok, this might not look that good, that is not what people expect from us”, then we wish to make it known for the public. (Interviewee 1)

Another example of how the environmental value created is rooted in their communication strategy is that when new measures are taken to reduce environmental impact they sometimes simply inform about this on their webpage without trying to get any further attention. This,

they explain, is because their customers are expecting these kinds of environmentally friendly choices to be made and take this kind of practice for granted.

Recognition and inclusion of stakeholders

Alpha describes their customers as their most important stakeholders. The composition of their product portfolio – which they describe as one of their main success factors – is influenced by requests from customers; *“it is a very customer-oriented approach. (...) We ask: What do you want? I think we have been good at that”* (Interviewee 1). The company mentions several products developed due to requests from customers.

The owners are an important stakeholder to Alpha, who give guidance and directs the development of the company. Further, the employees are described as an important asset, especially because they are a source of knowledge and give suggestions on improvements in the production process. Due to their modest size, all employees have to contribute in a broad variety of tasks. The size of the company is also highlighted as a source of motivation for the employees: They are described as having a high working moral and low absence rates. Knowing they cannot take the company’s existence – nor their own job – for granted, makes them more *“hungry”* (Interviewee 1) and hardworking.

The authorities are also mentioned as a stakeholder by the company. The company follows political processes, takes part in public hearings, is a public actor in the media and tries to influence industry associations and their message to the authorities. When asked, Alpha lists a number of measures that could be taken by the authorities which could have improved their market.

Though Alpha mentions the industry incumbents when asked about competitors, they suggest these actors are more complementary actors than actual competitors. Alpha does not have any collaboration with these actors besides some occasional contact. As they see their products filling a market niche that the incumbents do not necessarily aim to fill, they have had factory visits from these companies since they don’t perceive it as necessary to *“hide”* how their products are produced.

Knowledge and capabilities

Knowledge is rooted in the explicitly stated values of Alpha through the use of the word ‘competent’. The topic is emphasized by the interviewees as important both when recruiting new employees and as part of the company culture. The company seeks to continuously expand their knowledge base through employing persons with complementary knowledge to that already present in the company. If young people spend two to three years in the company and use that as a “*springboard*” (Interviewee 2) for their careers, they feel the company has achieved something valuable because new knowledge is brought in. Knowledge is moreover important to the company culture as discussing industry development and possible improvements is suggested to inspire the employees and makes room for continuous improvements.

When asked about what kinds of knowledge the company believe is most important to them, Alpha emphasizes domain knowledge as this is necessary for continuous improvements of the company’s products. Moreover, the company recognizes that presently there is a need for increased knowledge on commercialization – especially on making forecasts on what to produce and choice of distribution channels.

Measuring environmental value

Alpha uses metrics and monitors the reduced environmental impact of some of the measures taken in their production process. Beyond that, they describe societal value as something “*abstract*” (Interviewee 1) – difficult to grasp – and suggest that what they perceive as valuable for society might not be considered as valuable to others. What they see as important is to “*do the right thing*” (Interviewee 2), whereas measuring the results is not perceived as important.

Organizational cultures and values

Alpha describes themselves as being governed by a set of explicitly stated values and company culture and values is emphasized throughout both interviews. The values guide decisions, for instance regarding what products they produce and as a foundation for their communication strategy. Also when making new – and possibly risky – investments, the

company says their values give confidence in doing so without having to spend too much time on calculations: *“Having a set of values as a base to make considerations and evaluations... Should we go for this? Should we do this or should we not? Does it fall within what we stand for? That has meant a lot”* (Interviewee 2). The values also guide decisions when smaller, incremental improvements in their production or value chain are considered. The company states that *“We are not counting the dimes. Then we rather look at how we are going to include it [the extra cost] in the calculation”* (Interviewee 2). This does not mean money is spent carelessly: A modest use of money, for instance on office facilities, is mentioned as a value important to the company.

Though environmental value creation is deeply rooted in the company’s values, the interviewees come back to the importance of also delivering satisfactory financial results and underlines this cannot be taken for granted: *“We do environmental considerations all the time (...). And it must fit together, it must be economically sustainable. If not, we won’t be here anymore”* (Interviewee 1). The importance of making a viable business case out of focusing on environmental issues is illustrated through Alphas’s market strategy. The company was founded based on a wish of solving an identified societal need. Initially, the company was not sure if they would be able to “pull off” selling only organic products, questioning whether the market was ready yet. First when they saw the possibility of actually being financially viable even with purely environmentally focused products, this became their strategy.

4.1.2 Company Beta

Beta was founded in the late 1990s, and offers a widely used building material produced in an environmentally friendly way. The company has its headquarters in Eastern Norway, and production facilities both in Southeastern Norway and Western Europe, subsidiaries in Scandinavia, as well as sales representatives in Western Europe and North America. In total, Beta has around 70 employees.

Beta uses a patented production procedure to offer materials which – compared to the rest of the industry – does not use traditional input factors that cause negative environmental impact. This production procedure was developed based on university research. Today, the company delivers products both to the B2C and B2B market. We suggest societal value is created

through the offering of a sustainable alternative to products made of hazardous input materials. Even though Beta has experienced high growth in revenues from 2009 until today, the company has struggled with negative results since the start due to capital intensive investments in production facilities and technology development. The negative results have however decreased over the last years and growth rates are expected to provide positive results by 2016.

Selling an innovative and environmentally focused value proposition

Beta describes their product as innovative in the sense that their quality is superior compared to the products offered by traditional industry incumbents, while they are also produced without using harmful input factors. However, the company suggests that it is the creation of a new market based on proprietary technology which is the most innovative part of their activities:

From a technological perspective what we are doing is not kind of... extremely innovative. It is new technology, but it is to actually take the step and commercialize and drive it through to a commercial product within this industry... That is extremely innovative. (Interviewee 1)

Throughout the interviews it is the challenges related to commercialization and market entry which are emphasized. Beta describes the decision to make business out of an environmental problem as made because this represents the biggest potential for profit. This is described as more important than having an intrinsic motivation for solving the environmental problem at hand. Beta describes the size of their market – and their own potential – as huge. Their challenge has been to prioritize, do fewer activities and address smaller customer segments. Though they describe these prioritizing processes as decisions made under uncertainty and with less time than desirable to perform the underlying analyses, they say they have succeeded with these processes.

Beta says it has taken more time than expected to enter the market and for people to understand the problem of choosing products made from hazardous input factors and rather choose alternative products, like theirs. They suggest a reason for this is that customers are conservative and unwilling to try out new products; *“The customer wants to buy the products*

he has always bought, what his father bought, and what his grandfather bought (...) We are operating in the world's most conservative industry” (Interviewee 1). To address this reluctance to try out new products, brand building is an important success factor for the company. They explain that building a brand for their products is done for several reasons: They are a small company among large industry incumbents, and need to attract attention. Also, they are not competing on price, rather there are several cheaper options on the market. Due to lack of resources available for marketing, Beta uses experts and trend-setters in addition to targeting specific customers who direct attention towards their product.

Recognition and inclusion of stakeholders

Beta describes their investors as their most important stakeholders. The company believes the choice of investors has been among their most important decisions; *“I believe that you can make a product out of anything, but investors... You only choose them once”* (Interviewee 2). Beta mentions three consequences of the choice of investors. First, they have provided enough capital for the company to reach its present level of operations even though they describe themselves as being *“capital intensive”* (Interviewee 1). Second, their investors are described as having environmental profiles which have made them patient even though the commercialization process has taken unexpectedly long time. Third, the investors have contributed in shaping the overall strategy. Particularly, they are described as having emphasized the importance of ensuring satisfactory environmental performance, promoting the need for marketing of the products, as have given inputs on how to do this.

Beta do not prioritize spending time on having the authorities even though they point to specific measures taken which have had significant effect on their market and potential regulations which could have improved their market further. They point to resource constraints as a reason for this, but also show a lack of confidence in politicians' ability to address the issue;

I am certain the world won't go under due to environmental problems, it will be fixed. I don't believe the politicians will fix it, that's just a mess. That has been shown the last 20 years. But I am sure the end user will fix it. The end user will focus on more

environmentally friendly products. That is the way I am sure the world will change.
(Interviewee 2)

The lack of confidence in politicians' ability to solve environmental problems has led Beta to build their strategy on existing national and international regulations rather than waiting for changes to be made. One of the interviewees explains the rationale behind the strategy like this:

I don't believe in starting companies which presupposes regulatory changes to survive. Maybe we are too passive as we are not trying to create those changes. But it is important for us to have a plan that can drive Beta to become a company who can succeed based on things we control ourselves. If not, it is not a commercial project.
(Interviewee 1)

Universities and research communities, both in Norway and abroad, are also regarded as stakeholders. They are used for delivering research on the products and the technology behind them and as testing sites. The company describes this is important to be able to continuously improve their products and to prove their quality to potential customers.

When it comes to competitors, Beta sees traditional industry incumbents and product substitutes in other markets as competitors. They view the traditional industry incumbents as "crazy-conservative" (Interviewee 2), and this result in a stakeholder strategy where there is hardly any contact with other industry incumbents. Rather, they describe how they seek to avoid industry fairs and events and say the CEO was hired partly due to lack of experience from the industry.

Knowledge and capabilities

Beta describes that domain knowledge has been present in the company since the initiation. The company sprung out from a research community and finds the knowledge this community represents as important in order to further develop the features of the company's products. Also, Beta highlights the importance of knowledge on commercial processes: "*The most important and most difficult we do, is sales. (...) Commercializing the product, bring it to the market, sell it, commercialize in a cost effective way*" (Interviewee 1). The need for this

kind of knowledge has led the company to search for employees with a certain kind of competence. First, as mentioned, having industry experience was seen as a disadvantage due to the described conservatism among the incumbents, which could lead to a lack of new thinking. This is what led the company to hire a manager with substantial commercial experience rather than experience from the industry the company operates within. Moreover, Beta emphasizes the importance of knowledge on international business and marketing due to a perception of the Norwegian market as too small. This has led to a focus on foreign markets, which has resulted in hiring people with international business experience.

Measuring environmental value

Beta describes measuring the environmental value created by their products as crucial because of the marketing advantage it entails. The company primarily measures how much greenhouse gas emissions their products reduce compared to conventional products. Beta explains they use these numbers when communicating with the customer; *“The customer has been told by their supervisors to think about the environment [when purchasing products], and then we can tell him the exact greenhouse gas emission accounting of our products”* (Interviewee 1). As their products offer something new in a market where innovations are rare, the need for a sales pitch clearly showing the value for potential customers is important. In particular, they emphasize how using their products as opposed to less environmentally friendly alternatives is an insurance against negative publicity for their B2B customers; *“20 years ago, when you did not have Internet... Now a blog post or a Facebook post can destroy your company”* (Interviewee 2). Interestingly, the interviewees emphasize the importance of communicating the environmental benefits of their product, but also suggest environmental awareness is an inescapable trend for companies as their own:

In 2016 it is expected that you do things correctly when it comes to the environment. (...) I believe it is obvious that those companies who are not thinking about the environment within this industry, they will slowly, slowly, slowly loose market shares. And it is happening in all other industries too. I believe. That is our hypothesis.
(Interviewee 2)

We suggest this show that despite the described lack of innovation within their industry, and the experienced reluctance against new products, the company is certain that taking environmental and social responsibility will become a point of parity.

Organizational culture and values

Beta does not mention any explicitly stated values. The company culture seems focused on actually being able to penetrate the market and to ensure economic performance. When describing their vision, one interviewee states that:

Beta will not save the world alone, and that has never been the intention nor the ambition, we are just making a product that should solve a problem, and then we shall make money from that. Everything we do; we shall make money. (Interviewee 1)

Economic value creation – rather than societal value creation – seems to be what guides decisions. For instance, when doing the previously described prioritization of market segments, those segments where the profit potential was perceived as greatest were chosen. They however say they are not sure whether these are the segments where the environmental value creation is largest. Moreover, they describe the superiority of their product as the reason why they have not put any emphasis on social or environmental features in their value chain. Rather, Beta argues that their product is never going to be chosen due to “*marginally better ethical guidelines in our processes, production and procurement*” (Interviewee 1) as the difference between their product and the alternatives is so substantial.

4.1.3 Company Gamma

Gamma was founded in the late 2000s and offers waste handling services in the maritime sector. The company’s headquarters is located in Eastern Norway, and they also have an office located in Asia. Gamma consists of less than 20 employees.

Gamma offers waste handling services to B2B customers which reduce some of the negative environmental impact caused by the maritime industry. We suggest societal value is created by providing these services in a way that does not have the same negative impact on the environment, nor on social conditions, as practices commonly used in the industry today. Gamma showed positive economic results in 2015 and predicts the trend will go on.

Selling an innovative and environmentally focused value proposition

Gamma suggests they have been the only market actor who has really sought to address the industry's hazardous environmental impact, and that this is the innovative feature of what they offer. The interviewees describe how they see an increasing trend where *“it is more and more focus on doing things right, on environmental issues and those kinds of things”* (Interviewee 1), and that this perception initially made them believe there were a potential market for their services. The company also uses this trend when promoting their services to potential industrial customers: Their sales pitch emphasizes the importance of environmental concerns and ethical behavior within their customers' value chains. They suggest not taking societal concerns might cause serious damage to their customers' brands. As the price for Gamma's services is higher than alternative services offered in the market, the company's argument is that the price premium is an investment in brand building and an insurance against negative publicity.

Gamma is confident that the focus on environmental impact from the industry will only increase, leading to their services being even more attractive to potential customers. They argue this focus will also lead to more regulations put on the industry and that these will continuously be strengthened. This, in turn, makes it important to stay ahead of the regulations and they believe this might lead to first mover advantages.

As the industry is large – and Gamma believes the increasing environmental focus will eventually influence how most industry incumbents perceive their societal responsibility – they believe the base of potential customers is significant. The fact that Gamma's services are not offered by anyone else, seems to play out in two directions. On one hand, Gamma suggests that one of the success criteria behind the company is timing. They were early movers and hit the market when the focus on environment and sustainability increased. On the other hand, they also say they might have started a year or two too early, which led to financial losses during the initial years.

Recognition and inclusion of stakeholders

Gamma considers their customers as an important stakeholder. During the services' development phase the company got feedback from potential customers on what features they

should include in their service. Moreover, Gamma describes the industry as conservative; finding and getting to know potential customers has been time and resource consuming. In order to get the industry to understand why they should buy the services, the company has spent a lot of time working on their sales pitch.

The investors are also considered as important stakeholders. They have contributed by providing network and contacts among potential customers and suppliers, and this has been important to get the company going during the initial phase. The initial years after the company was founded is described as demanding and reaching positive numbers on the financial bottom line took more time than expected. During this period, the investors contributed substantially to the economy and have been patient concerning when the company should start earning money. The investors are also described as more concerned with how and what to deliver on the environmental part of their services than on economic value creation.

The company regards the authorities as important since they influence Gamma's market, but they do not devote much time to this stakeholder. They believe strengthening regulatory frameworks is important for their business. This is because it puts pressure on industry incumbents so that choosing environmentally superior services – like the one offered by Gamma – will not only be a question of “good will” or fear of being exposed to negative publicity, but rather be a legal requirement. When asked whether they themselves are lobbying for strengthened regulations, they say they try to be visible and available to provide inputs for instance to the government and their agencies. However, they are concerned their credibility might be affected by them having commercial interests in the introduction of new and stricter regulations.

The company mentions they have had some contact with both Norwegian and international civil society actors. These have provided inputs regarding the company's services and have brought attention to the environmental hazards caused by the industry. However, the interviewees also underline that they keep the NGOs on an arm's length and want to avoid being associated too closely with them as their potential customers might have mixed feelings about the NGOs and their agenda.

Gamma regards the traditional industry incumbents as their competitors. The company describes how they used to have some contact with their competitors, but that this contact has ended. They suggest the reason is that they have become a bigger threat to the other companies; *“we have grown a lot and taken quite a lot of their business, and that’s not very popular, so we are probably more hated than liked right now. That’s just how it is”* (Interviewee 1).

Knowledge and capabilities

The interviewees say their most important capability as being good at initiating and maintaining customer relations. This is resource demanding – both in terms of time and money – but is described as a precondition for succeeding with services competing on features beyond price. As the environmental features are fundamental in what Gamma offers, the company also mentions the importance of having knowledge about the industry’s environmental challenges. Also, technical knowledge is found necessary to ensure that their services address the most pressing environmental challenges.

Innovation structure

Gamma has introduced ‘business development’ as one of their key performance indicators. This is also incorporated in their management practice: Employees are expected to contribute in producing three new ideas every month – ranging from small improvements to bigger changes – and the best idea is rewarded every year. This inclusion of continuous innovation into their routines was done for two reasons. First, this is due to the described necessity of being ahead of changes in regulatory frameworks. Second, the company argues that during times where the industry might be struggling with their overall profitability – as is presently the case – there is a need to change rapidly and to improve their services to keep costs down.

Measuring environmental value

Neither environmental nor social value created by the company is being measured. However, being able to do it is described as *“my big dream, to find an equation that can provide a number [of the societal value created]. That is what I dream about”* (Interviewee 1). In particular, the company describes it as desirable to quantify the environmental value the

customer gets when choosing their services. Most importantly, they would like to quantify how this translates into financial risk run by customers choosing poorer environmental solutions.

Organizational cultures and values

Even though Gamma does not speak about explicitly stated values, creating societal value is described as “*alpha and omega*” (Interviewee 1) to the company. Identifying business concepts and cases which could improve the industry’s environmental impact was the basis on which Gamma was founded. The importance of creating environmental value has moreover guided the company’s decision processes. When choosing how to move forward, they say environmental aspects have always been prioritized over economic considerations. For example the company has chosen not to operate in certain countries because they are not confident that their services will be performed in a way consistent with their goal of creating environmental value.

The importance of societal value creation is also reflected in how the employees describe their reason for working in Gamma: The interviewees describe it as important on a personal level to work within a company improving the industry’s environmental impact; “*it gives a special kind of joy to work with something that feels like the right thing to do*” (Interviewee 1). When asked about the biggest challenges, the company states that being able to “*hang in there*” (Interviewee 1) – both as a company and personally – has been the biggest challenge:

It has been close sometimes. We have been operating on credit. It is important to try to hang in there, even if it’s like a rollercoaster. Yes, for me personally too. I have been close to saying “I cannot stay behind here, I want to keep developing. I want to do things!” It looked a bit dark at times. (Interviewee 1)

During these periods, the company describes working with environmental issues as a motivating factor.

4.1.4 Company Delta

Delta was founded in the early 2010s and operates in the electronics industry. The company is located in Southwestern Norway and has around 30 employees.

Delta develops patented electronics that can be integrated into several different products. The company is presently focusing on using the technology within the transportation sector, where the products are sold both in the B2B and B2C markets. Delta is considered to deliver societal value through enabling reduced greenhouse gas emissions from the transport sector. After initial years of negative economic results due to substantial capital investments in technology development and production, Delta in 2015 signed a contract with a large B2B customer. The company suggests this will ensure positive results in the years to come.

Selling an innovative and environmentally focused value proposition

Delta suggests that the innovative part of their value proposition is that their technology uses significantly less material and is cheaper than conventional technology. The technology is described by the interviewees as “*disruptive*” (Interviewee 2) and as “*a revolution for the world*” (Interviewee 1).

Despite a broad range of application areas for Delta’s technology, the company has chosen to use their technology to produce certain kinds of products as a first step to earn money and develop their business. Delta explains that offering these products was not the intent from the beginning. The company has a long term strategy of using the technology to offer other products to larger, international markets and other industries where the societal value created might be even greater than today. However, the company describes it as having been necessary to launch a product now in order to earn money and prove the commercial potential of the technology to their investors. Throughout the interviews, their current products are described only as a first stepping stone towards a greater vision.

Recognition and inclusion of stakeholders

Delta’s customers are described as their most important stakeholders. The customers are integrated in the company’s product development process, because the company considers the customers as crucial for a successful innovation process; “*the answers on how the future will look like lies in the customer relation*” (Interviewee 2). The company describes how customers present different needs that the company tries to address, either through existing products, or through adjusting existing and developing new ones.

The company also considers investors as “*extremely important*” (Interviewee 1). Delta describes how it is hard to find investors that provide enough capital, has a long term view on performance, and leaves room for idealism. They say most investors first and foremost are concerned with short term return on capital, not taking into account environmental or societal value. One interviewee puts it like this; “*There are so many meetings with investors where I have ended the meeting with saying ‘Doesn’t it matter [how we make money]? Should I just start selling drugs then?’*” (Interviewee 1). As Delta has a long term view on product development and performance, it has been necessary to obtain patient and visionary investors who trust the potential of the technology. The company’s investor strategy has been to find and engage so-called business angels instead of depending on venture capital funds. They suggest the business angels are more patient, sharing the company’s values and beliefs, and that they contribute with enthusiasm, commitment, and help forming the company’s strategy.

Delta also considers politicians, environmental NGOs and industry clusters as important stakeholders; “*I deeply respect political power when it comes to environmental technology, so I use a lot of energy talking to politicians*” (Interviewee 1). The company participates at conferences and invites these actors to visit them at their office. However, unlike many of the other companies interviewed, Delta does not seem to be concerned with regulations that promote the use of their products. They are certain there is political will to incentivize “*what is green, and not what isn’t green, and to punish things that pollute*” (Interviewee 2). Rather, it is taxation rules and how they perceive these as barriers for innovation which is of concern.

Delta views industry incumbents as their main competitors. The company has limited dialogue with these and perceives there is “*incredible opposition from the industry*” (Interviewee 1) as they are trying to “revolutionize” the market.

Knowledge and capabilities

Delta describes the combination of domain knowledge and knowledge on commercial processes as necessary to create environmental and economic value. In the early phase of Delta’s existence, the company prioritized developing domain knowledge through hiring people with the needed experience to develop their products. Today, it has been necessary to enhance the commercial knowledge in order to deliver the company’s products to the market.

Delta describes this shift from focusing on domain knowledge to commercial knowledge as difficult, but nevertheless believes it is crucial to increase their sales.

Measuring environmental value

Delta does not focus on measuring the environmental value created by their products and says this is due to lack of time and resources. One of the interviewees however says this has been a wish for a long time, and that they have considered hiring external actors to do it.

Organizational culture and values

Although Delta has no explicitly formulated corporate values, some inherent values and the strong company culture was emphasized throughout the interviews. The company describes itself as being governed by a common belief of being positive, frugal, hard-working, visionary, and in it for the long run. The CEO compares the employees to characters from the Star Wars – so-called Jedi Knights – which he/she suggests have similar characteristics inspired by Buddhism.

The inherent values guide many of Delta's decisions, such as the choice of investors, as mentioned previously. The interviewees also suggest how their beliefs have both positive and negative effect on their R&D and market strategy. On one hand, the attitudes and beliefs in the company have facilitated the long term strategy of developing something they believe have far greater potential than today's products. On the other hand, the beliefs have also led to time consuming development processes and careful testing of the products, when they probably should have been launched to the market earlier in order to provide capital for further R&D processes. One of the interviewees describes how *"it is painful when you along the way have to force products out even though you are far from the fundamental belief in what you are doing"* (Interviewee 1). One of the interviewees quotes Dalai Lama saying *"the greatest war seen in the world today is between the long and the short term"* (Interviewee 1) – when describing this conflict between launching their present products and developing their broader vision.

Despite the strong standing of values and culture within the company, they do not consider themselves as being particularly concerned with the social and environmental conditions

within their own value chain. They explain how they regard the environmental impact of their products as so significant that social and environmental conditions in the value chain represent only small contributions.

4.1.5 Company Epsilon

Epsilon was founded in the late 2000s and the company operates in the off-grid energy market, both in Northern Europe and in developing countries. Their main office is located in Eastern Norway, while the products offered are produced in Asia. Epsilon consists of less than 20 employees.

Epsilon delivers off grid energy products that substitutes similar products operating in a less environmentally friendly way. These products are sold both in the B2B and B2C markets. We suggest societal value is created by meeting fundamental consumer needs with less negative environmental impact than the alternatives offered. Epsilon shows positive economic results, in large parts due to a few large customers.

Selling an innovative and environmentally focused value proposition

Epsilon suggests their products are innovative in the sense that they solve a basic consumer need in an environmentally friendly way. Also, the products they offer are designed for multiple uses and represent a cheaper alternative than buying different products with different functions. As they operate in developing country markets, this is an important feature of their products.

Epsilon perceives the size of their market to be enormous, and the company describes that their challenge has been to prioritize what segment they should target. The company describes using a “*shotgun approach*” (Interviewee 1) in the initial phase of sales, meaning they targeted a range of potential customers and hoped for establishing a foothold in several markets. Epsilon emphasizes they did reach customers in many different markets using this approach. However, they also describe that the sales have not been large enough to provide stable revenues and margins. The last couple of years, the company has succeeded with segmenting and targeting customers through a narrower approach, prioritizing some markets

and distinct customer groups within these markets. This process, they describe, has to a great extent been guided by their values, as we describe later.

Recognition and inclusion of stakeholders

The company considers their customers as their most important stakeholders and describes how the customers participate in the development of the company's products. Epsilon runs product pilots with customers in different markets in order to get feedback on what the customer like and dislike about the products. The company suggests these pilots give valuable input as it is necessary to test the products' features in the environment in which they are intended to be used.

Further, the board of directors is considered as important for the company's development. In particular, the interviewees say the aim of creating environmental and societal value is emphasized by the board. For instance, the board has decided the employees are allowed to use a certain percentage of their working hours on working towards more sustainable business procedures. Such sustainability procedures can both be related to the products' features as well as the company's value chain.

Epsilon from time to time collaborates with different external actors such as governmental organizations, trade organizations, and producers of complementary products. These collaborations are however not systematized. Epsilon meets these actors informally during conferences, or in more formal settings such as at meetings organized by the authorities. Through this occasional contact, Epsilon gets input on their products' features, the markets the company serves, and information about potential customers. Epsilon also uses the distribution channels of producers of complementary products. This has made it possible to get contracts with large customers that would have been difficult to reach without the help of bigger and more well-known companies.

Knowledge and capabilities

When talking about knowledge, Epsilon explains how various kinds of knowledge have been important during different phases of the company's development. They describe three phases

the company has undergone; the start up phase, the phase building the business case, and the phase in which they are currently where the company is implementing its business strategy.

During the start up, the company did not have any concrete products, only ideas on what the products should look like and how they should work. In this phase, the company argues that knowledge about public relations and innovation was decisive. An interviewee describes how the company at the time had this knowledge in-house through their founder:

You need to be an incredible story teller. You need to sell something which you don't have. They [Epsilon] had not yet gotten their products, they went on for two years without a product. (...) The founder was amazing [on marketing and selling], completely awesome. He could sell his grandmother on a bad day. (Interviewee 1)

During the second phase, the company regards knowledge on customer needs and behaviors as important. At the time, the company underwent a systematic process in order to retrieve such knowledge whenever they considered entering new markets. This was done by reading market reports and conducting pilot studies, as previously described.

The present phase entails finding a viable business model for the company. The interviewees emphasize the importance of knowledge regarding commercial processes. In particular, they perceive knowledge on pricing and distribution as important during this phase. The interviewees suggest this knowledge should have been retrieved earlier than what was the case. The fact that the company delivers products not only valuable for each customer – but also for society at large – have been appreciated by several stakeholders and the company has received considerable positive feedback on their products. This positive feedback is suggested to have led the company to underestimate the need for knowledge on how to actually sell their products; the interviewees describe how they believed the “*product would sell itself*” (Interviewee 1). Today, Epsilon finds they have understood the importance of knowledge on commercial processes and is in a process of retrieving this knowledge for instance by using external consultants giving them advice on distribution strategies in different countries. Also, the company has recruited employees with commercial experience.

Innovation structure

Epsilon has a long term strategy of developing their products into bigger systems, or bundles of products, satisfying more customer needs. In order to achieve this, the company describes a need for more competence on innovation. This has led to the recruitment of a new innovation director who is supposed to work exclusively with development of existing and new products. This comes in addition to the customer pilot projects previously described.

Measuring environmental value

Epsilon says they have not prioritized developing frameworks for quantifying environmental value as they perceive it is obvious that their products create such value. Also, the interviewees points to time constraints as a reason. Even though the international trade organization they are part of have developed some standardized ways of measuring impact from the kinds of products Epsilon offers, the company says it has not been prioritized to use these frameworks.

Organizational culture and values

Epsilon has four explicitly stated values, where one of these values – ‘sustainability’ – seems especially important. The CEO explains that a requirement to begin working at Epsilon was to have sustainability as a company value: *“I want to lead a sustainable business. That is what I want”* (Interviewee 1). The interviewees describes the employees as motivated by making a difference. During the interviews, several examples on how the values guide strategic decisions were mentioned, including choice of customer segments, business partners and value chain activities. For instance, Epsilon make decisions on which customers to prioritize based on where they believe most societal value can be created. Also, one of the interviewees describes how the company is concerned with social and environmental conditions in their value chain; *“I don’t want to make money at the expense of animals, people or the environment”* (Interviewee 1). The company is one of the first companies in the world to attend an international program for reducing water, energy and waste consumptions throughout the value chain.

4.1.6 Company Red

Red was founded in the late 1990s and operates in the financial sector. The company is located in Eastern Norway and has less than 20 employees.

Red offers a range of financial services both to the B2B and B2C markets. They differ from traditional players in the sector in that they offer customers services entailing a more environmentally and socially focused value proposition. We suggest societal value is created through offering their customers financial services with a social and environmental profile. As for economic value creation, Red has shown positive results for several years.

Selling an innovative and environmentally focused value proposition

Red explains that the difference between their services and the other services offered is that theirs are based on certain values: *“There is a value-based foundation for our services. The short version of that is there should be some contributions to society – of either social or environmental character – from this business”* (Interviewee 1). The company says they are innovative in terms of being the only company offering their kind of services in the Norwegian market, in addition to being established based on the wish for solving identified societal needs.

Red argues as their value proposition is based on the aim of creating societal value, it is twice as hard to run their business compared to traditionally run companies: *“Either you run with profit as your main goal, or you run idealistic. But we are trying to carry both those backpacks simultaneously”* (Interviewee 1). Throughout the interviews these two considerations – and how to balance them – are emphasized as important for strategy making and decisions taken by the company. The company describes their main motivation for growth as being able to deliver more societal value.

Red perceives inspiring people to think differently about sustainability in regard to their industry as part of their aim. This seems important as they are dependent on environmentally concerned customers willing to buy more costly services than what is offered by industry counterparts. This is among the reasons why Red describes finding the right customers as their main challenge on which they work continuously.

Red finds their message and services to resonate well with what they describe as a growing trend where values like their own are perceived as important by customers and regulatory authorities. One of the interviewees, who has been part of the company almost from the start, explains that *“in a way we’ve become kind of trendy, even though we have existed for a long time and only a few people have known about us. But these days we are hot!”* (Interviewee 2). This has led to increased optimism and enthusiasm among employees, but the interviewees also address the issue of how increased attention requires a focus on doing things right. One of the interviewees says the company runs a higher risk than their industry counterparts when it comes to reputation. As they claim to create societal value in addition to economic value, it is a risk they might be caught doing something which did not turn out as intended.

Recognition and inclusion of stakeholders

Red regards their customers and investors as their most important stakeholders. Both groups are described as idealistic and engaged in the company. The investors have contributed by being willing to invest their money even though they could have received greater profits elsewhere. Their customers are in a similar situation as they are willing to pay a premium to receive more environmentally friendly services. Moreover, the customers also guide service development within the company. For instance, the company recount how one of the services within their portfolio was initiated by customers. Initially, the company was reluctant as they were not sure it would fit their service mix and image. However, having evaluated the proposition based on their values, they decided to include it in their service portfolio.

Employees in Red are described as hard working and enthusiastic. Despite the fact that most of them could have gained higher wages working for other companies, the company reports of low turn-over among their staff. The explanation – as described by the interviewees – is that many are driven by the experience of actually building something which has proven to be viable. This has given motivation to keep on working to succeed.

Red describes the authorities as an important stakeholder in the sense that they affect the regulations and reporting requirements within the industry they operate. They suggest industry regulations are not made for companies who run like they do, i.e. who wish to compete on service features other than price. Despite this, the company says they do not

lobby the authorities due to lack of resources. Also, they find it difficult to get their Norwegian trade association to do this, as it is not in the interest of other industry incumbents.

There are also other stakeholders mentioned – including NGOs, academic institutions and the general public – but the extent to which these are actually included in the company’s activities, seems to vary. NGOs are receiving some financial support from Red. This contact is also described as an opportunity for the company to get in touch with potential customers. When it comes to academic institutions, they are in contact with some scholars who follow the discussion around the industry and its relation to environmental and social issues. This has contributed to the company’s strategy of taking part in the public debate about the societal impact of their industry.

Red explains they have no competitors on their environmental and socially focused value proposition. This makes the traditional industry incumbents and their “ordinary” value propositions the company’s main competitors. Red has no particular contact with these companies except from meeting them on industry events and through trade associations. As Red is only addressing the Norwegian market, other actors offering similar services in other countries are not regarded as competitors. On the contrary, they describe a close relationship with similar companies in other Nordic countries and an international network of resembling businesses. This collaboration is used to give and get advice on operations and marketing, future opportunities and challenges. They are also described as important to inspire and encourage employees.

Knowledge and capabilities

There are two types of knowledge specifically mentioned by the company as important: Customer knowledge and general domain knowledge. First, the company describes how they need to understand their customers’ requirements, how to address these, and also how to reach new potential customers. This leads them to spend quite a lot of time on customer dialogue. This is described as a necessity, but also challenging for daily operations where time and human resources are scarce. Second, general domain knowledge necessary to operate within the industry is regarded as important due to the amount of regulations and reporting

requirements put on the industry. This entails a lot of work and implies a need to continuously be updated regarding introduced and discussed changes in the regulatory frameworks.

Innovation structure

Despite a perceived importance of continuously developing the services offered by the company, being able to prioritize innovation is challenging as everyone is busy running the day-to-day business. One interviewee explains:

We would like to do that too, we try that too, to save some time and resources for development. If there is then all of a sudden an emergency in the daily work... You need to put off the daily fires before you can do other things. (Interviewee 2)

We draw from this that Red is struggling to find a structure that allows for the degree of innovation the company itself regards as necessary.

Measuring environmental value

The company raises the question of whether it is possible to measure societal value. Through their international networks, they know of similar companies in other countries who have been trying to find ways to measure societal value creation in monetary terms (e.g. social return on equity) but that it has been found difficult. The interviewees say they don't believe this is possible as there is no agreed-upon definition of what societal value entails. One of the interviewees describes:

To be honest, and this is my personal opinion, it is not possible. We are talking about values that cannot be measured. But then again, we are present in this world, and that is the way you get to communicate your message. Ok, imperfect and definitely up for discussion, but it is hard to get something to spread without using that tool too. (Interviewee 2)

This shows that although they describe measuring societal value in economic terms as controversial, it is important for marketing purposes and to attract new customers. It should be mentioned that for some of their services, especially those with emphasis on environmental value creation, there are introduced some measuring routines to monitor the impact made.

Organizational cultures and values

As shown, Red describes how values form the foundation for the services they offer. The interviewees say they have never considered following new business opportunities only based on whether they could make money. The motivation has been to create societal value. Certain services are specifically mentioned as not being offered – though they have been requested by customers and could have increased Red’s profits – as they don’t see how this service fits their value-based foundation.

Red’s values are also important to stakeholders who are decisive for the company’s survival: This is what motivates customers, investors and employees to settle with a higher price, a smaller premium or a modest wage compared to alternatives. Nevertheless, the company also emphasizes the importance of succeeding in economic value creation. They underline that some profits should be paid to investors – *“because we want to be taken seriously, we want to be a real economic business who is able to make it”* (Interviewee 2). They also emphasize how they cannot *“live from gifts”* (Interviewee 2) as this is not sustainable over time.

4.1.7 Company Yellow

Yellow was founded in the mid-1900s and operates in the plastic material industry. The company has its office and production facilities in Western Norway and has around 40 employees.

Yellow offers a product to B2B customers that is based on recycling and is rooted in circular economy thinking. Through the use of more environmentally friendly input factors, they allow their customers to choose more sustainable products and increased resource efficiency. We suggest societal value is created through waste reduction and reuse of materials. As for economic value creation, Yellow has shown positive economic results for several years.

Selling an innovative and environmentally focused value proposition

Yellow’s product entails a price premium caused by the environmental value the product creates. The company explains it has been challenging to convince customers to pay this extra cost. This is due to the industry to which they try to introduce the product not being

particularly concerned with their own environmental impact. This means Yellow has spent a lot of time convincing customers to try their product:

Technically we can achieve quite a bit. But there must be a demand, or at least an understanding that all are responsible for using resources in a sustainable way. We still have a way to go there, and we have to consider whether we should use more resources on telling the good stories. We believe that the first company that wants to do something here can get good credits for that. (Interviewee 1)

Yellow argue that until they are more certain the described demand and understanding is present, they need to work on establishing this demand. However, they also describe it as advantageous to be an early mover though this entails a need for a balance between what is technically feasible and what can be sold in the market.

Recognition and inclusion of stakeholders

Yellow seems to be among the companies with the most active and explicit stakeholder strategy and perceives their network as a key success factor. The company merges issues relevant for companies they want as customers, with issues relevant to academic institutions. The company finds that these collaborations enable them to innovate and create new solutions; *“and we are good at this, in all modesty! (...) We have many sources of knowledge, and then we combine them and that is our smartness. We are pulling the threads”* (Interviewee 1). Yellow’s way of working with stakeholders from both business and academia, make them use substantial time and human resources on taking part in a wide range of networks and research programs. Through these collaborations, they get in touch with resource persons they work closely with. Especially, they contact companies they believe can reveal technical development opportunities and enable them to develop new solutions.

Yellow explains that the partially missing willingness to pay for the premium on their product could be mobilized if regulatory authorities put more pressure on their potential customers. However, Yellow does not themselves prioritize resources on lobbying for stricter regulations. They explain this by a concern that potential customers might regard this as negative because it might increase their costs. Yellow does not want to be known for having lobbied these kinds of regulations. Nevertheless, they are taking some action towards

authorities, by giving presentations and communicating about their company. They describe how they try to “*make them [the authorities] read between the lines and focus on opportunities and so on (...) We do that, but we cannot be the source of new propositions, that we cannot*” (Interviewee 1). In other words, the company tries to influence regulations through their dialogue and contact with the authorities, but it is not a systematic lobbying approach.

When asked about competitors, the company explains it is those companies running business in the traditional way who are their main competitor. This competition might be fierce as potential customers are not necessarily willing to pay the price premium for using Yellow’s product. Also, as their product might reduce the use of certain materials, the company believes the producers of these materials will not necessarily be enthusiastic if this kinds of products are applied more widely.

Knowledge and capabilities

Two types of knowledge are emphasized by Yellow: Technical knowledge necessary to produce and improve their product and knowledge concerning how to sell their product. The first one – domain knowledge – is sourced primarily through the use of networks, as described previously. The second kind of knowledge is concerned with understanding how to persuade customers to pay more for an environmentally friendly product. The company perceives it lacks this knowledge today.

Measuring environmental value

Yellow describes how their product needs to fulfill a minimum regarding what they need to deliver of environment value. However, when asked whether that minimum is quantified, the company says it is not, as they do not know how to do it and believe it is too challenging.

Organizational cultures and values

Yellow does not refer to any specifically stated values, but describes how they like having a bigger perspective on what they do beyond aiming to earn money:

We like having a bit bigger perspective than simply earning money on what we do. It is a responsibility you have, both in terms of having economic resources, but also knowledge about opportunities, and if you can use those in the right way, it can make a difference. (Interviewee 1)

Throughout the interviews, emphasis is also put on the need for generating profits. To find viable ways of balancing the two concerns – societal and economic value – the company considers different megatrends and believes some trends entails business opportunities for the company. They seek to address some of these megatrends, but also emphasize how they could have chosen to use their resources on things that are more profitable, but that “*do not make any difference in the world*” (Interviewee 1). We draw from this that values are guiding long-term decisions on what opportunities to pursue.

4.1.8 Company Blue

Blue was founded in the late 1980s, and operates in waste handling and renewal energy production. The company has its headquarters in Eastern Norway and is represented with offices in nine countries worldwide. In total, Blue has around 130 employees.

Blue provides technology that facilitates increased production of renewable energy and more efficient handling of waste to the B2B market. The company also delivers operations and maintenance services related to their technology. We suggest societal value is created as Blue’s technology responds to environmental challenges such as waste treatment, recycling and production of renewable energy. As for economic value creation, Blue has shown increasing positive results for several years.

Selling an innovative and environmentally focused value proposition

Blue was the first player in the world offering their technology. The company describes this technology as innovative in terms of the increased production of renewable energy it provides, as well as the efficient handling of waste.

The technology provided by the company has several potential application areas. The company has gone through two processes where they have changed the application areas for the technology. During the first years, the technology was intended used in a different

industry than where it is used today. However, the company saw that in order to get the technology to work, they had to use environmentally hazardous input factors which were (and still are) heavily regulated by the authorities due to their negative environmental impact. This made them leave this area of application. The employees at the time were however fascinated by the features of the technology and wanted to look for other application areas. Then the company “*stumbled over a new opportunity by chance*” (Interviewee 1), but their first customer experienced problems getting the technology to work. Then Blue decided to do a more thorough investigation of possible application areas and did this by turning to academic research. Through this process the company found their current market. One of the interviewees admits the company has been “*lucky*” (Interviewee 1) during these trial and failures, but emphasizes they have had “*the capability of turning it around when you see that the original plan doesn't work*” (Interviewee 1). Blue suggests a lesson learned from this process is that technology development is extremely difficult, and you need to be certain your technology works before you spend resources on sales and marketing.

The company finds it hard to convince customers what they are offering is superior to conventional alternatives. They suggest an important reason for this is that their technology entails a larger investment cost than conventional technology, though the costs of operation are smaller. In addition, Blue suggests there is a lack of incentives for trying innovative solutions among their customers and the external consultants often guiding the buying process on behalf of the customer. Finally, they find the Norwegian market difficult due to lack of regulations favoring their technology. An important strategy for the company is therefore to target risk willing customers in international markets where such regulations exists. Also, they have expanded their portfolio to include service and maintenance to achieve more recurring revenues to strengthen the company's economy.

Recognition and inclusion of stakeholders

Blue describes risk willing and competent customers as their most important stakeholders. As the technology Blue provides is complex, it has been important that the customers understands the advantages inherent in the technology. Competent customers have functioned as “*door openers*” (Interviewee 2) for the company as they have been willing to test new technology and give important references used in sales pitches later on.

The company further mentions their investors as important stakeholders. They say the investors' main concern is return on capital, but that they have had a long term view on return, and *"have had the money to endure ups and downs"* (Interviewee 2). Beyond funding, the investors have an active role in the company, contributing in strategy work and decisions on what to do next, as in the described process of finding new application areas for the technology.

Blue considers the authorities as an important stakeholder in the sense that they regulate the industry the company operates in. Though Blue experiences a lack of regulations in favor of their technology in the Norwegian market, the company has no systematic strategy in place for influencing regulations. This is because they see this as a demanding and time-consuming process. Blue also considers the authorities as both facilitating and impeding their economic value creation: The company has received funding from the government through different funding programs, but also points to taxation rules, in particular rules concerning the net wealth tax, as a challenge when building their company. The company argues this tax has made their investors increasingly important to them.

Universities and research communities are other stakeholders important for Blue, illustrated for instance by the company turning to research to explore possible application areas for their technology. The company describes how these actors contribute by developing new technical knowledge and being test sites for Blue's technology. The interviewees explain how these actors have also had the function of providing independent opinions about the level of reduced greenhouse gas emissions given by their technology. These considerations are used in Blue's sales pitch.

Blue considers the industry incumbents as their competitors, but has no cooperation with these other than talking to them at industry conferences.

Knowledge and capabilities

When asked about what type of knowledge and capabilities the company possesses, Blue emphasizes multidisciplinary expertise: *"What makes a company like Blue a survivor... It's teamwork with different people with different knowledge and capabilities. The fact that we are a team with different competences, that's extremely important"* (Interviewee 1). The company

mentions domain knowledge, sales capabilities and knowledge on commercial processes as particularly important: *“We would never have come as far as we have without people with technical knowledge. (...) But that’s not enough. Someone needs to sell the technology as well”* (Interviewee 1). The company’s sales teams consist of economists, designers and people with education and experience from the industry. They suggest this variety of skills and knowledge to be necessary due to the complexity of the technology.

Also, as already described, the capability of being flexible is emphasized as one of the company’s success factors.

Measuring environmental value

As described, universities and research communities have been used to measure both the increased production of renewable energy as well as the level of reduced greenhouse gas emissions their technology represents in comparison to alternative solutions. The interviewees argue that as their technology offers something new in a market where innovations are rare and the customers are conservative, the need for a sales pitch clearly showing the environmental value for potential customers has been important.

Organizational culture and values

Blue does not mention any specifically stated values. The fact that the company offers technology creating environmental value is actually a consequence of choices guided by where the company believed they could make money. One of the interviewees illustrates this by saying: *“My task is to think in economic terms. If you don’t make money, then... Money is – whether you like it or not – the ultimate proof that you produce something of value”* (Interviewee 1). However, this is not to say environmental impact is not of importance to the company. They describe that considerations about environmental value creation might guide further development of their technology. This is illustrated, for instance, by one of the interviewees explaining:

I think that still there is considerable societal value to be gained from our technology. We just have not really gotten to that part of the development. This is due to us having

to prioritize some things over others. We don't have enough money for doing everything. We have started on that kind of thinking as well. (Interviewee 1)

The company also keeps coming back to the fact that they have been very flexible in terms of the application area of their technology and describes this as an important part of their culture. They describe it as a culture of “*trial and error*” (Interviewee 1) that encourages the employees to take risks and try out new things.

4.1.9 Company Green

Green was founded in the early 2000s and is a technology provider to the food industry. The company is located in Eastern Norway and has less than 20 employees.

Green offers a product allowing for less waste of food. Even though the product is sold in the B2B market, it gives both corporations and consumers an opportunity to reduce their waste of food. The company's product was developed based on university research. Waste of food is a big challenge in Norway and the rest of the world. We suggest Green creates societal value through offering a product which enables the reduction of this kind of waste. After initial years with negative economic results due to time demanding R&D, Green has landed a commercial contract with a large B2B-customer and is working towards further expansion to new markets.

Selling an innovative and environmentally focused value proposition

Green's product is developed based on a technology which the company suggests have several possible areas of application. As a first step to get recurring revenues, they have decided to produce a product which address waste problems in the food industry. The product is suggested to be innovative in the sense that it allows for increased food resource savings as compared to alternatives presently offered in the market.

The innovativeness of the product is an important feature of the company's product and is among three explicitly stated values for the product (these values differ from those of the company, described later). Green says this stated value has led to a focus on continuous improvement of their product's features. However, they also explain that because the product offers an innovative approach to solving an environmental resource challenge, they spend

time and resources on deciding how to communicate the potential impact of the product to their customers. In their view, the environmental and societal challenges they seek to solve are very clear, but the solution to them is not. They describe how the feedback they have gotten has without exceptions been good, but despite “everyone” describing the product as smart, potential customers do not necessarily think they need it. The positive feedback, they explain, made them rely on this response for too long, and it took them by surprise how lengthy the process of actually selling the product to a customer was. One of the measures taken to improve potential customers’ reluctance to actually buy the product has been to put more emphasis on marketing and communication. Moreover, they are following a pull-strategy where the goal is to get end-users in the consumer market to ask for the product. They believe this will incentivize industry customers to purchase Green’s product.

Green has brand building as an important part of their communication strategy. As Green’s approach to solving waste problems in the food industry represents something radically new, they have realized there is a need to attract attention in the market. Due to this, the company spends increasing amounts of time and money on becoming a product customers actively ask for. As part of this process, they run surveys and are now hiring PR- and communication agencies to find out what part of their value proposition the customers perceive as most important. This is done in order to tune their communication around these elements.

Green perceives the timing for introducing their product as better than in a long time as they see increased focus on waste of food. They suggest they benefit greatly from a general increase in attention presently given to environmental and ethical issues. Green believes the market potential for their product on a global scale is enormous and that you only need some thousandths of the market to succeed. However, despite the seemingly large market, the company describes getting a foothold in the market as difficult.

Throughout the interviews, the interviewees are concerned with the phase of development in which the company presently finds itself. They explain they are moving from a R&D-phase with emphasis on product development, to a phase where larger scale production and commercialization is the most important part. The interviewees describe they have reached a point where they move from the product being a smart idea to seeing more clearly how the product should be used and how business can be made from it.

Recognition and inclusion of stakeholders

Green has close cooperation with some few, important customers. In addition to providing the financial basis for the company, these are also a source of innovation, as we describe later on. Green does not sell directly to consumers, but as they believe in establishing a pull-strategy from this group, their communication strategy is directed towards the consumer market.

Green's investors are described as important for providing capital, but also as active in advising and helping the company move forward. The company mentions several elements in their strategy where the investors have provided substantial input on topics such as industry experience, network, financial aspects in addition to assisting with back-office functions. Moreover, on the financial side, they are perceived as patient as the process of earning money has taken more time than expected. However, the company is also concerned with the need to bring in more capital to be able to expand the business. The company perceives the Norwegian market as a good start for their product. However, they regard it as important to succeed also internationally as the potential for their product extends beyond the Norwegian market. The interviewees say this will require more capital. They believe getting new and larger investors requires having numbers in place that will “survive” (Interviewee 1) the considerations and due diligence processes foreign consultants do on behalf of larger, foreign investors.

The company suggests there are several measures the authorities could have taken which would improve their market. First, they describe how more focus on the food wasting challenge from the authorities would improve the pull from customers. Moreover, they list countries where regulations are stricter, and how copying these to Norwegian legislation would be of help to Green. One of the interviewees uses the example of the introduction of airbags in the car industry to illustrate this:

The airbag – and many other safety measures in cars – came only when there was a legal requirement from the authorities which stated “from that date, you cannot sell cars without an airbag”. So we can sit here pushing, and we can push long and hard, but the real change in quanta happens when it is a legal requirement. And then we will be here, ready to go. (Interviewee 1)

Green does some work towards authorities, but describes this as a question of resources. As they are presently designing a public relations strategy, they believe more time might be spent on this in the time to come. They might also involve more of the industry in lobbying for stricter regulations. Environmental organizations are also mentioned as a stakeholder interested in the topic, but is presently not an actor the company cooperates with. In addition to resource constraints inhibiting a more active relationship towards the authorities, Green perceives it as challenging to convince politicians as the company is a commercial actor. They regard it as a potential problem that policy makers might think they are only pushing their own agenda, as they are also making money from this.

Green knows of only one other company who are trying to introduce new products which addresses food waste in a similar manner as they do. The other company is situated outside Europe, and as they perceive their potential market as very large, this company is not seen as a threat. Green do not have any contact with this company apart from meeting them occasionally on fairs, conferences etc. Rather than viewing other companies as competitors, Green suggests their main challenge is to actually convince customers to buy the product in the first place. This implies they are rather competing against the traditional way of handling food, than against competing products.

Knowledge and capabilities

Green was founded in an academic environment which ensured domain knowledge was present from the outset. The company also lists several types of specific knowledge and skills important to the phase they are presently in: Production knowledge, communication skills and analytical knowledge. First, Green describes a need to increase production of their product and suggest this leads to a need for more knowledge on “*managed product development from early phase to industrialization*” (Interviewee 1). This is perceived as necessary to streamline production, reach volume production, and make the process less vulnerable to errors in addition to lowering the price. Further, due to their strategy of creating a pull from consumers the company sees a need for communication and marketing skills. In addition to hiring external agencies to contribute to this process, the company also expresses a wish to internalize this knowledge to improve dialogue with customers.

The need for new knowledge has resulted in a strategy of employing people with different skills and experience. For instance, the CEO was recruited due to his/her experience from big, commercial companies, and the CTO was hired due to his/her experience from companies which have moved from small to larger scale production.

Innovation structure

As innovation is stated as one of the values for Green's product, but also as a value on the company level (see below), the company works continuously with a twofold strategy. They find it important to improve their existing product, both in terms of its features and the way it is produced, but also focus on developing new products. As described by an interviewee:

In the phase we are presently, we need to do well at the commercial part and the communicative part. But the company dies eventually if there is not an innovative power working continuously. (...) And we need to ensure we have the necessary people present for that innovative power to come. (Interviewee 2)

This need influences their recruitment strategy, and affects the choice of customers: Green describes working with customers as an important source of innovation, especially working with new customers. This has led the company to prioritize customers not only based on who they perceive as the most profitable ones, but also on the basis of who might ask for new product features and expose the company to new challenges which might in turn lead to new innovations and products.

Measuring environmental value

Green does not measure the environmental value created through their product, but explain how they try to show their customers potential savings employing Green's product can provide. They regard this as important to convince potential customers that using their product does not only have environmental value, but also economic value. This economic value for the customers, they suggest, is created because operating more resource efficient is an opportunity for saving, not only an additional cost accruing from buying Green's product.

Organizational cultures and values

In addition to having one set of values for the product, there are also explicitly stated values for the company. As mentioned, ‘innovation’ is among these, and so is ‘meaningfulness’ which one interviewee explains entail a wish for it to be meaningful to work in Green. This is described as both related to the environmental value their product creates and to creating a social environment at the workplace where people feel valued and motivated. As getting the first customers and ensuring sufficient capital is described as challenging, one interviewee suggest there is a need for employees not only willing to live with this uncertainty, but that even have an appetite for risk.

The company suggests their culture is characterized by transparency and courage, implying that challenges and problems they face should be shared and discussed. Conflicts and critical comments are encouraged during early phases of development projects. One of the interviewees for instance mentions how he/she sometimes takes the role of questioning new ideas from colleagues even though other colleagues are enthusiastic and fascinated by the suggestions of a new product. This questioning happens despite the fact that the proposals might come from highly competent experts. Also, they seek to create a culture that allows for trying out new things not worrying too much about failing. They perceive this as important to be innovative.

The company perceives the environmental value they create as a fortunate consequence of performing well, rather than an overall goal. One of the interviewees explains the culture as different from what he/she experienced in other clean tech companies: *“I don’t think it [creating environmental value] has been that important. It has been more like ‘this is a cool product with some advantages we can sell to the consumer’. It is not kind of ‘save the planet’”* (Interviewee 1). A consequence of this seems to be that Green are not very concerned with environmental or social issues in their own value chain; *“you don’t ask where it comes from, you ask: how much does it cost? That kind of attitude. Not any kind of ‘carbon footprint’”* (Interviewee 1). This illustrates how Green perceives price as the most important requirement for their input factors, as opposed to whether these input factors are more socially or environmentally focused than potential substitutes.

4.2 Expert interviews

In this section we present the findings from the expert interviews structured according to our propositions. The amount of data on each proposition varies as the experts put more emphasis on some topics than others. If there is no empirical data regarding a proposition, it will not be listed in the text. Each expert is given a randomly chosen number used throughout the presentation of the findings. As in section 4.1, direct quotes are marked by quotation marks and italic writing.

4.2.1 Selling an innovative and environmentally focused value proposition

A majority of the experts say the main challenge for companies seeking to create environmental and economic value is the uncertainty concerning the willingness to pay for environmental progress among potential customers. The experts mentions several reasons for this unwillingness to pay for innovative products creating environmental progress: (1) There is uncertainty about the quality and features of the products, (2) the products' features entail a potential need for customers to change their operations and routines, and (3) the products often entail a price premium. Experts 1 and 2 describe that many companies overlook this challenge because they get deluded by the fact that it is "*crystal clear*" (Expert 2) the world needs these kinds of products and the "*market potential often is huge*" (Expert 1). Experts 1, 2, 3 and 4 suggest regulations and subsidies from the authorities might contribute in creating the needed demand, but they also describe it as unpredictable and "*risky*" (Expert 4) for a company to base its business on regulatory changes. Expert 2 suggests that a strategy to overcome this challenge is having an international focus from the outset and mentions several companies employing this strategy successfully. These companies consider the Norwegian market inexpedient due to lack of specific regulations or subsidies and have therefore targeted country markets where such regulations or subsidies are already in place.

Even though creating demand for environmental products seems challenging, all experts perceive a trend where environmental concerns play an increasingly important role. Expert 5 even suggests that; "*I don't think it is harder to succeed with environmental products than in other areas of business today. I am tempted to say the opposite*" and explains this by the increasing environmental focus. The experts emphasize several elements affecting companies'

willingness to create shared value creating strategies: Expert 2 points to several support schemes for companies offering environmental products not necessarily available to companies in other industries. Moreover, Expert 5 emphasize the authorities placing sustainability on the political agenda. The expert suggests this result in companies willing to take their part of the responsibility, because they feel “*this is the correct thing to do*” (Interviewee 5). For instance, Experts 1 and 2 describe how a number of the companies providing environmentally concerned innovations are also concerned with taking societal considerations in their own value chains and when sourcing input factors. Lastly, Experts 3 and 4 argue companies today perceive that solving environmental issues represent a substantial profitability potential in the future.

4.2.2 Recognition and inclusion of stakeholders

The experts emphasize the importance of recognizing and including stakeholders in the companies’ strategic decisions, but also describe several challenges these companies face in this regard.

The challenge of getting investors

All experts emphasize the importance of getting funding from investors, but describe how this has been challenging for companies offering environmental products. They mention several reasons for this. First, Expert 4 suggests investors often think of environmental products as risky investments, and this conflicts many investors’ intention of maximizing return on capital and minimizing the risk taken:

Investors take only technological risks or market risk. So you can’t have both. Either, the company must be certain that there exists a substantial market, or you have to be sure about the potential of the technology. But you can’t take the risk of both these elements. That’s just too hard. (Expert 4)

Expert 4 says environmental products often represent both these types of risk, making it hard to collect needed capital.

Second, Experts 4 and 6 explain that a reason for the lack of capital is that investors have negative experience with environmental products, clean technology and similar business cases as investment opportunities:

There were so many investors who got burned six-seven years ago. (...) Clean tech and renewable energy technology was extremely hyped, and then the whole thing collapsed. (...) If you have lost buckets of money, then you remember it for a long time. It spread throughout the whole world. A lot of investors, nearly all, lost substantial amounts of money as a result of the environmental crack. (Expert 6)

Both experts believe environmental products need to regain its trust before investors will be willing to invest again.

Third, several experts mention the availability of less capital intensive investment opportunities as a reason for lack of capital for the environmental products sector:

Capital efficiency is important for investors. It costs the shirt of your back building production facilities. That's why there is great interest in software companies. (...) With the digital revolution we have seen... It makes it extremely hard to get investors to invest in good old industry. (Expert 6)

An additional point made by Experts 2, 4 and 5 is that Norwegian taxation rules might be a challenge for these companies. The challenge is described both concerning the net wealth tax for the companies, but also concerning the current tax regime for investors, as this incentivizes other investments than new companies.

A market trend affecting these companies' access to capital in a positive direction and which is emphasized by Experts 1, 2 and 3, is the current downturn in the oil and gas market. Expert 2 suggests "it has not been any need to create anything new until now" and Expert 3 suggests investors are looking for other investment opportunities than oil-related companies. Expert 1 describes a perception of more investments flowing in the direction of renewable energy projects, where capital until recently has been a limitation.

Limited contact with the authorities

Experts 1 and 2 argue that as companies often need regulations and subsidies in place to create a market, the authorities including politicians, governmental agencies and local authorities, as well as civil society organizations are substantial stakeholders. For instance, Expert 2 describes that *“for those companies where environmental politics is needed in order to create a market... They have everything to gain from talking with the environmental movement, because there is very little environmental politics that aren’t initiated by this movement”*. The expert illustrates this by explaining how environmental NGOs have driven forth regulations that companies have benefited from, for instance on transport regulations. Expert 1 also believes it is important to lobby the authorities, but describes it as limited what the companies can achieve due to their small size and limited resources. The same expert, however, underlines how there are indeed some companies working to influence regulations. He/she further describes the importance of companies drawing attention to the environmental issues they work with and their solutions to these. This, he/she suggests, is important as regulations might not be strengthened unless there is certainty that the new requirements can in fact be fulfilled due to technological progress.

The importance of business-to-business collaboration

Experts 1 and 3 underpin the importance of other companies as stakeholders and emphasize collaboration between companies both within and across value chains: *“We know from research that companies collaborating do better than companies only working by themselves”* (Expert 1). Both experts argue there are several areas in which companies can cooperate, such as R&D, market entry, and developing clusters that can have long term impacts.

Also, Expert 1 describes the importance of companies requesting products or services with certain environmental features or standards from each other. The expert perceives this as an increasing trend and suggests it is an important driver for the development of environmentally friendly products or services. Moreover, Expert 5 says there is also increased attention paid to environmental issues within large companies in the aftermath of the climate negotiations in Paris in 2015. As these large companies *“become more environmentally concerned of the environmental aspects in almost all activities they do”* (Expert 5), more capital become

available for green technology development. Expert 5 suggests this increased environmental focus within and between companies might accelerate the development of more environmentally focused business opportunities.

4.2.3 Knowledge and capabilities

Several experts emphasize the necessity of having both domain and market knowledge in order to succeed with economic and environmental value creation. Expert 4 suggests the companies succeeding are those who are “(...)experienced entrepreneurs. They have high technological expertise. They have market knowledge; they know the needs of their customers and they have built a technology in order to satisfy these needs”. Expert 2 share the view of the other experts, but underlines that he/she finds many of the companies trying to address environmental challenges today lacks the necessary market knowledge: “I feel that a lot of the environmental technology companies today have not put enough thought into their business case. They cannot give an answer to what their business model is or how they are supposed to earn money”. Expert 5 recommends establishing market contacts and start promoting the product early to increase knowledge of potential customers’ requirements and reduce market risk. The expert explains early promotion of the product entails a risk that you might struggle to meet agreed-upon specifications on a technical level, but that this is when the technological knowledge inherent in the company comes into play. This underlines the importance of domain knowledge.

The importance of having political knowledge is also emphasized, for instance by Expert 2 who describes how “the companies make products that are dependent on politics to sell (...) And then they have no political knowledge, not even about the existing regulations!”. The expert describes many of the companies as dependent on regulations and subsidies decided by the authorities. However, as the quotation shows, he/she argues there is a lack of political insight in many companies and this poses a challenge as they are not able to influence the regulations necessary to enhance their market.

4.2.4 Organizational culture and values

When asked about what characterizes companies succeeding with environmental and economic value creation, Expert 5 emphasizes the culture of these companies:

I think almost everyone who has succeeded is driven by a very strong will to create something. You can say that it is another way of saying that they have passion. (...) You have to have passion. Without that, you fail. (Expert 5)

The expert perceives passion and engagement as important because you need to withstand setbacks and rejections for instance when you promote your products to potential customers. Along the same lines, Expert 5 describes the phase where you wait for recurring revenues as among the most challenging for companies. Before reaching the tipping point many companies go through a tough period. Experts 5 and 6, in addition to interviewees from the case companies, use the expression “*valley of death*” to describe the phase where the investment requirements are substantial and income is low. Expert 5 describes how eight out of ten companies “die” within this period, as eventually all money is spent and your investors withdraw. The expert describes the companies surviving this period as patient and with a long term view on company strategy and performance.

5 Discussion

Never doubt that a small group of thoughtful committed citizens can change the world; indeed, it is the only thing that ever has.

Margaret Mead

In this chapter we answer our research question on how SMEs offering innovations that address environmental challenges create shared value. In section 5.1 we present a cross-case analysis based on the findings from Chapter 4. This cross-case analysis illuminates the microfoundations of how the case companies create shared value. In section 5.2 and 5.3 we present the implications of our research for practitioners and theory. In section 5.4 we discuss limitations of the thesis, before we conclude the chapter with our suggestions for further research in section 5.5.

5.1 The microfoundations of shared value creation

In this section we analyze the findings referred in Chapter 4 on a cross-case level. First we describe how the case companies perceive the context they are operating in, i.e. the environmental issues context. Then we move through our six propositions and analyze the extent to which these are confirmed and how the proposed elements for shared value creation play out within our case companies.

5.1.1 A perception of a greener future

Environmental challenges have been the context for our exploration of shared value creating companies. We find that the perception of a trend where environmental concerns play an increasingly important role affect how the companies plan and implement their strategies. Therefore, the interviewees' perceptions of the environmental context also influence how the propositions play out, and we therefore start our discussion by showing our interviewees' perception of a greener future.

The case companies and experts are notably consistent when they describe how they perceive an increasing focus on environmental issues among the general public, authorities as well as within and among companies. This seems to create optimism among the companies; *“The timing for launching these types of solutions is probably better than they have been in a*

really, really long time. There is a massive focus on sustainable production and carbon footprint” (Green interviewee 2). That business increasingly requests more environmentally concerned products and/or services from each other, is suggested to be particularly important to accelerate the increased environmental awareness and might strengthen the business cases for a number of the companies.

Interviewees from both case companies and among the experts agree that solutions to environmental problems entail a potential for economic profits. Some even argue that companies trying to build an environmentally concerned business case might have an advantage over similar firms with a less environmentally concerned value proposition; *“Today, the winners are those with environmental technology. And that is an enormous change!”* (Delta interviewee 1). This is interesting as scholars (e.g. Porter and van der Linde, 1995; Nidumolu et al., 2009) refer to the prevailing view as having been that economic value creation and environmental progress form a deadlock where progression in one direction happens at the detriment of the other. A number of the interviewees suggest increased environmental focus implies there is a potential for early mover advantages. Some argue that companies might gain from building strategies on this environmental trend, whereas others even suggest that taking environmental considerations will not be optional in the time to come. This view of the value creation potential inherent in environmental challenges is in line with Porter and Kramer’s (2011) view of the possibility of creating economic value from addressing societal needs.

5.1.2 Selling an innovative and environmentally focused value proposition

The first proposition suggests that companies creating economic and environmental value are able to bring forth and sell innovative and environmentally focused value propositions. Having an innovation that addresses environmental challenges was part of the selection criteria for our case companies. However, there is a need to understand how the products or services are brought to the market and to illuminate how the inherent environmental value of the innovations is translated into economic value for the company.

Societal value creation

Societal value creation is a result of all the innovations offered by the case companies. These innovations address different environmental challenges, such as less use of hazardous input factors and more environmentally friendly resource use. This shows how the companies are built on what Porter and Kramer (2011) explain as the crux of shared value creation; i.e. “identifying and expanding the connections between societal and economic progress” (p. 6). Although the case companies have societal value creation in common, there are also a number of differences: They are of different size and age, some provide products and others services, and they address the B2B market, the B2C market or both. This resonates well with the existing literature on shared value creation which describes shared value being created in a range of differing companies with a variety of products or services addressing different markets.

Not all the case companies had the creation of societal value as a goal from the outset. Some were indeed initiated based on an identified societal need which could be addressed by their product. We suggest this include Alpha, Beta, Gamma, Epsilon and Red. Delta, Yellow, Blue and Green, on the other hand, started out with a technology that they needed to find an application for. This is in line with literature that describes shared value creating firms ranging from large and well-established firms seeking to shift their operations in a more societally concerned direction (e.g. Walmart in Porter and Kramer (2011), Nestlé in Pfitzer et al. (2013)), to companies where the creation of societal value was an important component from the start (e.g. Waste Concern in Porter and Kramer (2011), Whole Foods in Porter and Kramer (2006)). None of the companies describe their innovations as ignited due to the introduction of new policies or regulations, as Moon et al. (2011) suggest could be a basis for shared value creating efforts. We believe that the companies initiated based on solving an environmental challenge have more knowledge on the environmental challenge they address than the companies that was not founded with this basis. This is further described in subsection 5.1.4. Apart from this – the fact that some companies are initiated on the basis of solving an environmental challenge, while others are not – does not seem to determine the extent to which they are able to create shared value or how this is done.

Economic value creation

Creating economic value alongside the environmental impact provided by the innovation is described as challenging, but also necessary to create shared value and to survive in the longer term. It is also the crux of the matter in Porter and Kramer's concept that these products are actually sold for economic value to be created. As we explain in Chapter 3 the case companies are already profitable or there are clear indications they will be. However, Chapter 4 reveals that reaching the present state of economic value creation has been a challenging and long-lasting journey. A number of the case companies describe how the societal value created by their innovation has received considerable positive feedback from outsiders. The challenge for these companies is that this enthusiastic feedback is not necessarily translated into customers or revenues. As summarized by Expert 4; *"I think there are many things that can work really great in theory, but you need some customers"*. Many of the companies describe getting a market foothold as surprisingly difficult and tedious.

One of the explanations to why it is challenging to get a market foothold might be what Eccles et al. (2016) describe as customers' unwillingness to change their habits or hesitance to pay a premium if the societal value offered also entails extra costs. This makes the environmentally positive feature of the companies' value proposition a challenge, as the companies don't know if there is actually willingness to pay for the extra, environmental value. This challenge is for instance explained by Expert 1:

It is probably a bit the same as it is for any firm; they need to respond to a need. They need to solve a problem for those who are going to buy it. (...) But what constitutes the extra challenge for these companies is that there is a great risk concerning whether the market is actually willing to pay for the environmental effect, and then you get an extra risk. A double risk, actually. (Expert 1)

The risk described by Expert 1, seems to be greater for companies offering products or services that differ from competing value propositions solely by offering a solution of better environmental standard, such as Gamma and Red. Other companies might mitigate this risk by offering products with additional features beyond positive environmental impact, such as improved quality (Beta) or positive health impact (Green).

We find establishing market strategies for reaching the first customers and recurring revenues as being at the heart of how the case companies achieve combined environmental and economic value creation. The shared value concept builds on the premise that business is able to overcome the barrier of reaching a market foothold – and convincing the reluctant and possibly conservative customers described by Eccles (2016). As referred in Chapter 2, Porter and Kramer (2011) suggest that companies are better equipped than for instance governments to motivate customers to embrace these kinds of products or services. Our literature review on shared value creation however reveals that how this is done by companies has not received much attention and is not emphasized in the articles we have reviewed. We suggest the case companies do this by establishing market strategies containing a variety of measures to motivate customers to accept these new products. We find some recurring elements in the companies' strategies for reaching a market foothold. These common features include segmentation and prioritizing of customers, brand building and in some cases an international view of the market already from the outset. We describe these in the following subsection.

Identified stepping stones towards a market foothold

We find three vital elements for the case companies' market strategies. First, several case companies describe segmenting and targeting customer groups as important. The fact that these companies address environmental challenges that have considerable societal effects means that their markets are perceived as not only large, but at times enormous. The companies describe going from the perception of a huge market to segmenting potential customer groups as both necessary and difficult:

There are no limits for what you can... The potential for Beta is bottomless. You can do... Anything! The challenge is that you have a limited amount of resources in the organization, money to use on marketing etc. You need to take some choices regarding your focus and find what not to do. It is always frightening to not do something and always easier to do a bit of everything, because then it feels like you are certain to succeed with something. (Beta interviewee 1)

The interviewee from Beta further describes how this segmentation process is one of the reasons why the company has succeeded. The need for prioritizing, and especially identifying

and getting the first customer onboard, is confirmed by the experts who say this is also crucial for the companies to prove their concept to their next customer.

Second, some of the case companies, especially those operating in markets with large industry incumbents (for instance Alpha, Epsilon and Green), stress the importance of brand building in order to convince customers to buy their product. For instance, trend setters and researchers are used to promote the case companies' products or services. As the brands are in part built on the environmental value offered by the product or service, the companies say this increases the importance of not being taken for practices going against their societally and environmentally focused brands. Rather than emphasizing the positive aspects of their products, there are also case companies, such as Beta and Gamma, mainly communicating that their products work as insurance against negative publicity. The case companies using this approach describe it as challenging because the industries they sell to traditionally have not been very concerned with their own environmental performance. The companies say they seek to convince potential customers that negative publicity as a result of environmentally damaging practices might become a bigger threat in the years to come due to increased environmental awareness from the general public.

A third element found in the market strategies, is having an international market approach. Some of the case companies (such as Beta, Gamma, Delta, Epsilon, Blue and Green) early adopted an international market focus. This is also suggested to be important by several experts. These companies consider the Norwegian market as unsatisfactory due to conservative customers and/or lack of specific regulations that favor the use of their products or services. As a result, they have targeted foreign markets where such regulations or subsidies are already in place or where the customer potential is larger.

5.1.3 Recognition and inclusion of stakeholders

The second proposition suggests that companies creating economic and environmental value have a broad recognition and inclusion of stakeholders. The literature mentions a range of relevant stakeholders for shared value creating companies, for instance; customers (e.g. Spitzeck & Chapman, 2012; Lee et al., 2012), investors (e.g. Eccles et al., 2012), authorities (e.g. Kanter, 1999; Spitzeck & Chapman, 2012; Pfitzer et al., 2013), NGOs (e.g. Schmitt &

Renken, 2012; Pfitzer et al., 2013), related businesses (e.g. Porter and Kramer, 2011; Moon et al., 2011; Pfitzer et al., 2013), academia (e.g. Porter and Kramer, 2011; Moon et al., 2011; Pfitzer et al., 2013) and competitors (e.g. Schmitt & Renken, 2012). Our findings show that the majority of the case companies consider customers and investors as important stakeholders, but apart from this, they have a relatively narrow view on what actors they consider and include as stakeholders. Two exceptions are found; Delta and Yellow have a strategic view on stakeholder relations and work systematically in both recognizing and including several of the stakeholders mentioned by literature into their daily operations. In the following, we go through each of the stakeholder groups to discuss the extent to which they are recognized and included in the case companies' work.

Co-innovation with customers

A majority of the companies mention customers as their main stakeholder. Some of them further describe how customers are involved in the company's innovation activities. This involvement seems to take two forms: The customers give input on what products, or features of a product, they want the company to develop (as with Alpha, Gamma and Green), or they contribute more actively by taking part in the developing process of the products or services (as with Delta and Yellow). This finding is in line with Lee's et al. (2012) description of co-innovating with customers as a way to achieve shared value creation.

We suggest including customers in the innovation process is vital in order to translate the environmental value of the innovations into economic value. As shown, shared value creating companies offer value propositions that seek to satisfy the needs of society at large. Then the challenge is to get customers to pay for a value proposition that also includes features the customer doesn't necessarily perceive it needs. In the first chapter of their book "Strategy From the Outside In, Profiting from customer value", Day and Moorman (2010) describe an important feature of companies that succeed building value in the long term as the ability of applying an outside-in-strategy. By this they refer to "standing in the customer's shoes and viewing everything the company does thorough the customer's eyes" (p. 5). To create shared value, the problem to solve for companies is to ensure this is done without losing the environmental features of the value proposition – and without losing the customer. We argue that this increases the importance of getting market feedback – through customer inputs and

co-innovation – to enhance the understanding of how solving the customer’s needs can be combined with solving societal needs. How this co-innovation is done and how customer versus societal needs are balanced, is hardly described at all in the shared value literature. We suggest this is a challenge facing shared value creating companies worthwhile exploring further.

Investors with a long-term view on performance

In addition to customers, investors are by most case companies perceived as the most important stakeholder. Even though some companies describe it as hard to attract investors and acquire sufficient capital, they presently have engaged appropriate investors for the companies. However, some also explain that due to plans of expanding the business there will be increased needs for capital and new investors in the future. The companies’ investors are characterized as patient, and as contributing with commercialization knowledge, useful network contacts and in the process of defining the case companies’ long term strategies. This confirms Eccles and Serafeim’s (2013) finding of how this kind of companies succeed in attracting investors interested in the firm’s long term success, and who do not compromise sustainability goals in order to maximize short-term profits.

Even though a majority of the case companies mention being able to attract patient investors as one of their success factors, we find this to be a topic that is underemphasized in literature and that should be further explored. Eccles and Serafeim (2013) underline that long term oriented investors should not be taken for granted in today’s business markets with substantial capital market pressure for short term performance. However, we have not found scholars within the shared value literature who emphasize investors as important stakeholders. Therefore, we were not aware of the importance of this process for the case companies before and during the data collection process. As this understanding emerged only during the analysis process, we did not follow up on the topic during the interviews as thoroughly as would have been desirable. Considering the importance of the investors described by the case companies – and our limited empirical data on the subject – we argue this is a microfoundation of shared value creation that should be examined further.

Limited collaboration with authorities

The companies recognize the authorities as an important stakeholder, but only a few of them have a systematic dialogue and actively include them in their strategies. This deviates from the description of this kind of companies as collaborating with the authorities suggested for instance by Kanter (1999) and Pfitzer et al. (2013). The companies mention several reasons why they don't prioritize this actor: Beta questions how much the authorities actually can accomplish, Yellow is concerned that potential customers might regard lobbying the authorities as negative because it might increase their customers' costs if stricter regulations are introduced. Further, a number of the companies, Beta, Red, Blue and Green, say resource constraints are the most pressing reason why this is not prioritized.

Regardless of the reasons for not establishing a dialogue with the authorities, we nevertheless suggest it could be an advantage for the companies to prioritize this more than what is the case today. The limited dialogue with this stakeholder is interesting as the companies describe the authorities as having the ability to improve market conditions for shared value creating innovations and point to several measures which could be taken in this regard. The quest is not primarily increased subsidies or monetary support, but rather a strengthening of standards and regulations, as well as more pressure being put on potential clients to improve their environmental performance. The importance of the authorities' role in shared value creation is also pointed to by the experts. They describe measures introduced by the authorities as necessary to create a functioning market for environmentally concerned innovations. Moreover, as literature points to new regulations as an opportunity for shared value creating initiatives (Moon et al., 2011), we believe the case companies could have benefitted from having a more active dialogue with the authorities.

Limited collaboration with other companies, NGOs and academia

We find limited and unsystematic collaboration with other companies such as producers of complementary products or companies located around the same area among the case companies. Also, NGOs and academia are rarely mentioned as important stakeholders. However, to collaborate with other companies within and across value chains are emphasized as a characteristic of successful innovative companies by Experts 1 and 3, also among those

companies addressing environmental challenges. The sparse dialogue between the case companies and other companies, NGOs and academia also contrasts the suggested importance of collaboration with such actors suggested in literature (e.g. Schmitt & Renken, 2012; Pfitzer et al., 2013; Porter & Kramer, 2011; Moon et al., 2011). One possible explanation as to why we don't find more collaborative activities among our case companies, is that for these relationships to be fruitful it requires time and sustained commitment from both parties (Kanter, 1999). As a majority of the companies develop capital intensive products, this often lead to an urgent need for capital either from investors or customers during the early years. Due to their modest size and resource access, this could lead the companies to prioritize their relationships with customers and investors rather than emphasizing relationships where the effect on profitability and funding is less immediate.

Expanded stakeholder strategies and system innovations as a way forward?

Our findings do not necessarily imply that collaboration with other companies, NGOs or academia is not valuable for shared value creating companies. On the contrary, we believe such collaborations could be of value. First, we believe academia could be important to provide a proof of concept for the companies' products or services. For instance, Beta and Green emphasize using universities and research communities as testing sites and providers of an objective view on their products' performance. As a number of the case companies describe their customers as being conservative and reluctant to try out new solutions, using academia to confirm the value of the offered product or service, could be a valuable contribution to the sales pitch.

Second, collaborations with partners such as other companies, NGOs and academia could provide the grounds for improvements of existing value propositions, and be a source of new innovations. Particularly, we want to highlight the potential role of stakeholders to bring forth so-called system innovations; i.e. "the renewal of whole set of networked supply chains, patterns of use and consumption, infrastructures, regulations, etc., that constitutes the socio-technical systems which provide basic services such as energy, food, mobility or housing" (Smith, Vob, & Grin, 2010, p. 439). We bring this term forth as Smith et al. (2010) argue system innovations provide the most considerable impact on solving environmental problems:

A need for step-jumps in absolute performance, such as 80% reductions in carbon emissions over the next generation, or factor ten improvements in resource efficiency, implies changes at the level of entire socio-technical systems. These system innovations, such as transformative innovations that overhaul food systems or waste systems, involve purposeful changes in prevailing techno-economic paradigms and system architectures. (p. 439)

We believe system innovations are not only important for environmental progress, we suggest they provide a potential for economic value creation: When developing system innovations, companies can take different positions within the system or network. A result of one company taking a distinct position within the system might be the emergence of a new market which can be served by other companies. For instance, along with the emergence of electrical vehicles came the opportunity of filling a market of developing charging stations. Driving forth system innovations requires the case companies to increase collaboration with partners from different networks. Central actors in innovation systems are governments, research communities and a wide variety of companies from different sectors (Smith et al., 2010). We draw from this that though our case companies are primarily focused on customers and investors as important stakeholders, a systematic approach to stakeholder relations and a system view on innovations might entail potential for future value creation efforts.

Limited collaboration with competitors

The case companies do not collaborate with their competitors, contrasting Schmitt and Renken's (2012) findings of shared value creating companies redefining "the competitive rivalry of the market" (p. 93) by cooperating with market rivals. This deviation from theory may be explained by the fact that we have explored a somewhat different context than that of Schmitt and Renken (2012). These authors find collaborations among competitors in a context where there are several actors offering environmentally friendly products within the same market. The companies face common challenges in the industry they are trying to address and as they target different customer segments, they are not necessarily competing for the same buyers (Schmitt & Renken, 2012). The majority of our case companies, however, provide an environmentally concerned value proposition in markets where the other industry incumbents are less environmentally focused, and the market for such products and services are less

mature. This suggests that collaborations with competitors would imply working with providers of products with less positive environmental impact. Some case companies resist collaborating with these companies, as their aim is moving away from and offering an alternative to industry incumbents' practices. Also, their competitors are hesitant to collaborate, because the case companies succeed, it might "*change the rules of the game*" (Delta interviewee 1). For these reasons, we find it to be reasonable that collaborating with competitors should not necessarily be prioritized by the case companies.

5.1.4 Knowledge and capabilities

The third proposition suggests that companies creating economic and environmental value possess domain knowledge, knowledge about the commercial processes needed to make a viable business case, as well as knowledge about the environmental issues the companies address. As Chapter 4 shows, the case companies possess domain knowledge and in some cases knowledge about commercial processes. Knowledge about the environmental issues the companies address is not explicitly mentioned by the case companies, but – as we will show – nevertheless seems to be present in some of the companies.

Domain knowledge as an important starting point

All the case companies perceive domain knowledge as vital in order to create innovative and unique products or services. This is in line with the findings of Schmitt and Renken (2012), and is not surprising as domain knowledge is described as the foundation on which the innovations are made. Particularly, this knowledge was important during the initial phase of the companies, when the founder(s) of the companies developed the innovative product or service. The founders are in a number of the cases described as persons particularly competent within domain knowledge vital to the companies' products or services. Moreover, three of the companies (Beta, Blue and Green) have sprung out of academic communities, which underline the knowledge intensity present in the product development process.

Increasing importance of commercialization process knowledge

Commercialization knowledge is described as increasingly important. The different companies have slightly different views on what "commercialization knowledge" entails, and

suggests it covers knowledge about sales, distribution, understanding customer needs, price models and marketing. However, they all describe these as elements related to the process of bringing their products or services to a market. Given the emphasis put on reaching a market foothold (see subsection 5.1.2), it is not surprising the companies regard understanding this process as key knowledge. The shared value literature also confirms the importance of understanding commercial processes (e.g. Schmitt & Renken, 2012).

Interestingly, this knowledge seems not to be commonplace among all the companies, and this is confirmed by the expert interviews. Some interviewees describe it as having taken some time before they realized the importance of this kind of knowledge. This could be due to founders being more focused on domain knowledge and features of the product or service rather than on bringing the product to the market. Also, as many shared value creating innovations are met by enthusiasm regarding the environmental features of their innovations, this might blur the necessity of retrieving market and commercialization knowledge and actually getting the first customers.

The literature does not describe how companies retrieve knowledge on commercial processes. This could be due to many articles focusing on large and established companies. Whereas established companies might have the opportunity to extrapolate knowledge from previous market entry processes and use it for new shared value creating products, this is not necessarily the case for SMEs initiated based on a new innovation. Some of the companies, such as Beta, Delta, Epsilon and Green, describe how they have been, or currently are, in processes where they attempt to retrieve this knowledge. The primary strategy seems to be through hiring people, often leaders, with the wanted experience. Some of these have for instance hired leaders with experience from large, commercial companies after seeing the need for more commercialization knowledge.

Missing emphasis on environmental issues knowledge

Only one of the companies, namely Gamma, explicitly mentions they possess knowledge on the environmental issue they address. This contrasts the literature suggesting that knowledge about the social or environmental problem at hand is important in order to create shared value (Porter and Kramer, 2011; Pfitzer et al., 2013). As referred in Chapter 2, Pfitzer et al. (2013)

explain that in order to gain such knowledge, the company must retrieve a thorough overview of the problem, who and how many is affected by it as well as what impedes and what might drive improvements. Though only Gamma mentions this type of knowledge, we believe that some of the case companies (Alpha, Beta, Epsilon and Red) have indeed searched for the kind of understanding suggested by Pfitzer and his colleagues. These companies are the ones initiated with the aim of addressing a certain environmental problem. We suggest this imply that knowledge on the environmental issues in question is to some extent present, though it is not mentioned explicitly.

Even though we find less emphasis on this kind of knowledge among the companies than in the literature, we suggest it might be advantageous to companies to familiarize themselves more with the environmental issue in question. A more comprehensive and holistic view of the problem, could bring forth new and innovative ideas, and it is vital to enable system innovations (see subsection 5.1.3). A more holistic view of the problem could also potentially bring forth stakeholders which could be valuable collaborators for the companies.

Need for an additional kind of knowledge?

Even though none of the companies mention knowledge on regulatory frameworks or political insight as important – and the shared value literature is sparse on this topic – we suggest this type of knowledge is valuable to the case companies. This is because authorities have the possibility of introducing measures which could improve conditions for shared value creating innovations (see section 5.1.3). We have shown that the authorities are not an important actor in the companies' strategies, and that there are a number of explanations to why this is. An additional explanation could be that there is a lack of knowledge and understanding of how the political process takes place and how the companies can operate in the political landscape, as suggested by the experts. We suggest an implication of this is the companies need increased political insight to understand how actors within the bureaucracy as well as politicians could be approached.

5.1.5 Innovation structure

The fourth proposition suggests that companies creating economic and environmental value have structures or mechanisms facilitating innovation. Chapter 4 shows that some of the

companies recognize the need for working continuously to improve their products and services and/or to create new innovations. Epsilon recently employed a director of innovation, Gamma describes how generation of new ideas is part of their routines and key performance indicators, and Green says the need for innovation affects both their recruitment strategy and how they prioritize among potential customers.

Although the companies recognize the importance of innovation, they do not emphasize any specific structure to ensure innovative efforts. One reason for this could be that when literature points to a spectrum where innovation activities could be placed either in the legacy business, through funding external actors or somewhere between these extremes (Pfitzer et al., 2013), this does not seem to be an actual choice for the case companies. Due to their modest size (a majority of them have less than 30 employees) funding external actors to undertake their innovative activities might be perceived as impossible or not expedient. Rather, focusing on how the company should organize internal resources so that innovation can take place seems to be a more relevant issue to the companies. However, when we also find few signs of internal structures or mechanisms introduced with the intent of enhancing innovation, size can again serve as an explanation: Establishing an innovation structure and mechanisms for communication across the organization may be perceived as bureaucratic and unnecessary. Moreover, as some companies describe how everyone has to do “*a little bit of everything*” (Alpha interviewee 1), structural issues or measures to ensure cross-divisional collaboration to enhance innovation (Eccles & Serafeim, 2013) might just not be prioritized.

One could argue that a structure that facilitates innovation is more important to big organizations, as the ones Pfitzer et al. (2013) and Eccles with colleagues (Eccles et al., 2012; Eccles & Serafeim, 2013) have studied. This might imply that when we don't find such structures or mechanisms, it is primarily a potential problem to the largest case companies. However, some of the companies, Epsilon and Green, do say that after the first launch of their innovation, further development has gained too little focus. Moreover, an interviewee from Red describes how there always seem to be some kind of emergency which must be handled, and the interviewee finds that this kind of firefighting happens at the detriment of innovation efforts. We draw from this that also for the smaller companies, finding mechanisms to ensure

that innovation and continuous development of products are not lost in day-to-day operations is important.

5.1.6 Measuring environmental value

The fifth proposition suggests that companies creating economic and environmental value, measure their environmental impact. Only a minority of the companies apply some sort of measuring routines. These companies explain that measuring is primarily important as part of their sales pitch to convince customers of the superiority of their value proposition. This implies that the companies who do have measuring routines in place are more concerned with measuring the environmental value their product or service create than assessing the overall environmental footprint caused throughout their lifecycles.

Some of the case companies, Alpha, Red and Yellow, find it challenging to put numbers on societal value created by their product or service. This confirms the difficulty of establishing relevant metrics for this kind of measuring described in literature (e.g. Driver & Porter, 2012; Pfitzer et al., 2013). However, these difficulties do not seem to be the only reason why measuring of environmental value is not done by more of the case companies. Delta and Epsilon ascribe it to lack of resources, but Epsilon also regards it as unnecessary as they believe the societal contribution offered by their product is obvious. These explanations for lack of measuring are not found in the literature. The literature argues instead that measuring can be used to assess possibilities for improvements and new sources for value creation (Spitzeck & Chapman, 2012; Fearne et al., 2012). This is not mentioned by any of the case companies, nor is this kind of thorough measuring referred to as having ignited the idea of the innovations on which the companies are built. A possible explanation for this is that using measuring to identify new sources of value creation is more important to existing companies with traditional products and services who want to discover new opportunities for environmental progress in their value proposition or value chains. Meanwhile, as our companies are built on shared value creating innovations, this could explain why measuring, at least for this reason, is not perceived as important.

5.1.7 Organizational culture and values

The sixth proposition suggests that companies creating economic and environmental value have a supportive organizational culture and the addressing of environmental needs as part of their vision and/or values. We find that several case companies have a culture based on openness to new ideas and trust, in line with the finding of Eccles et al. (2012). Also, the companies have values, some explicitly stated and others implicit, related to sustainability. This supports the findings of Brown and Knudsen (2012), Schmitt and Renken (2012) and Eccles et al. (2014) who suggest values to be vital elements in this kind of organizations. We look into both organizational culture and values in the following two subsections.

Supportive organizational culture

The organizational culture in the case companies is most evident through the way the interviewees describe the companies' employees. The demanding situation described during the initial years seems call for a special breed of employees. Both the interviewees and the experts emphasize the importance of employees who are willing to live with the risk and uncertainty related to the survival of the company and their own job. Alongside this willingness to live with risk – or even appetite for risk, as some describe – comes the need for being sufficiently patient due to the time consuming process of reaching a market foothold. We find throughout the interviews that the employees of the companies are motivated by the societal issues the companies address, in line with the findings of Eccles et al. (2012). These authors argue that this motivation leads to employee engagement and productivity. We suggest that the strong motivation for “*making a difference*”, as Epsilon interviewee 1 puts it, can serve as an explanation to why the employees endure the risky and time consuming process of reaching recurring revenues and a more stable economic status for the company.

Values guide decisions

Several case companies have explicitly formulated values related to sustainability. This is in line with the arguments of Brown and Knudsen (2012) on the importance of values being “explicit and known to all members” (p. 8), so that they can be referred to in day-to-day decisions making. A majority of the companies that do not have explicitly stated values still have the solving of environmental issues as an important part of their vision. In these

companies, their vision seems to guide decisions in a similar manner as for those companies with explicitly stated values.

A number of the companies describe their values as unfolding through concrete actions and decisions taken. Throughout the interviews, several examples of how values have guided specific decisions are given. For instance; Alpha and Red describe how certain products have not been offered – though they have been requested by customers and could have increased the company's profits – as the companies don't see these products fitting their value based foundation. Gamma and Epsilon prioritize selling to customers based on where they believe the most societal value can be created, whereas Delta describes how choices of appropriate investors is made based on the company's values. These examples illustrate that values guide a variety of decisions in the companies – also in the challenging initial phase. This seems to be in line with the findings of both Schmitt and Renken (2012) and Brown and Knudsen (2012) who find values to guide both strategic and operational decisions.

Even though values guide many decisions in the companies, we have identified one area where it seems to be great differences among the companies as to whether values guide decisions or not: Whereas some suggest the aim of creating societal value also influence choices made when sourcing input factors or designing their value chains, this is not the case for all companies. The first approach, where social and environmental considerations are made throughout the value chain is for instance applied by Alpha, Gamma and Red. These companies explain this choice as both a consequence of seeking to achieve enhanced societal value, but also to mitigate the risk of being disclosed on practices going against their environmentally focused image and expectations from their customers. The companies who are not as concerned with social or environmental considerations in their operations, argue that the value propositions they offer are substantially better than those of industry counterparts. This, they argue, is more important than taking these kinds of considerations in every step of the production and distribution process. This contrasts findings made by Schmitt and Renken (2012) who suggest shared value creating companies also take societal considerations in their value chains. Experts 1 and 2 also perceive companies combining environmental and economic value creation as more concerned with societal considerations in their value chains than what seems to be the case for some of our case companies. On one

hand, the diversity found among the companies in this regard could be understood as a consequence of the fact that several of the companies struggle to be in the black and that there is no room for taking measures beyond what is required when it comes to value chain and input factor choices. On the other hand, based on the arguments brought forth by for instance Alpha, Red and Expert 2, this could prove to be risky if the companies seek to build a societally focused brand. Moreover, as we believe it is in the interest of the case companies to increase the general awareness and demand for “greener” products, it might be short-sighted not to contribute in increasing the B2B demand for environmentally concerned value propositions.

On a strategic level, the companies also describe the need to balance between a value based aim of solving environmental problems and generating sufficient profit to stay in the black. Even though several case companies are guided by values emphasizing environmental issues and the importance of societal value creation, a majority of the case companies, including Alpha, Beta, Delta, Red, Yellow, Blue and Green, in their interviews emphasize how they are for-profit companies, in contrast to being non-profit ones. It seems important to the companies that they are profitable as this is considered the most efficient way of creating environmental value, as illustrated by a Delta interviewee:

Our ambition is to become a billion dollar company. You don't need to be a capitalist to state that. Because; if we are supposed to have an impact on the world, then we have to become a big company. It is as easy as that. (Delta interviewee)

That the companies consider their task twofold – creating both economic and environmental value – illustrates their shared value creating strategies and illuminates the crux of the matter: That alongside societally concerned, green ideas and intentions, there is a need for customers to buy the products and investors to give access to capital, to provide black numbers on the bottom line.

5.2 Shared value creation and implications for practitioners

The theory on which this thesis is built, suggests that addressing societal challenges is a viable way forward for companies as it provides opportunities for innovation and economic value creation. Our findings imply that conditions are ripe for shared value creation. Due to the

increased focus on environmental challenges, we suggest that to companies willing to explore the combination of environmental and economic value creation, there is no time like the present. However, companies aiming to create shared value should be aware that this is not done overnight, and the wish to pursue shared value creation has implications for strategy, activities and people which practitioners should take note of. These implications are described in the following and are illustrated in a summarizing diagram (Figure 2).

We recognize that to SMEs aiming to create shared value, resource and time constraints force the companies to constantly prioritize between different activities. However, there are some findings we suggest are particularly important to consider, and that can aid companies seeking to create shared value. A first implication of our research is the need to ensure that necessary knowledge and a strategy for reaching a market foothold are in place. Our case companies use in-depth domain knowledge to produce innovative products or services that create positive environmental impact, and many of them establish relations with potential buyers to ensure the customers' needs are also considered and included as part of the value proposition. Further, they retrieve knowledge on commercial processes to create a strategy for reaching a market foothold and ensuring recurring revenues. We find that these market strategies consist of a number of building blocks including customer segmentation, brand building, internationalization as well as proving the companies' value proposition to customers by measuring the products' or services' environmental impact.

Also, we find the company culture and certain stakeholders to play a decisive role. The market strategy and company activities are carried out in an organizational culture of trust and engagement and by employees who have a passion for societal value creation. This is what provides the engagement and willingness to endure times of uncertainty regarding the company survival and the employees' own jobs. Moreover, practitioners need to take note of the importance of finding appropriate investors who allow for a long-term – and at times risky – process before return on their investments are made.

Beyond the elements the case companies already have in place for achieving shared value creation, we find some elements we believe might prove important for increasing the chances of successful shared value creation even further. We argue these elements should be considered by practitioners. First, it seems crucial for the companies' survival in the longer

term to ensure that continuous innovative efforts are made to improve products or services and allow for new shared value creating innovations. It should be considered whether part of these innovative efforts should also include more societal considerations throughout the life-cycle of the innovation. Second, taking on a broader view of who is considered relevant stakeholders and seeing the companies' innovation as part of a larger system might increase the positive societal impact in addition to provide necessary input for internal innovative efforts. Third, as authorities influence the "rules of the game", improving the political insight within the organization and seeking to impact how future regulations are designed, could prove helpful in creating the necessary market foothold.

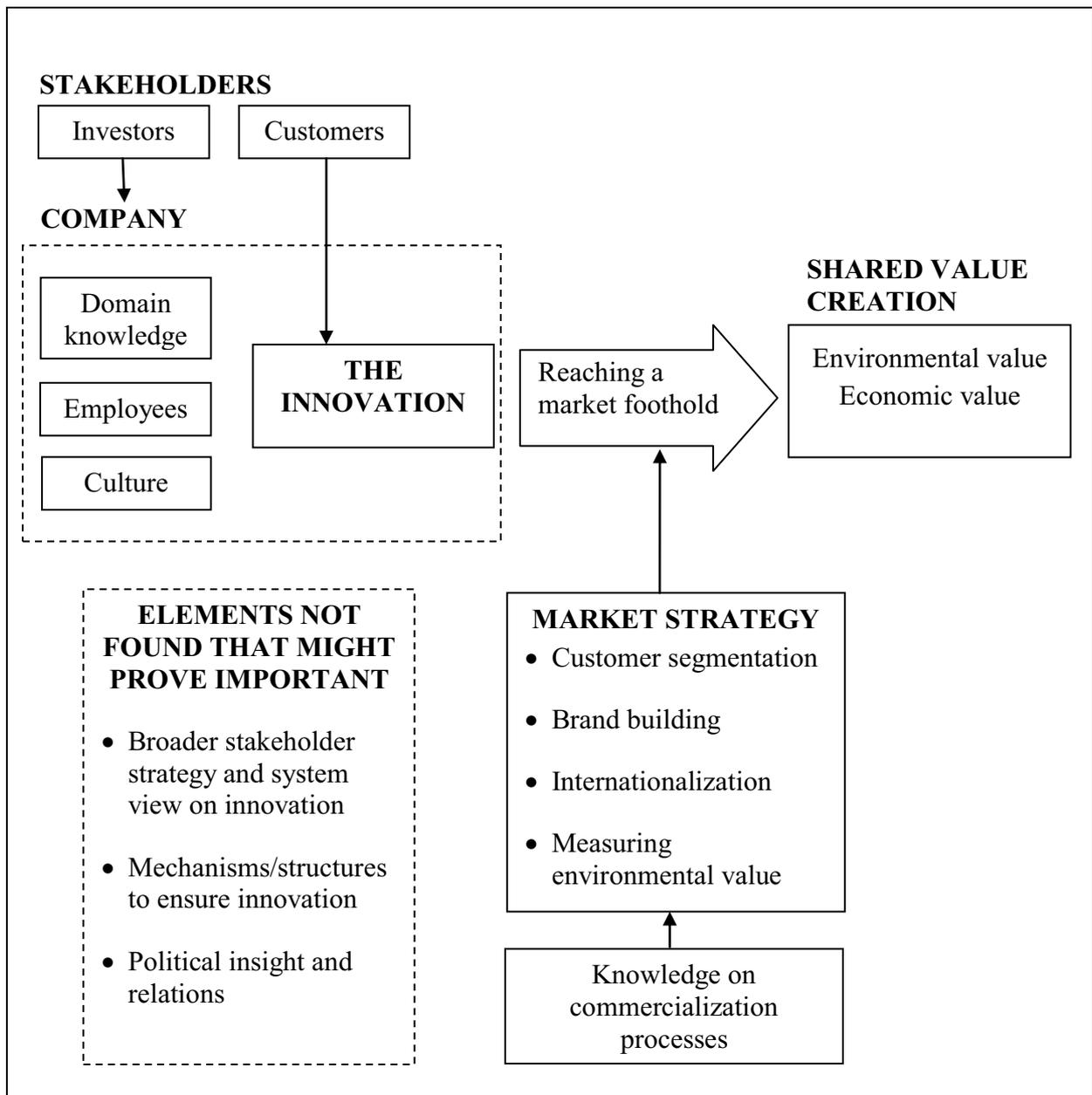


Figure 2: Summary diagram of implications for companies seeking to create shared value.

5.3 Implications for theory

Despite the attention shared value creation has received (Crane et al., 2014) there is limited research on how companies can implement shared value creation strategies in practice (Dembek et al., 2015). We address this knowledge gap by studying the shared value creating efforts of SMEs.

Our first contribution to theory is the identification of six factors describing the characteristics of shared value creating companies found through a thorough literature review on shared value and related terms. The factors suggest these companies (1) are based on an innovative and societally concerned value proposition, (2) broadly recognize and include stakeholders, (3) possess knowledge and capabilities, (4) have a structure that facilitates innovation, (5) measure the societal value created, and (6) have an organizational culture and values supporting their practices. Further, we have – by choosing to explore SMEs with innovations addressing societal challenges – painted a more fine-grained picture where the microfoundations of shared value creating efforts in this context is illuminated. This work has contributed to theory by moving from the overarching factors found in literature to an understanding of the microfoundations of how companies create shared value.

Another contribution to theory is choosing an original context to explore shared value creation. The existing literature on shared value creation consists of empirical research made on a variety of companies – both in terms of size, the societal challenge they address and their approach to shared value creation. However, our literature review shows that many scholars focus on large corporations that turn some of their existing operations towards practices with a less negative or more positive societal impact (e.g. Porter & Kramer, 2011; Pfitzer et al., 2013). Therefore, our choice of context – SMEs that offers shared value creating innovations – is original. The fact that we do not recognize all stated propositions within our case companies and find other elements we suggest should be considered further, indicate that how these propositions play out are closely linked to the context. Our findings therefore contribute to theory by illuminating shared value creation in a specific setting we suggest is particularly relevant in a Norwegian context.

5.4 Limitations

In addition to the research quality considerations made in section 3.5, there are three further limitations we believe are of importance and which are related to the choices made during the process that has affected the research.

First, there are limitations regarding the case selection criterion on economic value creation. As described in Chapter 3; in order to get enough interesting cases to look at we decided that the criterion for creating economic value could be understood both as profitability today or future potential for profitability. Allowing for companies that have not shown stable positive results over the last years to join the study weakens our case because this means there is some uncertainty regarding the economic value creation inherent in the shared value creation concept. This is clearly a limitation of the thesis. We attempted to mitigate this risk by using indications from the external environment on the profit potential of the case companies. For example; some of the companies have received support from Innovation Norway through Miljøteknologiordningen. A requirement for receiving this kind of support is that Innovation Norway believes the company will generate profit in near future (Innovasjon Norge, 2014). Searching for these kinds of considerations made by people external to the company was done to increase the chances of choosing case companies that will create economic value in the future.

Second, there are limitations regarding the criterion on societal value creation. There are many interpretations of what this means in practice and as described in Chapter 2, few concrete ways of measuring this kind of value is defined and in use (Dembek et al., 2015). Again, our strategy was to use external assessments of the company, such as evaluations from Innovation Norway, ratings, listings and news media articles, to evaluate whether the company creates environmental value.

Finally, there are limitations regarding the depth of our empirical investigation. When investigating the identified propositions, we have chosen breadth over depth. We have prioritized to empirically explore all the six identified characteristics of shared value creating companies over getting a deeper understanding of for example one distinct factor. Though we sought to investigate each factor as thoroughly as possible, the time constraints during the

interviews also constrained the level of detail. As we describe in the next section, conducting a deeper exploration of individual factors is a suggestion for further research.

5.5 Future research

There are several paths that could be followed to enhance the understanding how shared value can be achieved. First, we suggest that going further into depth on the various propositions and explore how these play out, would advance the understanding of shared value creation. Based on our findings, we suggest that the propositions that we do not recognize in our case companies – but nevertheless believe could prove important for shared value creating companies – are particularly interesting for future exploration. These include (1) understanding if and how organizational structures and mechanisms can ensure continuous innovation important for shared value creation, (2) understanding how a broader stakeholder approach and possibly a system-based view on innovation activities affects shared value creation, and finally, (3) understanding whether enhanced political insight might improve companies' ability to create shared value.

In addition to these elements, we believe it is important to understand more of the process of how shared value creating SMEs attract appropriate investors, as mentioned in section 5.1.3. This is an area which we believe our research does not sufficiently cover. For instance, literature suggests companies use accounting frameworks, such as integrated reporting (Eccles & Krzus, 2010) and the triple bottom line concept (Elkington, 1998) in order to attract investors. The extent to which such practices are present – and how this plays out – in companies creating shared value could be an interesting area for future research.

Moreover, an area for future research is choosing another context than what is done in this thesis. This choice can be based on several criteria, such as company age and size, approach to shared value creation or the societal issue the companies seek to solve. Among these, we suggest to prioritize completing the picture of SMEs addressing environmental challenges due to the importance of this challenge and the prevalence of these kinds of companies. This could be done by exploring Porter and Kramer's (2011) two remaining approaches to shared value creation; i.e. redefining productivity in the value chain and enabling local cluster development. In addition, we believe investigating all of Porter and Kramer's (2011) three

approaches to shared value creation in the context of addressing social, rather than environmental challenges, could be valuable to further illuminate the shared value creation idea.

Finally, we believe that an area for future research is conducting somewhat different methodological choices than what is done in this thesis. In particular, we believe choosing a control group of companies not intending to create shared value could be valuable, as this could help isolate the processes that lead to shared value creation and possibly give a more precise image of these processes.

6 Conclusion

Sometimes it falls on a generation to be great. You can be that great generation.

Nelson Mandela

The world is facing changes that create severe societal problems not met by the global economy today (Porter & Kramer, 2011). Solving these societal problems cannot be done by governments alone and calls are made for business to be part of the solution. To companies seeking to create both economic and societal value, there is a need to understand how this can actually be done. Our aim has been to explain how shared value is created in SMEs offering innovations addressing environmental challenges.

Shared value creation in the companies we have explored rests on two pillars: Bringing an idea to life which enables positive environmental impact, and spreading the resulting product or service through selling it in the market. We find that balancing environmental progress and economic value calls for a variety of strategies. We have deduced six propositions from theory that characterize shared value creating companies and these have guided our research. We find that though most of the propositions are relevant to our case companies, there are nuances and differences in how they play out when we take a fine-grained look at them in the context of environmentally focused SMEs.

We find that the companies explored are concerned with reaching a market foothold for their innovations – either in Norway or abroad – by using several measures such as customer segmentation, brand building or quantification of their environmental impact. They include customers in developing their products and services and have found patient and dedicated investors. Beyond this, they have a relatively narrow stakeholder view. They possess domain knowledge and perceive commercialization knowledge to be vital. The importance of continuous innovation is emphasized, but few have introduced organizational structures or mechanisms to ensure this. Finally, these companies are dependent on dedicated employees working in an organizational culture of trust and engagement, and they are based on values related to sustainability.

The environmental challenges facing humans worldwide in the present and for the coming decades call for new approaches to value creation and innovation. It is our hope that the findings and suggestions presented in this thesis can guide SMEs in their pursuit of shared value creation, and that more companies will take action to address the societal challenges ahead.

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Appendix 1: Interview guide for case companies

Introduction

- Inform the interviewees about the research project and how the data will be used.
- Ask whether the company and/or interviewee want to be anonymous, and whether we can record the interview.

Table 4: Interview guide for the case companies.

Number	Question	Purpose
1	What are your responsibilities in Company X?	Clarifying the role of the interviewee.
2	How did the idea of Company X arise? a. Was the establishment of Company X an answer to an identified problem or an opportunity to be taken up? b. Was it immediately clear what the problem or opportunity was, or did you have to dedicate time to clearly identifying what it was? If so, how did you do that? Please describe. c. How did you arrive at the solution?	The intent of asking these questions was to collect data to be used in a doctoral thesis at IØT. However, the responses to these questions also provided valuable information to us, especially in understanding how the company's focus on creating shared value has evolved from the start.
3	What is/are the innovative element(s) of your offer? Please describe.	Understanding the value proposition of the company (P1).
4	Would you say creating societal value is a goal for Company X? a. How do you create societal value? b. What does this mean for the way you are working on a day-to-day basis? c. Was creating societal value a goal from the start? d. Do you quantify the societal value created? In that case, how and why?	Understanding the process of selling a societally focused value proposition in a market (P1). In particular understanding the process of societal value creation. Understanding whether this is perceived as important for the company and how this affects the shared value creation process (P6). Understanding whether, why and how the company measures societal value created (P5).

5	<p>To what extent would you say Company X has succeeded financially?</p> <p>a. If succeeded: What have you done in order to succeed?</p> <p>b. If not succeed: What makes you believe you will succeed in the future?</p>	<p>Understanding the process of selling a societally focused value proposition in a market (P1). In particular understanding the process of economic value creation.</p>
6	<p>Was there already an obvious customer base for your offer, or did you have to reconsider and identify what might be the market for your offer?</p> <p>a. How did you do this?</p>	<p>Understanding the process of selling a societally focused value proposition in a market (P1). In particular understanding the process of economic value creation.</p>
7	<p>Would you say that the process of developing and offering your solutions to the market has involved a lot of risk?</p> <p>a. How did (or do) you manage that risk?</p>	<p>Understanding the potential challenges of selling a societally focused value proposition in a market (P1).</p>
8	<p>What competencies or knowledge would you say have been most important in creating both economic and societal value?</p> <p>a. Has this competence/knowledge always been present in the company?</p> <p>b. How did you retrieve it?</p> <p>c. Are there knowledge/competences you think you would have benefitted from having in your present phase?</p>	<p>Understanding the necessary knowledge for creating shared value and how this has been retrieved (P2).</p>
9	<p>Who do you consider to be your stakeholders? How do you identify these?</p>	<p>Understanding what stakeholders the company recognize as important for shared value creation (P3).</p>
10	<p>Please describe what actors you collaborate with?</p> <p>a. What do these collaborations entail?</p> <p>b. How do these actors contribute in creating societal and economic value?</p>	<p>Understanding how the case companies work with stakeholders and how these contribute in creating shared value (P3).</p>
11	<p>Who do you perceive to be your competitors?</p> <p>a. How do you work with these? Please describe.</p>	<p>Understanding how the case companies work with stakeholders and how these contribute in creating shared</p>

		value (P3).
12	What role did (or do) your investors take in creating societal and economic value?	Understanding how the case companies work with stakeholders and how these contribute in creating shared value (P3).
13	How do you work with innovation in Company X today?	Understanding the innovation process and identify potential innovation structures and mechanisms present within the company (P4).
14	Please describe how you perceive Company X's culture.	Understanding what characterizes the company culture, and how this affects the process of creating shared value (P6).
15	Do you have explicitly formulated values? a. What are they? b. What do they mean to the company and the way you operate?	Understanding whether the case company has values, and understanding how these affect the process of shared value creation (P6).
16	To what extent are you concerned with social and environmental issues in your own value chain?	Understanding the case companies' values and how these affect the process of shared value creation (P6).
17	Have you experienced tradeoffs between environmental and economic targets? How did this play out? Please describe.	Understanding the case companies values and how these affect the process of shared value creation (P6).
18	What has been elements of your business model that has brought you to where you are today? a. What differentiates your business model from your competitors'?	Understanding the broader process of shared value creation. Identifying important elements in shared value creation beyond those identified through the literature review.
19	What have been the biggest challenges in creating societal and economic value?	Understanding the broader process of shared value creation. Identifying important elements in shared value creation beyond those identified through the literature review.
20	What do you think are the key lessons when it	Understanding the broader process of shared value creation.

	comes to achieving both societal and economic value?	Identifying important elements in shared value creation beyond those identified through the literature review.
21	<p>Have there been external conditions/circumstances beyond the company that have been important to you?</p> <p>a. Is there anything the authorities could have done that would have changed how you work?</p> <p>b. Do you work actively trying to influence the authorities' decisions?</p>	<p>Understanding the broader process of shared value creation. Identifying important elements in shared value creation beyond those identified through the literature review.</p> <p>Identify the companies' relation to the authorities as a stakeholder (P2).</p>
22	What is the number of employees in Company X?	Clarifying elementary information.
23	Is it OK to contact you if we have any further questions?	

Appendix 2: Interview guide for expert interviews

Introduction

- Inform the interviewees about the research project and how the data will be used.
- Ask whether the expert wants to be anonymous, and whether we can record the interview.
- Specify that the companies we are exploring are those that work towards creating both environmental and economic value, and that the reason for contacting experts is to get their general impressions of this kind of companies.

Table 5: Interview guide for experts.

Number	Question	Purpose
1	What are your responsibilities in Company/Organization X?	Clarifying the role of the interviewee.
2	What do you think characterizes companies that succeed with innovations creating both societal and economic value? a. Is there anything that distinguishes these companies from companies mainly concerned with economic value creation, and in that case what?	Understanding the broader process of shared value creation. Identifying important elements in shared value creation beyond those identified through the literature review.
3	Please describe to what extent and in what way you perceive these companies as being innovative.	Understanding the value proposition of shared value creating companies (P1). Understanding the innovation process, as well as whether innovation structures and mechanisms are present in shared value creating companies (P4).
4	What is your perception of the extent to which these companies have a clear idea on what markets they should offer their products/services to from the start?	Understanding the process of selling a societally focused value proposition in a market (P1). In particular understanding the process of economic value creation.

5	<p>What do you believe is the most challenging for these companies; creating societal value, or succeeding in commercializing their products/services? Why?</p>	<p>Understanding the process of selling a societally focused value proposition in a market (P1). In particular understanding the relation between economic and societal value creation.</p>
6	<p>In your experience, are there any specific competences or types of knowledge these companies possess?</p> <p>a. How do these companies retrieve their knowledge/competences?</p>	<p>Understanding the necessary knowledge and capabilities for shared value creation, and how this is retrieved by shared value creating companies (P2).</p>
7	<p>In your experience, what actors do these companies collaborate with?</p> <p>a. In your experience, are there any actors you believe these companies could have benefitted from working closer with?</p>	<p>Understanding how shared value creating companies work with stakeholders, and how these contribute in creating shared value (P3).</p>
8	<p>In your experience, what characterizes the investors that invest in these companies?</p> <p>a. Can you say something about the access to necessary capital for these companies?</p>	<p>Understanding how shared value creating companies work with stakeholders, and how these contribute in creating shared value (P3).</p>
9	<p>In your experience, are these companies concerned with national and/or international environmental politics?</p>	<p>Understanding how shared value creating companies work with stakeholders, and how these contribute in creating shared value (P3).</p> <p>Understanding the broader process of shared value creation. Identifying important elements in shared value creation beyond those identified through the literature review.</p>
10	<p>How can Norwegian authorities contribute in order to get more companies innovating for economic and societal value creation?</p>	<p>Understanding how shared value creating companies work with stakeholders, and how these contribute in creating shared value (P3).</p>

		Understanding the broader process of shared value creation. Identifying important elements in shared value creation beyond those identified through the literature review.
11	In your experience, do these companies measure their societal impact, and in that case, how and why?	Understanding whether, why and how shared value creating companies measures the societal value created (P5).
12	In your experience, how can the company cultures of these companies be described?	Understanding what characterizes the company culture of shared value creating companies, and how this affects the process of creating shared value (P6).
13	In your experience, to what extent are these companies concerned with social and/or environmental issues in their own value chains?	Understanding what characterizes the company culture of shared value creating companies, and how this affects the process of creating shared value (P6).
14	In your experience, are there any special challenges these companies meet? Please describe.	Understanding the broader process of shared value creation. Identifying important elements in shared value creation beyond those identified through the literature review.
15	Do you think start-up companies addressing environmental challenges meet distinct barriers that are different from general start-up companies?	Understanding the broader process of shared value creation. Identifying important elements in shared value creation beyond those identified through the literature review.
16	Is it OK to contact you if we have any further questions?	

Appendix 3: Overview of constructs

Table 6 shows the constructs used in the analysis process. These were used to mark parts of the empirical data in the data program NVivo. They are listed in both English and Norwegian, as all the interviews were conducted in Norwegian. The column to the far right, ‘Number of references’, show how many times the different nodes occurred after the all the empirical data was analyzed.

Table 6: Overview of constructs.

English	Norwegian	Number of references
Access to capital	Tilgang til marked	20
Brand	Merkevare	28
Challenge	Utfordring	45
Commercialization	Kommersialisering	12
Competitors	Konkurrenter	31
Contributions from investors	Bidrag fra investorer	9
Culture	Kultur	26
Customer	Kunder	32
Difference to other start-ups	Forskjell til oppstartsselskaper generelt	3
Distribution	Distribusjon	3
Economy	Økonomi	27
Employees	Ansatte	41
Frameworks	Rammeverk	27
Industry	Bransje	13
Innovation	Innovasjon	29
International	Internasjonalt	9
Investors	Investor	41
Knowledge	Kunnskap	53
Market	Marked	44
Motivation	Motivasjon	45
Outdated mindsets	Utdatert tankesett	8
Owners	Eierstruktur	5
Phase	Faser	25
Price	Pris	1
Problem defining process	Problemdefinering	6
Production	Produksjon	3
Reconceiving products and markets	-	19
Regulatory conditions	Rammevilkår	91
Reputation	Rykke	10
Requirements	Krav	14

Risk	Risiko	15
Size	Størrelse	7
Societal value	Samfunnsverdi	47
Stakeholder	Aktør	79
Success factor	Suksessfaktor	54
Target customer	-	29
Time	Tid	41
Trade-off between targets	Avveining mellom mål	41
Trends	Utvikling	40
Value chain	Verdikjede	32
Values	Verdier	35
Vision	Visjon	15

Appendix 4: Structure of constructs

The following paragraphs describe which constructs (from Table 6 in Appendix 3) that have provided data for what proposition.

P1: Selling an innovative and environmentally focused value proposition

The following constructs have provided data for the description and discussion of this factor: *Market, International, Brand, Difference to other start-ups, Success factor, Commercialization, Customer, Target customer, Industry, Innovation, Outdated mindsets, Risk, Economy, Challenge, Societal Value, Price, Trends, Size, Problem defining process, Phase.*

P2: Recognition and inclusion of stakeholders

The following constructs have provided data for the description and discussion of this factor: *Competitors, Industry, Innovation, Investors, Access to capital, Reputation, Requirements, Contributions from stakeholder, Challenge, Risk, Regulatory conditions, Success factors, Market, Customers, Owners, Target customer, Time, Production.*

P3: Internal knowledge and capabilities

The following constructs have provided data for the description and discussion of this factor: *Knowledge, Employees, Challenge, Production, Success factor.*

P4: Innovation structure

The following constructs have provided data for the description and discussion of this factor: *Motivation, Employees, Innovation.*

P5: Measuring environmental value

The following constructs have provided data for the description and discussion of this factor: *Societal value, Frameworks.*

P6: Organizational culture and values

The following constructs have provided data for the description and discussion of this factor:

Vision, Motivation, Employees, Market, Value chain, Risk, Societal value, Economy, Challenge, Success factor, Trade-off, Distribution, Culture, Size, Time.