Sustainability and Value Creation

Changing the perception of environmental responsibility and economic benefits

A master thesis by:

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Executive summary

In today’s business, privately held companies are facing an increased competition along with environmental constraints, such as industry regulations and government legislation. Furthermore, the depletion of natural resources and the carbon emission levels act as even more threatening constraints in the longer run. Business theorists argue that companies implement sustainability to address and avoid these constraints. According to these, companies can do business while both achieving economic benefits and reducing their environmental impact. A contemporary study by The Boston Consulting Group shows that sustainability is a widely recognised business concept, however, most managers possess a mistaken perception of sustainability, and as a consequence companies in general struggle to integrate and exploit the potential of sustainability.

The purpose of the thesis is to create knowledge, which elucidates the various ways companies can pursue sustainability, and how sustainability and value creation are interrelated. The research is guided by two questions; (1) how can companies make sustainability a strategic asset, and (2) how can sustainability create value for companies? The research is conducted in two parts. Part I presents a full-suit fact base in a four-step process; first we scope sustainability, second we explore recommended practices, third, we define ten sustainability steps, and address these in a strategic framework, and fourth, we argue for capability building as stepping-stones for sustainability to become a strategic asset. Part II presents sustainability value creation knowledge in a two-step process; first, we lay out a theoretical basis for value creation and sustainability, and second, we explore the ways sustainability can affect the value levers, margin improvement and revenue growth. The research method relies on a nuance of the resource-based view. This implies an understanding of sustainability as being accessible through resources and organisational capabilities, where their heterogeneity is a source of competitive advantage and value creation.

We conclude that companies can make sustainability a strategic asset, when sustainability is considered as corporate sustainability, when it is acknowledged for its valuable effect, and when it is strategically integrated to build capabilities in all business areas of the company. As such, corporate sustainability deals with environmental problems as business issues, rather than as responsibility towards society. Sustainability entails both an action and a valuable effect, which is why sustainability is value creation.

We also conclude that the integration of sustainability through acquisition, development and exploitation of resources and capabilities, can create value both when a value lever is actively addressed, but also due to the self-reinforcing effect that resources and capabilities enable.
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Initiation

1.0 Introduction

In today’s business community, global business trends and significant changes in the Earth’s ecosystem are changing the conditions for how companies are actually run. These trends call for company attention towards faster, newer, smarter and cheaper ways of doing business in the shed of capitalist structures. With that a global issue is the increasing industrialisation and the material consumption, pollution and waste generation that follow. When producing economic benefits the industrialisation also generates significant pollution burdens and continues to consume the Earth’s resources at an increasing rate (Hart & Milstein 2003). While the developed countries have reaped significant benefits from the industrial era, the world is facing devastating facts, because developing countries are following the footsteps of the industrialised countries. Global issues numbers show that while the level of carbon dioxide emission is significantly higher in developed countries, it has maintained the same level from 2000 to 2008, whereas the developing countries have increased their carbon dioxide emission by 30%\(^1\). Furthermore, although focus has been on the consumption of the Earth’s non-renewables (e.g. fossil fuel, metal), the rising problem is the consumption of the Earth’s renewables (e.g. forest, soil, fish stock). Consumption is growing at a level making it impossible for the Earth to replenish the harvested resources (Nelson 2005). These changes are constraining many business operations and management, in both public and private sector companies where both are partly responsible for the environmental conditions. However, the extent to which these are able to positively affect the environmental conditions and loosen the constraints differs greatly. Attention has been pointed towards the fact that the public sector is having difficulty with initiating solutions that deal with the global problems.

In many instances the public sector is seen as unable to cope well with social, economic, and environmental problems. (Luchsinger 2009; 167)

Core business in the private sector should remain innovation, technology development, capital investment and the implementation of sound management capability for value creation. However, it is increasingly being looked upon as a bringer of solutions to global problems,

\(^1\) The typical \(\text{CO}_2\) emission runs from 54.600\(^1\) in the United States, 27.700 in Germany, 14.400 in Sweden, 10.600 in Mexico, and 400 in Kenya (Gershon 2008). From 2000 to 2008, the \(\text{CO}_2\) emission has increased in average approximately 25\% in middle income countries (www.data.worldbank.org).
and as a saviour of the ecosystem (wbcsd.org). But why should the private sector take into account the environmental changes and attempt to save the environment?

One argument is that business operation in its existence is highly reliant on the basic natural resources that the planet offers. Therefore, improvements in environmental quality mainly depend on decisions made by private sector managers (Coglianese & Nash 2004). As the president of the World Business Counsel for Sustainable Development argues:

*Business cannot function if ecosystems and the services they deliver – like water, biodiversity, food, fibres and climate – are degraded or out of balance.* (Björn Stigson, wbcsd.org)

Another argument is that increased government intervention and companies’ voluntary reporting activities result in a trend of greater private sector transparency, which demands for action to retain legitimacy. With transparency an increased information level follows, which affects the awareness of how products are produced, and which elements of society production touches upon. As awareness in company surroundings increases, it changes the power structures. Globalisation presents a new and powerful dimension of capitalist development with a growing need for harmonising corporate interest and broader public interest (Luchsinger 2009).

While these arguments are often seen as constraints for business operations, these might as well be perceived as business opportunities. As such, a third argument for participating in this ecosystem salvation is that integrating environmental quality into business can pay off financially. Contemporary theorists refer to this as sustainability, where companies responsibly can participate while gaining competitive advantage (e.g. Porter & van der Linde 1995), increasing economic performance (e.g. Ambec & Lanoie 2008), or shareholder value (e.g. Reinhardt 1998).

Our interest resides in how well companies are able to perceive environmental constraints as business opportunities.
1.1 Problem discussion
To guide this interest, we draw upon a comprehensive report *The Business of Sustainability – Imperatives, Advantages, and Actions* (BCG 2009) conducted in collaboration between the Boston Consulting Group and MIT Sloan Management Review. The report provides statistics on the state of sustainability in business and it gives empirical insight into the challenges and opportunities managers are facing when pursuing sustainability.

In total, 92% of companies across industries are addressing sustainability in some way, and there is a strong consensus that sustainability is having – and will continue to have – a material impact on how companies think and act. However, the majority of companies state that they are not acting decisively to fully exploit the opportunities and mitigate the risk that sustainability represents – most actions on sustainability are limited to those necessary to meet regulatory requirements.

This gap between the recognition of its impact and the actual actions carried out is important to close as sustainability will become increasingly important to business strategy and management over time, and the risks of failing to act decisively are growing. Interestingly, sustainability is a concept with such a wide impact that management does not know nor understand how it differs from other business endeavours, and which implications to business it brings. Thus, managers acknowledge its importance, but the will to act on it is more blurry. As such, the report shows which roadblocks management meets when trying to act upon their belief in sustainability (figure 1).

![Figure 1: The most significant roadblocks to addressing sustainability issues (BCG 2009)](image)

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2 The report is based on a survey of 1,500 corporate executives and managers and 50 in-depth interviews. The report claims high-level findings from the survey, and the interviews to represent the cutting edge of sustainability companies.
For 21% of the companies, ‘Outdated mental models and perspectives on sustainability’ is the top roadblock to address sustainability issues. On the same footing, 20% state ‘Too many competing priorities’ and 18% state ‘Not convinced of the business case or value proposition’ as roadblocks to address sustainability issues. The report finds that these roadblocks are due to limited knowledge of the scope and possibilities of sustainability, and are related to uncertainty in how sustainability leads to financial results.

Furthermore, when companies already struggle to define the tangible facets of their business systems, it is not even attempted to model intangibles or externalities such as environmental and societal costs and benefits of their current business activities. As a result, the perceived benefit of addressing sustainability issues is rather narrow (figure 2).

![Figure 2: The greatest benefits in addressing sustainability issues (BCG 2009)](image)

This shows, that a majority of companies perceive ‘improved company or brand image’ as the greatest benefit to organisations addressing sustainability issues. The report response is that sustainability generally possesses far greater potential than mainly giving an improved brand image. Furthermore, 70% does not even make an attempt to develop a business case for sustainability, due to the limited perception. To us, it seems that sustainability is not only challenged by a lack in knowledge of sustainability and its various activities, but also by a lack in understanding how these sustainability activities actually create value.

The report affirms a high correlation between the depth of a business leader’s experience with sustainability and the benefits that this person perceives of it.
Practitioners with more knowledge about sustainability expanded the definition of sustainability well outside the ‘green’ silo. They tend to consider the economic, social, and even personal impacts of sustainability-related changes in the business landscape. Simply put, they see sustainability as an integral part of value creation. (BCG 2009; 5)

This shows that the more knowledgeable (experience and broader perceptions) a manager is about sustainability, the more thoughtfully he or she evaluates it, and hence sees the opportunity in it. Ultimately the report addresses the need for managers to develop a case for sustainability and see sustainability as an integral part of value creation in the company. The report identifies a need for new approaches, frameworks and a common full-suit fact base on sustainability, to make companies better address and act on sustainability as well as create value with sustainability.

1.2 Research area and question

Inspired by the discussion, we address managers’ perception of sustainability and the need for knowledge bases, to better build a case for sustainability as well as to see sustainability as an integral part of value creation. We see two interesting areas for research. First area concerns the notion of sustainability, and deals with the fundamental understanding of what sustainability is and the potential initiatives companies can undertake to pursue sustainability. As such, it concerns knowledge to better perceive and integrate sustainability as a strategic asset to the company. Second area concerns the possibilities for creating value with sustainability and deals with the economic effect sustainability can have on common value creation levers. As such, it concerns how the sustainability initiatives affect these levers. To guide this research interest, we ask the following research questions:

- How can companies make sustainability a strategic asset?
- How can sustainability create value for companies?

The purpose of the thesis is to contribute with knowledge of a new logic on sustainability for private companies (companies), to understand how it should be seen and integrated strategically as well as a value creation. We believe that this knowledge might be able to edify the current general perception of sustainability.
2.0 Methodology

To examine the research purpose, we take a stance within the resource-based view of the firm (Barney 1991), which can help understand the resources and capabilities within companies that sustainability needs and affects (Teece, Pisano & Shuen 1997), and how these valuable organisational capabilities lead to competitive advantage in terms of financial value (Sharma & Vredenburg 1998; York 2009). As a nuance to the resource-based view, we deploy the natural resource-based view (Hart 1995), which we find appropriate, since companies addressing sustainability must include external environmental resources and opportunities. As such, we see the resource-based view in a contingency perspective. We believe that a company’s path is defined by internal resources and capabilities, as well as environmental resources and opportunities.

The thesis consists of four blocks (figure 3). ‘Initiation’ introduces the research and explains the methods for research. ‘Part I’ answers the first research question. ‘Part II’ answers the second research question. ‘Finalising’ discusses the research reasoning, and concludes upon the total research.

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Figure 3: Thesis composition
The thesis progression is; in part I, we initially outline how the sustainability notion emerged and developed, and suggest how sustainability should be seen. Hereafter, we explore theoretical variations of sustainability and point out recommended sustainability practices. In the end, we merge the practices into sustainability steps, and present these in a strategic framework. This constitutes a full-suit fact base for how companies can make sustainability a strategic asset. In part II, we initially scope what value creation is and present a model for value creation through sustainability. Hereafter, we explore how sustainability affects the underlying value levers of margin improvement and revenue growth, respectively. This constitutes knowledge for how sustainability can create value for companies.

2.1 Theoretical scope and thesis delimitations
The notion of sustainability is multifaceted, and has been defined differently in various academic contexts. When addressing sustainability, emphasis can be put on different issues in relation to the Earth. By choosing a certain issue, a limited perspective on sustainability is formed, and accordingly sustainability recommendations will be limited to this perspective.

Hart presents a nearly all-including model of the Earth’s challenges, and argues for three colliding worlds; ‘the market economy’, ‘the nature’s economy’ and ‘the survival economy’ (1997; 75). If taking all three colliding worlds into consideration, the issues possible to address would span widely. Because of this, we delimit the thesis scope from the survival economy and issues related to poverty and social development. This implies a theoretical delimitation from aspects such as; social entrepreneurship and philanthropy (Hockerts 2006), bottom of the pyramid strategies (Olsen & Boxenbaum 2009), and microfinance (Yunus 2007). Thus, we choose to focus exclusively on the market economy and the nature’s economy that address issues such as pollution burdens and depleted resources. With this, sustainability initiatives are expected to build sustainable strategies for a lower material and energy consumption, and ensure a sustainable use of the nature’s economy. We believe that companies addressing sustainability should initially focus on the issues present in market economy and nature’s economy.

In the understanding of value creation, we choose to see value as the financial value that is created in companies. We delimit the thesis from considering value creation externalities such as value creation for the natural environment, ‘environmental value’ (Wattage & Soussan 2003; 434) and the inside-out, outside-in considerations of creating this ‘shared value’ (Porter & Kramer 2006; 84).
2.2 Research process
The preceding knowledge process is prevailing explorative. Although this knowledge is shaping a thesis logic (apparent deductive reasoning), we take on a somewhat inductive research approach where our logic is guiding the explorative paths we follow until we see the answer to the research questions.

2.2.1 Data as source of knowledge
We draw upon input from United Nations Global Compact (UNGC), which is the largest corporate citizenship and sustainability initiative in the world. Companies involved in UNGC adopt sustainability practices that will commit their business to contribute to sustainable economic development, and encourage private innovativeness in a manner regulations have not been able to. In order to scope sustainability, UNGC is built on Ten Universal Principles that each contains practices to comply with.

2.2.2 Theory as source of knowledge
Generally, we draw upon theory starting from early time (1910s) up until today. However, as direct input to explore sustainability and value creation, we use contemporary theories (1990s till today), because theory on the sustainability notion expanded greatly in the 1990s as well as it is reflecting the thesis towards a contemporary relevance.
Choices on which theories to use are consequently based on if the theory states a resource-based view, or if a theory ontology implicitly states this e.g. by addressing internal resources and capabilities. However, we recognise that certain elements of sustainability relates to external structural forces, which is typically not accepted in an orthodox resource-based view. Therefore, we acknowledge input from external structures focused theory (e.g. Porter & van der Linde 1995, Reinhart 1998, and Porter & Kramer 2006).

In the process of extracting sustainability practices, we focus on a practical recommendation. It is the ‘how-and-when-to’ feature we extract, and thus call a practice. We consider ‘a practice’ an action or activity that is recommended for a given company to take in order to pursue sustainability. Furthermore, to us a word is a word in whatever context that might be, and we attempt not to interpret on a defined meaning behind a theory-stated word (e.g. policy vs. strategy).

We use an understanding of value that is derived from resource-based theory on competitive advantage. We see value as ‘premium profits’ (Russo & Fouts 1997; 535), which is a notion related to the traditional neo-classic understanding of profitability, but differs due to the view on companies’ heterogeneity. In the frame of sustainability, the theory addresses the
intersection between profit and sustainability, i.e. in which way sustainability can affect internal value creation levers of the company. We furthermore include the anecdote method by deploying real examples to illustrate how sustainability can affect a value creation lever in practice.

2.4 Considerations to research ontology and epistemology
In order to clarify the meta-theoretical assumptions, we present the ontological and epistemological standpoint. We rely on the description and wording in Bryman & Bell (2003) and Rønn (2006).

2.4.1 Ontological considerations of the knowledge process
When selecting between theories, it is the instrumental feature that is of importance. We consider a theory as instrumental when it focuses on achieving an economic or strategic objective through environmental activities. Within the theories the debate primarily lies in a combination of the resource-based view and the positioning school. Even though we base the research on the first, we aim to eliminate most blind spots by recognising elements from the positioning school. Both aspects are relevant as we will expand both internal and external company boundaries. This is in alignment with the pragmatic constructivist ontology in the sense that we are trying to increase knowledge on a scientific field, by using different related and not overlapping approaches to understand the field more completely. It allows us to create knowledge on sustainability by decoupling practices from its source of origin, with the purpose of creating a result that is pragmatically consistent. As we aim to create a new logic on sustainability, this will evidently reflect our logic on sustainability.

We distinct between reality and a theoretically reduced description of reality, and we acknowledge that the thesis is a construct and a sum of our theoretical approaches (e.g. when we merge sustainability practices into sustainability steps). To us, exploration means working systematically to make sure that we have a full construct in the end. As such, we distinct the thesis knowledge from objectivism and rely on constructivism.

3 The pragmatic constructivist ontology is described in Rønn (2006). “Scientifically, the pragmatic constructivist ontology is in correlation with the idea that not one, but several point of views to a scientific research area will clarify crucial aspects of the studied area. In a pragmatic ontology we end up with the chosen aspect of research area becoming central to the research” (p. 119+120, our translation)
2.4.2 Epistemological considerations of the knowledge created

As we focus on value as financial value, we have a shaping logic that companies exist to make money and create financial value. We believe that business endeavours must argue to make economic sense, before these are to be integrated. This logic is epistemologically related to *transcendental philosophic epistemology* which recognises that humans possess preconditions. These preconditions ensure that we in the exploration of sustainability and value creation will select input that fits the logic, which impose that companies exist to create financial or economic value.

We move within different schools and disciplines in line with the eclectic tradition⁴ in order to create a more holistic illustration of sustainability practices and value creation processes. The aim is not to make academic conclusions stronger; we believe that knowledge is useable when it serves a pragmatic purpose.

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⁴ By reflectively embracing the eclectic field into our research it implies that the research becomes *transdisciplinary* assuming that boundaries of single contributing disciplines are exceeded and involve knowledge from academics, policy-makers and practitioners who all apply a broad set of skills and experiences in order to tackle a shared problem.
Part I

3.0 From responsibility to business issue
We initiate the exploration of sustainability by introducing to the conceptualisation of responsible businesses. We touch upon how the responsibility notion has developed until present time, and outline arguments that offset from the prevailing debate of whether or not it pays to address sustainability. With this we present the thesis optic on sustainability in the end.

3.1 The responsibility of a company
In 1916, almost one hundred years ago, J. M. Clark criticises business for being a ‘system of irresponsibility’ (Clark 1916; 218). Clark suggests that the appropriate responsibility of a company is to create transparency in business, and proposes a theory of ‘economics and responsibility’ arguing that businesses shall recognise and accept its responsibility for the public interest and society. By this proposal, Clark is considered first-mover in creating an academic opinion on expanding the responsibility of a company to include collaboration with the company’s surroundings (Champlin & Knoedler 2004).

In the 1930s, Theodore Kreps introduces the concept ‘Business and Social Welfare’. Kreps suggests ‘social audit’ as a way for companies to report responsibility. The ‘social audit’ is considered the first initiative to standardise reporting of social activities. According to The Social Reporting Report (1999), it changed the interaction between society and company by the way entities outside the company could define the responsibility of companies across industries. This highlights the emergence of transparency for companies as members of society.

The debate on the field of responsibility is coined in the 1950s where the notion social responsibility catches attention and gains importance. In 1953, H.R. Bowen publishes the recognised ‘Social Responsibilities of the Businessman’, a book often referred to as the original introduction of social responsibility. Bowen presents social responsibility as:

\[ \text{It refers to the obligation of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society.} \] (Bowen 1953; 6)
In this period, Bowen is agenda-setting by making social responsibility superior to decisions within all business activities (Garriga & Melé 2004). Characteristic for the literature of this time, responsibility concerns social objectives, and is seen as an obligation purely defined by desires of the society, overruling the economic interests of a shareholder.

In 1970, a well-established opponent to this movement, Milton Friedman, publishes ‘The Social Responsibility of Business is to Increase Its Profits’ (Friedman 1970). Friedman argues that the company only has social responsibility in accordance with its employees’ interests, and that these interests solely are to make as much money as possible.

There is one and only one social responsibility of business--to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud. (Friedman 1970; 6)

With this Friedman initiates the academic opposition to the social responsibility movement, with the arguments that profit shall be sovereign to resource-usage, and that meeting external social interests only will take away money from the company. Basically, including the desires of society is not compatible with the responsibility of the company – to increase its profits.

So far, the early contributions on responsibility are very contradictory; to earn the desires of society, or to earn more money. Either it is the one or the other. As such, none have proposed the relation between the two by looking into which desires the society have, how to integrate them in business operations, or how to increase profits in concordance with societal desires.

3.1.1 Emergence of CSR and Sustainability
The conceptualisation of corporate social responsibility (CSR) takes place during the 1960s and 1970s. During the 1970s, CSR comes into common use after the formation of many multinational companies and the acknowledgement of the difference between the local communities in which the companies operates. The term ‘stakeholder’ is used to describe and argue that the responsibilities of the corporation goes beyond the company’s shareholders as the activities of corporations have impact on several groups of different interest in society, and vice versa (Freeman 1984).

In the 1980s and 1990s, research on CSR is more focused on converting theory into concrete investigations of the company’s CSR performances (Carroll 1999). Many companies adopt
non-economic social values through e.g. ethics codes and social responsibility charters and the concept of ‘corporate social performance’ is a common use when evaluating a company’s performance. Every company – both active and responsive – can be evaluated on its social performance, both negatively and positively (Wood 1991). Because of the dilemma of being socially audited, many academic terminologies emerges in attempt to describe the organisational handling of social responsibility e.g. issues management, environment assessment, public policy, business ethics theory, corporate citizenship, corporate governance, corporate philanthropy, social reporting, etc. An endeavour to outline these concepts is in this context neither relevant nor appropriate.

Concurrent with the development of CSR, a wider acknowledgement of the natural environmental issues brought on by corporations at large is spread and debated. As opposed to the thinking behind CSR, this new acknowledgement is not brought about by policies only. It is continuously taken up by society at large as a principle guiding the many choices each citizen makes every day, as well as the big political and economic decisions. This conceptual acknowledgement is termed ‘sustainability’. It originates from the 1970s with works such as Goldsmith’s ‘Blueprint for Survival’ (1972) and the Meadows, Meadows, Randers & Behrens III’s ‘Limits to Growth’ (1972), where sustainability is referred to at a societal level with the idea of developing sustainable ways of living, decentralised from cities which would result in smaller pollution and more ecology, and ultimately reduce the environmental impact. Ultimately it follows profound changes in thinking, in economic and social structures and in consumption and production patterns (ec.europa.eu/environment). Furthermore, the rise of criteria formulating organisations⁵ (CFOs) occurs, which plays a crucial role in defining sustainability activity and creating legitimacy for many companies, due to its acknowledged criteria and issues interpretation.

The difference between CSR and sustainability is that CSR concentrates more on the non-financial societal activities that a company undertakes, whereas sustainability concentrates on both the impact of environmental factors on a member of society as well as the member’s impact on the environment. With this change the societal perceptions of the role of business have shifted markedly in the last two decades. While the core function of business remains innovation, technology development, capital investment and the implementation of sound

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⁵ CFO is a non-governmental organisation that develops one or more formal statements of rules of conducts regarding environmental and/or social domains of sustainability that producers voluntarily agree to implement’ (Ingenbleek, Binnekamp & Goddijn 2007; 540)
management capability for wealth creation, companies are increasingly being looked upon as bringers of solutions to the global problems sustainability points towards (wbcsd.org). Historically this last argument stems from the United Nations Conference on the Human Environment who points its spotlight on the reconciliation of environment and economic development debate in 1987. This is at the formerly known World Commission of Environment and Development (WCED) (today the Brundtland Commission). This commission published a well known report called the Brundtland report, which deals with the concept of ‘sustainable development’ and the change of politics needed to achieve that. From this report the most cited definition of sustainable development originates, namely that of;

*Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.*

(WCED 1987; 8)

The Brundtland report and the definition of sustainable development have both contributed in creating great awareness on environmental conditions and footprint, and respectively show that sustainability carries an inherited time element and links human needs and consumption. However, although it is world known and frequently cited, the definition is being criticised for being too broad, lacking practical insights, lacking the ideology of economic growth, as well as entailing conflicting goals (e.g. Hueting 1990; Graf 1992). As such, the definition has given occasion for further development of the sustainability concept, e.g. broadening or narrowing the concept further to incorporate social dimensions (Meyer & Jepperson 2000; Garriga & Melé 2004) and corporate dimensions (Dyllick & Hockerts 2002; Marrewijk & Werre 2003).

It seems to us that a consensus among contemporary sustainability theorists exists, indicating that both the social aspect and corporate dimension is a part of the notion sustainability. Apparently, sustainability unites being a responsible company in society and meeting own needs for profit.

### 3.2 Research scope on sustainability

This thesis research is initiated to break away from the current mental models focusing on global environmental concerns as more or less costly social responsibility issues. With our epistemological stance and the recognition of sustainability seen in a corporate setting, it is
evident that seeing environmental concerns with a new set of lenses becomes of significant relevance for companies.

*Corporate sustainability is a business approach that creates long-term shareholder value by embracing opportunities and managing risk from economic, environmental and social dimensions.* (Lo & Sheu 2007; 345)

In this vein, we re-focus sustainability to refer to corporate sustainability. While corporate sustainability has been perceived differently by society at large – i.e. economic sustainability, ecological sustainability and social sustainability (Russell, Haigh & Griffiths 2007) – this thesis refers to the concept with a holistic approach that results from an integration of the two first mentioned. Dyllick & Hockerts (2002) proposes a holistic definition;

*Corporate sustainability can accordingly be defined as meeting the needs of a firm's direct and indirect stakeholders (such as shareholders, employees, clients, pressure groups, communities, etc.) without comprising its ability to meet the needs of future stakeholders as well.* (Dyllick & Hockerts 2002; 131)

Because this holistic approach seems very broad, we emphasise that meeting the needs of your stakeholders, does not entail that the company should pursue to satisfy all needs. Saving the world is not the single company’s responsibility, since it would not make economic sense. We see sustainability as a tip-toeing balance, where the company should identify which direct and indirect stakeholder needs it can comply with. In this vein, the company should see sustainability differently;

*Companies that persist in treating climate change solely as a corporate social responsibility issue, rather than a business problem will risk the greatest consequences.* (Porter & Reinhardt 2007; 22)

We see that, if global environmental problems are dealt with as business issues rather than as social responsibility issues, an exploration of sustainability would open up to touch upon multiple business issues, and possibly present a new logic. If companies deal with global environmental problems in this manner, the sustainability opportunities as well as possibilities for value creation might furthermore become more evident. What we emphasise here is the direct idea behind the notion and wording of corporate sustainability; ability to sustain your company with a corporate environmental inclusion. As such, the remaining research is scoped to address practices and steps that see sustainability with this optic.
4.0 Exploring sustainability practices
With the sustainability optic in mind, the exploration of practices is also guided by the reasoning for taking into account both theoretical and practical data. This will create a broader understanding of sustainability. As such, the following exploration is separated into an exploration of: practical CFO data and theories on sustainability. Output from the exploration will be the recommended practices from each source, which will serve as input for the full-suit fact base.

4.1 The UN Global Compact
In January 2011, UNGC holds the position as the largest corporate citizenship and sustainability initiative in the world — with more than 8700 corporate participants from over 130 countries. The basic idea is that voluntary involvement can encourage private innovativeness and concern in a manner that regulation has not been able to (unglobalcompact.org). To achieve this, UNGC is based upon the Ten Universal Principles (figure 4).

<table>
<thead>
<tr>
<th>The Ten Principles of UN Global Compact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Rights</td>
</tr>
<tr>
<td>1. Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights</td>
</tr>
<tr>
<td>2. Principle 2: Businesses should make sure that they are not complicit in human rights abuses</td>
</tr>
<tr>
<td>Labour</td>
</tr>
<tr>
<td>3. Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining</td>
</tr>
<tr>
<td>4. Principle 4: Businesses should uphold the elimination of all forms of forced and compulsory labour</td>
</tr>
<tr>
<td>5. Principle 5: Businesses should uphold the effective abolition of child labour</td>
</tr>
<tr>
<td>Environment</td>
</tr>
<tr>
<td>7. Principle 7: Businesses should support a precautionary approach to environmental challenges</td>
</tr>
<tr>
<td>8. Principle 8: Businesses should undertake initiatives to promote greater environmental responsibility</td>
</tr>
<tr>
<td>9. Principle 9: Businesses should encourage the development and diffusion of environmentally friendly technologies</td>
</tr>
<tr>
<td>Anti-Corruption</td>
</tr>
<tr>
<td>10. Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.</td>
</tr>
</tbody>
</table>

Figure 4: The Ten Principles of UN Global Compact (unglobalcompact.org)
The ten principles form a practical framework for the development, implementation, and disclosure of sustainability policies and practices for all involved companies. Accordingly, this should result in building a more sustainable and inclusive global economy.

To develop sustainability efforts is a main objective for companies seeking compliance with UNGC. The practices within is a way to commit companies to contribute to sustainable economic development as this is the most influential reason for companies becoming a UNGC participant. A study shows, that UNGC has a significant impact in defining what sustainability is to companies, and the benefits from participating are not limited to ethical values such as doing the right thing (i.e. responsibility image), but contain economic values as well (Cetindamar & Huloy 2007). As a result, UNGC participants do not only contribute to environmental change, but also receive financial value.

Within the thesis delimitation, we set forth an exploration of the three principles that are related to the environment;

- Principle 7: Business should support a precautionary approach to environmental challenges
- Principle 8: Businesses should undertake initiatives to promote greater environmental responsibility.
- Principle 9: Businesses should encourage the development and diffusion of environmentally friendly technologies

In the following, the UNGC practices will be outlined in bullet points.

4.1.1 Businesses should support a precautionary approach to environmental challenges

The idea of undertaking a precautionary approach is to prevent rather than cure. It is believed that it is more cost-effective to take early action and steer away from irreversible environmental damages. In addition to this, stakeholders are to be integrated to perform a more proactive collaboration, i.e. to prevent rather than to cure.

The issues for companies to deal with include how to provide better information to the consumer, how to communicate potential risk for the consumer, the public or the environment. It also includes a structure of processes that allows a prior approval before certain products, deemed to be potentially hazardous may be placed on the market.

According to UNGC, the following practices build a precautionary approach;

- Develop a code of conduct or practice for company operations and products that confirms commitment for the environment.
• Develop a company guideline on the consistent application of the approach throughout the company.

• Create a managerial committee or steering group that oversees the company application of precaution, in particular risk management in sensitive issue areas.

• Establish two-way communication with stakeholders, in a pro-active, early stage and transparent manner, to ensure effective communication of information about uncertainties and potential risks and to deal with related enquiries and complaints. Use mechanisms such as multi-stakeholder meetings, workshop discussions, focus groups, public polls combined with use of website and printed media.

• Support scientific research, including independent and public research, on the issue involved, working with national and international institutions concerned.

• Join industry-wide collaborative efforts to share knowledge and deal with issues, in particular production processes and products around which high level of uncertainty, potential harms and sensitivity exist.

Tools that support these steps include; (a) leadership and project management (building managerial committee), (b) operational processes (building internal guidelines and code of conduct), (c) stakeholder management team (resources dedicated for corporate relations).

4.1.2 Businesses should undertake initiatives to promote greater environmental responsibility

The idea of undertaking responsibility initiatives is that business and industry should increase self-regulation, guided by appropriate codes, charters and initiatives integrated.

The issues to deal with include how internal regulation is initiated, executed, reported, and how external parties are aligned with these. It involves establishing an internal structure, and upon these it ensures communication and transparency. In doing this, issues on the existence of appropriate management systems become prevalent to help the company to meet the organisational challenge.

According to UNGC, the following practices promote environmental responsibility;

• Re-define company vision, policies and strategies to include the 'triple bottom line' of sustainable development - economic prosperity, environmental quality and social equity.

• Develop sustainability targets and indicators (economic, environmental, social).
• Establish a sustainable production and consumption programme with clear performance objectives to take the organisation beyond compliance in the long-term.
• Work with suppliers to improve environmental performance, extending responsibility up the product chain and down the supply chain.
• Adopt voluntary charters, codes of conduct or practice internally as well as through sectoral and international initiatives to confirm acceptable behaviour and performance.
• Measure, track and communicate progress in incorporating sustainability principles into business practices, including reporting against global operating standards.
• Ensure transparency and unbiased dialogue with stakeholders.

Tools that support these steps include; (a) assessment or audit tools (such as environmental impact assessment, environmental risk assessment, technology assessment, life-cycle assessment), (b) management tools (such as environmental management systems and eco-design) and (c) communication and reporting tools (such as corporate environmental reporting and sustainability reporting).

4.1.3 Businesses should encourage the development and diffusion of environmentally friendly technologies
The idea behind undertaking development and diffusion of technologies is that companies can reduce the use of raw materials, which basically leads to higher efficiency. This includes a variety of cleaner production processes and pollution prevention technologies, as well as end-of-pipe and monitoring technologies.

The issues for companies to deal with include implementation of technological resources and capitalising from these through know-how, procedures, goods and equipment, as well as organisational and managerial procedures.

According to UNGC, the following practices comprise strategic level approaches to improve technology;
• Establishing a corporate or individual company policy on the use of environmentally sound technologies.
• Making information available to stakeholders that illustrates the environmental performance and benefits of using such technologies.
• Refocusing research and development towards ‘design for sustainability’.
• Use of life-cycle assessment (LCA) in the development of new technologies and products.
• Employing Environmental Technology Assessments (EnTA).
• Examining investment criteria and the sourcing policy for suppliers and contractors to ensure that tenders stipulate minimum environmental criteria.
• Co-operating with industry partners to ensure that ‘best available technology’ is available to other organisations.

Tools that support these steps include; (a) process and manufacturing technique (EnTA, business system reengineering), (b) input material logistics (supply chain optimisation and value chain process analysis) and (c) product and material change (life-cycle assessment, product innovation cycles).

4.2 Theories on sustainability

In the following we explore sustainability practices in relevant theories. We do this by individually introduce each theory, and present the core practical recommendations the theory represents. These practices are made italic.

4.2.1 Sustainability practices in Orsato (2006)

The article ‘Competitive environmental strategies: When does it pay to be green?’ by Renato J. Orsato (2006) focus on how companies can engage in sustainability efforts in the pursuit of competitiveness. Orsato argues that companies must choose between efforts in order to pursue ’the right’ type of sustainability strategy, which proposes a contingency perspective and a belief that companies cannot and should not save the world, but should pursue return-on-investment (ROI) on environmental actions. Sustainability practices are divided into dimensions of competitive focus (organisational processes or products/services) and competitive advantage (cost or differentiation) which positions the article within a contingent resource-based view of competitive business.

Orsato makes this competitive dimension because of the growing importance that intangibles have in the success of businesses. He presents four generic types of competitive environmental strategy; eco-efficiency, beyond compliance leadership, eco-branding, and environmental cost leadership.

• Eco-efficiency
  With this strategy companies will develop capabilities to continuously increase the productivity of their organisational processes while decreasing the environmental
impact and the costs associated with them. It mostly relates to companies that supply industrial markets, are process-intensive and have customers that not necessarily want to pay more for environmental protection (Orsato 2006; 132).

▪ **Beyond compliance leadership**

With this strategy companies are willing to *spend money in the certification of their EMS, subscribe to business codes of environmental management*. In example adoption of schemes such as CERES Principles or the Global Compact [UNGC] can differentiate corporations from competitors as well as influencing a positive public opinion about organisational practices (Orsato 2006; 133). This strategy relates to companies that not only want to increase efficiency of organisational processes, but also want customers and the general public to acknowledge their efforts. These want to go beyond compliance with what is expected of them and employ further schemes and politics in the pursuit of sustainability visibility.

▪ **Eco-branding**

With this strategy the company will *use marketing differentiation to differentiate from its competitors* when it provides something unique that is valuable to buyers beyond simply offering a low price. It is argued that the strategy is the most straightforward for a company to choose (Orsato 2006; 134). Companies that intend to generate competitive advantage from strategies based on eco-branding need to observe the three basic requisites; consumers must be willing to pay, reliable information about the product must be available, and the differentiation should be difficult to imitate.

▪ **Environmental cost leadership**

With this strategy the company will *focus on radical product innovation such as material substitution and dematerialisation*, which makes more business sense than incremental process innovation. This strategy relates to those that are within an industry where consumers demand low prices for your product, or where environmental regulations make production costs increase. Companies that follow this strategy are expected to reduce both costs of the product/service and its overall environmental impact. This is a rare strategy (Orsato 2006; 136).
Although Orsato (2006) focus on capability development in the pursuit of competitiveness, it concludes that;

*Managers will need to identify the areas in which firms can focus their environmental efforts in the pursuit of competitive advantage. Fundamentally, they have to ask: Who is valuing my environmental investments?* (Orsato 2006: 140)

Inherent in this is the idea that a manager must focus not only on internal capability development, but also evaluate the efforts in relation to the external surroundings. Hence it becomes crucial to investigate whether or not e.g. radical product innovation would make business sense within the apparent industry structure.

For further exploration we turn from a concern of choosing one strategy that would fit competitiveness, to Hart (1997) that sees sustainability as stages of actions towards a greater sustainability and growth vision.

### 4.2.2 Sustainability practices in Hart (1997)

In the article ‘Beyond Greening’ by Stuart L. Hart (1997), the business logic for ‘greening’ is accused of being largely operational or technical, e.g. pollution prevention programs (low-hanging-fruits\(^6\)) that have saved companies billions of dollars. Few executives realise that environmental opportunities might actually become a major source of revenue growth – not just a source of cost savings. Thus the strategy eco-efficiency is one to pursue as a first stage towards a sustainable company - but is not the only stage, as Orsato (2006) would argue it to be. Hart (1997) focus on revenue growth (instead of competitiveness), but is nevertheless positioned within the same school as Orsato (2006) – the resource-based view of the firm – as companies should pursue strategies that focus on enhancing and developing capabilities for revenue growth through sustainability activity.

Companies need to ask whether they are a part of the problem or the solution to social and environmental problems. It is argued that a company’s surrounding is the entire World and all the levels of environmental issues that follow. When thinking in these terms the company can begin to develop a sustainability vision – a shaping logic that goes beyond today’s internal,

\(^6\) We refer to ‘low hanging fruits’ as; easy and inexpensive behavioural and material changes that result in large emission reductions relative to costs.
operational focus to a more external, strategic focus. Hart (1997) believes that such a vision will guide companies to undertake practices in accordance with the three stages of environmental strategy: pollution prevention, product stewardship and clean technology.

- **Stage one: Pollution prevention**
  Pollution prevention entails that instead of cleaning up waste after it is produced, it focuses on minimising waste before it is produced. This strategy depends on continuous improvement efforts to reduce energy use and waste. Acquiring EMS certification such as the ISO 14000 series will create strong incentives for companies to develop capabilities that can meet these requirements. When a pollution prevention scheme is fully implemented, the next stage should be pursued (Hart 1997; 71).

- **Stage two: Product stewardship**
  Product stewardship entails that companies partly focus on minimising pollution from manufacturing as well as focus on all environmental impacts associated with the full life cycle of a product. This is done by building new capabilities in production and operations. All elements of the value chain will be ‘internalised’. For a product to achieve low life-cycle environmental costs, the designer needs to minimise the use of non-renewable materials mined from the Planet’s crust, avoid the use of toxic materials, and use renewable resources in accordance with their rate of replenishment. Furthermore, the product-in-use must have a low environmental impact and be easily composted, reused or recycled at the end of its useful life. Therefore a key capability is to integrate stakeholders into the designing process. A cradle-to-grave analysis is often the way to assess the life-cycle. The analysis begins and ends outside the boundaries of a company’s operations – it includes a full assessment of all inputs to a product and examines how it is used and disposed. It is a way to reduce resource consumption. Properly executed it also offers the potential for revenue growth through product differentiation (Hart 1997; 71).

- **Stage three: Clean technology**
  Once stage one and two are generating the desired result, companies with a wish for revenue growth and with eyes on the future can begin to plan for and invest in tomorrow’s technologies. The existing technology base in many companies will not be sufficient in the future and are not environmentally sustainable. This stage is about
consciously developing new competencies to create a sustainable path to increased yields in the future (Hart 1997; 73).

Hart (1997) argues that all three stages and their impact will dissipate if they are not framed and directed towards a common goal – a sustainability vision. Through a prior article (Hart 1995), he argues that a company’s competitiveness is dependent on the non-renewable and renewable resources present in the environment, and thus a vision should integrate future elements of the world degradation in order to effectively guide company activity and develop capabilities that ensures future sustainable competitiveness. Therefore, we count in that companies should build a sustainability vision like a road map for the future, guiding the way for products and development of new resources (Hart 1997; 73).

4.2.3 Sustainability practices in Reinhardt (1999)
Being a prestigious scholar within environmental strategy, Forest L. Reinhardt (1999) has with the article “Bringing the Environment Down to Earth” brought the environment down to earth in order to re-frame the simplistic yes-or-no debate on whether or not it pays-off to be green. The article looks upon external structures to suggest the right sustainability practice. Reinhardt argues that all practices depend and should be evaluated within the given circumstances confronting the company and the chosen strategy. It is not a generic article asking generic questions and serving generic answers, and Reinhardt criticises the writing about business and the environment for ignoring this fact.

*The truth is, environmental problems do not automatically create opportunities to make money. At the same time, the opposite stance – that it never pays for a company to invest in improving its environmental performance – is also incorrect.*

(Reinhardt 1999; 150)

As opposed to the two prior articles, Reinhardt (1999) believes that environmental investments should be made for the same reasons as all other investments, and that questioning when or why ‘green’ pays off is irrelevant. He argues that environmental problems should be seen as business issues to deliver shareholder benefits through investments – not to save the world through certain steps. Furthermore, the article’s logic is to strategise externally and manage the company surroundings – thus we find it a proponent of the positioning school that acknowledge external market and industry structures to be guiding company action. However, the relevance
of the article is seen in its contingency approach that explores the conditions for companies to steer actions towards sustainability.

Managers need to go beyond the question ‘Does it pay to be green?’ and ask ‘Under which circumstances do particular kinds of environmental investments deliver benefits to shareholders?’ (Reinhardt 1999; 150)

Reinhardt has identified five approaches which imply that sustainability practices integrate the environment into business thinking. The approaches are: (a) differentiating products, (b) managing your competitors, (c) saving costs, (d) managing environmental risk, and (e) redefining markets.

- **Differentiating products**
  Within this approach companies can create a differentiated production that environmentally offers greater benefits or smaller costs than those of competitors. Three conditions are required for success with environmental product differentiation; the company must identify customers that are willing to pay more for an environmentally friendly product, it should be able to communicate its product’s environmental benefits credibly, and it should be able to protect itself from imitators (Reinhardt 1999; 150).

- **Managing your competitors**
  Within this approach companies can utilise sustainability practices to manage competitors, and thereby change the rules of the game. A company might need to incur higher costs to respond to environmental pressures, but it can still come out ahead if it forces competitors to raise their costs even more. This can be done by joining forces with similar positioned companies within an industry to setting private standards or convincing government to favour your product. The business challenge now is to create measureable standards and to outperform these, which demands an internal effort. This approach – to force competitors to match own behaviour – is fundamentally different from that of environmental product differentiation. The manager thinking about a choice between these must realise that if customers cannot be induced to pay a premium for an environmentally preferable good, then it may want its competitors to have to match its behaviour (Reinhardt 1999; 152).
• **Saving costs**
  With this approach companies can utilise the practice of saving costs within environmentally related production, and thereby cut costs and improve environmental performance simultaneously. Some company tactics include *reducing solid-waste generation and cutting water and energy use*. In example, industrial companies can cut costs and enhance environmental performance at the same time by redesigning inflexible or wasteful routines. Reinhardt states a common pattern for this type of environmental strategy; dramatic cost savings are often found when a company is under tremendous pressure. However, when not, managers should look for the environmental cost savings, but only if they deliver value after the management costs of the search have been included (Reinhardt 1999; 154).

• **Managing environmental risk**
  With this approach companies should include corporate sustainability into their risk management practices. The main reason for doing this is avoidance of risks associated with an industrial accident, a customer boycott, or an environmental lawsuit. More specifically, to *make effective management of business risk stemming from environmental problems* can itself be a source of competitive advantage. It is further argued that any company can benefit from doing an *audit of its environmental insurance policies and risk management systems*. Although no evidence is pointing towards that environmental risk management is bearing fruit, some investment in environmental risk management as well as in traditional risk management is prudent (Reinhardt 1999; 155).

• **Redefining markets**
  If a company is following several of the mentioned approaches it can redefine the current market by rewriting the competitive rules. This can be done by *rethinking traditional notions about property rights*, which is a useful way of discovering corporate opportunities to *redefine markets based on environmental challenges*. In example, if a company includes a focus on the disposal of its products, it redefines the business model of the competition. This is often utilised by *doing innovations in property rights and advance in technology*, which all in all can result in competitive advantage (Reinhardt 1999; 156).
Reinhardt argues that companies are not in business to solve the world’s problems, nor should they be, as they have shareholder responsibilities. Not all companies can profit from environmental integration, others will be able to do so by following one approach – and in some cases by following more than one.

All of the approaches can help managers to bring the environment down to earth: to think systematically and realistically about the application of traditional business principles to environmental problems (Reinhardt 1999; 150)

Inherent in this is an acknowledgement of the fact that internal optimisation will follow shareholder benefits in the light of the strategy ‘saving costs’. This relates to the strategies ‘Eco-efficiency’ by Orsato (2006) and ‘Pollution Prevention’ by Hart (1997).

4.2.4 Sustainability practices in Placet, Anderson & Fowler (2005)

Many academics and practitioners point towards sustainability as being a catalyst for innovation. In the article ‘Strategies for sustainability’ by Placet, Anderson & Fowler (2005) focus is on strategies and actions for sustainability that differs from the so-far explored practices for sustainability, by emphasising that innovation and industry integration are crucial elements of sustainability.

Developing a strategy that transitions from traditional resources-intensive and volume-maximizing operations to an approach that uses fewer resources and maximizes both stakeholder and shareholder value requires leadership, commitment, planning, and innovation. (Placet et al. 2005; 33)

This article is based upon research done by WBCSD, and aims at serving practical steps for a particular industry (the cement industry) to better meet the need for global sustainable development while enhancing shareholder value. Thus, this article also focuses on sustainability delivering shareholder value as Reinhardt does, but it furthermore integrates a stakeholder perspective which positions the article within a more socio-economic paradigm. Concurrently, it is related to the resource-based view, as it focuses on strategy and shareholder value to be achieved through competencies, skills, resources and enhancing capabilities across industries.

We use the theory, since it is argued that the recommended practices are of relevance to other industries. However, all practices are not all of relevance within thesis delimitation (e.g. employee well-being, community well-being and regional development), and thus we only deploy the remaining environmentally related recommendations.
• **Climate protection**  
This recommendation affects both the current business and the future business. It touches upon how operation processes are carried out and audited today. Basically, companies should *establish corporate management programs and setting company and industry targets for CO\(^2\) emission*, and moreover companies should *action long-term process and product innovation* (Placet et al. 2005; 35).

• **Resource productivity**  
This recommendation involves changing the business to *be more eco-friendly in resource consumption and production effectiveness*. It is related to climate protection as it follows the recommendations from this, by recommending that businesses facilitate practices of industrial ecology and eco-efficiency (Placet et al. 2005; 35).

• **Emissions reduction**  
Companies should *continuously improve and make more widespread use of emissions control techniques*. It is related to eco-efficiency, where it is reducing the waste and pollution the industrial processes entails (Placet et al. 2005; 35).

• **Ecological stewardship**  
Improve land-use practices by *disseminating and applying best practices for plant site and material management*. This practice is primarily focused towards companies within the cement industry. However, the practice can be applied to other companies and industries if seen as stewardship of material inputs and the best practices for using these inputs (Placet et al. 2005; 35).

• **Business integration of sustainable development**  
To succeed with sustainability general management and performance management is important. Companies should *integrate sustainable development principles into business strategy and practices* in order to create shareholder value. This practice focuses on internal organisation of sustainability and how the innovation and development of sustainable solutions should be a part of strategy and internal organisation. In this, human capabilities related to alignment and organising is of importance (Placet et al. 2005; 36).
Cooperation

Companies must look at cooperating together with competitors. They should work with other industry companies and external organizations to foster sustainable development practices and remove barriers. As mentioned, stakeholder management becomes prevalent when sustainable development is on the sustainability agenda. This requires stakeholder management departments with political competencies to push the industry agenda and thereby also create the barriers in favour if company development (Placet et al. 2005; 36).

Innovation

Companies must organise internally, and make sure that capabilities focus resources towards innovation. Companies should encourage sustainable development related innovations in product development, process technology and enterprise management. Innovation is related to the future path of the company and its products, and is inherent in the above mentioned practices (Placet et al. 2005; 36).

Placet et al. (2005) argues that sustainability initiatives should be undertaken in line with the current company strategy, and that it is unique to every company.

Although companies within one industry produces almost identical products, their cultures, competencies internal resources, locations and business priorities are different. (Placet et al. 2005; 41)

Thereby, there is no one set of sustainability-oriented innovations that is right for all of companies. However, innovation is important in sustainability. In all, this theory has concluded the exploration with a more multi-disciplinary approach recognising innovation in combination with industrial opportunities as paths to pursue sustainability.

4.3 Findings on sustainability practices

This exploration shows that the business methods of sustainability are different, and therefore practices show variations depending on the source. As such; one method is performance metrics and utilisation of technology; one method is a contingent ‘right-green’ strategy chosen to gain competitiveness; one method is a continuous process of development towards a future sustainability vision; one method is an investment only pursued if it delivers ROI; and one
method is an innovation and industrial opportunity rather than a company issue. Although these methods differ, many sustainability practices touch upon the same interfaces for company action. Therefore we use the practices as input to the full-suit fact base for sustainability.

Of great importance, we have seen a pattern though the above exercise; Sustainability practices contain both the actual action to be carried out (i.e. practical recommendation), but also imply the economic benefit (i.e. effect). Possibly this recognition – that action and value is combined – has the potential to change the perception of sustainability.
5.0 Sustainability as a strategic asset

The following section presents a framework of how companies can make sustainability a strategic asset. First, we extract and merge the sustainability practices into fewer reformulated sustainability steps, which comprise the total company initiatives within sustainability. Second, we propose a strategic framework for sustainability and with this we emphasise how companies through initiation of sustainability steps can make sustainability a strategic asset. In combination, this will tie together chapter 3, chapter 4 and chapter 5, and address the remaining unanswered aspects to provide a full-suit fact base on sustainability.

5.1 Merging the sustainability practices

The process of merging the extracted sustainability practices will be shortly accounted for in the following.

When extracting practices, we do not interpret on the words stated in the practices – to us a word is a word. It is, however, the practical recommendation that we take further. Therefore, we seek to encapsulate the action of the practice, and thereby emphasise what companies practically shall do, not what they receive. We find that practices in a source can overlap, e.g. within the UNGC, all practices of principle 7 relate to companies developing policies or enhancing stakeholder relations. As such, practices are extracted to be combined with these two statements, which we then alone consider adequate for the further process. The result of the extraction list is called ‘Sustainability practices’. Simultaneously, we merge the practices by categorising them according to the inherited practical recommendations and common denominators (i.e. innovation, development, R&D). The result of this is called ‘Sustainability steps’.

In combined, sustainability practices and sustainability steps are shown in the next table. The table input (the extracted practices) are in colours determined by its source of origin. As such, UNGC input is red, Orsato (2006) input is green, Hart (1997) input is blue, Reinhardt (1998) input is purple and Placet et. al (2005) input is black.
<table>
<thead>
<tr>
<th>Sustainability practices</th>
<th>Sustainability steps</th>
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<tbody>
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<td>• Develop a code of conduct and guideline for company operations and products</td>
<td>Ensure transparency</td>
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<tr>
<td>• Adopt voluntary charters, codes of conduct or practice</td>
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<tr>
<td>• Make information available to stakeholders that illustrates environmental performance</td>
<td></td>
</tr>
<tr>
<td>- Spend money on certification of EMS and subscribe to business codes of environmental management</td>
<td></td>
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<tr>
<td>• Establish two-way communication with stakeholders</td>
<td>Integrate stakeholders</td>
</tr>
<tr>
<td>• Ensure transparency and unbiased dialogue with stakeholders</td>
<td></td>
</tr>
<tr>
<td>➢ Integrate stakeholders into the product designing process</td>
<td></td>
</tr>
<tr>
<td>• Work with suppliers to improve environmental performance</td>
<td>Expand borders</td>
</tr>
<tr>
<td>• Use of life cycle assessment in the development of new technologies and products</td>
<td></td>
</tr>
<tr>
<td>➢ Focus on minimising pollution from manufacturing as well as all environmental impacts associated with the full life cycle of a product</td>
<td></td>
</tr>
<tr>
<td>• Minimise use of non-renewable materials, avoid use of toxic materials, use renewable resources in accordance with their rate of replenishment and reduce resource consumption to minimise life-cycle cost of products</td>
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<tr>
<td>• Join industry-wide collaborative efforts to share knowledge and deal with issues</td>
<td>Join forces</td>
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<tr>
<td>• Co-operate with industry partners to ensure that ‘best available technology’ is available to others</td>
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<tr>
<td>♠ Work with other industry companies and external organizations to foster sustainable development practices</td>
<td></td>
</tr>
<tr>
<td>• Establish a sustainable production and consumption programme with clear performance objectives</td>
<td>Become eco-efficient</td>
</tr>
<tr>
<td>- Develop capabilities to continuously increase the productivity of organisational processes</td>
<td></td>
</tr>
<tr>
<td>➢ Continuous improvement efforts to reduce energy use and waste</td>
<td></td>
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<tr>
<td>➢ Reduce solid-waste generation and cut water and energy use</td>
<td></td>
</tr>
<tr>
<td>♠ Integrate sustainable development principles into business strategy and practices</td>
<td></td>
</tr>
<tr>
<td>♠ Continuously improve and make more widespread use of emissions control techniques</td>
<td></td>
</tr>
<tr>
<td>♠ Be more eco-friendly in resource consumption and production effectiveness</td>
<td></td>
</tr>
<tr>
<td>• Create a managerial committee or steering group that oversees in particular risk management</td>
<td>Avoid environmental risk</td>
</tr>
<tr>
<td>• Make effective management of business risks stemming from environmental problems</td>
<td></td>
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<tr>
<td>• Audit of environmental insurance policies and risk management systems</td>
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<tr>
<td>• Refocus research and development towards ‘design for sustainability’.</td>
<td>Design for sustainability</td>
</tr>
<tr>
<td>- Focus on radical product innovation such as material substitution and dematerialisation</td>
<td></td>
</tr>
<tr>
<td>➢ Plan for and invest in tomorrow’s technologies</td>
<td></td>
</tr>
<tr>
<td>➢ Develop new competencies to create a sustainable path</td>
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<tr>
<td>✦ Do innovations in property rights and advance in technology</td>
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</tr>
<tr>
<td>✦ Encourage sustainable development innovations in product development, process technology and enterprise management</td>
<td></td>
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<tr>
<td>♠ Establishing corporate management programs and setting company and industry targets for Co2 emissions</td>
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<tr>
<td>♠ Action long-term process and product innovation</td>
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<tr>
<td>• Re-define company vision, policies and strategies</td>
<td>Plan for the future</td>
</tr>
<tr>
<td>✦ Change the rules of the game and redefine markets based on environmental challenges</td>
<td>Race to be first</td>
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<tr>
<td>✦ Use marketing differentiation to differentiate from competitors</td>
<td>Differentiate</td>
</tr>
</tbody>
</table>
5.1.1 Become eco-efficient
Eco-efficiency entails continuous improvement efforts to reduce material and energy intensity, reduce dispersion of toxic substances, enhance recyclability, maximise use of renewable resources in same rate as their replenishment, extend product durability and increase service intensity for customers. These efforts can be integrated through operations committees, process measurements and targets as well as codes of conducts, process programmes and business plans that ensure the practical internal implementation and internalisation of supply chain requirements.

This step is the one step that all sources can agree upon. It is a typical low-hanging-fruit for most companies, which indicates that this should be an easy step to take towards sustainability. As WBCSD states, it is creating more value with less impact – or more precise, it is creating more goods and services with ever less use of resources, waste and pollution. The fact that business is based on energy usage and that material availability is dropping due to more scare or obsolete natural resources, can serve as a major cost in the near future. Eco-efficiency is related to incremental change within the company, and can be pursued if the circumstances facing the company – the industry structure – also is facing incremental change due to the given threats of environmental issues (McGahan 2004). If industry trajectories are facing radical changes due to e.g. cost of material or regulations, then a more radical thinking on eco-efficiency is needed.

5.1.2 Design for sustainability
This step calls upon radical innovations and continuous capability development. It is the step to focus on if the industry is in a movement for radical changes. Therefore companies should engage in research, to keep a finger on the pulse. Investments in innovation are done with a long term perspective and to guide this, companies can establish corporate management programs, and steer towards strategic or industry targets. The step involves relatively greater efforts and changes, and human resources and capabilities need to act even more dynamically and flexible. Acquiring new technological resources (to enhance process or end-product) can also be a way of enforcing human capabilities to adjust and change more radically.

The step is prevalent, because the emerging new technologies that may provide potent, disruptive solutions, are threatening the foundations of energy – and material intensive industries. Sources such as renewable energy, sustainable living, organic agriculture, environmental technology etc. all hold the potential to drastically reduce the human footprint on the planet and to make the industrialisation up to date. When apparent that technology is a
rapid driver for change, there is a need for the company to re-focus R&D towards sustainable solutions in order to become competitive on costs and technology.

5.1.3 Differentiate
Differentiation can be done in two ways. Either a company can seek to differentiate operations by re-thinking operations, becoming eco-efficient and differ on costs, and adopt schemes that distinct the production from others by enhancing transparency. Or companies can enhance product differentiation by complying with standards of labelling, or possibly create their own label. Eco-labelling has the potential to make environmentally concerned consumers choose the product above others and at the same time demand for internal process change and new demands for suppliers and materials. In order to become product differentiated, three basic requisites are important; a) customers should be willing to pay more for your eco-friendly product, b) information about the eco-friendliness of your product should be easily accessible and c) the product should not be easily imitable by competitors. Companies must look externally in order to compare the degree of differentiation.

5.1.4 Expand borders
Expanding borders involves optimising performance through proper supply chain management as well as product life-cycle assessments. It indicates an external focus, but it constitutes by an integration of elements into a company’s own performance measures. To make this happen, companies must focus on the life-cycle of products to evaluate and audit all elements of the process in the making in order to strategically choose between suppliers and put environmental pressure on these. This can be done by mapping inputs and outputs, and thereby define company production boundaries (figure 5).

![Life-Cycle Inventory](source: Battelle & Franklin Associates, Ltd.)

Figure 5: Defining system boundaries (Svoboda 1995; 6)
Thus, company action can be to focus attention towards elements of production that resides outside company borders. In this it is relevant to look into suppliers and the environmental impact they impose. Taking on a cradle-to-grave assessment of products furthermore gives insight into how products are disposed by consumers, and potentially serves new possibility for recycling, reuse or even material substitution.

This step will support companies in making their activity legitimate, as the material and how it is derived, produced and delivered have an impact on environmental performance and legitimacy in society. It is of particular relevance in multinational or production intense companies. The challenges of the many responsibilities that follow when expanding boundaries can be addressed through strategic partnerships where companies join forces.

5.1.5 Join forces
Joining forces entails that companies within the same industry or across sectors share knowledge and join in to develop the technologies or solutions to environmental issues. Undertaking joined innovation projects and support of scientific research are also elements of joining forces.

It entails internal knowledge on environmental issues to be shared with competing companies, or researchers related to competing companies – basically a two-way street. This step does not imply that external forces are internalised. The internal resource bases remain, however, they can potentially develop radically by knowledge-sharing with outside parties. What has been difficult for companies to acknowledge – and still is – is the fact that an increasing share of cutting-edge knowledge of relevance resides outside the company. Inherent in this is an evaluation of the industry structure – if it demands for radical changes then radical innovations are needed and thus cross-sectoral partnerships or a joining of industry forces is needed to react to or forestall environmental threats. With platforms such as InnoCentive (a marketplace for innovation seekers and innovation solvers) knowledge between companies can be shared quickly.

5.1.6 Integrate stakeholders
When integrating stakeholders into company processes it entails cooperating with selected groups in society in order to get information on product and process expectations. This implies user-based innovations, NGO counselling and focusing R&D practices externally. This is relevant in the integration of civil society groups that helps evaluating environmental and social features of company activity. In example consumer groups can indicate expected product utility and value, and even how they expect the product to be produced. In this way
company competencies and knowledge are developed in greater harmony with its stakeholders, and sustainability activity is more likely to create value. Integrating stakeholders will provide legitimacy in the current surroundings, by stakeholder knowledge that puts environmental activity in a business and sales perspective. In relation to transparency, many companies can forestall social and environmental stakeholder pressure by integrating them into company processes and thus open elements of business thence ensuring transparency. In Europe, four out of five consider the environmental impact on the products they buy as an important factor (European Commission, ec.europa.eu); i.e. consumer demands for sustainable products and services plays an overwhelming role in today’s competitiveness. In the same way that stakeholders should be integrated, companies must ensure that stakeholders have access to certain company information.

5.1.7 Ensure transparency
With this step companies employ codes of conduct, audit and measure internal processes as well as ensure environmental targets throughout the supply chain. Companies must adopt voluntary schemes that act as enforcers of sustainability steps as well as demand continuous reporting activity. This process of ensuring can require that companies meet standards of technological resources and thus gain knowledge on these through development of human resources. By making this development, company surroundings can more clearly estimate the company resources and evaluate these on a sustainability matter.

Today, ensuring transparency is a trend related to legitimacy and increased stakeholder influence. Civil society groups and NGOs are entering the business arena and act as social and environmental enforcers locally (sometimes with more power than governments), but also globally as the information technology is enabling the stakeholders to communicate and trade information faster. Working in secrecy seems no longer an option nor is it a good idea.

5.1.8 Avoid environmental risk
Environmental risk avoidance requires the company to audit and integrate environmental lenses into risk management systems, or to create a group or programme able to foresee environmental risks. To support this, competencies to overseeing the landscape of information on environmental stances and environmental groups’ actions become essential. This information is then to be integrated into decision making e.g. through relevant leadership hierarchies or a management committee.
Generally, risk avoidance implies a systematic focus on all drivers for change in the present and future environment and company surroundings. A driver for change can be defined as;

... any natural or human induced factor that directly or indirectly causes a change in an ecosystem. (Millennium Ecosystem Assessment WBCSD 2005; 74)

Whereas a direct driver unequivocally influences ecosystem processes, an indirect driver operates more diffusively, by altering one or more direct drivers. The direct drivers of change include climate change, plant nutrient use, land conversion leading to habit change, and invasive species and diseases; whereas the indirect are demographic, economic, socio-political, scientific and technological, and cultural and religious. Within all these are threats to the company’s long-term survival, and thus it becomes of crucial to foresee these risks and steer the company in another direction in the short term or to cease them as opportunity in the longer term. In traditional corporate decision-making, the world is either certain (and predictable) or completely unpredictable. Managing risk from environmental issues is to see at residual uncertainty, where one evaluates and analyses the uncertainty left after the best possible analysis has been made (Courtney, Kirkland & Viguerie 1997).

5.1.9 Plan for the future
With this step, companies can audit the future levels of uncertainty (e.g. generated through risk reports) and come up with different scenarios of strategic action. With an apparently clear future, traditional strategy tools are relevant for the strategic planning whereas an ambiguous future would require a more systematic approach with eyes on analogies and pattern recognition. To integrate environmental elements in company vision and strategic planning might also serve as a guide for action and behaviour throughout the company. It can create a path for both corporate strategy and resource development and acquisition.

In choosing between which environmental issues to address, companies should look at the opportunities in the points of intersection between company and environment. By creating a full scale view on the inside-out and outside-in linkages (how your company affects environment and vice versa), management will be able to differ between opportunities and generic or strategic issues. Moreover, management can focus strategically on issues that would be a generic issue to competitors.

5.1.10 Race to be first
In this step companies focus on internal optimisation and rearrangements for the future competitiveness. When racing to be first it is innovation and market creation that is of primary
focus, which is why companies’ strategic intent must be ‘to shape the future’. It is creating a leadership role that shapes how the industry operates. A possible action to pursue this can be, to attempt to change the rules of the game. If this is succeeded, competitors will struggle with a change to regain competitiveness. Another possible action is to lobby for regulations that would favour the product or technology developed, e.g. by setting private standards. Inherent in this approach is re-thinking markets and customer needs, but also a restructuring of thinking about what the company resources actually are. Creating a private standard, or gain political influence can swift value of a company’s resource almost instantly, since it can provide the company with a new type of competitiveness.

5.2 Sustainability in a strategic framework

In the following we show how the above sustainability steps can function as stepping-stones for companies to make sustainability a strategic asset. We draw upon a view on company resources and capabilities as creating a strategic path for companies. This will provide a new strategic framework to see sustainability.

The familiar story is that companies increasingly rely on intangibles (e.g. R&D, brands, customer relationships, organisational flexibility) as the source of competitive advantage. Yet, managing these as assets becomes more challenging when the overarching concept of sustainability is integrated into the organisation. The solution is to manage sustainability as a strategic asset and measure the strategic impact of single sustainability actions (Becker, Huselid & Ulrich 2001). Strategic assets are defined as;

... the set of difficult to trade and imitate, scarce, appropriable, and specialized resources and capabilities that bestow the firm’s competitive advantage. (Amit & Schoemaker 1993; 37)

This solution requires a new perspective on what is meant with integrating sustainability and a new understanding of how sustainability generates value throughout the entire organisation. Companies should thus think of sustainability as an ‘architecture’ that must be properly managed and structured, rather than as a set of practices that are decoupled from the organisation. For instance, when a sustainability feature is incorporated into a brand (e.g. a green certificate), it is the strategic performance of this brand that makes it a strategic asset.

To argue for how companies can make sustainability a strategic asset, we include the two notions; resource-based stepping-stone and sustainability strategy. The first enables
companies to see sustainability steps as stages of development leading the company through a strategic desired path. In literature on capabilities, namely strategic development relies on an implicit stepping-stone assumption (Wernerfelt 1984). Sustainability must be managed as actions to take that will follow the existing capability development trajectories. As such, we see sustainability as a strategic asset that develops contingent with the internal company context, and hence that appropriate steps to follow is individual to each company that pursues sustainability.

The inclusion of strategy is the guiding element and the continuous point of reference to see sustainability as a strategic asset. A company’s sustainability work must be seen as unique and has to be tailored to a unique structure and purpose. For the organisation to fully utilise sustainability in a business strategy, sustainability must relate to all business aspects. In broad terms, these include the daily internal operation, the plans for internal operation, daily management of external parties, and plan for management of external parties (Porter & Kramer 2006).

To illustrate this point, we incorporate a matrix that is built around the elements of time and space. As such it consists of four quadrants that span from internal to external space dimensions as well as present to future time dimensions. We use the matrix to illustrate the functionality of business that sustainability touches upon. It is argued that sustainability works as a strategic asset in any of the quadrants, and that sustainability works holistically as a strategic asset in the case that all four quadrants are covered. The matrix thereby serves as a strategic framework for sustainability (see figure 6, page X).

Viewing the framework in a contingency perspective, sustainability becomes a strategic asset for companies when a chosen step supports a strategy and competitive position. This entails choosing the right green for your company (e.g. Orsato 2006) – where strategy and operations can gain a competitive advantage on either cost saving mechanisms or revenue increasing. The matrix can furthermore be used as an assessment tool to evaluate sustainability performance. If the four quadrants are not balanced (Hart 1997) sustainability will have difficulty becoming a strategic asset to the company, i.e. if the lower-half contains more actions than the upper, it is not integrating any proactive actions that supports future trajectories or forestalling future issues. By this a manager can see the maturity level (Baumgartner & Ebner 2010) of company sustainability work and address the remaining quadrants in order to make sustainability a strategic asset. The last way to look at the
framework is in a strategic sense, where it is seen holistically and as a guiding pane for the steps and actions the company can take on a progress towards a vision.

We do not look into how the framework should be used, but we will place the steps in the matrix as these will be the same no matter how the matrix is used. By this a company will become more knowledgeable on sustainability and hence a possible change in perception can emerge.

5.2.1 Working with the sustainability steps

Present-Internal represents steps that are primarily internal and near-time to the company. As indicated before, natural first actions that companies undertake are actions that relate to this, also called low-hanging-fruits. We place the steps; become eco-efficient, avoid environmental risk and expand borders into this quadrant, as they relate to the current internal operations of a company. By undertaking steps in this quadrant new capabilities are developed to handle business issue related to the current organisation, and sustainability will become an asset if implemented with respect of current capability development trajectories. These new capabilities hold the possibility to be exploited towards also developing elements within the lower-right quadrant.

Present-External represents actions that are near-time but also includes salient stakeholders that are external to the company. Again, some of the more well-known sustainability actions (i.e. marketing) are placed within this quadrant. We place the steps; integrate stakeholders, ensure transparency and join forces into this quadrant as these address issues and actions that are external to the company but related to current activities. In this relation newly developed capabilities raised from actions within the present-internal quadrant can be exploited as stepping-stone bases for further development. Developing a capability, e.g. organised and prioritised stakeholder integration, is of great significance in this quadrant.

Once actions within the present internal and external operations have been executed and supporting capabilities developed, it is apparent that the company can exploit this situation and innovate and re-develop capabilities to handle more issues and operational challenges for the company. This is also known as going beyond compliance or having a proactive stance on sustainability.

Future-Internal represents actions that are providing future solutions. Radical designs and new ways of handling business operations and markets are the focus of this quadrant. We place the steps; design for sustainability, differentiate and race to be first into this quadrant as
they address operational designs for sustainability, and look into how products and business models can be developed or re-defined.

Actions, steps and capability development within the three mentioned quadrants are measurable and can be identified as strategic if they are pinged against a single point of reference, namely that of a sustainability strategy.

*Future-external* represents sustainability visions and strategies. With a sustainability strategy the right actions and steps to take will be guided and capability trajectories defined to make sustainability more than a regulative constraint, but to make it a strategic asset. We place the step; *plan for the future* into this quadrant, as this step is related to future growth trajectories and visions for the company’s sustainability performance.

The result is illustrated in figure 6.

<table>
<thead>
<tr>
<th>Internal</th>
<th>External</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Future</strong></td>
<td><strong>Plan for the future</strong></td>
</tr>
<tr>
<td>Design for sustainability</td>
<td></td>
</tr>
<tr>
<td>Differentiate</td>
<td></td>
</tr>
<tr>
<td>Race to be first</td>
<td></td>
</tr>
<tr>
<td><strong>Present</strong></td>
<td></td>
</tr>
<tr>
<td>Become eco-efficient</td>
<td>Integrate stakeholders</td>
</tr>
<tr>
<td>Avoid environmental risk</td>
<td>Ensure transparency</td>
</tr>
<tr>
<td>Expand borders</td>
<td>Join forces</td>
</tr>
</tbody>
</table>

*Figure 6: Sustainability steps in a strategic framework*

With this companies can integrate this thinking into strategy work, and perceive sustainability as a value generating strategic asset rather than a regulative constraint that adds costs to the company.
5.3 Part I findings

In making sustainability a strategic asset, companies should acknowledge how broad the potential of sustainability is. First, seeing the environmental problems as business issues and thereby an integrated part of doing business, should enlighten the perception of sustainability threats and potentials. Second, we see common denominators across various disciplines, and we find that these denominators can be merged into ten sustainability steps, which we argue comprise all actions for sustainability that span from near-time internal operations to future external. Third, by integrating these into a matrix, we find that companies can use this knowledge to assess strategy work. Fourth, by integrating sustainability steps as stepping-stones that build on current and new capabilities, companies can address the entire strategic framework and possibly integrate sustainability into all business areas.

This full-suit fact base creates a new logic for sustainability; the integration of environment can evolve into sustainability being a value creating asset for the company. Hence sustainability is not only the actions or steps a company can take, but also a value creating effect.
Part II

6.0 Creating value with sustainability

To edify the perception of sustainability, we look into the financial case for sustainability. We explore this by emphasising the core of business; value creation.

In developing the financial case for sustainability, leading companies speak the language for business: value creation. They assess their sustainability strategies as they would any investment, systematically evaluating every value-creation lever – including intangibles. (BCG 2009; 20)

Emphasising how sustainability creates value matches our epistemological reasoning – companies exist to earn money – and sustainability efforts should therefore make sense financially before being pursued. In relation to the scope of sustainability this accounts for the economic dimension. Furthermore, an inclusion of intangibles matches our choice of a resource-based view.

In the following section we; first introduce the concept of value creation and outline a model of value creation levers, and second introduce basic elements of resource-based theory to emphasise how resources and capabilities are core in sustainability leading to value creation. Thereby this chapter functions as a theoretical foundation to the following two chapters.

6.1 Sustainability creating value

The conviction that sustainability, or efforts related to environmental management can contribute positively to the economic dimension in companies has been shown in various studies (e.g. Klassen & McLaughlin 1996; Christmann 2000; Lanoie & Tanguay 2000; Lo & Sheu 2007; Ambec & Lanoie 2008). Through an overview of these and other related studies, we see that this economic and environmental correlation is labelled differently. These labels can be; firm performance (Klassen & McLaughlin 1996), premium profits (Rosso & Fouts 1997), competitive advantage (Porter & van der Linde 1995; Porter & Kramer 2006; Dangelo & Pujari 2010), sustainable value (Hart & Milstein 2003), sustainable value added (Figge & Hahn 2004), long-term shareholder value (Lo & Sheu 2007), economic performance (Ambec & Lanoie 2008), sustainability economic value added (York 2009).
In chapter 4.3, we found how various business methods for sustainability differ, but nevertheless touch upon the same interfaces for action. We also see this phenomenon in the differing labels above. Although the optic and action on sustainability benefits differs (performance, advantage, economic value, etc.) we find that the financial outcome is the same; reduction in costs or creation of revenue – two aspects that are evidently related to value creation.

We lean on an understanding of value as ‘premium profits’ (Rosso & Fouts 1997; 535). Premium profit is based on the idea of traditional profitability, but is added a resource-based dimension in the sense that premium profits are unique to the company due to uniqueness in the resources generating the profit (see further explanation in 6.2). Accordingly, premium profit can spotlight the environmental performance-economic performance relationship through the emphasis on organisational advantages. Related theorists have argued that premium profits also can be referred to as rents – accruing to the owners of scarce firm-specific resources rather than the economic profits from market positioning (Pitelis 2009). We choose to juxtapose the generation of rents with the creation of premium profits, and thereby also with the underlying levers to premium profits. We argue that premium profit is an appropriate value determinant when addressing how sustainability can create value in companies.

In assessing premium profits, we follow the logic that the competitive advantage gained through sustainability can be created through margin improvement and increased revenue (e.g. York 2009). As such, we use these as measures of value creation, to make a financial case for sustainability.

With inspiration from common economic literature, we argue that margin improvement can be achieved through the value creation levers; a) cost savings, b) risk management, c) pricing power, and d) employee engagement and recruitment. Revenue growth can be achieved through the value creation levers; a) market share, and b) new market entry. All things considered, we deploy an understanding of value, and structure our analysis of value creation according to this (figure 7).
6.2 A resource-based orientation of value creation

The resource-based view focuses on management and exploitation of existing company-specific assets (Teece, Pisano & Shuen 1997). Therefore, how sustainability creates value is directly linked to how resources are managed and exploited at the company level. Empirical studies adopting this orientation conclude that environmental responsive strategies and the emergence of competitively valuable capabilities are linked (Sharma & Vredenburg 1998; Klassen & Whybark 1999) because of companies’ development of distinctive resources.

...a firm’s competitive strategies and performance depend significantly upon firm-specific organizational resources and capabilities. (Sharma & Vredenburg 1998; 730)

In this vein, we lean on the following understanding of resources;

A resource refers to an asset or input to production (tangible or intangible) that an organization owns, controls, or has access to on a semi-permanent basis. (Helfat & Peteraf 2003; 999)
This understanding includes physical, human and organisational resources (Barney 1991). Accordingly, resources are assumed to be heterogeneous when integrated into a company context (and turned into assets such as technology, knowledge, information, firm attributes, organisational processes and informal relations). In this Barney (1991) argue that companies build and consist of resources that are; ‘valuable’ so it can exploit business opportunities and neutralise threats in the company environment, ‘rare’ compared to current and potential competitors, ‘imperfectly imitable’, and ‘nonsubstitutable’ with no strategically equivalent substitutes for this resource (Barney 1991; 106).

By this we also acknowledge that a resource is a phenomenon that exists in its own form (by being an asset or an input), but must be managed and exploited by organisational capabilities in order to generate the premium profits. We understand organisational capability as;

An organizational capability refers to the ability of an organization to perform a coordinated set of tasks, utilizing organizational resources, for the purpose of achieving a particular end result. (Helfat & Peteraf 2003; 999)

Following this understanding of resources and organisational capability, is the belief that a company gain competitive advantage, as it pursues a value creating strategy through a path that is different from its competitors. Furthermore, resources and capabilities can yield multiple competitive advantages, as both the economic and the environmental performance generated by these resources is related (Klassen & Whybark 1999). Thus competitive advantage is a result of specific resources and organisational capabilities, and is directly linked to the desired result of generating premium profits. With this follows that each company exploit its resources individually, and that premium profits will differ in-between companies undertaking the exact same sustainability step.

In a sustainability perspective, the competitive advantages generated by different forms of resources vary with the stability of the business surroundings (Klassen & Whybark 1999). The lack of environmental inclusion in the traditional resource-based view is addressed by Hart (1995) which proposes the notion ‘the natural resource-based view of the firm’. To Hart ecology is a source of competitive advantage, and he affirms that the integration of

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7 According to Barney the three types of resources are defined: ‘Physical capital resources include the physical technology used in a firm, a firm’s plant and equipment, its geographic location, and its access to raw material. Human capital resources include the training, experience, judgment, intelligence, relationships, and insight of individual managers and workers in a firm. Organisational capital resources include a firm’s formal reporting structure, its formal and informal planning, controlling and coordinating systems, as well as informal relations among groups within a firm and between a firm and those in its environment’ (1991; 101).
environmental constraints in the organisation and management processes will build new resources and develop capabilities that improve competitiveness. In sustainability value creation, the notion behind environmental opportunity and constraint is included as this is inevitable. The point is that when it comes to sustainability, one cannot evaluate or develop the resources and capabilities within before juxtaposing them to the external factors. Some argue for this approach as ‘dynamic capabilities’ and argue for exploiting internal and external firm-specific resources to address changes and business opportunities in the environment.

As such, we deploy a nuanced view of the resource-based view and claim that contingent factors are decisive elements in identifying firm-specific resources and capabilities.

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*Teece, Pisano & Shuen defines the two terms as: ‘Dynamic refers to the capacity to renew competences so as to achieve congruence with the changing business environment. … Capabilities emphasizes the key role of strategic management in appropriately adapting, integrating, and reconfiguring internal and external organizational skills, resources, and functional competences to match the requirements of a changing environment* (Teece, Pisano & Shuen 1997; 515).
7.0 Margin improvement and sustainability

As environmental concern enters the academic debate, the research field is divided into opponent groups asking whether or not it pays to be green. Proponents stating that it does not pay off, argues that environmental regulations for instance only impose extra costs onto companies and that these will continue to increase concurrently with the regulation rates (e.g. Walley & Whitehead 1994).

However, proponents stating that it does pay off point towards the cost reducing features of addressing environmental issues directly linked with company operations (e.g. Hart & Ahuja 1996). These features typically suggest pollution prevention programmes and point towards the positive effects that this action can have on various margin improving levers. Arguments such as these are often referred to as low-hanging fruits.

With off-set in the literature from proponents stating that green pays off, we define the financial case for sustainability by looking at the positive correlations of where sustainability can create value through margin improvement. We do this through four value levers that together comprise the notion of margin improvement; (a) cost savings, (b) risk management, (c) pricing power, and (d) employee engagement and recruitment.

7.1 Cost Savings

Through a review of literature on cost savings through sustainability (Klassen & McLaughlin 1996, Ambec & Lanoie 2008, Carter & Rogers 2008, BCG 2009, etc.), we have come up with the following categories to represent cost savings; (a) operational efficiency, (b) supply chain optimisation, and (c) lowering direct costs and taxes.

7.1.1 Operational efficiency

Operational efficiency is connected to efficient use of natural resources, in the sense that;

*Improvement of procedures, whereby a decrease in pollution is coupled with improved productivity through saving materials heightened use of sub-products, reduction of energy requirements or diminished disposal costs.* (Lanoie & Tanguay 2000; 41)

This shows a material and resource focus, where minimisation of the consumption of scarce resources and a more efficient use of the resource employed into organisational processes are delivering great benefits to the company in the sense of reducing costs. Reducing cost of
resources includes minimizing the use of energy, materials, water and land, as well as enhancing recyclability and product durability, and closing material loops.

Saving costs with operational efficiency can entail restructuring of and investments in company operations. Within sustainability these can concern internal regulations and/or standards for operations developed inside the company. The first refers to efficiency, and the latter refers to effectiveness\textsuperscript{9}. Among different opportunities for this, we find implementation of different systems and policies for reporting, and development of internal audits and incentive structures. We divide operational efficiency into; (a) acquiring technological or physical resources, and (b) developing resources and organisational capabilities.

7.1.1.1 Acquiring technological or physical resources

Acquiring technological or physical resources deals with how companies internalise technological resources or physical assets, and enable these via organisational capital. To obtain efficiency and cost savings companies can cautiously choose between schemes and standards that support company operations as well as environmental targets. Common for these schemes and standards is that they will function as a compliance policy, either a written or a physically measureable one.

According to Rosso & Fouts (1997), compliance policies aimed at end-of-pipe of operations must affect only physical asset resources in order to be acquired. These policies put ambitions towards pollution prevention. In this way, compliance with environmental standards is achieved primarily by adding pollution-removing or filtering devices to the existing assets of a firm, and does not require the company to develop expertise or skills in managing new environmental technologies or processes.

\textit{The technology is essentially self-contained, off-the-shelf hardware. Once such hardware is installed, it does not fundamentally vary production or service delivery processes.} (Rosso & Fouts 1997; 538)

Acquired resources will, however, become assets for the company because they are implemented into a heterogeneous context. Thus, over time these can give competitive cost advantages (Helfat & Peteraf 2003).

We find that such compliance policies are focused on the end-result of operational efficiency, and distinct to the core operations. A more close-to-operation compliance policy can be

\textsuperscript{9}Efficiency: performing a task in the most economic manner, or ‘doing the things right’. Effectiveness: doing the things in a way that gets you closer to a goal, or ‘doing the right things’. Efficiency relates to how much needed to spend or invest in relation to desired effectiveness.
acquisition and integration of environmental management system (EMS). Many companies employ large EMS to get practical suggestions and regulations to follow (i.e. ISO 14000 series of EMS). The series’ major objective of norms is;

... to promote more effective and efficient environmental management in organizations and to provide useful and usable tools - ones that are cost effective, system-based, flexible and reflect the best organizations and the best organizational practices available for gathering, interpreting and communicating environmentally relevant information. (iso.org)

Many companies worldwide have greatly enhanced competitive advantage on the cost side due to EMS oriented management (Orsato 2006). We agree to this statement. Companies simply use the systems to reduce or eliminate trade-offs between cost and environmental responsibility in organisational processes. Companies that invest heavily in EMS and safeguards can potentially avoid future environmental spills, crises, and liabilities. Costs resulting from material waste and ‘inefficient processes’ will also be minimised (Klassen & McLaughlin 1996; 1201).

An acquisition of EMS can lead to margin improvement, as stated above, but needs to be integrated into the company, since e.g. a third party technology is available to competitors.

The resource-based prediction would be that, if purchased from a third party, a physical asset itself cannot produce premium profits, as that technology is presumably available to competitors. However, if new physical assets are deployed in a way that allows a firm to capitalize on and enhance its internal methods for waste reduction and operational and fuel efficiency, such advantages are less transparent. (Rosso & Fouts 1997; 538)

For acquired physical resources to be integrated and generate margin improvement, acquisition alone is not sufficient. Companies need to deploy organisational capabilities in order to capitalise from the acquisition.

We find it common for both end-of-pipe compliance regulations and EMS that the acquisition of physical resources can be a source of cost savings. We note that standardised systems are less likely to result in premium cost reduction, as these are available to all in an industry. However, less standardised regulations, will open opportunities for competitive advantage on cost saving and uniqueness as well as higher embeddedness. In this matter, EMS compared to end-of-pipe compliance is by nature more unique and more likely to result in cost reduction.
We propose the sustainability step *become eco-efficient* in linkage with cost saving by operational efficiency. This step entails to optimise internal operations in the pursuit of becoming somewhat sustainability oriented. Effectiveness is in this step linked to schemes and standards that help improve the very same.

7.1.1.2 Developing resources and organisational capabilities

Embracing the notion of improved efficiency follows alterations in a company’s resources and organisational capabilities required to manage them. If a company is to implement a policy of using for example clean technology in operations, it requires increased skills from workers at all levels. This means that self-development of resources and capabilities to manage these, happens in a comprehensive and socially complex process, necessitating significant employee involvement, cross-disciplinary coordination and integration, and a forward-thinking management style (Russo & Fouts 1997). The process of developing a policy thus builds the capabilities of commitment and learning, integration and increased skills which are prime resources to the company in reaching greater cost reductions.

Some of the self-developed resources for greater environmental performance, efficiency and hence cost savings are measurable systems or policies that ensures that organisational capabilities are developed to manage resources towards sustainability performance. Accounting and performance measures are used to ensure optimal sustainability effectiveness, and should happen at multiple levels – individual, group and organisational (e.g. Zimmermann 2009). Some companies set direct measurable environmental targets (often related to environmental footprint or resource usage).

In example the American Fetzer Vineyards has included a strong waste management program that has reduced waste to landfill by 94% since 1990, while growing production by almost 50%. The employees recycle all of the usual suspects and those items that are unique to wineries like corks and diatomaceous earth. Fetzer bails 150 tons of excess cardboard, 20 tons of shrink wrap plastic, and 210 tons of glass for resale. Fetzer estimates to have saved well over $150,000 in dump fees by reducing waste. Additionally, Fetzer has an extensive composting program that incorporates all of the skins and seeds from the crushed grapes, approximately 4000 tons that are windrowed and covered for the winter rains. The compost is then used as a natural fertilizer in the vineyards and landscaping (fetzer.com). By strategically following up on these measures, greater operational effectiveness is claimed to be achieved – since the quality of the same job done is enhanced – and environmental targets are obtained.
and costs are saved. These measures enhance the development of organisational capabilities able to achieve greater efficiency and cost savings.

According to Zimmermann (2009) a positive outcome of this lies in the developed capabilities’ ability to identify and implement company-value-increasing proposals to modify technology (e.g. schemes, certifications, standards) and avoid value-destroying changes.

As a self-enforcing process, pursuing sustainability through efficiency might create human resource or knowledge spillovers to related operational practices.

For instance, learning how to use energy more efficiently or exploit waste and by-products in one production plan might benefit other production plants and improve managerial expertise and, therefore, might entail knowledge spillovers among a firm’s division. (Ambec & Lanoie 2008; 51)

It is often linked to a company’s eco-footprint and is generally associated with a waste of resources, with raw material not being fully used or with lost energy, and hence often coincident with improving the productivity with which resources are used (Porter & van der Linde 1995). In relation to cost savings, pollution can also be seen as economic waste that involves unnecessary, inefficient or incomplete utilisation of resources – or resources not used to generate the highest value (ibid). We note that the uniqueness of companies will affect the degree of efficiency, and hence the degree of rent generation through enabled organisational resources.

Development of resources and of capabilities to manage these is a comprehensive process that also needs a forward-thinking management style. In this relation, new business models can emerge as organisational capability. Take for instance the copier company Xerox. Xerox viewed its leased copiers as high-quality inputs for the production of new copiers, as the leased copiers were returned to Xerox instead of disposed by the customer (Hart 1995). Such a model ties together design and manufacturing functions, along with the units responsible for interfaces with customers, resulting in company-wide gains in operational efficiency and cost savings.

Forward-thinking management styles also scrutiny industries for potential partners associated with the company’s waste. Many companies can reuse the material that another company finds as waste and emission. In example, a few years ago the Danish industrial development company Frandsen Industri, made a groundbreaking innovation in recycling machinery. On annual basis, the Danish fishing industry leaves more than 700 tons of plastic
waste from nets etc. The company receives this plastic waste, recycles it and then produces new plastic sources for the entire plastic industry (frandsenindustri.dk). In this manner, the company not only uses another industry’s waste as input for its products, it also saves resource usage in general. This example shows that companies with industrial plastic waste can reduce emissions and save waste disposal costs, if they partner with a recycling company.

We find that the development of e.g. a sustainability policy can enable development of organisational capabilities to manage and behave according to this new resource. We furthermore see that this often follow greater efficiency gains for the company as a wide whole, which is why cost saving is achievable through the creation of resources and organisational capabilities.

Again, we propose the step become eco-efficient that entails refocusing use of materials and energy and by considering product operations through the development of resources (e.g. policies) that enables new organisational capabilities.

For all parts of operational efficiency (both acquired resources and developed resources and capabilities), companies that are most likely to benefit from operational efficiency are those where the production process is flexible, and in industries where market-based instruments (such as pollution taxes and tradable permits) are implemented. These companies have a larger amount of variable costs associated with production and operation (e.g. energy, material, and services).

In general, companies that supply the industrial markets face relatively high levels of processing costs, and these generate waste or by-products that can be targets for reduction. Furthermore, the above step is relevant to companies with customers that are not willing to pay more for a greener product, e.g. industries with higher regulation levels and higher price competition.

7.1.2 Supply chain optimisation
Sustainability attention has followed proliferate variety of literature concerned with supply chains and how to integrate these. According to the empirical study Baden, Harwood & Woodward (2009) several economic benefits can be obtained by integrating sustainability throughout a company’s supply chain. Efficiency gains and cost savings are either definitely or probably a benefit from internalising and fulfilling criteria of responsibility (similar to codes of conduct) in the supply chain. It is argued that economic benefits are realised, and that
cost savings is one of them. We take this empirical study as a note for further exploring premium cost reduction.

Carter & Rogers (2008) argues for different ways of reducing costs in supply chains. Costs savings can be obtained through a reduction in packaging waste, and the ability to design for reuse and disassembly. These capabilities can lower costs by reducing payment to third parties for taking care of waste, and through a lower material consumption as production input is based on prior utilised materials. In this, learning is a key capability.

Learning that occurs between buyers and suppliers concerning environmental ... activities such as working with suppliers to commit to waste reduction goals and developing capable minority business enterprise suppliers takes time, but such learning can have a strong positive influence on supplier performance and reduced operating costs in supply chain relationships. (Carter & Rogers 2008; 374)

Interestingly, while supply chains seemingly are external they are in many ways less transparent and more difficult to imitate, e.g. due to the learning that stems from internalisation.

Another cost saving notion in the literature about sustainability supply chains concerns the formulation, implementation and enforcement of codes of conducts and determination of price on goods and materials. This is related to when companies develop resources and capabilities to manage these. Potentially implementing codes of conducts in supply chains can create an overall lower cost and appoint buyer power to the buying company. According Yu (2007) this power gives possibility for buyers to outsource its policies to suppliers, especially SMEs in foreign countries. For instance, when the supplier is situated in a developing country and the buyer in a Western, costs related to the implementation of codes of conducts are situated with the supplier and furthermore functions as a barrier for the supplier to engage with other buyers. Here both buyers and suppliers can engage in strategic partnerships that ensure a constant strive for reducing costs throughout the supply chain. As a further note, Carter & Jennings (2002) argue that increased involvement by purchasing managers in responsible

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10 56% respondents signed that efficiency gains that eventually will lead to cost savings is either definitely or probably a benefit from undertaking criteria of responsibility (similar to codes of conduct) in the supply chain. In this vein, 82% would be happy to comply at environmental criteria (in distance to 55% at social criteria). Combined, it shows that economic benefits from undertaking environmental responsibilities in supply chains are recognised, and that cost savings is one of them.
activities leads to improved trust and commitment with suppliers as well as increased supplier performance. The study also suggests that suppliers may gain an improved competitive position due to increased commitment and improved performance in lead times, quality and efficiency.

We find that integrating and developing supply chain resources can result in a tighter involvement and can actually create a longer-lasting and less imitable set of organisational processes and capabilities. This is particularly present when suppliers are engaged in the design for disassembly and reuse (Carter & Rogers 2008). Furthermore, companies can benefit efficiency and cost savings with the development of codes of conducts and new capabilities in the supply chain to manage these, not only for the company but for its partnerships with suppliers as well.

We propose the step *expand borders*, which includes value chain practices such as product life-cycle analysis and minimisation of the waste generated external to the company. Furthermore, the integration of codes of conducts is related to the step *ensure transparency* in the way that guidelines, charters and codes of conduct will support a greater information stream and transparency on company operations throughout.

Every company dependent on supplies from other parties can benefit from supply chain optimisation and developing codes of conducts to be implemented throughout the chain. However, it is apparent that the companies that are dependent on goods from suppliers that produce large amounts of waste or have a heavy resource usage would benefit more from supply chain optimisation.

### 7.1.3 Lower direct costs and taxes

Lower direct costs and taxes can be obtained in many ways through sustainability. Direct costs are associated with bank interests, funding possibilities and building expenses whereas taxes are associated with CO$_2$ quotas, green fees and environmental taxes.

When a company officially claims to engage in sustainability activities, it will become known to its surroundings. By the fact that potential investors scrutinise markets, and that these according to Ambec & Lanoie (2008) assign extra value to sustainability companies, it entails that companies engaged with sustainability have better access to capital markets. In this vein, shareholders in general is influenced by information on the environmental performance, and their reaction can be perceptible on their investments on the stock market, and lead to an increased funding access for the company (ibid). Moreover, sustainability companies gain
increased proliferation of the green (or ethical) mutual funds that arise in the business community of today. These aspects will generally lower the cost of funding (cost of capital) to companies pursuing sustainability due to regular supply-demand logic.

In addition to this, companies with better environmental performance or a sustainability trajectory can access bank loans more easily and at superior interests. Most banks have a team of experts to evaluate the sustainability performance of possible loaners. For instance, some Danish banks have appropriated funds towards green loans at particularly attractive terms with an extraordinary low interest rate, which helps making investments in green projects more profitable (e.g. the Danish company Nykredit, nykredit.dk).

Another direct cost saving notion is the one of green buildings. Although this requires investment, it will pay off and deliver cost savings in time. Take for instance the car manufacturer Ford. Ford has redesigned a plant site to reduce emission levels. They have implemented a so called ‘living roof’ – a roof of soil, grass and other excrescences, which is designed to keep the plant warmer in the winter and cooler in the summer, e.g. saving air-conditioning operation costs. Furthermore, photovoltaic panels turn sunlight into electricity to supplement the building’s power supply. On the ground, solar collectors heat water for the building. According to Ford, this will deliver great cost saving benefits for the entire operation (ford.com).

Other possibilities for cost reduction are green fees, CO² quotas and taxes; better environmental performance leads to avoidance of green fees, smaller quantities of CO² permits to be bought and lowering of environmental taxes. According to the Danish ministry for taxation, these taxes have been imposed on the community with the sole purpose of changing environmental habits and address energy use, transportation extents and environmental concerns (skm.dk). By addressing sustainability a company can lower or avoid these taxes and reduce direct costs (Ambec & Lanoie 2007), as in the mentioned example of Fetzer Vineyards and their $150,000 savings in dump fees (7.1.1.2).

We find that lower direct costs and taxes seem to be an almost natural consequence of engaging with sustainability. Better access to capital markets, bank loans and lower tax rates are following a company's sustainability efforts.

We propose the step become eco-efficient since it relates to mentioned efforts regarding e.g. establishing eco-efficient production, reducing waste, increased productivity of organisational processes. Moreover, companies must ensure transparency of the many sustainability efforts
in order to meet the market’s scrutinising and make shareholders and funding stakeholders aware of the environmental responsibility.

We find that lower direct cost and taxes is a natural consequence of a company’s sustainability efforts, and propose that this cost benefit is more likely for all companies pursuing a sustainability strategy, in one way or another. However, some companies have additional opportunities, such as large companies with shares exchanged on the stock markets, and companies that undertake greater business transformation that requires funding.

7.2 Risk management
Growing awareness on companies’ eco-footprints and political pressures for behavioural changes has resulted in an intensification of company control practices. By this, 67% of the largest companies have made sustainability reporting a part of the risk management programme (Anderson & Anderson 2009). Furthermore, integrating sustainability measures into your organisation inevitably follows some sort of risk management or risk avoidance for the future, be it short or long term risks.

Proponents of risk management and sustainability risk management suggest that these two notions go well hand-in-hand. In a perspective related to basic understandings of sustainability, such as the Brundtland definition (see 3.1.1 Emergence of CSR and Sustainability, page 16), sustainability risk management is a framework for assessing the impact of present decisions on the future.

Any definition of sustainability that is covered by this perspective has to consider the future consequences of present actions. All we can do is to assess the risks that present decisions impose on future individuals. So sustainability needs to be stated in terms of risks rather than in terms of certitudes. (Krysiak 2009; 483)

From this broad point of view, despite the positive talk, the new wave of risk management can be regarded as a defensive reaction to an increasingly demanding environment. In this matter, environmental concerns have been essential for companies’ initiation of risk management. Basically, with risk management company resources can be directed towards areas where they are most demanded and risk is deemed (Power 2004).

On a further note, risk arises when vulnerability exists within a company’s operating system in the absence of effective control and countermeasures (i.e. lack of risk management). To avoid risk, Kytle & Ruggie (2005) argue that companies must develop capabilities to integrate
stakeholders, and thereby address risks associated with these. In doing this companies will and must build a learning base on its external surroundings and edify risk management capability with knowledge. In this vein, an improved environmental performance can allow a company to anticipate and reduce the risk associated with external stakeholders such as customers and activist organisations. For instance, environmentally friendly goods are less likely to suffer from a boycott campaign orchestrated by ecological groups and carried out into the media. As an example to this, during the 1990s Nike was a profitable company with a superior employee image. But Nike’s goods were made in overseas factories/sweatshops with very poor working conditions. After nongovernmental organisations (NGOs) exposed this aspect, Nike’s profits and stock price suffered. As a result, Nike has done a turnaround in managing its sweatshop risks. Each of their 700 manufacturing locations is transparent and identifiable, and international monitoring groups can observe working conditions freely (Anderson & Anderson 2009). Insight from this is how Nike changed the organisational capabilities e.g. company design, and managed human capital by undertaking changes and committing to transparency.

In agreement with Kytle & Ruggie (2005), risk management has the possibility for a more effective decision making as surrounding risk factors are becoming of equivalent strategic value for the company – in particular the globally extended company – and relevant for all companies’ value propositions. In this vein, Godfrey, Merrill & Hansen (2009) argue that risk reduction protects the company profit against the deadweight costs\(^\text{11}\) of severe financial distress.

\[\text{Specifically, if managers can reduce the firm’s exposure to firm-specific risks that give rise to deadweight costs in a way that investors cannot diversify away, then value is added through risk management.}\] (Godfrey, Merrill & Hansen 2009; 427)

On a broad basis companies can exploit newly acquired resources such as EMS (e.g. ISO 14000) built on total quality principles to provide guidance for the development of systematic processes and capabilities geared toward removing waste and lowering risks throughout the company’s operations as well as lowering future costs. Moreover, by launching projects and

\(^{11}\) Deadweight costs associated with financial distress occur when other real, not merely opportunity, costs are imposed on the firm as a result of the loss event. Such costs may include legal costs associated with distress, refinancing costs, the diversion of managerial time and attention, tighter supplier terms, loss of key employees, or the diminution of brand equity or reputation. Stulz (2002) reports estimates of the expected value of these, and other, deadweight costs at around 3 percent of asset value (in Godfrey, Merrill & Hansen 2009; 427).
measurable accounts for lowering resource consumption and decreasing emissions, risk and costs will be reduced over time. As noted by Varney;

*For example, projects for reducing water usage in production and setting goals to reduce carbon emission can lower risk – and lower costs simultaneously.* (2008; 26)

We find that cost savings are possible to obtain from external risk management by avoiding accrued environmental liabilities, fines, warnings and penalties, as well as product take-back programs in compliance with or in addition to regulatory initiatives. A company’s vulnerability and threat for any type of risk can be reduced through better internal and external sensing, reporting, and monitoring. We see that when it comes to lowering external risks from e.g. government regulations or activist organisation intervention, the estimation of how vulnerable a company and hence the estimation of risk costs saved and profitability ensured, is highly uncertain. Nevertheless it is information directed towards the company management as well as the external stakeholders that can add a positive outcome for the company profitability. Gaining knowledge of environmental expectations from better relations with stakeholder groups, increased understanding of internal standards by which companies should abide, and a smaller allocation of resources are all enabled by linking environmental sustainability through a risk management program – and will all result in probability of lower costs. Basically, integrating sustainability considerations into all kinds of risk management will lead to better decision making (Funk 2003). Yet, the generated profit is not directly accountable, since it is future, and should thereby be considered as probabilities of profits.

We propose the step *avoid environmental risk*, since this directly relates to risk management. However, this step does not stand alone, as the actions related to this lie within the steps *become eco-efficient; expand borders; integrate stakeholders; ensure transparency*. To cope with future business, companies should consider *design for sustainability* and *plan for the future*, since these cover the future handling of risk management. This shows that sustainability risk management is touching upon various features of strategy and operations, spanning from internal to external space, to present and future time.

Companies within production industries with heavy emission rates and waste generation, as well as industries where production is dependent upon a high level of materials and energy usage are by definition disposed with a higher risk level than for example the average
consultancy within the service industry. However, an assessment of future risks, i.e. the avoidance of a boycott due to low sustainability commitment will inevitably lead to a reduction in cost in the long term.

7.3 Pricing power
As another lever for margin improvement we explore a company’s pricing-power. For pricing power to generate margin improvement, there are two possibilities; to lower cost of selling to customers or to lower cost of buying from suppliers.

Miles & Covin (2000) points towards a general trend in industries and claims that stakeholders and suppliers have become more concerned with the company’s overall reputation when selecting between potential strategic alliances. This statement stresses the importance of companies to seek new ways to utilize environmental marketing capabilities as a source of enhancing reputation and competitive advantage. We use this as off-set to explore pricing-power.

Pricing power is relative to the expectations of the persistence of price and cost movements. Traditional pricing power theory argues this when it comes to persistency towards customers.

In other words, the extent to which a firm matches an increase in costs or prices at other firms by increasing its own price depends on how persistent the increase is expected to be. (Taylor 2000; 1390)

We focus on pricing power as related to how persistent companies can act when bargaining prices for e.g. needed materials, or when they will not accept higher prices from suppliers. The interesting here is capabilities’ ability to achieve this pricing-power.

Superior reputation provides an advantage, which may result in pricing concessions, as well as other benefits outside the scope of pricing power (i.e. morale, risk, flexibility) (Miles & Covin 2000). We see pricing concessions as the main argument for companies to succeed with pricing power in supply chains. Moreover, superior reputational advantage is the determinant in this matter, and we find environmental performance as having influence on this. As Miles & Covin state;

Reputational advantage, as a function of credibility, reliability, responsibility and trustworthiness, is enhanced by superior environmental performance. (Miles & Covin 2000; 300)
In order to achieve this reputational advantage, environmental reporting is significant. Annual or biannual environmental reports are to be designed for enhancing companies’ reputation (ibid).

When environmental performance is positively linked with increased reputation, this follows a possibility to sell the same amount of products for less marketing costs.

*Reputational advantage greatly enhances the corporation’s marketing efforts by providing the opportunity to target quality sensitive segments with less price dealing and potentially lower selling costs.* (Fombrun 1996 in Miles & Covin 2000; 300)

We find that companies must create a specific or rare reporting resource in order to achieve a reputational advantage. Creating this will lead to credibility, not only internally, but also externally. Thus, sustainability directly affects costs through pricing concessions made possible by a company’s capability to utilize pricing-power through reputation. In addition, if companies utilise standard frameworks provided by e.g. CFOs, it will affect the reliability of the reports, in the sense that these are comparable to the ones from competitors. We find that building and expanding relationships and potentially gaining concessions can be obtained by creating superior reputation through a superior environmental performance. E.g. reputation can lead to a higher favourability among sales channels, since these have a higher interest in being associated with a positive reputation. Thus, possible sales channels will rise, pricing concessions are more likely, and sales costs can be lowered.

We acknowledge, that the competitive level of buyers also will affect the pricing power possible to realise in supply chains, due to traditional economic mechanisms of demand and supply. However, we do not engage further into this mechanism in margin improvements, but address this reputational advantage in relation to revenue growth on page 68.

We propose that companies can undertake *ensure transparency*, which is essential since it creates awareness among stakeholders and possibly provide a positive reputational change. Moreover, *expand borders* is significant in order to stay persistent in determining prices. Finally, *become eco-efficient* is relevant in order to create an annual reporting, which will enhance reputation. In this vein, possessing certificated production and products will automatically add value to any marketing initiative due to the certificate’s image and ethical value (e.g. ISO, or any green labels).
7.4 Employee engagement and recruitment

In literature on companies’ environmental performance we see that sustainability has multiple effects on costs associated with employees, e.g. motivational effects, recruitment effects, and externally directed effects. However, all of the effects stem from the fact that companies engaging in environmental initiatives either directly or indirectly affect the most important resources – the employees – and their ability to perform. This points toward multiple possibilities for companies to reap economic rewards by reducing costs, in particular cost of labour.

Positive effects on employee motivation can result from an improved reputation, or stem from the employee’s morale and ethics. The latter can be enhanced by voluntary engagement in extra-activities within sustainability, which will contribute to the feeling of a deeper purpose (Weber 2008).

For example, increased employee motivation can increase productivity and eventually result in cost savings. (Weber 2008; 250)

De Backer (1999) (in Ambec & Lanoie 2007) provides evidence that working with environmental systems, such as EMS will contribute more to employees’ motivation compared to traditional management systems. In particular ISO 14001 has significant positive effects on employees’ morale and productivity, much more than the ISO 9000 certification. In this vein, Grolleau, Mzoughi & Thomas (2006) (in Ambec & Lanoie 2007) show that improving human resources is a significant incentive for the decision to obtain the ISO-14000 series certification.

A greater employee motivation stems from an increasing human need for self-actualisation. While it is important for people to self-actualise in private, there is an increasing pressure on a professional job to contribute to this self-actualisation (Newholm & Shaw 2007). Thereby employees who look for more than just a payment (which according to Friedman (1970) is none) will find inner resonance from working with sustainability. This professional self-actualisation is explained as:

Processes of self-actualisation are determined increasingly by individual decisions about employment and labour, as well as consumption and leisure.

(Parkins & Craig 2006; 13)

This seems in accordance with the contemporary MIT study, Bhattacharya, Sen & Korschun (2008) that stresses the two-way communication between employee and management to be
essential for CSR to lead to motivation and result in cost reductions. This thereby implicitly states that a high aspect of motivation is how sustainability is actually managed in general. Exploring this here, however, is not relevant.

Sustainability activities in general can also directly or indirectly affect the attractiveness of a company for potential employees. A recent study shows that 90% of MBA students are willing to forgo financial benefits in order to work for a company with better reputation for corporate social responsibility and ethics (Montgomery & Rasmus 2003). Researchers have suggested that initial applicant attraction to a firm is based on perceptions of the firm's image, which is influenced by the firm's corporate social performance (Thurban & Greening 1997).

Results indicate that firms higher in CSP [corporate social performance] have more positive reputations and are more attractive employers than firms lower in CSP. Such results suggest that potential applicants are aware of firms' corporate social performance and that those with more positive ratings may have competitive advantages because they attract more potential applicants than firms with lower CSP ratings. (Thurban & Greening 1997; 666)

Furthermore, motivated employees will act as ambassadors for the company, and thereby potentially increase the applicant pool. Companies that attract more qualified applicants have a larger applicant pool, which results in greater effectiveness of the company’s recruitment process. This can be considered as an indirect cost reduction, due to a lesser effort to be put into attracting candidates. In example, during the late 1980s and 1990s Merck developed a drug that cured river blindness, a painful disease that afflicted millions in tropical Africa. None of the affected could afford to pay for the drug. After failing to get the U.S. government and the World Health Organization to pay for the medicine at cost, Merck made the decision to supply and distribute it to all affected populations free of charge, and by 2003 it had treated about 30 million people through this programme. The cash cost to Merck was considerable, however, the CEO Vagelos states that Merck’s River Blindness programme enabled recruitment of very able scientists who would not otherwise have been available (Heal 2005; 396).

On a further note Heal mentions that people seek to for ‘good’ companies (2005; 396), companies they can be proud of. One reason to this is that employees do not like having to justify or excuse their companies to friends and families, and as a result sustainability
companies have relatively more success with recruiting, maintaining and motivating employees than companies with poor records.

We find that there is a link between environmental performance and costs saved from employee engagement and recruitment. Human resources have a higher production of valuable rents to companies by being more productive. In this, the organisational capabilities, which forms the scope of self-actualisation within the human capital, plays a vital role in creating rents through lower labour costs. Included are the indicators of fluctuation rates, turnover and absenteeism.

We propose that companies should ensure transparency in order to make surroundings aware of sustainability initiatives and records. Become eco-efficient is also affecting motivation, since this will participate in creating an ethical company, attractive for employees. Design for sustainability can improve motivation through productiveness and self-actualisation since it gives a possibility for employees to pursue innovative sustainability initiatives aimed at handling the future.

A part from this, we believe that most other sustainability steps can contribute to motivation and recruitment, as employees make a holistic assessment of companies. However, the direct economic effects are debatable.

Generally, a reduction in cost of labour can be obtained by all companies. Companies more likely to save costs on recruitment can be companies whose emissions might affect their worker’s health and companies in areas where sensitivity to environmental care is particularly important. Moreover, we include companies that seek to attract young, well-educated employers.
7.5 Sustainability leads to margin improvements

We have found that companies engaging with sustainability can benefit from its effects on the value creation levers for margin improvement, and that the financial case for sustainability can be created and obtained with a focus on which resources are needed and how the developed capabilities should manage these resources. The following sums up the above exploration of margin improvement and its defined value creation levers (figure 8).

Figure 8: Margin improving value levers affected by sustainability actions

- Acquisition and development of resources and capabilities for greater operational efficiency
- Developing and employing of codes of conduct for waste reduction, reuse and disassembly, for greater supply chain optimisation
- Access to green funding, fewer payments of emission quotas and lower taxes for lower cost of capital

- Systematisation of development of processes and capabilities for greater internal risk management
- Integration of stakeholders to avoid accrued liabilities, fines, warnings and penalties for greater external risk management

- Developing a sustainability reputation for greater marketing power and sales channel power
- Using reputation to access lower price products and materials from suppliers due to higher pricing concession

- Beyond compliance commitment to environmental concerns for increased productivity and lower cost of labour
- Developing a sustainability reputation for lower recruitment costs due to increased company attractiveness and number of applicants
8.0 Revenue growth and sustainability

The second profit generating variable that sustainability can positively affect is revenue. According to Kolk & Pinkse (2005) and Pinkse & Kolk (2007, 2010) external pressures such as global environmental issues make companies either compensate (through measures, emissions reductions and acquisition of credits) or innovate (process improvement, product development, new market/product combinations). They argue that the strategic focus preferably should be to innovate in order to manage external pressures as well as achieving new sources of revenue growth. However, as introduced previously, BCG (2009) found that the main driver for pursuing sustainability is to gain corporate legitimacy. Moreover, less than one out of ten, saw revenue creation as a main benefit of sustainability.

The issue of managers not perceiving sustainability as a mean to revenue growth, is addressed by the empirical study Dangelico & Pujari (2010), that states how external regulations does not entirely represent constraints to how a business should grow and comply, but regulations actually do offer possibilities for preservation of revenues and opportunities for new business creation. Moreover, incentives for pursuing sustainability should be the possibility to follow market growth, and thus increase company growth.

A view on economic sustainability literature shows that certain economic benefits related to revenue growth can arise from integrating sustainability into business e.g.; return on investment, increased sales, development of new markets, improved corporate image, product differentiation, and enhanced competitive advantage (Miles and Munilla 1993; Shrivastava 1995; Miles and Covin 2000; Pujari, Wright & Peattie 2003; York 2009; Fraj-Andrés, Martínez-Salinas & Matute-Vallejo 2009). Common for these is that revenue growth can be obtained through either; an increased penetration of market in which the company is already present (current revenue streams), or by starting up in a market that is new to the company (new revenue streams).

As such, we separate this section into the value creation levers; (a) market share, and (b) new market entry.

8.1 Market share

From a resource perspective companies earn higher profits, and generally have higher market shares, if they have ‘better’ resources that provide competitive advantage and are impossible to replicate at equal costs (Montgomery & Wernerfelt 1991). Resource profiles and market
shares are seen as contingent in the sense that if resources change the relative market shares typically change as well. In this it is of great importance that companies both acknowledge the threat from competitors that are somewhat going beyond compliance with R&D capabilities or have a valuable resource such as their sustainability reputation, and the apparent contingent relationship between some resource profiles and the relative market share.

With off-set in preceding research on how to affect market share with sustainability, we outline the exploration of this section with these categories; (a) reputational advantage, (b) customer retention, (c) gain strategic market share, and (d) differentiate products.

8.1.1 Reputational advantage
One of the factors that suggest greater profits through market shares is reputation. A reputation for leadership in environmental affairs will increase sales among customers that find these issues important. When a company develops an environmental policy, it must also develop a reputation for that policy, since such a reputation in itself is a source of market advantages (Russo & Fouts 1997). As an example to the link between reputation and profits, large hotel chains such as Marriot, Fairmont and MGM generally credit part of their profits to their reputation for pro-environment corporate behaviour, because they realise that a good and effective sustainability strategy and the gain for market shares (propaganda.com). What can be argued is that once gained, this reputation is itself a valuable and inimitable resource.

Along with the increasing awareness of environmental issues proliferate market opportunities are present. Customers are increasingly choosing green alternatives over existing generic products, because they are more influenced by environmental considerations than ever before.

> Marketers are facing increasing challenges to address sustainability issues in order to attract, satisfy and retain customers. The size of green markets is increasing and is likely to get bigger in future. These changes and expectations make it essential for researchers to investigate green product innovation. (Dangelico & Pujari 2010; 473)

Market data shows that there is a strong growth in green and ethical products and that this growth has been sustained over time. In 2009, the sector for green and ethical products was estimated to be worth £36billion (UK market alone) (see figure 9), and expenditure on ethical goods and services has grown almost threefold in the past ten years.
The possibilities for further market growth and market share gain will increase in the future. Exemplifying the scope of this statement, the total expenditures on environmentally friendly products and services represent less than one percent of total household expenditures, although the sector has increased tenfold through the last ten years (The Co-operative Bank 2009). It becomes our logic, that with these market trends companies have great opportunities to develop new capabilities for the exploitation of these market trends.

Whilst there are now many green advertising messages in the marketplace, it seems that there is still an opportunity to dominate in this territory. A recent UK survey found that 66% of people could not name a brand that is taking a lead in tackling climate change (The Climate Group 2008). It seems that brands are not connecting well with this committed and diverse green market. It should thus be recognised that information is key to ethical consumption.

*The increasingly well-informed consumer is not only demanding [green] products, but is challenging manufacturers and retailers to guarantee the ethical claims they are making about their products.* (Strong 1996; 5)

Because of this data it seems to be of great importance for companies to focus on marketing and communication capabilities in the pursuit of a pro-environment reputation that could potentially be linked with greater market shares. Ecological behaviour can be manifested through the degree of acceptance of ecological ideas within the company and through the degree of implementation into strategy processes. Within environmental orientation, it reflects what is expected of the company’s responsibility towards the natural environment and its
acknowledgement of the need to reduce the impact of its product activities. This is furthermore seen as a natural change in a company’s environmental marketing orientation (Fraj-Andres et al. 2008). Adopting this orientation must be done with the acknowledgement of the importance environmental protection has for economic interests. This performance so to say, includes how environmental criteria is integrated into the marketing decisions such as product design, distribution, consumption, and ultimate product disposition (Miles & Covin 2000) – overall it involves marketing efforts of each green engagement a company is concerned with. By this the reputation is the set of perceptions held by the customers as well as all other stakeholders. Excelling in this is a competitive capability.

The concurrent requirements for companies to simultaneously improve financial performance and environmental performance encourage companies to seek innovative ways to utilise environmental green marketing and management as a source of enhancing reputational and competitive advantage (ibid) – ultimately profitability through market share gain.

In this we see that marketing and information is an important factor for gaining market shares with sustainability as the selling force. The apparent sustainability step is to ensure transparency, in order to let all interested parties in on relevant environmental measures, values and reporting activities as well as overall communication on its sustainability stance. Developing sound communication routines and integrating schemes and standards that require reporting activity as well as deliver the potential for labelling and certifying products and services are important resources and capabilities to master. Balancing the level of information a company provide to stakeholders while still maintaining a degree of inimitability and rarity in how to master this is yet another capability to build. A potential way to obtain this could be through the step integrate stakeholders, i.e. integration of consumer and customer groups. As Hart (1995) would argue, correct stakeholder integration is a capability that can become a competitive advantage, which is of relevance as the company gains access to the direct source of whom it is to sell its products or services to. Hence stakeholder integration is a greater possibility to serve information of green features and product quality, price and disposal in a manner that will have impact on buying behaviour.

**8.1.2 Customer retention**
Environmental considerations can affect decisions to repurchase. Most of companies’ existing customers (both within business-to-business and business-to-consumer) will increasingly seek to live and operate in a more sustainable way. Offering sustainability as a business attribute will become an important factor in customer retention. Companies should ask the question of
how green one’s customer base is and how likely it is to be motivated by environmental issues (Helström 2007). Developing capabilities that handle environmental constraints or desires should also include systems or platforms for understanding customer bases. The platform total quality environmental management (TQEM) for example, is a platform developed by the global retailer Proctor & Gamble (P&G). The foundation of the P&G story is not around cost savings, although these have surely been realised. Being a company that knows that its products are in nearly every home in America and around the world, P&G has quickly responded to customers’ desires for more environmentally safe packaging and products (Shrivastava 1995), by a systematic integration of the knowledge and desires of its customers.

Also here, to integrate stakeholders into organisational development processes, is important to master, and hereafter to ensure transparency for these customers. An important point for company improvement is the information provided to consumers. Many consumers are concerned with environmental issues, but only some of them actually focus on sustainability when purchasing products (Ernst & Young 2010). The reason for this is not that consumers are less environmentally concerned, but that they are dissatisfied with the level of information. For example, the retail sector has been struggling with the labelling of sustainable products for a number of years now.

### 8.1.3 Gain strategic market share
In retail and in business-to-consumer markets, sustainability serves as a possibility for market share gain. However, sustainability also leads to potential strategic partners. In business-to-business markets (and in supply chains), companies can gain market shares by implementing various sustainability standards and developing more environmentally friendly products for other companies in need of green products or services – and even sell at higher prices required to meet the standards. Many companies will favour and in some cases even pay more for suppliers that meet their standards and share commitment to quality and sustainability. In 2008, this was the case for Wall-Mart:

> Paying more in the short term for quality will mean paying less in the long term as a company. Higher quality products will mean better value, fewer problems, fewer returns and greater trust with our customers. (CEO of Wall-Mart Mike Duke, businessassurance.com).

By this the bars are raised and pressure for providing evidence to ethical standards is higher to gain or even retain market shares. It might be that an unwillingness to pay more is present with consumers, but the willingness is more apparent with business-to-business segments.
Because of this the opposite of cost savings could be relevant for a company – investing in new green features that meet customers’ regulatory standards or even go beyond compliance by providing new and focused sustainability solutions for customers.

Capabilities for doing so often emerge from the sustainability step integrate stakeholders, and from product assessments in the step expand borders. Inherent in this approach is the idea that companies can evaluate and attack sustainability demands and issues together through the sustainability step join forces. Strategic alliances or projects joining forces between suppliers, competitors and customers can help solve environmental issues faster and regain or retain a responsible reputation while avoiding the risk associated with the handled issue. Take for instance the Danish chocolate producer Toms Gruppen and the energy supplier DONG energy. In a joined partnership they work to optimise energy use and reuse of material (cocoa shells) for new electricity development. As a result, both increase revenue as well as a greener and responsible reputation (dongenergy.dk), due to a strategic market share for DONG and a reputation for Toms Gruppen that could now gain market shares on a business-to-consumer market.

8.1.4 Differentiate products
When a product goes to market as green, sellable and differentiated, the product must meet some criteria to potentially increase market shares. These criteria include; (a) customers that are willing to pay for your product must be identified, (b) the information of the green feature of the product must be easily accessible for interested parties and (c) the product should not be easily imitable to competitors (e.g. Hart 1997; Reinhardt 1998; Aragón-Correra & Sharma 2003; Dangelico & Pujari 2010). Differentiating the product or service from those of competitors, and making it hard for competitors to replicate at equal costs, is an important competitive advantage in the battle for market shares.

In this there are various levels of which would be a competitive advantage. As argued in e.g. Miles & Covin (2000) product design, distribution, consumption, and ultimate product disposition are some of the variables scrutinised by the savvy customer. Delivering a green featured product ‘better’ than that offered by the competitor the advantage should become apparent (Montgomery & Wernerfelt 1991).

As an example of this, in 2008 P&G launched Ariel Excel Gel which is a new type of laundry detergent that claims to wash effectively at temperatures as low as 15 degrees Celsius. Ariel Excel Gel is differentiated in way that it contains three times as many low-temperature cleaning ingredients as competing liquid detergents. And the product comes in a recyclable
plastic container that uses 14% less packaging. The product reduces environmental footprint by consuming 40% less energy already at 30 degrees Celsius washing. According to P&G, introducing Ariel Excel Gel has not only been substituting current Ariel products, but also helped changing customer behaviour to go for Ariel, and hence it has increased P&G’s market share (Proctor & Gamble, annual report 2009, pg.com).

However, in some industries where regulations are strict and customers’ demands are price oriented or fixed, the competition for market shares is different (Green & Porter 1984). Although a company can differentiate on costs through greening production processes, it is not always possible to deliver a greener product at an affordable price. E.g. in the packaging industry where the products are somewhat similar, the differing point is price. Being able to compete on price, but still earn profits is a capability that demands for internal restructuring that makes costs lower and hence product prices lower. Then, the market share gain should become a possibility.

Looking at your products as resources (from product portfolio to resource portfolio), will follow a broader fact base of opportunities (Wernerfelt 1984), which will serve as a competitive force when integrating sustainability and exploiting the resources and capabilities emerging from these efforts.

By this we see that companies can gain higher market shares when differentiating products to incorporate a green feature and when the product meets customer criteria. The sustainability step proposed is differentiate, as this suggests a focus on offering green features with products that are differentiated from those the company itself or competitors offer.

### 8.2 New market entry

New market entry is companies’ enhanced ability to enter new markets and thus exploit new potential sources for revenue growth. It is related to redefining a product to adapt to new market segments, developing new products that create segments on existing markets or develop a new product to enter a new market. We refer to this as research and development (R&D). When a company integrates environmental constraints into its operations, different resources and capabilities such as technology, human capital and other intangible assets will be developed (Hart 1995; Sharma & Vredenburg 1998; Fraj-Andres et al. 2009).

We see that R&D holds the opportunity to increase revenue in three ways (figure 10); entry on an existing green market due to incremental R&D; entry on or development of new green
segment in existing markets due to radical R&D; and entry on completely new markets due to isolated R&D.

This logic is a structure in the following section; (a) incremental R&D for green market entry, (b) radical R&D for entry on or development of new green segment, and (c) isolated R&D for completely new market entry.

### 8.2.1 Incremental R&D for green market entry

Environmental constraints within the company can foster innovations on current products or services in a way that enables the product or service to live up to environmental standards or customer demands in an environmentally concerned market. In this the company is exploiting the newly developed resources and capabilities to achieve the highest value in product related markets, selling the product or service outcome to related companies or by selling the knowledge or asset of the resource or capability to e.g. a competitor (Teece, Pisano & Shuen 1997).

Innovation on current products or services is furthermore labelled as incremental green product or green service innovations. Incremental green innovations include the increasing use of existing key dimensions of green products such as eco-efficiency, the substitution of conventional materials with a lower environmental impact, or the design of recyclable products (Hellström 2007; Dangelico & Pujari 2010). Green product innovations are characterised by small or incremental improvement of previous versions or by their reliance
on existing technologies with minor changes, not dissimilar to the features of their incremental conventional products.

When products or services respond to the environmental constraints integrated into the company, these can gain access to product related markets through environmental marketing\(^\text{12}\) (Fraj-Andrés et al. 2009). This becomes of relevance when e.g. products claim to be ecological or environmentally friendly. In this, eco-labelling and adoption of schemes or standards will be the last entry marker especially within retail commerce.

Pujari, Wright & Peattie (2003) argues that supporting elements of a new green product feature such as implementing environmental performance standards into existing production processes, systems and organisational structure or substituting materials with environmentally friendly material will have a potential for leading the redefined product or service to new market entry and performance. Furthermore, Chen, Lai & Wen (2006) found a positive correlation between green product and process innovation performance and competitive advantage, and that the investments made in greening the products and processes was helpful for businesses’ value creation.

Our logic is therefore that green product innovation adds a ‘potential’ (Peteraf & Barney 2003; 320) for new market entry and hence value, because the existing capability bases and business models are complementing the incremental investments of the newly developed resources, which hold the right to enter a green market as a product or service. This is also related to the aforementioned stepping-stone process, where existing bases are used as stepping stones into new markets (London 2009). For example, SAP has entered a new market by launching its Sustainability Solution Portfolio, which is a platform based on the three pillars Planet, People and Profit. The platform has been build on SAP’s existing base of programming competencies, and in combination with sustainability being integrated into the SAP strategy this has lead to new customers (sap.com).

London (2009), however, states that while strategic RBV scholars argue that companies’ market entry is guided by their existing capability development trajectories and that companies should enter markets where the resource requirements match their capabilities, the need for a base of completely new capability development is lacking. This will be addressed in 8.2.3.

\(^{12}\) Environmental marketing will in the RB perspective be a motivator for further development of capabilities (Fraj-Andrés et al. 2009)
Greening current products and services is positively related to the steps become eco-efficient, integrate stakeholders and expand borders; environmental orientation within companies can demand for new product philosophies such as ‘cradle-to-grave’ or ‘cradle-to-cradle’, which are complex and difficult to implement. A useful method to evaluate a product’s environmental impact can be assessment of product life cycles (LCA). This approach is becoming rather common among companies that are genuinely addressing environmental concerns. Doing this calls upon integration of external knowledge sources into the development of the new product features. For example, the art of integrating stakeholders in a way that fully exploit the possibilities for resource optimisation and innovation is a capability arising from these life cycle assessments (Hart 1995; Dangelico & Pujari 2010). Innovations on products and services can also follow if the market of current products is regulated or being scrutinised by stakeholders. In this it is of imperative importance that companies respond to these regulations and scrutinisation, in order to preserve legitimacy on the market. Often these innovations also integrate operational effectiveness and resource efficiency as well as expand borders in order to acquire new knowledge bases for resource development.

8.2.2 Radical R&D for entry on or development of new green segment

It is evident that a sustainability orientation or environmental constraints can foster ability to exploit existing firm-specific assets. However, this also invites for considerations for developing new capabilities (Wernerfelt 1984; Barney 1991; Teece et al. 1997).

When capabilities for integrating stakeholders (e.g. assessing the life cycle of current products and complying with environmental regulations) are fully exploited, possibilities for new product developments emerge. In sustainability terms this is associated with being proactive or going beyond compliance (e.g. Orsato 2006) with the environmental pressures or regulations. Often, new product innovations occur when unique resources or capabilities emerge from former environmental compliance efforts, which destroy or neglect former assets and create new ones. This type of innovation is labelled radical green product innovation. Literature suggests that radical green product innovations include the use of new technologies, or the replacement of one critical component with a completely new one that significantly reduces the overall environmental impact of the product (Hellström 2007; Dangelico & Pujari 2010). An innovation is radical if it is new to the market or is based on a radically new technology, and/or has been patented by a company.

Radical green product innovations grant access to new markets where the product or product features will create the highest value for the company. Inherent in this is the common
understanding of the criteria a product has to live up to, in order to become a value increasing asset rather than a value destroying. These include; (a) customers that are willing to pay for your product must be identified and (b) the information of the green feature of the product must be easily accessible for interested parties (e.g. Hart 1997; Reinhardt 1998; Aragón-Correra & Sharma 2003; Dangelico & Pujari 2010). Customers willing to pay can be identified by expanding borders and integrating stakeholders into the product development process – if not, the product can be overruled by more important features such as being too expensive or not being interesting. Information is related to the aforementioned environmental marketing. Awareness can be addressed by means of eco-labelling or third party certification, which make green products clearly recognisable and create credibility to the green claims (Dangelico & Pujari 2010). Creating credibility through eco-labels or third party certification will require stringent, scientific and systematic internal processes to integrate and measure products’ environmental impact at each life-cycle stage (ibid). These criteria have been mentioned in relation to increasing market shares and competitive advantage through differentiation on page 73, where the last criterion is that the product should be hard to imitate by competitors.

Hellström (2007) argues that a green product innovation also can be labelled as such, when a product is produced with new green technology. However, in exploring technological innovation the company should consider how the existing routines, structures and capability bases influence the development of both the components and the architecture that integrates the components, associated with this new innovation (London 2009). This calls for attention towards a redesign or reconfiguration of resources within the organisation. This green technology innovation can furthermore be an asset of which a company can gain revenue if patented and distributed to related companies. Ambec & Lanoie (2008) exemplifies how companies have profited from selling pollution control technologies to other companies in the industry, and hence have moved into another line of business that also holds the potential to be a market determinant.

While we acknowledge that RBV sees market conditions as given (e.g. Peteraf & Barney 2003), looking external to the company is appropriate for the last point. An asset that has received little attention in the RBV is political acumen. Political acumen is the ability to influence public policy in favour of the company’s competitive position. What companies tend to forget or neglect is that;
... political skills are an inimitable, valuable resource that can be used to neutralise, promote, or otherwise manage external constituencies. (Russo & Fouts 1997; 540)

Where the complying companies would use this capability to lobby for slowing down the pace of environmental legislation, the companies that go beyond compliance would use this to lobby for stricter legislation because their newly developed capabilities or technologies can ‘raise the bar’ for the industry, and hence deliver a competitive advantage (ibid). The latter phenomenon is also referred to as ‘the Porter hypothesis’ (Porter & van der Linde 1995), which from an industry perspective claims that the stricter the regulations are, the greater the level of innovation will be from the players within this industry. Lobbying for regulations that facilitate own product or technology, can give a market advantage that forces competitors to comply with the regulations in favour of own technology (buy the asset to compete), or to go beyond compliance with new technology themselves (rationally choosing among investment strategies based on competitors strategies and lobby for these as well). However, as Russo & Fouts (1997) argue the skill of political acumen alone can be an important asset for compliance companies lobbying for less strict legislation, which then makes the mentioned hypothesis less significant.

It becomes evident that companies’ engagement with sustainability can lead to the development of new capabilities and resources that can be translated into new green products or services. It is also evident that a company can take these products to market if they meet market requirements and customer criteria – that is if they deliver value at an affordable price. By this we see that building new capabilities on the existing company basis can be a great opportunity for new market entry as well as new value creation. Furthermore, we see that a company has the potential to become industry leader, if the innovations follow e.g. new green technology (for example pollution prevention technology), which again can be patented and distributed.

This value lever can be positively affected if companies engage in become eco-efficient, integrate stakeholders, expand borders as well as join forces, race to be first and plan for the future. When designing for the future the company builds on existing and newly developed sustainability capabilities emerged from one or more of the mentioned steps, and refocuses R&D into forestalling potential future threats that meet both the company as well as the industry. In this, we find that an external industry perspective is a relevant complement to the already internal capability focus. Joining forces within the industry, be it competitors,
suppliers or researchers is the best way to address a present or future environmental issue that presents a threat to the company. Doing this with success would in e.g. Hart (1995)’s optics be viewed as a new capability to the company and hence become an important feature for redesigning current products and processes or developing new products or services – both for new market entry.

8.2.3 Isolated R&D for completely new market entry

In some instances new market entry can be done with a capability base that equals zero. Although this seems impossible for some strategic growth RBV scholars, London (2009) addresses this gap with the socio-economic market differences sustainability addresses. Exemplifying this requires us to touch upon the limits of this thesis, and look into one of the more popular social sustainability strategies – bottom of the pyramid (BoP) strategy. The argument for including this here is that this market is often neglected into various assumptions about its potential. This is a market opportunity gaining increased attention as a potential source of revenue growth, requiring capability in the lower income markets (Prahalad & Hart 2002).

As such, the possibility is large in this socio-economic level. This is associated with new capability development, as the existing capability bases cannot be successfully modified into the new markets – hence the need for building new capabilities (Hart & London 2005; London & Hart 2004 in London 2009). The issue seems to be that when entering these markets, companies lack context-specific complementary assets that facilitate change in a market. Furthermore, replicating existing business models and associated capabilities (like the stepping-stone approach) should be avoided. What London (2009) points out, however, is that rather than directly placing existing assets into new markets, the company should place them internal to the company – isolated from existing routines. For example embeddedness to local demands is a key capability. By this, new business models will emerge which furthermore support new capability development. Interestingly, the ventures that aim for BoP market entry are framed as long-term R&D oriented investments, and are not expected to generate economic returns in the short term (London 2009).

We find that efforts with isolated R&D hold the potential of developing new capabilities that can help enter new markets in other socio-economic layers, and that the economic potential of these layers is significantly high. By this a completely new way of thinking can serve as future rent generation for many companies. Because of this the steps race to be first, plan for
the future as well as join forces in new partnerships has the potential to develop new capabilities for new market entry.

8.3 Sustainability leads to revenue growth
We have found that companies engaging with sustainability can benefit from its effects on the value creation levers for revenue growth. Thus, the financial case for sustainability leading to revenue growth can be created with a focus on how to exploit, develop and innovate on current and new capabilities that manage company resources as well as exploit, develop and innovate on the resources themselves. The following sums up the above exploration of revenue growth and its defined value creation levers (figure 11).

- Create a positive environmental reputation through development of marketing and communication capabilities for an increase in market shares
- Utilise TQEM in combination with transparency to increase customer retention and awareness
- Adopt and ensure environmental standards to enable the possibility for strategic partnerships
- Go beyond content compliance or use different channels or packaging for greater product innovation

- Incremental product innovations such as green certification or material substitution can open to an existing green markets
- Radical product innovations such as redesign of resources or development of new standards and private labels can open up for a green segment in an existing markets
- Isolated R&D and creation of new capability can lead to new market entry

Figure 11: Revenue increasing value levers affected by sustainability actions
8.4 Part II findings

To generate premium profits with sustainability engagement implies assessing the current resources against an external environmental context, as well as acquiring and developing new ones aimed at handling this context. Furthermore, developing capabilities that are capable of managing the resources potentially follows spill-over and new opportunities for market share gains or new market entry. We find that the effects of integrating new resources and capabilities follow a positive benefit for various value creating levers. Companies’ active work with sustainability does not only lead to increased efficiency, but affects reputation and transparency which follows concessions in capital cost, green taxes, power relations, labour costs, and external risks avoidance. As such, in the case for revenue increasing value levers, the actions within the market share increasing value levers affect the possibility for new market entry positively due to developed capability bases. However, what seems to be most obvious is the fact that margin improving actions almost naturally follow changes in revenue increasing value levers and vice versa. For instance, operational efficiency actions naturally follow margin improvement and hence premium profits, but also follow incremental changes in current product line which results in gained market share or even new market entry. In reverse, new green market entry follows reputational concessions in direct costs, labour costs etc.

This self-reinforcing effect of positive interrelations between value levers greatly advocate for engaging with sustainability and it serves as a solid knowledge ground for a potential shift in how sustainability is perceived. By this, sustainability is a phenomenon that can affect all value creation levers of the company at various organisational levels, and when this is acknowledged, companies can build a more thorough financial case for sustainability.
Finalising

9.0 Discussion

Through an overview of the thesis reasoning, debatable implications arise. We choose to emphasise two discussions that touch upon the implications for engaging in sustainability, respectively; company inertia and the need for exogenous shocks for change, and associated investment risks. Conclusively, we look into the debate of ‘does green pay off?’ to place our viewpoint within this.

9.1 Company inertia and exogenous shocks

Throughout the thesis we have referred to acquisition, development and exploitation of resources and capabilities. However, we have neither addressed how inert company structures are, nor the difficulties companies face when implementing something new.

A returning issue to management is company inertia. Most organisations display inert structures, as if their past history determines their present state. Often, the belief that company resources are inert and hard to change is pointed out as the main obstacle for strategy and company development – take for instance the outdated mental models in the BCG report. The argument is that companies are unable to make rapid and dynamic strategic moves, because they either lack the organisational capacity to develop new competencies or that assets are not readily tradable (Teece 1976, 1980). Furthermore, resource endowments are sticky and companies are to some degree stuck with what they have. Even when an asset can be purchased, companies will need superior information or luck, or both, to fully profit from the asset (Barney 1986). According to this understanding, an integration of sustainability resources and undertaking a sustainability step is a lucky case, if a company is to succeed. Moreover, if a company seeks for sustainability to become an asset, the way it is managed and integrated is the pressuring point for its successful integration.

Theorists describe this resource stickiness as a company’s path dependency, which is a property of a random process\(^{13}\) existing in two conditions (contingency and self-

\(^{13}\) E.g. absorptive capacity, first-mover advantage, institutional persistence, imprinting, or structural inertia are all well-known theoretical mechanisms that explain how certain aspects of the past relate to current properties of organisations.
reinforcement). Path dependency causes a resource lock-in in absence of an exogenous shock (Vergne & Durand 2009). This lock-in characterises a state of balance with a very low potential for endogenous change – put simply, lock-in is a hard-to-escape situation. We believe that companies according to this more radical resource-based view would find great difficulties in pursuing sustainability as well as generating value from it, since the argument seems to be that companies must rely on current resource and capability bases. As such, the challenge of outdated mental models from the BCG report seems even more immense.

We argue that lock-in situations are more likely to occur for companies that address sustainability solely as a responsibility to the environment. Responsibility desires can be subjective and dependent on management philanthropy or only based on an expectation of image and brand benefits. This will leave only one path to pursue, as well as it will be a source of endogenous change – a situation where lock-in mostly occurs.

We also argue that if sustainability is viewed, addressed and integrated as a business issue, the exogenous shocks desired for change will affect the company as a natural consequence. For example, exogenous shocks can be new environmental regulations or a new competing EMS technology. When this is acknowledged, sustainability will be a value generating asset and a much easier process to obtain. In this, thesis arguments for ‘stepping-stone’ capability development shall be under the terms of sustainability as an integrated business asset. Sustainability initiatives are all dependent on exogenous impacts, but builds and changes according to current capability bases and strategic desires. As such, sustainability is the ability to sustain business in congruence with environmental changes.

9.2 Investment risks

Within our understanding, premium profits are created when sustainability is integrated. However, we have not considered the investment risks in sustainability integration.

Proponents for engaging with sustainability argue for how companies should prevent pollution and emissions rather than control the externalities of company operation. However, some argue that movement toward the prevention mode of operation actually increases a company’s level of risk. Under normal conditions, an investment in redesigning and replacing existing processes in a competitive environment is financially significant and involves substantial risk. As such, the decision to adopt for example clean technologies and to incur the added costs of pollution reduction without governmental action is even more risky for two reasons. First, early in their life cycles, technologies and processes that are on the
cutting edge of source reduction might cost more and be of lower quality, than they will be when they become off-the-shelf technologies. Second, the viability of new, clean technologies can be largely unknown, as are the economic consequences of their use (Kemp 1993 in Russo & Fouts 1997).

What we can agree upon is that regardless of context, to go beyond compliance entails a great deal of risk. However, we argue for the contingency perspective to be included in assessment of resources and their economic risks. For instance the inclusion of industry growth influences how risks can affect profitability in two ways. In a discounted cash flow analysis the level of growth in an industry moderates the expected probabilities of return, because the expected payoff of any investment risk is higher in industries with a high growth rate (Russo & Fouts 1997). Also, the technology life-cycle (Abernathy & Utterback 1978) seems to be a factor because high growth industries accelerate the maturation of technology, rapidly reducing the levels of risk inherent in clean technology investment. Hence, when companies invest in pollution prevention, although it is adding to its risk portfolio, it also has a higher prospective return when the contingent factors are included in the assessment. Our argument is that companies that fail to invest in these new technologies will suffer in comparison.

Furthermore, we argue that this risk and its impact can be minimised with the RBV in mind. We have shown how e.g. continuous improvement, stakeholder integration, acquisition of physical assets and technology, and intangible resources such as reputation and political acumen can offer competitive advantages and generate premium profits because of their causal ambiguity and complexity. We argue that these knowledge resources support environmental decisions that go beyond this pollution control idea, to proactively focus on prevention programmes, hence minimising the risks associated with an isolated resource such as new clean technology.

9.3 Does green pay off?

With our understanding of sustainability integration we have addressed the way value is generated through additional premiums profits. However, we have not considered how certain companies can be that sustainability increases profitability.

Various empirical studies have proved that sustainability does not enhance profitability. Some argue that the many regulations related to environmental issues have a direct influence on the costs of running a business committed to sustainability to such a degree that profitability turns negative.
Environmental costs have stubbornly continued to outpace both inflation and economic growth for the last two decades ... Costs are destined to increase even more, especially since the increase in regulations show no sign of abating. (Walley & Whitehead 1994; 49)

This group of researchers argue that it would be an easy matter to assemble a matching list of companies that have found costs increased and profits reduced as a result of environmental regulations (e.g. Palmer, Oates & Portney 1995). What is interesting here, is that these studies argue negatively for the potential of value as; ‘value to actually be destroyed’ (Walley & Whitehead 1994; 47), when the company engages with environmental issues. In this debate, even the more positive proponents (e.g. Fraj-Andrés et al. 2008) point out that empirical support for the positive link between environmentally friendly initiatives and profitability is still scarce and often contradictory.

We believe that these contradictory studies emerge due to variations in method and research offset point. Take for instance the study by Walley & Whitehead (1994). Their research focus is limited to focus on how government regulations add extra costs to companies (how the companies are constrained), rather than focus on how these regulations can be translated into business actions (which opportunities that could emerge). This insight is our thesis reasoning. We have shown how the many levers for value are interrelated and almost naturally create value as a direct consequence of both external regulations and internal developments. Once again, we see the importance of including both revenue growth levers and margin improvement levers to assess sustainability and its contribution to profitability. The mentioned negation-focused perception of sustainability can change, if the financial case for sustainability is created with both the optics of sustainability being business integration as well as the optics of evaluating the more interrelated effects of sustainability – in any form that might be.

However, what we do not directly address are the financial investments a company must make when e.g. purchasing clean technology, acquiring EMS certifications, timely implementation of policies, etc. What we have created, is knowledge on how sustainability can be exploited to enhance premium profits. In this we emphasise the relevance of a contingent and nuanced perspective on the RBV. For a company to judge whether sustainability follows profitability, it must do considerations in profit contributions over time. We acknowledge that profitability will change over time due to change in cash flow on sustainability initiatives, and that short vs. long term considerations needs to be made, to find
out if sustainability is profitable (e.g. Lanoie & Tanguay 2000). As such, we also acknowledge that contingent factors are essential to determine profitability.

As expected, the biggest bottom line benefits accrue to the 'high polluters' where there are plenty of low-cost improvements to be made. It appears that the closer a firm gets to 'zero pollution' the more expensive it gets, as further reductions mean rising capital and technology investments. (Hart & Ahuja 1996; 36)

We acknowledge that evaluating the financial costs of investing in sustainability is highly relevant. However, what we emphasise in this matter is related to the statement in BCG (2009), saying that practitioners with more experience and knowledge on sustainability see more opportunities for value creation, and thereby expand sustainability outside the green silo. We have shown the positive contribution to profitability that sustainability initiatives can follow, and thus we argue that a financial case for sustainability should be created when knowledge on the effects of sustainability is integrated in decisions on investments. Thus, we argue that the financial case for sustainability should be undertaken through an open exploration of how the company can exploit sustainability in a way that contributes to premium profits.

Because of this we do not take stance within the ‘does green pay off’-debate. But we argue that corporate sustainability is a matter of when it pays off and how it can be integrated to pay off. In this debate we acknowledge the fact that a company’s sustainability efforts not necessarily generate a higher profitability, but we argue that it can lead to competitive advantages and the derived premium profits. As such, we focus on sustainability delivering premium profits because of its causal ambiguities and complexity, due to the inclusion of contingent factors in decisions and as a result of the perception change on sustainability.
10.0 Conclusion

Privately held companies are increasingly being looked upon to engage in saving the natural environment, through a less negative environmental impact from company operations. Current global issue numbers show an increased consumption and an ongoing depletion of the Earth’s resources, renewable as well as non-renewable. Simultaneously, companies are facing an increase in global business trends, which forces companies to do business in newer, faster and more transparent ways in order to stay competitive. These issues have followed an ongoing debate that concerns whether or not engaging in environmental issues follow tradeoffs and have impact on company competitiveness. Leading theorists and practitioners argue that salvation of the environment positively contributes to a company’s profitability, if the company addresses it with the sustainability notion. Most companies acknowledge the importance behind environmental concern, and recognise the notion of sustainability. However, a BCG study shows that the current general perception of sustainability is mistaken and outdated due to a lack of knowledge on implied business opportunities, a missing relevant strategic framework, and an undefined business case.

Inspired by the overall situation, the thesis answers the following research questions; how can companies make sustainability a strategic asset? And, how can sustainability create value for companies?

Within the first research area, we present a full-suit fact base with a new logic for sustainability; sustainability is both an action and a valuable effect, and when it is integrated into all business areas, it will become a strategic asset to companies. The reasoning behind this logic contains the following findings.

First, sustainability is a concept with a wide array of meanings, implications and results for companies. Often the debate on sustainability offsets from that companies have responsibility towards the environment. And since ‘being a responsible company’ is what occupies many practitioners, sustainability is initiated on a wrong basis. The consequence of this is a crooked understanding of sustainability and an inability to see the business opportunities that actually occur in sustainability. As such, sustainability shall be considered as corporate sustainability, a notion that sees environmental problems as business issues concerned with companies’ ability to sustain activities through an economically reasonable integration of environment and stakeholders. This makes sustainability an integrated part of business, which forms the meaning and scope of the sustainability notion – sustainability; ability to sustain.
Second, the way a company can business sustainability varies depending on level of analysis and applied optic. However, we see common denominators in the content of the recommended sustainability actions. We find that sustainability practices can be merged through the indentified denominators into ten sustainability steps, which we argue comprise all possible business actions within sustainability. Notably, we see that sustainability entails both a practical recommendation (i.e. an action or an initiative), and that it implies a related valuable effect. Thus, we find that value creation is inherited in sustainability.

Third, we propose that the ten steps are seen in a matrix that spans from a present to future time dimension and an internal to external space dimension. This matrix is a strategic framework that evaluates the level and strategic potential of sustainability. We find that companies can; address present internal operations by the steps become eco-efficient, avoid environmental risks and expand borders, and address present external operations by the steps ensure transparency, integrate stakeholders and join forces. Furthermore, companies can; address future internal opportunities by the steps design for sustainability, differentiate and race to be first, and address future external opportunities by plan for the future.

Fourth, our last finding for making sustainability a strategic asset is by companies initiating sustainability steps as stepping-stones for building capabilities, aimed at achieving a strategic objective. In this we see that when companies address the entire strategic framework of sustainability steps through capability developments, sustainability is integrated into all business areas, well on its way to become a strategic asset.

Our conclusion hereby is that companies can make sustainability a strategic asset when it is considered as corporate sustainability, when it is acknowledged for its valuable effect, and when it is strategically integrated to build capabilities in all business areas.

Within the second research area, we present knowledge on how sustainability has a self-reinforcing effect on various value creation levers within a company. The reasoning behind this contains the following findings.

First, we find that value generated from environmental integration has been determined in various studies, all arguing for a different terminology. However, these do not differ in the final value results; costs or revenue. As such, we argue for value creation as premium profits that can be improved through either margin improvement or revenue growth, when companies develop resources or enhance capabilities. If this is achieved, companies will create
competitive advantage by following a value creation strategy that is different from competitors, due to heterogeneity in resources.

Second, margin improvement can be positively affected through the levers that address sustainability on; a) cost savings, b) risk management, c) pricing power, and d) employee engagement and recruitment. In this, margin improvement requires a focus on current resource needs through acquisition or development of resources, and a focus on how capabilities can be developed to manage and exploit these resources. Furthermore, revenue growth can be positively affected through the levers that address sustainability on; a) market share, and b) new market entry. In this, revenue growth requires a focus on how to exploit, develop and innovate on current and emerging capabilities that manage company resources as well as the resources themselves.

Third, the last finding is that the effects of developing and integrating new resources and capabilities within one value lever follow a positive benefit for other value creating levers. A company’s active work with sustainability to create margin improvements does not only lead to greater efficiency, but affects reputation and transparency which enable concessions in capital cost, green taxes, power relations, labour costs, and external risks. Moreover, actions to gain market shares or enter a new market through sustainability can positively affect each other, when capability developed from these actions is exploited. A company’s active work to increase the current customer base through innovation might also create ability to enter a new green segment. Most obvious is the findings that margin improving actions almost naturally follow changes in revenue increasing value levers and vice versa. This is a self-reinforcing effect that also constitutes how sustainability can create value in companies.

Our conclusion is that the integration of sustainability through acquisition, development and exploitation of resources and capabilities, can create value both when a value lever is actively addressed, but also due to the self-reinforcing effect that resources and capabilities enable.

We believe that the thesis knowledge on sustainability can edify the current general perception of sustainability. This can make companies exploit the full potential of sustainability, and utilise it as a mean to achieve sustainable business growth.
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[www.dongenergy.dk](http://www.dongenergy.dk) – Danish energy supplier

[www.ec.europa.eu](http://www.ec.europa.eu) – European Commission data on the natural environmental state

[www.fetzer.com](http://www.fetzer.com) – Fezter Vineyards

[www.ford.com](http://www.ford.com) – Car manufacturer

[www.frandsenindustri.dk](http://www.frandsenindustri.dk) – Innovative recycling company

[www.goodwithmoney.org](http://www.goodwithmoney.org) – British bank

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