

Sustainable strategies: Integrating sustainability practices into corporate business operations

How can companies in polluting industries develop and implement profitable and sustainable business strategies?

The case of: The Shipping and Cruise Line Industry

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Abstract

This thesis seeks to study how companies within polluting industries can develop and implement profitable and sustainable business strategies. In order to answer the given research question, the shipping and cruise line industry is the chosen industry of study, due to its air and water pollutions. Research on the field states that the strategic management process of companies within the industry is rather challenging and addresses the need for further studies. The literature identified a gap between the development and implementation phases, with the latter stated as most difficult for the strategic manager. Therefore, this thesis aims to address these challenges and related opportunities of sustainable business strategies.

With the purpose of providing an insight on sustainability, profitability and the strategic management processes, a multiple-case study of three companies within the chosen industry was conducted. Primary data was obtained through in-depth interviews of the case companies and one non-profit organisation with industry-specific knowledge.

The study revealed that sustainability is a considerable concern for the participating companies. Several internal and external factors were found to influence the sustainable strategy development process, such as KPIs, competence, involvement, and regulations. With regard to strategy implementation, change management, company culture, internal communication and competence on new technologies, was found to be important in the process. Further, the findings imply that governmental regulations can act as a positive driver for sustainable strategy development. However, findings reveal that the implementation of regulations into the strategy process can serve as a challenge. The data analysis identified a long-term perspective on sustainable actions as necessary in terms of profitability, and the social value should be seen in context of the financial value. Finally, the study implies that companies having a profitable and sustainable business strategy can experience a competitive advantage in the industry.

Preface

This thesis contributes to the final completion of our Master of Science in Business Administration at the University of Agder, School of Business and Law. This research process started with our special interest in sustainable business development and environmental concerns. Gaining in-depth knowledge on these fields of research, specified within an industry of particular interest, has been highly motivating for us. It has been a long and educational journey, providing us with extensive knowledge on the chosen topic and an introduction to academic research.

Throughout the study, several people supported our research process and contributed with competencies important for the final results. Firstly, we wish to express our gratitude towards our supervisor Professor Andreas Erich Wald, who supported us throughout the process, always available for questions and academic discussions. He has provided us with valuable feedback during the research process and the structure of the thesis. Further, a big thank you to the participating informants providing us with the information needed to conduct the thesis. In addition, we would like to thank our family and friends for supporting us with words of encouragement throughout this process.

Last, but not least, a special thanks to the School of Business and Law at the University of Agder for providing us with academic competences and knowledge, experiences on real-world cases and international challenges.

We hope that you find the thesis interesting to read!



Elise Thu Johansen



Malin Bjørnsen

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1. Introduction

Corporate sustainability is of increasing importance as rising concerns about environmental and social issues, stakeholders and regulatory pressures forces companies to take actions towards a sustainable business (Engert & Baumgartner, 2016, p. 822). Sustainability is by no means a new concept, but with the increasing pressure to benefit both shareholders and the society at a large, comes the need for research on how sustainable strategies can be successfully developed and implemented (Engert & Baumgartner, 2016; Engert, Rauter & Baumgartner, 2016). Academic scholars state the importance of companies integrating corporate social responsibility (CSR) into strategy, in order to cope with the strategic challenges (Galbreath, 2009a, p. 121; Johannsdottir & McInerney, 2018). Furthermore, previous research state that there is a lack of studies on how companies can develop and implement sustainable strategies (Egels-Zandén & Rosén, 2015; Engert & Baumgartner, 2016; Engert et.al., 2016; Galbreath, 2009b; Nathan, 2010). Thus, studies investigating the strategic management process in this relation, identified a gap between strategy development and implementation, stating the need for increased knowledge on the phenomenon (Engert & Baumgartner, 2016). Studies reveal that strategy implementation is challenging for strategic managers due to lack of competence and a strategic approach to corporate sustainability (Engert & Baumgartner, 2016, p. 822).

Since financial results are the pillar of most strategic choices, it is important to not neglect the profitability aspect of the sustainable strategic management process (Figge & Hahn, 2012). In addition to increased competitiveness, companies can face several other benefits such as economic performance, corporate reputation and cost reduction (Engert et.al., 2016, p. 2838). Companies are realising that it is possible to both reduce emissions and increase profits, however, it appears that the literature lack enough research on how sustainable strategies can actually increase profits (Hart, 1997; Lampe, Ellis & Drummond, 1991).

The aim of this study is to investigate how companies can develop and implement profitable and sustainable business strategies, by identifying factors evident from companies within the shipping and cruise line industry. We are trying to highlight the subject of sustainable strategy in the context of the chosen industry, representing a polluting industry. The industry is defined as ‘transport by water of either passengers or cargo’. Lam & Lai (2015) conducted a study on environmental sustainability in shipping operations, highlighting the increasing impact of

shipping on the global economy, and societies that cannot be underestimated. The industry stands for a significant amount of pollutants affecting both air, water and ecosystems. In 2018, 170 countries agreed to cut carbon emissions by at least half by 2050 through the International Maritime Organisation (IMO) (Gabbatiss, 2018). These increased regulations force companies to take action towards more sustainable operations.

Based on the literature search process, we found it interesting to investigate a somewhat uncharted area of sustainability and the strategic management process. Engert & Baumgartner (2016) and Johannsdottir & McInerney (2018) suggest future research to conduct industry-specific studies in order to enable researchers to do a comparative analysis between industries on the field. Accordingly, this thesis will provide insight on sustainable strategy development and implementation within a particular industry. To the best of the researchers' knowledge, such a study has not been conducted on Norwegian based companies. These findings led us to the following research question:

How can companies in polluting industries develop and implement profitable and sustainable business strategies?

The case of: The Shipping and Cruise Line Industry

In order to answer the given research question, this thesis is based on previous literature presented by academic scholars and researchers, and incorporates several of the theoretical concepts existing on the field. The concept of profitability will be carefully implemented through the analysis and discussion, as it composes an important part of doing business. This thesis seeks to identify whether there are any critical factors in the strategic management process, and find if there are any obstacles in the implementation process. Further, we will address whether sustainable strategies are found to be profitable, and how companies within the industry view the value of investing in sustainable solutions.

The structure of the case study

This thesis consists of six chapters in total. In the following chapter, the background for the study will be presented together with relevant theory on the field. Chapter three presents the methodology of the study, where we explain and justify the choices made in relation to the research method. Furthermore, a description of how the data is collected and analysed will be given. Chapter four presents the results of the analysis, and further discuss the main findings

in order to answer the given research question. In the last chapter, we will present some concluding remarks based on the discussion and present some limitations of the study. Finally, we suggest some themes and topics for a future research agenda.

2. Background and theoretical context

The purpose of this chapter is to provide an insight of existing literature and theoretical concepts on the field of sustainability and the strategic management process. These constitute the basis for further analysis, discussion of findings and concluding remarks. In the following, a definition of sustainability will be provided, followed by an overview of the concepts of CSR and the strategic management process. Furthermore, the Porter Hypothesis is presented in order to provide an innovative perspective on the concept. Finally, theory on profitability related to sustainable business strategies will be given.

2.1 Definition of sustainability

The term ‘sustainability’ was developed by the World Commission for Environment and Development in 1987 and is defined as “a change process in which resource utilisation, investment, technological development and institutional change all harmonise with each other and ensure both the immediate and future potential to meet human needs and expectations” (Brundtland, 1987, p. 44). This definition focuses on the fact that society constantly have to adapt in order to meet a secure future for both present and future generations.

The concept of sustainability has since 1987 turned out to be a pervasive theme (Rainey, 2006; Cooney, 2008). Through literature and research, several definitions of sustainability have emerged, and today, it is concentrated on doing business in a more human, ethical and transparent manner (Garetti & Taisch, 2012, p. 84). According to Banerjee (2002) it has been an increased awareness of environmental issues by governments, policy makers, business firms and the public in the last decades. With the industrial development, problems regarding global warming, air and water pollution have emerged, and demand immediate solutions (Banerjee, 2002, p. 177). Changes in the external environment with increased regulatory forces and public environmental concern affects companies and their corporate actions. These environmental concerns have an impact on the development and implementation of sustainable, yet profitable, business strategies of companies in polluting industries. Today, the trend among companies is

to focus on CSR, corporate responsibilities, the triple bottom line and so on (van Marrewijk, 2003). In this thesis, the focus will be on the environmental aspect of sustainability in the chosen industry.

2.2 Corporate social responsibility (CSR)

The moral and responsible duty of companies with regard to stakeholders has been discussed in strategic management literature for decades, introducing the concept of corporate social responsibility (CSR). Hargett & Williams (2009) defines CSR as the importance of companies being more than profit-seeking entities, as they have a significant impact on worldwide, social and ecological systems (Hargett & Williams, 2009, p. 74). As the goal of this thesis is to address how companies can develop and implement sustainable strategies, CSR serves as a basis for a thorough understanding of responsibility.

A study conducted by Galbreath (2009a) states the importance of integrating CSR into the fundamental dimensions of strategy in order to take on full responsibilities, which is found to be challenging for companies. Companies that successfully manage to integrate CSR into strategy are, according to Galbreath (2009a), more likely to obtain competitive positions, benefiting both their stakeholders and society. These findings are supported by Porter & Reinhardt (2007), stating that companies can identify opportunities to enhance or extend their competitive positioning by integrating sustainability and CSR into strategy. In order to provide an understanding of the findings of Galbreath (2009a), the relationship is illustrated Figure 1;

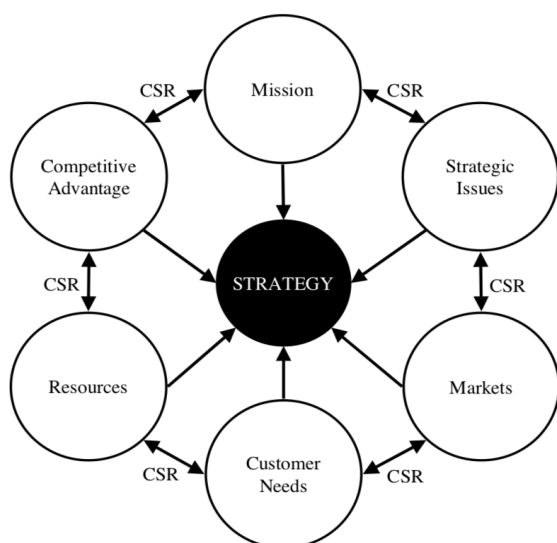


Figure 1: CSR in the context of strategy (Galbreath, 2009a, p. 113)

The exploration of CSR within each dimension of corporate strategy is of importance in this thesis, as sustainable strategies demand companies taking on full responsibility throughout the strategy process. When developing and implementing sustainable strategies, there is a need to have a proper understanding of both the internal and external environment and their implications for the company. CSR has to be considered in the development process when conducting market analysis, and when identifying customer needs and resources benefiting the society (Galbreath, 2009a, p. 118).

The triple bottom line

CSR is defined in different ways by several researchers, but they all have one thing in common; it is more than just profits. In mid-1990s, Elkington (1998) developed a new framework for measuring performance, which extended the traditional measures of profits to include environmental and social dimensions (Slaper & Hall, 2011, p. 4). The framework, named the Triple Bottom Line (TBL), is relevant for both businesses, non-profit organisations and policy makers, as it serves as a tool to support sustainability goals and to gain competitiveness. Elkington (1998) argue that the company's responsibilities cover aspects beyond the economy, and that there is a need for an appropriate balance between economic, environmental and social aspects to achieve sustainability. All three parts of the bottom line, shown in Figure 2, are interdependent and when using the framework, one must remember that they are considered equally important.

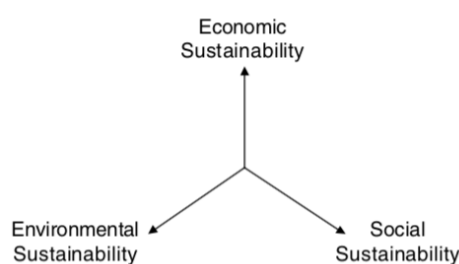


Figure 2: Illustration of the triple bottom line. (Dyllick & Hockerts, 2002, p. 132)

The fact that the bottom line is threefold means that the company reports on both the economic, environmental and social status. Reporting of quantified results should support the visions and values that the business communicates (Elkington, 1998). However, what and how many parameters are reported will depend on the type of industry, the interests of the stakeholders and the company's ambitions. According to Elkington (1998), the companies operating in a

specific industry should examine what their stakeholders want and prioritise the effort to improve the non-financial results. It is the stakeholders, not the business management, that set the standard for what the business should report on (Elkington, 1998). Elkington (1998) look at the triple bottom line as a conceptualisation of sustainable development at a company level. Further, Elkington (1998) believes that the economic part of the TBL, will consist of more than just financial results, for instance pointing to externalities and long-term sustainability in the business economy.

According to Dyllick & Hockerts (2002), companies focusing on mainly economic sustainability can succeed in the short run, but long-term sustainability requires focus on the three factors of the TBL framework (Dyllick & Hockerts, 2002, p. 132). The main challenge of the TBL framework is related to calculating the triple bottom line, as it does not have a common unit of measure. The economic variables deal with the flow of money and is the most common when measuring performance and economic sustainability in a company. Environmental variables represent measurements of “natural resources and potential influences on its viability”, and include among others, air and water quality, energy consumption, waste and natural resources (Slaper & Hall, 2011, p. 5). The social measures of the triple bottom line refer to a company’s value to communities and management of social capital. The TBL framework allow companies to take on a wider responsibility with regard to sustainable business and strategy development, and contributes to long-term measurement of both people, planet and profits (Slaper & Hall, 2011, p. 8). The TBL framework constitute an important basis in this thesis, as the balance between economic, environmental and social sustainability have to be carefully considered when answering the given research question.

2.3 Corporate strategy and strategic management

The following section will present literature on strategic management, with the process of sustainable strategy development and implementation. Several key points and studies are being presented in order to provide an overview of basic concepts and factors that have to be considered in environmental management. The aim is to provide a comprehensive assessment of theories needed to discuss and interpret findings and provide conclusions, in order to answer the research question.

The term strategy has been defined in a variety of ways, and the definition by Chandler (1990) is widely used; “strategy is the determination of the basic long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary to carry out these goals” (Chandler, 1990, p. 13). As the definition implies, strategy formulation is treated as an analytic process for establishing long-range goals and action plans, followed by strategy implementation (Mintzberg & Waters, 1985, p. 823). According to Galbreath (2009a), the six following dimensions are needed to in order to achieve strategic goals; mission, strategic issues, market, customer needs, resources and competitive advantage (Galbreath, 2009a, p. 110). These dimensions create an important basis for conducting a study on how companies develop and implement sustainable strategies.

Engert & Baumgartner (2016) argues that companies within polluting industries should develop a sustainable business strategy in order to meet challenges in the changing business environment. However, limited attention has been paid to the implementation of such strategies, and there is an existing gap between the formulation and implementation phases (Engert & Baumgartner, 2016). Research defines the latter as the most problematic phase in strategic management, and it has become of special interest for researchers on the field (Mintzberg & Waters, 1985; Epstein & Roy, 2001, p. 586). Balancing the economic, social and environmental needs of both the company and the environment is identified as challenging for strategic managers and has to be carefully considered (Epstein & Roy, 2001, p. 586). Bridging the gap between strategy formulation and implementation requires the managers’ ability to translate strategy into action (Epstein & Roy, 2001; Engert & Baumgartner, 2016).

In order to get a thorough understanding of the connection between sustainability and the strategic management process, a framework developed by Nathan (2010) is presented in Figure 3. Based on previous research done by Galbreath (2009b), Nathan (2010) aim at describing important factors of core strategy, sustainability awareness and sustainable competitive advantage (Nathan, 2010, p. 34).

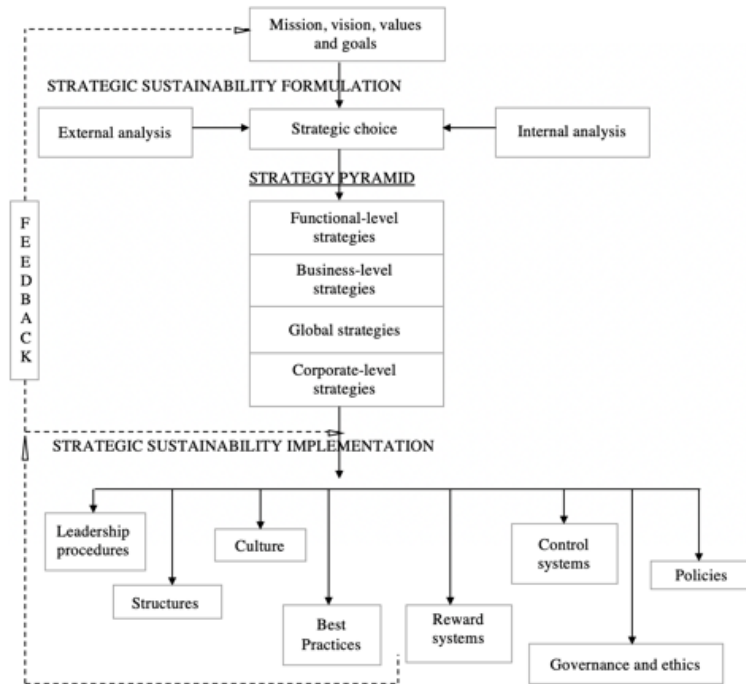


Figure 3: Weaving sustainability thinking into the strategic management process (Nathan, 2010, p. 34).

The line of argument is based on the need for companies to understand their position, and the importance of defining sustainable strategic actions in line with core strategy. Sustainability thinking should be included throughout the strategic management process in order for companies to potentially succeed with such strategies (Nathan, 2010, p. 34). According to Nathan (2010), companies often misunderstand sustainable strategic actions, and find them difficult to measure initially (Nathan, 2010). By conducting both internal and external analysis with regard to sustainability, companies obtain valuable insight into its core skills and competencies, and competitive position (Nathan, 2010, p. 35).

Corporate environmental management

In order to provide a comprehensive assessment of how companies can develop and implement sustainable strategies, it is necessary to integrate environment into classic strategy concepts.

With the increased importance of considering environmental impact and sustainability issues, the concept of environmental management emerged in the 1980s. Klassen & McLaughlin (1996) defines environmental management as “all efforts to minimise the negative impact of the firm’s products throughout their lifecycle, and measures how successful a firm is in reducing its environmental impact” (Klassen & McLaughlin, 1996, p. 1199). Sustainable

management is a proactive process ranging over a long-term perspective, covering local and global concerns, identifying both threats, problems, and opportunities (Barrow, 2006, p. 7). When companies adapt to environmental management, the term *corporate environmental management* emerge. A corporate environmental manager has to consider natural resources and pollutions when planning for corporate activities, focusing on practice and real-world issues rather than pure theoretical planning (Barrow, 2006, p. 7).

Environmental management requires both competences to set goals, and a thorough understanding of laws and regulations, environment, economics and people (Barrow, 2006, p. 7). According to Barrow (2006), the important tasks of an environmental manager is; education of employees regarding sustainability; updating management on new regulations and legislation; control actions done by the company on a strategic level; avoid legal costs; and, if necessary, correct previous mistakes (Barrow, 2006, p. 113). In order to handle such variety of responsibilities, there is a need for long-term planning. An understanding of the concept of corporate environmental management serves as a basis for this thesis, in order to address how companies can develop and implement sustainable strategies.

2.3.1. Strategy development

Based on an assessment of the company's environmental impact, managers formulate strategic goals towards a sustainable strategy, including both company values, commitment and goals (Epstein & Roy, 2001, p. 591). Corporate activities related to sustainability issues can be energy consumption, waste and labour prices, depending on the industry context. According to Epstein & Roy (2001, p. 591), the formulation of goals must be based on identified challenges and should be developed as a set of specific targets, such as energy efficiency, material consumption and disposal.

Galbreath (2009b) contributed with a study on strategy development, highlighting the importance of companies considering both context, options and actions in order to assess sustainability on a strategic level (Galbreath, 2009b, p. 316). The study points out that "strategy is not a one-size-fits-all proposition", and thereby there is an emerging need to understand the unique position for each company in order to develop a tailored strategy (Galbreath, 2009b, p. 316). Galbreath (2009b, p. 306) address the lack of a 'universal standard' on how companies should respond to strategy creation in times of increased external pressure with regard to

sustainability. The components of the framework developed in the study by Galbreath (2009b) are summarised in Figure 4, aiming at contributing with an understanding of the relation between the five key components;

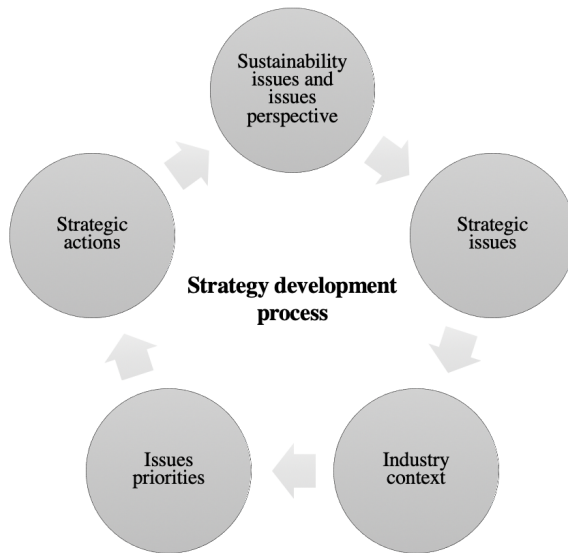


Figure 4: The strategy development framework with five key components (Galbreath, 2009b, p. 306)

This framework contributes to the research process of this study, by highlighting the value of the case companies' strategic managers having a thorough understanding of the five parts of strategy development. Galbreath (2009b) concludes that there is a need for future research to conduct a comparative study within a specific industry, addressing the issues of the components presented in the framework, which will partly be done in this thesis.

Conducting internal and external analysis during strategy development

As part of strategy development, Nathan (2010) states the importance of conducting both internal and external analysis to have a thorough process. Through an examination of the company's macro environment, managers obtain valuable competence on both customers, competitors and industry development. Further, Nathan (2010, p. 35) address the possible competitive advantage provided by having such competences, as it can reveal new available product innovations and investors. Accordingly, an internal analysis can reveal core competencies and competitive position of the firm, contributing with valuable insight in the development process. As the goal of this study is to find how companies can develop and

implement sustainable strategies, the study by Nathan (2010) has an important role in the discussion of the study findings.

Developing plans

Another important part of strategy development is thorough planning and development of strategic plans, covering both environmental and sustainability concerns. Epstein & Roy (2001) conducted a study on key drivers of sustainability, stating the need for plans and programs in strategy development. The study presents a framework, distinguishing between plans regarding environmental and social performance, and communication of sustainability performance, all contributing towards a successful achievement of goals (Epstein & Roy, 2001, p. 592). Companies including sustainability in their strategic process often face the need for change in existing routines, capital investments and spending on research and development (R&D). Such adjustments increase the need for plans (Epstein & Roy, 2001, p. 592). In addition, external analysis was found to be the basis for creation of plans in the development process. In addition, Epstein & Roy (2001) highlight the importance of companies' having plans with regard to the promotion of performance to stakeholders, communicating sustainable actions. Such plans can be related to the marketing of sustainable actions taken or conducting surveys to increase industry and customer knowledge (Epstein & Roy, 2001, p. 593). All of these findings have to be kept in mind when discussing and answering the given research question in this thesis.

Key Performance Indicators

Based on thorough analysis and plans regarding sustainable strategies, companies have to develop performance indicators in order to assess the value of sustainable actions taken. "Every sustainability initiative undertaken should be associated with a specific sustainability performance indicator" and "...translating each element of sustainability into a metric that can be related to sustainability performance" (Epstein & Roy, 2001, p. 594 and 596). The previous statements show the importance of defining goals and strategic actions that is possible to compare to actual performance indicators. In order to provide value for both the company and the environment, KPIs are found to be essential. The study by Epstein & Roy (2001) reveals that KPIs give managers access to valuable information about the impact of strategic sustainability goals and what impact they have both for the company and the environment (Epstein & Roy, 2001, p. 595).

As this thesis covers the shipping and cruise line industry, relevant parameters used to assess environmental performance are found to be waste, emissions, energy and water consumption. According to Epstein & Roy (2001), investment in, for example, waste management systems can serve as an indicator of performance related to sustainability. However, these investments require measurements of the actual amount of waste reduced, and the need for KPIs emerge (Epstein & Roy, 2001, p. 596). In this thesis, results from Epstein & Roy (2001) creates a basis for an evaluation of the participating case companies' measurements of sustainable performance, being important for the following argumentations in order to answer the research question presented.

2.3.2 Strategy implementation

Strategy implementation is defined as the process of translating a formulated strategy into action, and research states that this is the most difficult phase for strategic managers (Epstein & Roy, 2001; Epstein & Buhovac, 2010). Following the study conducted by Epstein & Roy (2001), a successful strategy implementation requires managers understanding of decisions made and actions taken, and the effect on performance. Epstein & Roy (2001) argue that having such insight permits better integration in day-to-day operational decisions throughout the organisation (Epstein & Roy, 2001, pp. 587-588). As this study seek to get an overview of how the participating case companies implement sustainable strategies, research on strategy implementation opens up for further discussions.

In the following, research and previous literature addressing the issues and possibilities of implementing sustainable strategies are presented. All of the following concepts are considered as important for the argumentation towards answering the research question presented in this thesis.

Five C framework on strategy implementation

With the aim at bridging the gap between strategy implementation and sustainability, Johannsdottir & McInerney (2018) conducted a case study addressing how insurance companies can integrate sustainability into culture, core business, strategy and structure (Johannsdottir & McInerney, 2018, p. 1252). Their research presented the 'Five C framework of implementing environmental sustainability strategies', classified in five categories;

- 1) commitment of leaders and employees,
- 2) configuration of the business,
- 3) core business and its transformation,
- 4) internal/external communication, and
- 5) continuous improvements

As Johannsdottir & McInerney (2018) argues, the five elements discovered in the study can be of relevance for other industries and businesses with a different core strategy. Accordingly, the authors wish for future research to explore whether the framework applies to other sectors (Johannsdottir & McInerney, 2018, p. 1262). The framework also emphasises other aspects as important for strategy implementation such as leadership, employee motivation, company culture and communication. We argue that the five elements of the framework are of importance for the argumentation and conclusions on how companies can implement sustainable strategies. Finding whether these five elements are of relevance for the participating case companies is an interesting approach, and thus it will contribute to answering the given research question.

Implications in the implementation process

Engert et.al. (2016) conducted a literature review of 114 peer-reviewed scientific journals on the integration of corporate sustainability into strategic management. The review found three essential areas affecting the strategy implementation process; organisational influences; internal and external drivers; supporting and hindering factors (Engert et.al., 2016, p. 2838). Engert et.al. (2016) revealed several internal and external drivers and supporting and hindering factors in the integration process. The results from Engert et.al. (2016) serves as an important starting point for discussing different factors influencing the strategy implementation in polluting industries. Getting a thorough understanding of potential supporting and hindering factors, internal and external drivers, compose an important part of this thesis. Thereby, we chose to include, in Figure 5, the illustration of findings by Engert et.al. (2016), which is kept in mind when discussing strategy implementation within the chosen case companies.

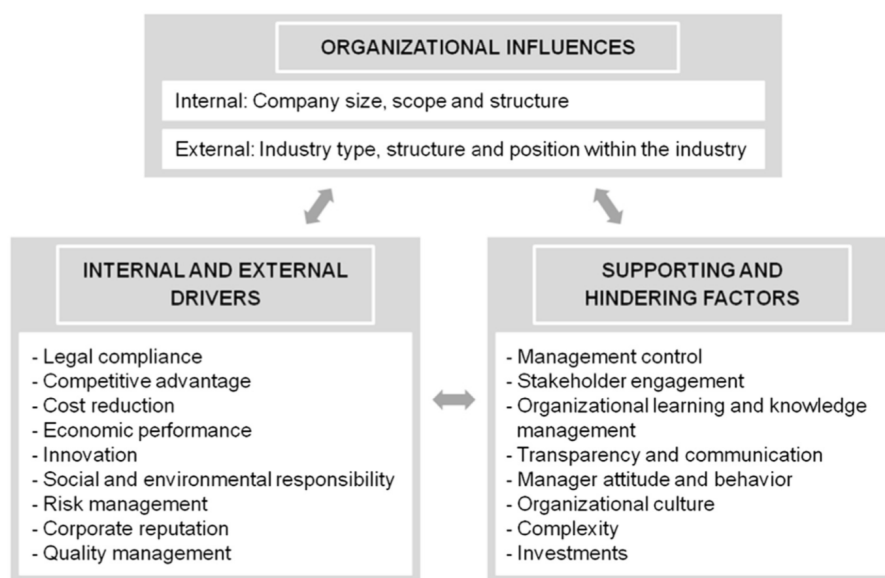


Figure 5: Emerged issues from exploring the integration of corporate sustainability into strategic management (Engert et. al., 2016, p. 2838).

The framework can contribute to managers identification of implications in the implementation process and serve as a guideline on what issues to be considered and initiatives serving the company’s strategic orientation (Engert et.al., 2016, p. 2843). Having insight on implications is stated as important in the implementation process. Supporting factors should be enlightened and hindering factors should be carefully considered. Identifying internal and external drivers in order to assess company problems is found to be critical. Based on the review, the authors suggest that future research focus on how the integration of corporate sustainability into strategic management is done in practice and identify managers arguments to drive the process (Engert et.al., 2016, p. 2843).

Other research on the field of strategy implementation has focused on the identified gap between the strategy formulation and implementation phases of sustainable business strategies. So as Engert et.al., (2016) identified emerged issues, Engert & Baumgartner (2016) conducted a study on the gap, identifying factors and conditions necessary for companies to achieve a successful implementation. The following factors were identified; organisational structure; organisational culture; leadership; management control; employee motivation and qualifications; communication (Engert & Baumgartner, 2016, p. 826). An interesting contribution to the discussion of how companies can implement sustainable strategies would be to see whether finding of this thesis are in line with findings by Engert & Baumgartner

(2016). Identifying ‘success factors’ for the chosen case companies within the shipping and cruise line industry can contribute with an industry-specific study as purposed by Engert & Baumgartner (2016).

Formal and informal systems in implementation of sustainability strategies

Epstein & Buhovac (2010) conducted a study, addressing the main challenges of implementing sustainability into strategic management. The goal was to enhance the understanding of sustainability drivers, impact of corporate decisions on the society, environment and corporate financial performance (Epstein & Buhovac, 2010, p. 307).

‘*Formal systems*’ are processes, performance measurements and reward systems used to help managers assess the effects of different inputs in the strategy process. Epstein & Buhovac (2010) argue that competence on external requirements, expectations and industry standards is necessary to succeed with sustainable strategies (Epstein & Buhovac, 2010, p. 309). In order to provide value for the company, Epstein & Roy (2001) and Epstein & Buhovac (2010) argues that companies should measure progress in order to evaluate whether implementation is successful, by, among others, using defined KPIs.

Further, the study by Epstein & Buhovac (2010) revealed the need for ‘informal systems’ as a supplement for the ‘formal systems’. ‘*Informal systems*’ include mission, leadership, culture and people necessary for organisational success (Epstein & Buhovac, 2010, p. 313). These are aimed at motivating employees to take part in sustainability adjustments, in addition to improve company culture. Epstein & Buhovac (2010) state that managers who are able to integrate sustainability at the core of company strategy through commitment and involvement of employees, compose an important part of strategy implementation. Further, Epstein & Buhovac (2010) found informal systems to be critical in implementation, which shows that these cannot be overseen or undervalued in the process. For this thesis, the distinction between formal and informal systems addressed by Epstein & Buhovac (2010) is of special importance in order to answer the research question. This is due to the evaluation of whether the case companies manage to have both formal and informal systems in place, as suggested by Epstein & Buhovac (2010).

2.4 Environmental regulations and corporate strategy

Both national and international regulations, and legal compliance requirements are continuously developed to limit pollutions and other environmental harmful effects from the industry. Thereby, in this study, it is relevant to include research related to regulations and legal compliance in order to answer the given research question.

Rugman & Verbeke (1998) states that environmental regulations are the main determinant of managers taking strategic actions to benefit the society, and to develop a sustainable business strategy. However, taking strategic actions to cope with environmental challenges is a complex and costly process for managers. Walley & Whitehead (1994) argues that the 'win-win situations' in environmental situations are rare, as the total cost of a company's environmental program will have a bigger impact (Walley & Whitehead, 1994, p. 46).

As a contribution to the research on environmental regulations and corporate strategy, Rugman & Verbeke (2000) conducted a case study presenting a resource-based perspective on green strategies in an international context. Rugman & Verbeke (2000) studied environmental regulations due to the rapid growth in governmental interventions, and its influence on company's competitiveness and their strategic management process. The study shows that companies trying to adapt to a more dynamic green capability, also experience an effective first mover response (Rugman & Verbeke, 2000, p. 384). The study also concludes that one of the main challenges today is to implement sustainable strategies in connection with regulations (Rugman & Verbeke, 2000, p. 384). However, the case study does not state whether they have a solution to this challenge.

Further, a study conducted by Rassier & Earnhart (2015) found that investors expect a negative relationship between environmental regulations and profitability. The study further states that there is a positive correlation between environmental regulations and actual profitability (Rassier & Earnhart, 2015). This might indicate that investors' expectations do not necessarily match the actual long-term financial results. Further, the study found that management generally refuses to carry out strategic and environmentally-friendly activities in fear of the economic prospect. One reason for these predetermined attitudes, can be weak enforcement and poor results of regulations in previous years (Song, Wang & Sun, 2018, p. 4).

However, regulations often lead to higher costs in several parts of the value chain, but it also stimulates technological development and higher competitiveness according to several studies (Porter, 1991; Jaffe & Palmer, 1997; Hamamoto, 2006; Ambec & Barla, 2006). Increased competitiveness can, in turn, lead to greater market shares and higher earnings, which can result in positively affected profits.

2.5 The Porter Hypothesis

With increased focus on environment and sustainability in polluting industries, comes the need for innovative solutions to solve current issues. Porter & van der Linde (1995a) developed a hypothesis focusing on the environment, resource productivity, innovation and competitiveness. The Porter Hypothesis states that properly designed environmental standards and regulations can trigger innovations, which ultimately improves company profitability (Porter & van der Linde, 1995a, p. 120). Thereby, outside pressure can serve as a motivation for companies in polluting industries to develop innovative solutions. Regulators and companies should focus on the trade-off between environmental protection and competitiveness by encouraging innovation and resource productivity (Porter & van der Linde, 1995a, p. 128).

For companies in the shipping and cruise line industry, focusing on a sustainable business strategy involves, among others, creating innovative solutions that contribute to reduced pollutions. Porter and van der Linde (1995a) divides innovation in response to environmental regulation into two categories; new technologies and approaches that reduce costs from dealing with pollutions; and innovations addressing the root causes of pollution by improving resource productivity (Porter & van der Linde, 1995a, p. 125). Further, Porter & van der Linde (1995a) encourage a shift from focusing on costs related to eliminating or treating pollution, towards focusing on the opportunity costs of pollution; wasted resources, wasted effort, and diminished value to customers. Companies focusing on developing sustainable strategies and solutions instead of fighting against regulations, can have increased competitive advantage within the industry.

Rassier & Earnhart (2015) conducted an analysis supporting the Porter Hypothesis. They argue that companies who view regulations as an opportunity to develop and employ new

technologies and techniques, can improve their business by decreasing production costs and increase product quality. On the other hand, the Porter Hypothesis has been criticised by several economists questioning the validity of the hypothesis. Critics claims that companies voluntarily seek opportunities to improve financial performance, regardless of regulation and regulatory pressure (Rassier & Earnhart, 2015, p. 137).

Competitive advantage

As the demand for low-pollution and energy-efficient solutions are increasing, companies use innovations to open up for new market segments and finding their way to a competitive position. Environmental improvements must be considered as an economic and competitive opportunity, and not as an inevitable cost or threat. Porter & van der Linde (1995b) stresses the importance of companies recognising the environment as a competitive opportunity rather than additional costs. Companies should gather sufficient information about their true environmental costs and opportunities through analysis of their current business operations in order to take on a competitive position in the market (Porter & van der Linde, 1995b, p. 115). However, environmental regulations do not necessarily lead to innovation and competitiveness, or to higher productivity for all companies. Several econometric studies state that environmental regulations raise costs and harms competitiveness, but these are subject to bias as compliance costs are overestimated by ignoring possible innovation benefits for the company (Porter & van der Linde, 1995b, p. 108). According to Porter & van der Linde (1995b), only the companies that get a successful innovation will gain a competitive advantage. A more competitive industry will more likely take up a standard as a challenge and respond to it with innovation. A non-competitive industry would not be oriented towards innovation and thus be tempted to combat all regulations (Porter & van der Linde, 1995b). Companies considering compliance cost and industry regulations as a source to innovation, benefit recused costs and improvement in their competitive position.

2.6 Profitability in sustainable business strategies

Strategic cost management is an important aspect of developing competitive strategies, and one of the main drivers is the cost advantage (Christmann, 2000). From a business perspective, factors for increased competitiveness have been described with traditional variables in the competition, such as profitability and financial results. Research indicates that environmental

actions both lead to lower costs and a form of differentiation in relation to competitive advantage (Reyes-Rodríguez, Ulhøi & Madsen, 2014, p. 195).

Previous research indicates that there is a connection between environmental efforts in companies and increased profit performance (Hart & Ahuja, 1996, p. 34). Activities aimed at reducing the environmental footprint appear to have positive effects on operating performance such as return on sales, return on assets and return on equity, after one to two years. Hart & Ahuja (1996) further argues that industries with prominent pollutions might even benefit more in terms of financial results. The bottom line is, that there are several low-cost activities to be performed in polluting industries, which can lead to increased performance even though the investment costs might increase for short time period. Further, Lo & Sheu (2007) conducted a study, stating that it is a significant positive relationship between corporate sustainability, market value, and sales growth. They even argue that companies with a strong focus on sustainable strategies may be rewarded by investors with a higher valuation in the financial markets. According to Kumar, Teichman & Timpernagel (2012) companies need to eliminate waste in order to stay competitive and profitable. Thus, the study implies that companies must increase their focus on sustainable strategies in order to have a competitive and profitable corporation.

Although several studies point to a positive correlation between financial results and sustainable strategies, there are also studies that contradict this. Christmann (2000) found that there is a marginal negative relation between environmental management and cost advantage, which is a significant factor in determining firm performance and profitability. Environmental strategies may then generally not lead to notable cost advantages and increased competitiveness (Christmann, 2000, p. 675). Therefore, it appears that there are different opinions in the literature as to whether sustainable strategies can be profitable from a business perspective.

3. Research Methodology

The purpose of this chapter is to describe choices made on research method, research strategy and research design, in addition to provide a description of the data collection process and the following data analysis. Finally, the chapter gives an evaluation of research quality and methodological limitations of the study.

3.1 The choice of research method

According to Corbin & Strauss (2008) methodology is “a way of thinking about and studying a social phenomenon” (Corbin & Strauss, 2008, p. 1). There are several methods serving as techniques and procedures for a researcher when gathering and analysing data for a study (Corbin & Strauss, 2008, p. 1). The choice of research method in this thesis is based on an assessment of the empirical approach and the purpose of the study, intended to contribute to answering the given research question.

3.1.1 Research perspective

The purpose of the study is to increase our understanding of the research phenomenon and gather information and experience, rather than searching for the truth. We are searching for information on how companies can develop and implement profitable and sustainable business strategies, based on the selected case companies and their strategic processes. Therefore, based on Marshall & Rossman (2006) outlining of research purpose, we consider this as a descriptive and exploratory study, as we are trying to build descriptions of complex circumstances unexplored in the current literature (Marshall & Rossman, 2006, p. 33).

3.1.2 Qualitative research method

When deciding on a research strategy, it is common to distinguish between quantitative and qualitative research methods. The difference between these research methods is largely dependent of differences in data and how they are processed. The quantitative method is often preferred when collecting information that can be quantified or expressed in numbers, while a qualitative method collects information that cannot be quantified in such way. According to Corbin & Strauss (2008), qualitative research seeks to discover rather than test variables, by reaching participants inner experiences in an area or field, in order to determine meaning and experiences. As the purpose of this study is to gain in-depth knowledge of the sustainable strategy development and implementation phases within a specific industry, we chosen to use a qualitative research method.

3.2 Selection of research strategy and research design

To answer a given research question, there are several possible research strategies and research designs that can be used, depending on the phenomena under study. In the following sections, we are providing explanations for choice of research strategy and research design.

3.2.1 Case study as a research strategy

The choice of research strategy for this study is based on given conditions and suiting research methods proposed by Yin (2014), which contributed to the determination of the most appropriate strategy. According to Yin (2014), there are three conditions that have to be considered in order to choose the most suited research method; a) type of research question, b) the extent of control the researcher has, c) the degree of focus on contemporary events (Yin, 2014, p. 9). In order to illustrate our process of choosing a research strategy, Table 1 provide an overview of relevant situations suiting different research methods, presented by Yin (2014);

Method	Form of research question	Requires control of behavioral events?	Focuses on contemporary events?
Experiment	how, why?	yes	yes
Survey	who, what, where, how many, how much?	no	yes
Archival Analysis	who, what, where, how many, how much?	no	yes/no
History	how, why?	no	no
Case Study	how, why?	no	yes

Table 1: Relevant situations for different research methods (Yin, 2014, p. 9).

In this study, the research question is formulated as a ‘how’ question, as we seek to explain the relationship between sustainability and the strategic management process. As the purpose of the study is to observe and interview key informants rather than taking control, a case study appears to be a suitable strategy. Further, the study focusses on how companies actually behave in a strategic manner, and thereby view contemporary events rather than a historical phenomenon. With this in mind, we consider the criteria of Yin (2014) to be fulfilled and choose case study as the research strategy for this study.

3.2.2 Case study design

Prior to any data collection process, it is necessary to decide on what research design to use in the study. According to Yin (2014) research design is a logical plan for getting from a defined set of questions to be answered, to some sets of conclusions or answers to these questions (Yin, 2014, p. 28). In this study, we have made a choice on number of cases to be included, leading to a choice of whether to conduct a single or multiple-case design to answer the given research question. Yin (2014) distinguish between two basic types of case study designs; *single-case design* and *multiple-case design*. A single-case study is appropriate to use when the researcher studies a single group or phenomena, providing an in-depth description, and require strong arguments in justification of choice for the case (Yin, 2013, pp. 51-52).

On the other hand, a multiple-case study is suitable when the researcher seeks to address differences and similarities between several cases, which is the purpose of this study. According to Yin (2014), choosing a selection of two or more cases to answer questions such as “how and why a particular intervention has been implemented smoothly” is an appropriate way to do a case study (Yin, 2014, p. 62). As this study seek to explain how companies can develop and implement profitable and sustainable business strategies, a multiple-case study seems to be a suitable strategy. In this study the cases are defined as the companies, operating within the same industry, and the context is the polluting industry composing the companies’ operating environment. According to Klettner, Clark & Boersma (2014), case study research is valuable when assessing how companies implement their sustainable strategies, and several single-case studies have been conducted on the field. However, there is a lack of multiple-case studies focusing on businesses within a specific industry (Klettner et.al., 2014).

In accordance with the argumentation above and the purpose of this study, we have decided to carry out a multiple-case study design, aiming at answering the given research question.

3.2.3 Selection of cases

The final selection of proper cases for the given study is important in qualitative studies. This has to be done prior to any data collection process, and the most important criteria is that the cases serve as a basis for answering the given research question (Yin, 2014, p. 95). Yin (2014) states that the selection technique for a multiple-case study is based on a replication logic (Yin, 2014, p. 57). Each case must be carefully selected so that they either predict similar results (a

literal replication) or predicts contrasting results (a theoretical replication). When screening possible candidates for this study, we had a one-phase approach, meaning that we chose between several possible candidates. Prior to the screening process, we defined a set of operational criteria whereby a few candidates were deemed as qualified. Some of the main criteria were that the informants had competences on both sustainability and strategy processes within their company. In addition, they had to have information on and understanding of the company's position within the industry.

In this study, the selection of case companies is based on how they include sustainability in the development and implementation of corporate strategies. Accordingly, we find it reasonable to collaborate with large companies within the same industry, as they have both resources and knowledge on sustainability. In small-medium businesses, there is often a lack of specific knowledge on the strategic fields of operation. Another important criterion was that key people within the companies were available at the time for the data collection and were willing to contribute to the study. Based on the operational criteria defined beforehand, we contacted several possible candidates within the shipping and cruise line industry via email, receiving several positive feedbacks on candidates willing to contribute. On this basis, we decided to proceed with three companies operating in the chosen industry, in addition to one independent non-profit organisation with industry-specific knowledge.

Having an informant from a non-profit organisation in addition to the case companies was found to be valuable due to the informant's knowledge on industry development, laws and regulations. We followed the same procedure as with the companies, contacting several non-profit organisations via email, receiving feedback from a few candidates. However, we found a lack of people with the industry-specific knowledge we were searching for, thus, we managed to find one qualified informant.

All of the informants required to stay anonymous, and will thereby be named '*Company A*', '*Company B*', '*Company C*' and '*Non-profit organisation*' in this study. To provide an overview of the case study research, we included both method, strategy and design in the following model. These are put in relation to the cases chosen, in order to systemise the methodology;

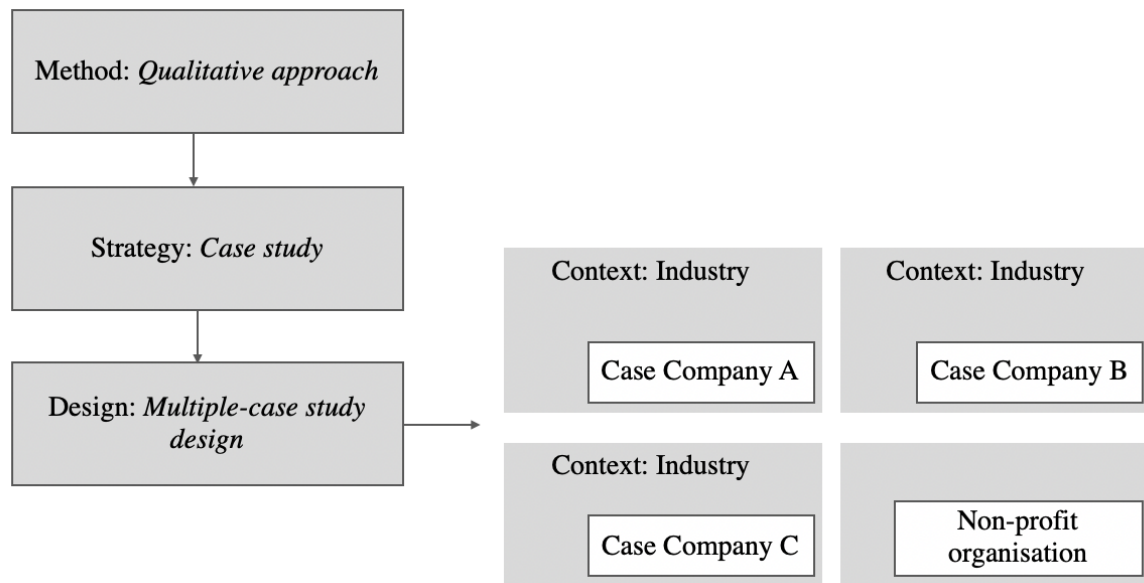


Figure 6: Illustration of our case study research.

3.3 Data collection and accomplishment of the study

According to Yin (2014), there are several sources of information, having different strengths and weaknesses. For this study, we chose to use interviews as the method for data collection, supplemented by industry and company-specific documents. The next paragraphs will explain the different types of data collection to a wider extent.

3.3.1 Data triangulation

Case studies using multiple sources of evidence is, according to Yin (2014), considered to have a higher degree of quality and lead to the development of converging lines of inquiries. Triangulation of data is stated by Yin (2014) to be data that address similar findings. Data triangulation can further be described as collecting information from multiple sources, with the purpose of finding similar patterns or findings. By developing convergent evidence through data triangulation, the construct validity of the case study can be strengthened (Yin, 2014, p. 121).

Nevertheless, one should keep in mind that a disadvantage of using the triangulation approach as in data collection, requires extensive data collection knowledge as researchers have to handle and analyse different types of data sources. However, we believe that data triangulation will

reinforce both the validity and reliability of this thesis, as the scope of data becomes more extent. Therefore, we have chosen to use both document data and interviews in the data collection process in this thesis.

3.3.2 Document data

Document data is included in order to support other sources of information and has the advantage of being easily accessible for the public (Yin, 2014, p. 107). Thus, document data must be used with care, due to the case of available documents not always showing the unmitigated truth (Yin, 2014, p. 108). Therefore, we were critical when choosing document data to be included in this study. Prior to the interviews, we examined the companies' websites in order to get an overview of how they presented themselves with regard to sustainability. We chose to evaluate financial data from 'Proff- the business finder' (Proff, 2019), to get an overview of the financial creation of the chosen case companies. To obtain additional industry-specific information, we read various environmental reports from the Norwegian Parliament, the Norwegian Shipowners' Association and the International Maritime Organisation (IMO). We found this valuable in order to get a more nuanced overview of the industry than what the companies were able to provide in the interviews. Document data contributed to a more critical view of the information given by the informants.

3.3.3 Interviews

According to Yin (2014), interviews are one of the most important sources of data collection in case studies and take form of guided conversations rather than structured queries, known as in-depth interviews (Yin, 2014, p. 110). One advantage of conducting interviews is the creation of a realistic picture of the field of study, and the generation of data that gives an authentic insight into the informants' experiences (Silverman, 1997, p. 99). As the aim of the data collection is to gather detailed information on how companies within the chosen industry develop and implement sustainable strategies, we found interviews to be most suitable.

Development of the interview guide

Developing good questions for the interview guide is a prerequisite for a case study and should be formed in such a way that the researcher can use it as a guide in the interview situation (Yin, 2014). During the creation of an interview guide for this study, both previous research and

document data were used as a foundation for defining questions, contributing to the quality of the questions asked.

According to Yin (2014), there are three types of case study interviews; prolonged interviews, shorter interviews and survey interviews. In this study, we chose to use a shorter case study interview. The reason why we chose this approach was to get a focused interview that did not exceed one hour, due to the informants having limited time available. The interview guide for the case companies consisted of 43 questions, including the themes; environmental measures, profitability and the phases of the strategic management process related to sustainability. For the non-profit organisation, we searched for more in-depth knowledge of the industry, and thereby, the development of the interview guide had to be different than for the case companies. The interview guide used for the non-profit organisation consisted of 16 questions, including themes of challenges in the industry, industry work towards sustainability, profitability and ethical dilemmas. The two separate interview guides can be seen in Appendixes A and B.

Conducting the interviews

Both researchers were present during each interview, where one researcher took notes, while the other led the interview. In addition, we chose to use an audio recorder to easily go through the interviews during the transcription phase. All of the informants accepted the use of recording prior to the interview. To ensure that we did not fully control or influence the interview objects, we chose to ask open questions during the interviews. To investigate our research question thoroughly, semi-structured interviews were chosen, following the interview guide, but accordingly allowing informants to go into other relevant topics. Since the informants were spread to different geographical areas in Norway, we chose to conduct the interviews over Skype, also due to limited time available for travel.

The informants were asked what environmental measures their company currently carried out. The reason why we asked these questions was to make the informants aware of what sustainability measures are actually implemented. Further, the informants were asked what internal and external factors affecting the development and implementation of sustainable strategies. Further, under the theme of profitability, the informants were asked which factors must be taken into account in order to maintain profitability of the company by introducing sustainable strategies. In addition, the informants were asked to address the relationship

between financial results and sustainable measures, as well as how they experienced governmental grants in the context of sustainable measures. The interviews with the case companies lasted for approximately 50-60 minutes.

The informant from the non-profit organisation was asked about what main challenges that exist in the industry, and how the organisation cope with these challenges. In addition, the interview focused on some moral and ethical considerations. Further, the informants were asked to reflect on sustainable strategies in the industry, containing themes like motivation, realism, relevance and general impressions. Lastly, the informant was asked to address how sustainable strategies can affect profitability. It was also mentioned examples of 'best practice' companies within the industry. The interview with the non-profit organisation lasted for approximately 45 minutes.

At the end of each interview, the informants were asked how they experienced the interview and if they had any additional comments beyond what we had discussed. Our impression was that the informants was detailed and carefully thoughtful, and there were few additional comments.

3.4 Data analysis

In this section, the different steps of the data analysis process will be presented. The stages of the coding process will be described and further illustrated with a coding result example. In addition, the process of writing memos during the data analysis will be presented.

The coding process

For the data analysis, we used the qualitative analysis software NVivo 12 to organise, categorise and analyse data conducted in the collection process. The reason why we chose to use NVivo 12 was its contribution to an effective and thorough coding process and analysis of conducted interviews. It is important to notice that using an analysis software serves as an assistant in the process and will not do the finished analysis. The software will make it easier for the researcher to determine whether any meaningful patterns are emerging from the data, shown in codes and categories defined by the researcher (Yin, 2014, p. 134). There should also be clarified reasons for defining categories, codes and subsequent codes to ensure that they can

be connected with the chosen research design. An example of the coding results is presented in Table 2. An overview all the coding results can be found in Appendix C.

Sample quotes	First-Order Categories	Second-Order Themes
# "When we decided to build LNG driven ships there was established a NOx-fond, and the price of the LNG fuel made the investment bearable. But then the Norwegian government, Ministry of Finance and the Norwegian Parliament came up with new regulations that resulted in a price increase of 25 to 30 percent on the LNG fuel." (Company C) # "Regulations are not always well developed on the basis of empirical documentations and realism, which can result in regulations that does not have a positive environmental effect globally..." (Company B) # "There is a lack of stable framework conditions, this is crucial." (Company B)	Poorly developed regulations create uncertainty in the industry	Regulations and legal compliance affect sustainable strategy development and implementation
# "We see that the development of infrastructure is not good enough, and we cannot invest in more sustainable transportations, like electric ferries, because not all ports have shore power." (Company B) # "When sustainable alternatives are fully developed, there is a need for development of required infrastructure, which is time consuming, 10-20 years if we are lucky." (Company C) # "Often, required infrastructure are not available for the companies as seaside development often don't go and in hand with development of land infrastructure." (Bellona)	Regulations and infrastructure are not in line with the development of the industry	
# "If there are reasonable regulations coming, it makes us have a creative mindset and going beyond what is expected from us..." (Company B) # "We wish to have a special competence as a part of our differentiation strategy in order to get a competitive advantage relative to our competitors." (Company C) # "It has been a motivation to get a competitive advantage related to sustainability, we are trying to fill the gap in the industry." (Company B)	Regulations can be a driver for innovation	

Table 2: Coding results example

According to Corbin & Strauss (2008), researchers should begin coding after the first interview as the first data serves as a foundation for further data collection and analysis (Corbin & Strauss, 2008, p. 163). All of the transcribed interviews were read several times to get a thorough understanding of the respondents' answers. The conducted data were studied both as four separate parts, and together as a whole, which provided the basis for breaking down the data in order to generate codes and categories. When further coding procedures no longer provided new knowledge but merely confirmed the theory developed, the process ended.

A model explaining how the coding process took place is illustrated in Figure 7. First, we started with open coding of the raw data, following the grounded theory approach. Grounded theory is to carry out data collection and analysis in parallel (Bryant & Charmaz, 2007, p. 15). An open coding procedure is used, in which one gives names to statements and event elements from their substance. By continuously comparing new observations with previously obtained data, categories are developed and the relationship between them is discovered. In the open coding phase, we made first-order nodes and added sentences from the interviews into the various categories. This part of the process made us reflect upon the data, what the data was stating and indicating. After we had gone through all of the interviews, we went through all of

the nodes again where we delineated some categories and created new ones. After this, we moved on to creating subcategories under the first-order nodes, called axial coding (Corbin & Strauss, 2008, p. 198). This was done in order to identify similarities and differences to create relationships among the open codes. Following, we started selective coding and developed core-categories based on the categories developed in the last axial coding process. The core categories then lead to second-order themes and dimensions used in our analysis and discussion presented in Chapter 4.

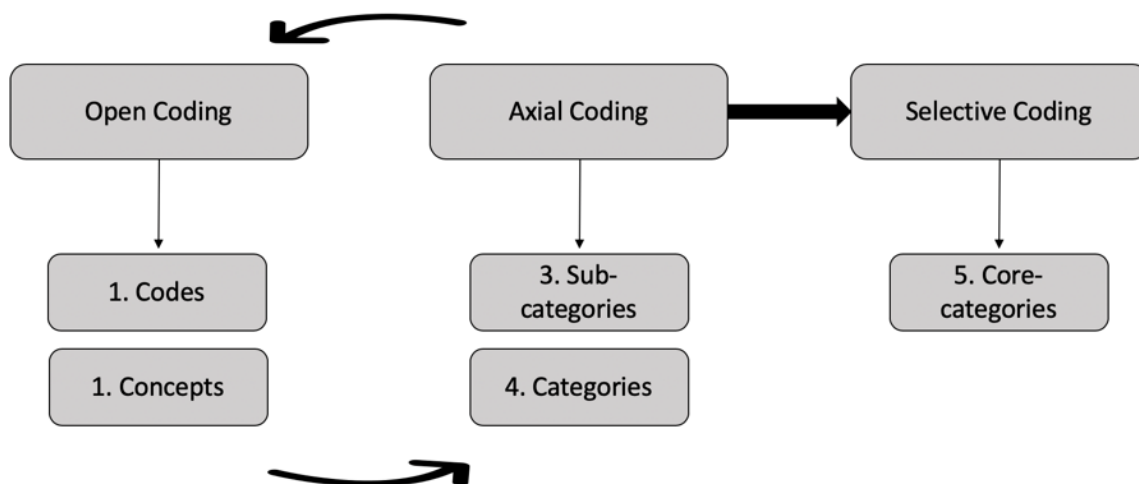


Figure 7: Coding process

Writing memos

During the entire coding process, we wrote memos. Memos are a specialised type of written records that contains the products for the analysis and is a way to portray possible relationships between concepts and statements (Corbin & Strauss, 2008, p. 117). It is an active way of analysing the data and forced us to start analysing early in the analysing process. The memo writing process began with the first analytic session and continued throughout the entire analysis process, as recommended by Corbin & Strauss (2008). Writing memos was a time-consuming process, but an important and necessary part of the analysis in order to keep track of cumulative thinking.

First, we chose to write memos during the open coding process, in order to systematise our thoughts on how we developed nodes and connections. When moving on to axial coding, we continued writing another memo based on the first memo written. In order to display the findings of the data, we used models in a creative process, drawing the relationship between

information from the informants. In the analysis process, we assessed whether several of the findings from the different companies belonged to each other and drew out what was designated by similarities.

3.5 Research quality

When conducting research, one can judge the quality of a given design by evaluating the validity and reliability of the study. In this section, an assessment of the research quality of the study will be discussed.

3.5.1 Reliability

Reliability relates to the extent to which the procedures for data collection will produce the same results if repeated several times by the same researcher or by other fellow researchers (Yin, 2014, p. 48). There will always be a possibility that the circumstances may have influenced the information given during the interview process, such as the interviewers. Therefore, one cannot conclude that if the process were to be repeated, the answers of information would be exactly the same as in this thesis.

The data was conducted through interviews, and we chose to send the interview guide to the informants a few days before the interview took place. The reason why we did this, was to make sure that we got the right key people within the company to participate in the study, as well as giving them the ability to prepare for the interview. Due to some of the questions going beyond the informant's competences, they asked colleagues in other departments of the company before the interview took place, and they could then contribute with a more thorough explanation. However, there are some risk related to handing out the interview guide beforehand, as the answers received could be fabricated so that the company could be presented in the best way possible. Another factor influencing the reliability of the study is that each of the companies and the non-profit organisation provided us with one informant each. The reason why we did so, is due to the lack of key people within the organisation having the competence on both sustainability and the strategic management process.

The informants required to be anonymous in order to participate in the study. The fact that all of the informants wanted to stay anonymous is considered positive, as they were allowed to speak more freely, and they were not hesitant to be quoted. This can contribute to more accurate

in-depth information from the informants, which in turn could lead to the reliability to be enhanced.

The interviews were held in Norwegian, as this was the mother tongue of both the informants and the researchers. After the interviews were completed, these were further transcribed and translated to English. The translation of quotes from Norwegian to English was carried out as accurately as possible and to the best of the researcher's ability. Nevertheless, it must be expected that some quotes may be incorrectly translated or that they lost somewhat of their meaning. However, we believe that the information was translated as correctly as possible and that the genre of error is relatively small. The fact that direct quotes have been used throughout the analysis, we believe, strengthens the reliability of the study.

According to Yin (2014), the goal of reliability is to minimise the errors and biases in a study. To reach this goal, researchers have to document their data collection procedures. In this study, we therefore focused on a proper description of our choice of research method, research strategy and design. In addition, we provided a thorough description of the selection of cases, data collection and data analysis. We believe that this can contribute positively to the reliability of the study as the process is thoroughly documented, and the ability to carry out the study again with similar results will be greater.

3.5.2 Validity

External validity shows whether the study findings are generalisable beyond the study. Yin (2014) states that the research question can have a direct impact on the strategies used in striving for external validity, and 'how' or 'why' questions increase the opportunity of generalisation. With this in mind, we developed our research question, which precisely expresses *how* companies in polluting industries can develop and implement profitable and sustainable strategies. In addition, when doing a multiple-case study, the chances of doing a good case study will be greater than using a single-case design, as results and conclusions from multiple cases provide the ability to compare and replicate (Yin, 2014, p. 64). However, the selection of informants in this study is rather narrow, and one cannot generalise the results more than to a certain extent even though multiple cases have been used. This might have had, to some extent, a negative impact on the validity. However, we believe that three case-

companies and one additional non-profit organisation is enough to consider the validity to be satisfying.

Construct validity is concerned with the identification of correct operational measures for the concepts being studied and is found to be challenging in case study research (Yin, 2014, p. 46). Therefore, it is important to consider whether the study answers its actual purpose. During this study, two researchers gathered data and information to be used. This is an effective strategy to ensure the construct validity of the study, and is called investigator triangulation (Yin, 2014, p. 120). This led both researchers to constantly review all the research material, to make sure that we got the right meaning of both theory and information. In addition, this contributed to control that the study actually answers its actual purpose. This can lead to strengthened validity, as other researchers can review the study and be sure that the content described is likely to have happened.

3.5.4 Methodological limitations

A multiple-case study was found to be the most suitable research design for this study. However, we acknowledge that there are some methodological limitations to our research. Although we included three companies and one non-profit organisation as informants in order to examine the industry as a whole, the scope of the study might have been too narrow. Having three case companies makes us unable to generalise on the basis of information obtained through interviews, nor are we able to state that our findings reflect how other companies within the industry work in practice. Having a case study with a larger number of informants could have contributed with even more data to the development of the thesis. However, due to limited time, such a scope was found to be challenging. According to Yin (2014) a major concern of case studies is the difficulty for researchers to avoid the bias of results and conclusions being affected by personal perceptions and opinions.

Thus, this has been kept in mind when analysing results and deciding on concluding remarks.

3.5.3 Ethical considerations

On July 20, 2018, a new privacy legislation came into force with the purpose of strengthening the rights of individuals (NSD, 2018). The changes entail, among other things, requirements for the consent of participants in projects and the obligation to register and document the processing of personal data. Personal data is information that can be linked to individuals in the thesis. It may be linked directly with data containing names, data that is traceable to an

email/IP-address, indirectly through background information or through a reference number in the dataset (Universitetet i Agder, 2019). As long as the project process personal data in either of the ways mentioned, you are obliged to notify the Norwegian Centre for Research Data (NSD). Prior to the interviews, we notified to NSD that we were to collect personal data, even though the case companies were meant to be anonymous in this study. We received approval from NSD January 15, 2019 to start collecting data. Further, we developed a declaration of consent that was signed by all the participants, which is in accordance with Yin (2014) arguments on obtaining a formal approval. This document contained information about the research project, the purpose of participation and why the companies were asked to participate. In addition, the declaration included information about what participation involves and information about privacy and rights. The declaration was signed by the three case companies, the non-profit organisation, as well as the supervisor and the two students responsible for the thesis. All of the informants required to stay anonymous in the study.

As the data used in this thesis is collected through interviews of key informants, we find it important to do an ethical assessment with regard to the use of individuals in research. When conducting interviews in a case study, the need for protecting human subjects emerge, and the researchers have a special responsibility (Yin, 2014, p. 78). It is found to be particularly important to ensure that the informants are not harmed in any way by participating in the study, and that their privacy is protected. We had these responsibilities in mind when conducting the interviews and used the information throughout the research process. The questions asked had a limited number of personal questions, and rather focus on the companies' work with sustainability and strategy. This is to ensure a more professional relationship between the informants and researchers.

Prior to the interviews, the informant's personal data were treated anonymously and stored in a secure way. In addition, they were informed that the interviews were recorded on tape, and that the file is kept by the researchers until the end of the study period. The researchers are obliged by the University of Agder to store information conducted through interviews in a secure way, by using their service for personal data storage, named Microsoft OneDrive, which was done. By this, we ensure that data conducted through interviews are treated in such a way that the identity of the participants remains private. Although the data is protected in the best way possible and the informants in the study are anonymised, there is a risk of being recognised

by someone with special company knowledge. The researchers have, to the best of our ability, written the thesis in such a way that company information is difficult to recognise.

4. Findings and Discussion

The following chapter will provide a presentation of data gathered through the interviews. Each section consists of data presentation, followed by a discussion of the findings in accordance with literature and research presented in Chapter 2. Our findings will be presented in five main sections; ‘The case companies’, ‘Sustainable strategy development’, ‘Sustainable strategy implementation’, ‘Regulations and legal compliance’ and ‘Profitability’.

4.1 The case companies

These companies were chosen for the present study owing to its position in the industry and strategic actions taken towards a sustainable industry. The companies are mainly operating in Norway and the other Nordic countries, but also partly on the international market. They are constantly taking on strategic actions to meet sustainable goals and are handling pressure from both the Government and other stakeholders. In their strategic management process, the companies focus on pollutions caused by their ships along the coastline, both air and water pollutions, as well as waste management.

None of the companies have a clear vision containing sustainable concerns, which were expected to be found prior to the data collection. Within the industry, the three case companies place themselves in the cost leadership and differentiation categories, with special focus on industry-specific knowledge and competence, market challenges and customer preferences.

Company A:

Company A offers passenger traffic in addition to shipping of utility vehicles and goods, and is among the youngest cruise line companies within their segment. Despite this, they have managed to grow large purely in market terms in Europe. The company has moved from using heavy oil fuel to use of sustainable fuel on several ships, and the interview showed that they are changing their strategic focus towards a clearly defined strategy by the end of the year of 2019.

Company B:

In addition to Company A, Company B offers passenger traffic and cargo shipping, and has been an important part of the industry for decades. Since their beginning, the company has come up with several sustainability reports and contributed to a sustainable development of the shipping and cruise line industry. In addition to an overall strategy the company has a separate environmental strategy focusing on environmental footprints and corporate social responsibility, aiming at taking a new strategic turn. Sustainability is of great importance for the company, and the informant state that it is constantly search for new and innovative solutions to environmental issues within the industry.

Company C:

Company C offers cargo shipping and is an important actor within freight transport along the European coastline. The interview revealed that the company focuses on developing industry-specific knowledge and competence on sustainable solutions, and they are constantly following R&D to keep up with market trends. Sustainability is not a part of the overall company strategy, but they follow regulations and legislations given, and take on strategic actions towards a sustainable industry development.

The non-profit organisation:

The non-profit organisation has worked with challenges on emissions and pollution from the shipping and cruise line industry since the 1980s. This organisation provides valuable information and insights about the industry and the companies operating within, as they are independent and not related to any of the case companies participating in this study.

Motivation

The introduction of sustainability initiative is determined by a number of motivational factors, such as internal and external forces arising from various stakeholders and institutions. This subchapter intends to explore what factors motivating the companies to consider sustainability in the strategic management process.

It emerged from the interviews that there are different factors motivating the case companies to develop and implement a sustainable business strategy. A common denominator for the three companies is the potential competitive advantage and increased profitability of taking on sustainable strategic actions;

“It has been a motivation to get a competitive advantage related to sustainability, we are trying to fill the gap in the industry.” (Company B)

For Company B, the goal of being the market leader within their segment and getting a first-mover advantage, has been an important motivation;

“If we fail to follow the industry development regarding environment and sustainability, our competitors might take the leading position.” (Company B)

In contrast, Company A and C consider themselves as average actors in the shipping and cruise line industry and are not motivated by obtaining first-mover advantages. However, Company C seeks to have special competence in order to reach their mission of being the preferred shipping supplier and get a competitive advantage in the market.

“We wish to have a special competence as a part of the differentiation strategy in order to get a competitive advantage relative to our competitors.” (Company C)

“It can be a definite advantage to be a secondary or third mover in the market regarding sustainable actions, but if the market demand is clear, it is not profitable being the last mover. But you also have to consider the technological risks with being a first mover.” (Company C)

The above statements show the different motivational factors among the case companies, especially related to the value of being a first or second mover. According to the informants, this is caused by the industry development and governmental concerns that have to be considered in the strategy development process.

“Cost efficiency stands as a motivational factor for developing a sustainable strategy. If we can increase productivity through environmental solutions, we choose this option.” (Company C)

The informant from the non-profit organisation supports these findings, stating that;

“Some do these changes because of the environmental issues, but mainly these companies have a business in need of income. In addition, it might provide a competitive advantage, more contracts and higher earnings, as well as being in front of the coming governmental regulations.” (Non-profit organisation)

In addition, the informant from the non-profit organisation states that increasing claims from consumers and legal authorities are forcing companies to take sustainability into account.

All of the case companies state that corporate social responsibility (CSR) is one of the main motivations for taking on a sustainable strategy;

“We aim at having better environmentally friendly solutions by choosing the right technology, operational patterns and market customisation seen from a social and market perspective. In addition, we wish to contribute to increased understanding - and knowledge of the environmental field.” (Company B)

When analysing data, we found that there are several factors motivating the case companies with regard to CSR. It is crucial to take part in the sustainable development of the industry, which is important for all of the companies.

“Actually, the motivation is to be a sustainable company, but this has to follow the market development to reduce company risk.” (Company C)

“We are driven by changes in governmental regulations and their continuous changes, which motivates us to develop new strategic actions, as we have a sustainable strategy based on governmental regulations.” (Company B)

“Our motivation is to be a responsible actor and we care about how others perceive us, both the society, employees, owners and customers. Reputation among customers is important for us, and we constantly have to be aware of their perception of us. In addition, governmental regulations stand as a motivation because we have to follow these, if not, it will be costly.” (Company A)

The above statements show that governmental regulations in the industry have an impact on the companies' motivation to take on CSR in strategic matters.

«We want to be a responsible actor and develop our strategy on the basis of environmental and sustainability demands.” (Company B)

“With regard to CSR, we care about external reputation among stakeholders, long-term thinking, environmental adjustments and going beyond compliance. But this requires profitability to make it possible.” (Company B)

Discussion

All of the case companies are driven by different motivational factors; thus, they have several factors in common. The findings also reveal that certain factors are likely to have a bigger impact on the companies’ motivation and that they vary in relevance. Competitive advantage is one of the common motivational factors found, which is also stated in previous literature on the field (Porter & Reinhardt, 2007). In this relation, Galbreath (2009a) stated the importance for companies to be aware of their position in the market, in order to take on competitive or first mover advantages through leading positions. Some of the informants also mention that it might be problematic if the companies fail to follow the industry development due to avoidance of risk, lack of competence or the willingness to consider sustainability. They see the possibility of losing their competitive advantage, and the difficulty of achieving competitive advantages in the future. However, we found that Company B, which has the greatest focus on sustainable strategies, also emphasise being a first mover, as they consider this as a way to gain competitive advantage. Thus, we see that while the two other companies are not directly motivated by such advantages.

The study further revealed that CSR is a motivation for all of the case companies. This stands in line with the arguments of Galbreath (2009a), stating that CSR is vital for the process of having a sustainable strategy, as it serves as a basis for company strategy. The companies aim at being a responsible actor within the industry and take responsibilities beyond CSR, as the industry is constantly changing. These findings are supported by the Triple Bottom Line presented by Elkington (1998), highlighting the importance of companies taking on both economic, environmental and social responsibility.

4.2 Sustainable strategy development

To provide a comprehensive assessment of how companies can develop a profitable and sustainable strategy, it is necessary to investigate what internal and external factors influencing the case companies' development process. This implies an understanding of how the process works within each company, and how the company management set their goals to successfully implement a sustainable strategy. An overview of the main findings on factors influencing sustainable strategy development is presented in Table 3.

Factors influencing sustainable strategy development		
Internal factors	External factors	Planning
<p><i>Competence</i> on industry, market and technology</p> <ul style="list-style-type: none"> Lack of competence can have a negative impact on the development process Companies increase competence through: <ul style="list-style-type: none"> → The use of resources on R&D → Cooperation and participation in pilot projects <p><i>Involvement</i> of employees across all company levels in the development process ensure a thorough process</p>	<p><i>Regulations</i> is the main factor</p> <ul style="list-style-type: none"> Developing strategy in order to meet industry regulations Rapid changes in conditions can harm the industry, and have to be considered in the development process <p><i>Customers, stakeholder reputation</i> and <i>competition</i> are identified as factors that have to be considered when developing a sustainable strategy</p>	<ul style="list-style-type: none"> Thorough analysis and planning required Need for long-term perspective in the planning process <p><i>Defining Key Performance Indicators</i></p> <ul style="list-style-type: none"> Challenge: KPIs not defined in relation to sustainability, but rather financial performance <p>→ Companies need to view KPIs as more than financial indicators in order to develop a sustainable strategy</p>

Table 3: Overview of main findings on factors influencing sustainable strategy development

Thorough planning and long-term thinking

Long-term thinking, thorough analysis and planning are found to be of significance in the development of a sustainable strategy for the companies. In addition, the informant from the non-profit organisation highlights the importance of companies focusing on sustainability throughout the whole value chain;

“What is important regarding corporate sustainability is to value this throughout the whole value chain. They should not forget to consider what products and resources they buy from their suppliers.” (Non-profit organisation)

“My impression of the companies within the industry is that sustainability is not high on the companies' agenda. Some bigger companies have sustainable strategies in addition to the overall company strategy, but most companies have only a few sentences on their webpage.” (Non-profit organisation)

Discussion

As stated in the literature, a thorough planning process based on analysis of the micro and macro environment is necessary before proceeding with a sustainable strategy (Dyllick & Hockerts, 2002; Epstein & Roy, 2001). This is also evident from our findings, as all of the case companies emphasise internal and external analysis of core competencies and environment prior to any sustainable strategy development. Along with Epstein & Roy (2001) and Dyllick & Hockerts (2002), we found that long-term thinking is crucial in the planning process, both with regard to investments in ships, and the anticipation of possible changes in regulations from governmental institutions. As such, we believe that there is evidence of the companies' managing sustainability development with a long-term perspective in order to create a basis for a successful implementation. Accordingly, long-term planning in the strategy development process is found to be critical with regard to the profitability of investments (Barrow, 2006).

Nevertheless, our study shows that the case companies do not focus too much on developing plans regarding the promotion of sustainability performance to stakeholders, which stand against research done by Epstein & Roy (2001), stating such plans to be critical. We argue that it is important for the companies to focus on all elements of a planning process and that they increase their focus on promoting sustainable actions to stakeholders, as addressed by Epstein & Roy (2001). By doing so, management might face new investors and other positive effects due to a better reputation among stakeholders and within the industry. In addition, such plans and programs might lead to competitive advantages in the long-run.

4.2.1 Defining Key Performance Indicators

All of the informants agree on the importance of defining key performance indicators (KPI) when developing a sustainable business strategy, but these are incorporated in various scope within each of the companies. In this relation, one identified challenge is the ability to come up with ideas in the development phase that is possible to measure;

“It is a challenge to come up with good ideas that have a measurable effect in the development phase.” (Company A)

Findings imply that the case companies' KPIs are mostly driven by measuring financial performance rather than sustainability. The main KPIs identified is fuel consumption,

efficiency and waste management. However, none of the companies have defined these KPIs in direct relation to sustainability.

“We measure fuel consumption and efficiency, and waste management, but these KPIs are not directly seeking to measure sustainability, but rather financial performance.”
(Company C)

“Our company defines KPIs, many of them are related to responsibility with regard to our operations. We also aim at using KPIs to ensure that our marine operations are implemented in accordance with current laws and regulations.” (Company B)

Discussion

Epstein & Roy (2001) argue that KPIs are crucial when developing sustainable strategies. This is because each element of a strategy should be related to a specific sustainability performance indicator in order to provide value for the companies. This is found to be done in a various scope within each of the participating companies, as they are mainly driven by financial performance rather than sustainability. The company’s focus on key numbers such as waste management and CO2 emissions, which stands in line with arguments provided by Epstein & Roy (2001) and Barrow (2006). As regulations are expanding with the pressure for companies to prove their actions taken with regard to sustainability, there is an increasing need to have thorough developed KPIs, not only related to financial concerns. These issues were discussed by Elkington (1998), arguing that companies responsibilities cover more than economic incentives. An identified challenge is the companies’ abilities to find a common unit of measure related to social and environmental sustainability, compounding an important part of the companies’ KPIs. These challenges are previously discussed by Dyllick & Hockerts (2002), stating that calculating social and environmental sustainability can be more difficult than measuring economic sustainability. Our findings further reveal that the case companies have a rather narrow focus on social measures, stated as an important factor in the triple bottom line (Elkington, 1998). Thereby, we argue that companies need to define KPIs related to both economic, social and environmental sustainability in order to have a thorough strategy development, supported by Elkington (1998) and Dyllick & Hockerts (2002).

4.2.2 External Factors Influencing Sustainable Strategy Development

From the interviews, *regulations, customers, stakeholder reputation and competition* were found to be external factors influencing sustainable strategy development.

“External factors influencing is governmental regulations, customers and employees, and the society’s’ general opinion, but I cannot say that these limits our strategy development in any way.” (Company A)

As Company A states, the identified external factors do not directly limit their strategic management process in any way. Thus, our findings does, to some extent disagree on this point.

Industry regulations and legal compliance

Regulations are found to be a common factor influencing the strategy development process, as these create the basis for environmental concerns to be included in the process. The informant from Company B stated the importance of following regulatory claims in order to develop a strategy that satisfies changing conditions;

«Basically, there are no external factors that limit our strategy development process, but we need to be proactive in relation to regulatory claims coming in the years to come.” (Company B)

However, another informant state that regulations might turn out to be a negative external factor if they turn out to harm the market rather than being a contributor to sustainable development.

During the interviews, it was stated that the companies’ ability to go beyond compliance in strategy development is based on an own assessment of the need for such actions. Two of the companies have a clear goal of going beyond compliance, and states that it is a necessary move to take on required environmental actions;

“There are four factors that have to be balanced; reputation among stakeholders, long-term thinking, environmental adoption and going beyond compliance.”
(Company B)

“We wish to work with sustainability as something more than compliance. The distance from compliance to the level we wish to reach related to sustainability is huge, and sustainability is something way more than only compliance.” (Company A)

Discussion

Conducting external analysis is, as argued by Nathan (2010) and Epstein & Roy (2001), of special importance when companies are developing a sustainable business strategy. This is because knowledge of industry development and changes in the company's macro environment is found to be crucial when setting strategic goals and actions. These arguments are in accordance with our findings, stating that the case companies conduct external analysis to obtain competence on industry regulations. The industry is facing some uncertainty due to rapid changes in regulations followed by new technological and environmental solutions, which requires company managers to conduct external analysis more often than before.

The companies have, until recent years, successfully conducted industry knowledge and followed changes in industry regulations. However, our findings reveal that regulations can have a negative influence on strategy development if they are rapidly changing and difficult to follow. A corporate strategy is planned in a three to five-year perspective and developed on the basis of the current analysis of the macro-environment (Epstein & Roy, 2001). With rapid changing conditions and regulations comes the need for managers to adjust towards changes in a different scope than before. As Epstein & Roy (2001) argues, constant analysis of the macro environment composes the basis for strategy development. Thus, this phase is found to be difficult and can have negative consequences for the companies if regulations are changing before the 'expiration' of the current company strategy. The strategic manager has to identify threats, problems and solutions with regard to industry regulations in order to envision the impact of these on the strategy development process, as argued by Barrow (2006). However, having the ability to forecast future changes in regulations is found to be difficult and is not necessarily feasible.

Although the companies have the ability to conduct an external analysis, each of the companies are obliged to evaluate these findings and incorporate them in a strategic manner. These actions demand competence on new solutions, and managers ability to put these into meaningful strategic goals and actions. With changes in the macro-environment comes the need for having a manager that has a thorough understanding of laws and regulations. These findings are previously discussed by Barrow (2006), stating the need for managers to have competences of all the company's surroundings. Findings also reveal customers, stakeholder reputation and

competition as factors influencing the strategy development process. These stakeholders comprehend important parts of the companies' operating environment and is an important contribution to competence in an industry context.

Building on this, we argue that conducting external analysis in order to assess customers, stakeholder reputation and the company's market position is crucial in the strategy development process. None of the companies are willing to take the risk of ignoring a market examination, as these comprise an important basis for strategy development.

4.2.3 Internal Factors Influencing Sustainable Strategy Development

Findings reveal *competence* as the internal factor having the greatest impact on strategy development for the three companies. This includes both industry and market competence, as well as technological competence. Company A states that the balance between what the company wants to do, and what it is capable of doing, is a challenge when developing a strategy with regard to competence. According to the informants, lack of competence may lead the companies to being unable to proceed with a sustainable strategy, and thereby competence turns out to be a negative internal factor in the development process.

Company B and C have a continuous focus on developing internal competence on the environment and sustainable solutions for the industry. Mainly, this is done through research and development (R&D), in order to identify challenges and get to know their operating context;

“We have to constantly build competence to understand the environmental context. This has to be kept in mind for everyone, especially key people in the company.” (Company B)

“Something that can set limitations is the understanding of technological development, understanding what comes and understanding the changes in the market. We have some improvements to do here, which limits us.” (Company C)

Findings from the case companies' interviews are supported by the informant from the non-profit organisation, stating the value of companies cooperating and taking advantage of competence across the whole value chain;

“Companies should take part in pilot projects, take advantage of the whole value chain, in addition, to follow up on changes on land in addition to onshore. This way, the companies obtain competence on what solutions that work, which creates the basis for company-specific goals and sustainable strategy development.”

(Non-profit organisation)

Involvement was identified as another important internal factor. The interviews show that the companies involve employees from all parts of the organisation, but to a different extent. Company A has a formal process involving middle managers, seeking for contributions. On the other hand, Company B does not have any formally defined process, but are open for input and involve their employees to some degree.

“It is against its purpose if the strategy is a pure leadership product because every employee has an impact and is supposed to implement it in the daily operations.”

(Company A)

Discussion

Findings show that, in order to have an understanding of core skills and competencies, the companies conduct internal analysis to evaluate their position and resources available, as argued by Nathan (2010) and Epstein & Roy (2001). Competence on industry, market and technological development are of special importance, as these are rapidly changing and affect the competitive position of the company. From a strategic management perspective, competence has to be acquired in order to be able to identify goals and define strategic direction for the company (Barrow, 2006). To what extent the companies are able to acquire competence, is thus dependent on resources used and participation in development projects. Two of the companies use their resources on R&D and take part in pilot projects to further develop their industry-specific competence. Through such investments of both time and resources, the companies gain distinct competence by collaborating and testing different solutions, which can provide them with competitive advantages. However, we argue that it is important that both managers and employees have the ability to, later on, implement these new competencies in order for it to provide value for the company.

Lack of competence is a concern among the case companies, mostly in relation to competence on the technological development of the industry, as this can be a drawback on their

competitive advantage. Further, we found that lack of competence may lead to poorly defined strategic goals that later on can be difficult to implement, making the process even more challenging for the companies. As argued by Galbreath (2009b), managers have to understand their operating context, strengths and weaknesses in order to create a sustainable strategy. As our findings imply, the companies have to be aware of whether they lack important competence or not, in order to be able to fill in knowledge gaps in the development phase.

By involving employees from different parts of the company, findings show that the quality of goals set can be increased. Through involvement, management can obtain competencies they did not have beforehand, due to knowledge sharing. Employees working onboard ships might have tacit knowledge on company procedures and sources of emissions, which is valuable information in the development of a sustainable strategy. However, to the best of the authors' knowledge, the literature presented in this study has not discussed this factor in relation to strategy development, which is an interesting finding. Thus, we argue that the involvement of employees is an important internal factor.

4.3 Sustainable strategy implementation

This section seeks to provide a comprehensive assessment of how the case companies work to successfully, or not successfully, implement their sustainable strategies, and what internal and external factors influencing this process. The three companies have different approaches to the implementation process. However, they have several internal and external factors in common. An overview of the main findings on factors influencing sustainable strategy implementation is provided in Table 4:

Factors influencing sustainable strategy implementation	
Formal systems	Informal systems
KPIs have to be defined in order to measure progress and evaluate whether the implementation is successful	<ul style="list-style-type: none"> • Change management • Company culture and employee involvement • Internal communication
KPIs are revisited and evaluated in order to secure a satisfying implementation	<ul style="list-style-type: none"> • Competence on implementation and use of new technologies

Table 4: Overview of main findings on factors influencing sustainable strategy implementation

4.3.1 Formal systems for measuring strategy implementation

A common denominator found among the case companies with regard to sustainable strategy implementation is the focus on informal systems such as *company culture, management and competence*. In addition, all of the companies use KPIs, being formal systems, as measurements of implementation.

Key Performance Indicators

KPIs are being used in order to measure progress and find whether the companies manage a successful strategy implementation, or not.

“We make sure that manuals and the sustainable strategy are followed through daily following mid-leaders, and checking key numbers such as revenue growth, customer satisfaction and several other key performance indicators that gives measurable results on a company level.” (Company A)

“The strategic development and the way we are working with it are continuously revised and evaluated, and we measure the implementation on whether we reach our KPIs related to time and resources, before we move on. We have to see whether our strategic choices were right, if they are satisfying; yes, if not; no. If we have too many unsatisfying cases, we have to consider whether the strategic steps were right.”
(Company C)

The informant from the non-profit organisation also stresses the importance of companies being able to measure whether strategic goals are met;

“It is crucial to have defined goals and measurements to be able to implement a sustainable strategy. How to actually reach the goals set? How to measure whether the goals are met? Measuring progress and sustainability is necessary in all parts of the company.” (Non-profit organisation)

Discussion

Epstein & Roy (2001) discuss the importance of managers identifying key drivers to improve the implementation phase, by having an understanding of actions taken. As stated by Epstein & Buhovac (2010), our findings reveal that the companies constantly use KPIs in order to follow the implementation on a corporate level. These also compose the basis for evaluating

goals set and find whether these are met. KPIs provide strategic managers with valuable insight into corporate decisions and financial performance in relation to strategy implementation. Further, findings reveal that these formal systems (KPIs) are critical in the process of examining whether a strategy should be revisited or changed in any way, in order to be successfully implemented. These results support findings by Epstein & Buhovac (2010), stating that formal measurements are a key ingredient to make sustainability work (Epstein & Buhovac, 2010).

4.3.2 Informal Systems

Change Management

Company A mention change management as a challenge when implementing a sustainable business strategy, and states that it requires managerial resources to obtain a successful implementation;

“Change management is needed when implementing a sustainable strategy, but it is a strategic component that engage people. As a company leader, it is important to see the possibilities of improvement and development.” (Company A)

The interviews further revealed that it is important that both leaders and employees adjust towards changes to successfully implement sustainable solutions;

“Implementation is all about engaging people.” (Company C)

“Implementation requires that employees are able to, have the willingness and understanding of change, and that leaders have the ability to follow up.”
(Company A)

Company culture and employee involvement

All of the companies prioritise *involvement of employees* in the implementation phase. Strategic decisions are made at the top level, but findings show that involvement from all company levels is necessary in order to have a successful implementation. Company A states that their entire company is involved in the process, and that they use appraisal interviews to set strategic goals and follow up on the implementation on a personal level. In addition, Company A yearly arrange workshops to involve and motivate employees, where they can provide suggestions on sustainable strategic actions, such as waste reduction onboard ships.

“Development of employees is a key factor to ensure progress and development. This way, the employees reach their full potential and abilities.” (Company A)

Company B involves personnel working on their ships, in order to get feedback and suggestions on how to reduce pollutions. Further, they try to motivate employees to take sustainability into account on a daily basis and implement a company culture that encourages such attitudes.

“It is important that all employees are motivated to see the reason why we are taking sustainability into account, and that they actually follow our strategic goals and demands from the top management.” (Company B)

“The company has a good organisational culture based on clearly defined value propositions and good management principles.” (Company B)

Company C also mention involvement as a key factor in the implementation process;

“Many of our issues are solved through continuous dialogue and collaboration. Interaction between all company levels has a significant value.” (Company C)

Internal communication

All of the case companies emphasise internal communication when implementing strategy, and are focusing on the use of platforms to communicate their sustainability goals. Digital platforms, manuals and meetings are used to gather employees and reach out to each one of them with strategic visions. Internal communication across company levels is found to be important;

“We develop a corporate strategy and further communicate this out to all of our employees across divisions in shorter explanations that are easy to understand. Yearly, we go through our strategy where our CEO goes out and meet all our employees to briefly present the strategic content. We also communicate through physical meetings with employees onboard, a strategy-manual and ‘Facebook at work’ as a digital platform.” (Company A)

“We communicate with onboard personnel on how we strategically can work towards reduced pollutions from our ships and are constantly learning from this, together with internal reports on environment and pollutions.” (Company B)

The above statements show that communication between top management setting the strategy and the onboard personnel, is important in the implementation of a sustainable strategy.

Competence

The three interviews clearly identified competence as a critical success factor when implementing a sustainable strategy. Interviews revealed that competence on how to use new technologies and solutions with regard to sustainability and environment is of special importance for the companies. The informants claim that a *lack of competence* can lead to poorly made decisions and unsuccessful implementation phase. The informants stated that there is a difference between the willingness to invest, and having the competence and abilities to use and implement the new solutions;

“There are many challenges, one of them is having the ability to use new technology that requires new competence gained through learning and experience. One thing is the willingness to invest, another thing is having the competence to use these solutions.” (Company C)

It is found that decisions made with a lack of competence can have a negative impact on the companies as a whole, both financially and strategically. In addition, competence on the operating context was mentioned;

“The key is thorough planning and that you know what you do, based on analysis done beforehand. Implementation fails if it is done precipitously.” (Company B)

“Implementation requires a good understanding of the company’s operating context.”
(Company B)

An interesting finding comes from the informant in Company C, claiming that there is no difference between the implementation of a sustainable strategy and other corporate strategies.

Discussion

Managing sustainable strategy implementation within the shipping and cruise line industry is a complex task, where different factors have to be carefully considered (Barrow, 2006). As stated in the literature, leadership, culture and people are important factors composing the

informal systems needed within a company (Epstein & Buhovac, 2010; Engert et.al., 2016). The interviews found all of these factors being important for the case companies in their sustainable strategy implementation.

Leadership with a focus on change management, as argued by Johannsdottir & McInerney (2018) and Engert et.al., (2016), were found to be of importance for the case companies. This is due to the need for leaders to engage employees in the implementation process through company culture, motivation and communication. Managers ability to engage employees in the implementation process was found to be central among the case companies, as stated by Johannsdottir & McInerney (2018), arguing that commitment of leaders and employees is crucial in the process. Further, findings reveal that, through change management, leaders are thriving for a change towards sustainable daily operations, depending on employees' willingness to adjust in the process. This involves employees understanding of change, and their ability to implement new solutions in daily business operations. These findings are also supported by Barrow (2006), stating that education of employees is one of the main tasks for an environmental manager. Although willingness to change and adjust towards a more sustainable business is present, the process can be rather difficult if management fails to follow.

Organisational culture and employee motivation are important in sustainable strategy implementation (Engert & Baumgartner, 2016; Engert et.al., 2016; Epstein & Buhovac, 2010). In this study, these factors are found to have a positive effect on the implementation process if they are successfully developed and maintained, as they yield a positive working environment and commitment among employees. We found that strategic management encouraging learning, involvement and development of employees provides a positive contribution to a successful strategy implementation. The informants highlight the importance of all employees understanding the value of the company's strategic actions towards reduced pollutions and environmental footprints. This is supported by Engert et.al., (2016), who argues that companies should aim at having a sustainability-oriented culture with a set of basic assumptions (Engert et.al., 2016, p. 2842). On a company level, sustainability has to be incorporated in the organisational culture in order to handle the complex task of integrating sustainability (Engert et.al., 2016). Findings show that the companies incorporate sustainability mainly through employee involvement and an open company culture. These findings are supported by Engert

& Baumgartner (2016) and Epstein & Buhovac (2010), who found organisational culture and employee motivation as critical success factors in the strategy implementation process.

As stated by Engert & Baumgartner (2016) and Epstein & Buhovac (2010), findings show that strategy implementation requires cooperation among employees and between management in order to succeed. In addition, employee's willingness to take part in organisational and structural change is found as crucial in the implementation process. This is stated to be more likely if leadership is done in a way that involves the employees working onboard ships. A common barrier in the implementation process, as stated by Engert & Baumgartner (2016), is the distance from top management setting the strategy, and the employees working onboard implementing the strategy on a daily basis. This can be the captain responsible for doing an effective crossing in order to reduce CO2 emissions, or restaurant employees following routines regarding waste management. Findings further reveal that the company management arrange different types of platforms gathering both employees and leaders. In this way management ensures, to an extent, that employees are aware of their sustainable strategy and that they stay motivated to contribute to reduced emissions. It is found that these platforms also are used to receive feedback from employees onboard, in order to get an overview of current implementation and what actions are working in practice. These findings are supported by the arguments of Engert & Baumgartner (2016), stating that barriers in the implementation process have to be carefully considered and handled by the management.

Internal and external communication

Internal and external communication is stated to be of significance in the strategy implementation process (Engert & Baumgartner, 2016; Engert et.al., 2016; Johannsdottir & McInerney, 2018). Findings reveal that all of the companies emphasise internal communication in sustainable strategy implementation. We argue that this is due to the need for involvement and engagement of employees in the process, mainly done through internal communication, both oral and written. It is found that the companies communicate through both dialogue, written manuals and reports, and digital platforms. The two latter are found to be more frequently used, as they reach out to a large number of employees within the company and require a smaller amount of attention from top management. In contrast, direct dialogue is found to be used in a smaller extent, as the management somehow finds it more challenging to meet all employees with short intervals. These findings are supported by Engert &

Baumgartner (2016) and Engert et.al., (2016), who identified internal communication as a critical success factor in the implementation of a sustainable strategy.

The need for internal two-way communication in this phase is due to the rather long distance between top management and employees working on board ships (Engert & Baumgartner, 2016). In this relation, it is found that the case companies keep this barrier in mind when implementing their sustainable strategy, enhancing internal two-way communication. Comments from Company C shows that communication is vital in the process of evaluating and revisiting a sustainable strategy on the way to a successful implementation. Due to the belief that “*..following the implementation process onboard through communication can reduce misunderstandings and increase efficiency*” and “*..management development courses are being used to communicate internal missions and strategic goals in order to increase employee understanding and competence*”. In line with Johannsdottir & McInerney (2018), these comments cite communication as a key enabling factor in sustainable strategy implementation.

Lack of competence as a hindering factor for successful implementation

The environmental manager is, according to Barrow (2006), responsible for the education of employees regarding sustainability. Our findings show that lack of competence can lead to several challenges in the implementation process. Thereby, development of required competence on how to use new technologies and solutions is found to be important. However, to the best of the authors' knowledge, previous literature found in the literature search process lack discussions on competence in direct relation to strategy implementation. Competence was stated in literature as an important factor in the strategy development process, thus, in this study, competence is found to be a critical factor for a successful implementation as well.

Our research found that the companies struggle with a successful implementation if they fail to obtain required competencies. The study identified a gap between the companies' willingness to invest in sustainable solutions, and the competence to implement these in daily operations. As a result, a lack of such competence can lead to negative effects, both strategically and financially, in addition to serve as a challenge for the companies' competitive position. In the shipping and cruise line industry, as for many other industries, competence can lead to

competitive advantage, providing the company with a distinct position within the industry (Prahalad & Hamel, 1990).

In order to cope with these challenges, the companies should invest in the development of competence prior to the implementation process. In this way, employees working with implementing new sustainable solutions are better prepared on how to successfully use them in daily operations.

It is important to address the fact that findings revealed some differences between the participating companies with regard to implementation. One of the companies stands out, claiming that sustainable strategy implementation does not differ from any other strategy implementation. This result can be due to the companies having different routines, competence and resources used on strategy implementation. Companies providing more resources on the implementation process might find the process less demanding and may not experience any differences in the process. However, findings show that all of the companies find it rather challenging to acquire required competence in order to successfully implement a profitable and sustainable business strategy, regardless of how they perceive the process itself.

4.4 Regulations and legal compliance

Laws, regulations and governmental incentives are constantly being developed for the industry. In this context, the researchers find it interesting to see whether new requirements and regulations prevent or promote competitive and sustainable solutions in the industry. An overview of the main findings on how regulations and legal compliance affect the development and implementation of sustainable business strategies, are provided in Table 5.

How regulations and legal compliance affect sustainable strategy		
Development of industry regulations	Infrastructure	Innovation
<ul style="list-style-type: none"> ○ Changes in regulations can cause market disruptions leading to unstable conditions and uncertainty among shipowners ○ Some regulations are perceived by the informants as poorly developed 	<ul style="list-style-type: none"> ○ Infrastructure on ports does not follow the development of regulations and governmental incentives – making it more risky to take on new solutions 	<ul style="list-style-type: none"> ○ Regulations is considered to be a driver for innovation ○ There is a disagreement if there really is an advantage to be a first mover when it comes to new innovative solutions

Table 5: Overview of main findings on regulations and legal compliance

4.4.1 Development of industry regulations

All of the companies are affected by regulations and legislation, and states that regulations can contribute towards a more sustainable development of the company and their process of taking on new sustainable, strategic actions;

“You are driven by changes in legislation and there is a continuous development of new regulations for the maritime sector, and we need to strategically work to find some advantages in the industry.” (Company B)

With regard to newly developed regulations, the informant from the non-profit organisation states that solutions needed for the shipping and cruise line industry to reach these goals, do not exist;

“One can ensure efficiency onboard and change to less CO₂ intensive fuel but moving to LNG is not enough to reach governmental goals on reducing emissions from the industry.” (Non-profit organisation)

On the other hand, environmental strategies can provide advantages if they are approached in the right way;

“Companies have an advantage if they welcome environmental regulations rather than having a negative attitude, creating an advantage so their competitors don't get ahead of them.” (Non-profit organisation)

One challenge regarding regulations is that companies take environmental strategic actions on the basis of governmental encouragement, that later on turns out to be further regulated. According to the informants, this can eventually have a negative impact on the cost picture and cause market disruption. For instance, changes in regulations led to increased CO₂ fees on LNG, which had a negative financial impact for the companies that invested in LNG as a more sustainable fuel;

“When we decided to build LNG driven ships there was established a NO_x-fond, and the price of the LNG fuel made the investment bearable. But then the Norwegian government, Ministry of Finance and the Norwegian Parliament came up with new regulations that resulted in a price increase of 25 to 30 percent on the LNG fuel.”
(Company C)

This is an example of unstable conditions for the companies that operate in the shipping and cruise line industry. Further, Company C also states that unstable conditions make shipowners insecure about what solutions to choose and what to invest in. The informants emphasised that regulations have to be logic in such a way that it does not end up having a negative impact on the market situation. For instance, Company B states that;

“Regulations are not always well developed on the basis of empirical documentation and realism, which can result in regulations that do not have a positive environmental effect globally. We analysed some of the regulations as less sustainable and rather negative for the company in a financial matter.” (Company B)

“There is a lack of stable framework conditions, this is crucial. The Norwegian authorities want us to go for battery and hydrogen, this is very good for short distance crossings, but if you want to sail longer distances there are no technological solutions today that make it feasible.” (Company C)

The informant from the non-profit organisation stresses the importance of the Government developing regulations and legislation in collaboration with the companies in the industry, rather than creating these behind closed doors;

“The Government has to work together with the industry and not develop plans and regulations behind closed doors. This contributes to solutions that are realistic and able to implement for the companies.” (Non-profit organisation)

In addition, Company B argues that some regulations destroy the competition in the market, as the largest operators will gain the advantage of having the resources to take greater risks in relation to investments.

Infrastructure

All of the companies agreed on infrastructure having an impact on whether they take on new and sustainable solutions for their operations. The infrastructure on ports is not always following the development of regulations and incentives for companies using greener alternatives, such as hybrid solutions or electric crossings. Company B and C states that;

“We see that the development of infrastructure is not good enough, and we cannot invest in more sustainable transportations, like electric ferries, because not all ports have shore power.” (Company B)

“When sustainable alternatives are fully developed, there is a need for development of required infrastructure, which is time-consuming, 10-20 years if we are lucky.”
(Company C)

Further, Company C highlights the issue of using hydrogen or electricity over long-distance crossings, as the technological solutions for these crossings is yet to be developed. For short-distance crossings, such as inland ferries, the technology is more convenient to use, but this require infrastructure like shore power.

“The Norwegian Government aims at all companies choosing hydrogen and batteries, which is a good solution for ferries that have short-distance crossings, but if you have long-distance crossings, there are no technological solutions that make it possible to use what the Government wishes for.” (Company C)

These findings are supported by the informant from the non-profit organisation, addressing access to shore power as a critical factor. Companies have to make sure that the infrastructure is developed in order to get the power needed to use the hybrid function on their ships. The informant from the non-profit organisation highlights these issues;

“Often, the required infrastructure is not available for the companies as seaside development often don’t go hand in hand with the development of land infrastructure.”
(Non-profit organisation)

Discussion

According to our empirical findings, changes in regulations can lead to market disruptions that create unstable conditions and uncertainty among shipowners. This may lead the industry to refuse to adopt sustainable strategies. In addition, market disruption could lead to companies who has the opportunity to invest in larger projects, also being the market leader. This creates an imbalance in the market, which leads to difference in competitive conditions. These findings are in line with research by Rassier & Earnhart (2015), stating that investors expect a negative relation between environmental regulations and profitability, and that management often refuse

to carry out sustainable actions that goes beyond compliance. It also seems that there is a special focus among the companies on what has been implemented by regulations earlier, where not every regulation has been successful. This is also emphasised in the literature; it is not uncommon that previous experiences from poor regulations can lead to reluctance (Song et. al., 2018, p. 4). Nevertheless, it is worth mentioning that the companies do not fight against regulations, they are happy to welcome them as long as they are well founded in realism and empirical research. In this context, the informant from the non-profit organisation mention that governmental agencies and the industry should aim for better cooperation, in order to get appropriately designed laws and regulations benefiting the industry. This requires the industry to take the initiative to help create and develop new regulations based on past experience and market forecasts.

Rugman & Verbeke (2000) argues that companies trying to adapt to laws and regulations to a larger extent, also experience competitiveness as it can guide to a first-mover response. Further, the study concludes that one of the main challenges is to implement sustainable strategies in connection with regulations (Rugman & Verbeke, 2000, p. 384). As our findings implies, regulations play an important part of sustainable strategy development and all of the informants mention that public regulations affect strategic choices to a certain extent. In the chosen industry, it is therefore important for the companies to take regulations into account and include these in the best way possible in the strategy development and implementation. First, this is necessary with regard to statutory regulations. Secondly, proper use of regulations can lead to new, innovative solutions providing companies with a first mover advantage (Rugman & Verbeke, 2000).

4.4.3 Innovation

All of the informants considered regulations as a driver for internal innovation and the courage to take on new solutions. Some of the companies even argue that regulations combined with internal initiatives serve as a driver for innovation;

“If there are reasonable regulations coming, it makes us have a creative mindset and going beyond what is expected from us. You might not get the time to reflect on your own, but external regulations or initiatives forces you to do so.” (Company B)

Company A and C consider themselves as average actors in the shipping and cruise line industry and are not necessarily seeking for first mover advantages. However, Company C seeks to have special competence in order to reach its mission of being the preferred shipping supplier and get a competitive advantage in the market;

“We wish to have a special competence as a part of our differentiation strategy in order to get a competitive advantage relative to our competitors.” (Company C)

“It can be a definite advantage to be a secondary or third mover in the market regarding sustainable actions, but if the market demand is clear, it is not profitable being the last mover. But you also have to consider the technological risks with being a first mover.” (Company C)

On the other hand, Company B focus on being the market leader as they find it valuable to be a first-mover in the industry. The company seek to be ‘above average’ on sustainability;

“It has been a motivation to get a competitive advantage related to sustainability, we are trying to fill the gap in the industry. If we fail to follow the industry development in regard to environment and sustainability, our competitors might take the leading position.” (Company B)

In relation to innovation and first-mover advantage, it appears that the informants have separate opinions whether this is favorable or not.

Discussion

All of the informants agree on the term that regulations can be a driver for new, innovative solutions that benefit the environment. Our findings indicate that the companies are experiencing regulations as a positive factor, as they are forced to be creative and find new strategic solutions in relation to sustainability. For some companies, this means that they would like to be a step ahead in order to set a standard in the industry. The non-profit organisation also emphasises being a first mover in this context by stating that *“the company will then have an opportunity to set a standard for which direction environmental actions should have”*. According to the Porter Hypothesis, properly designed standards and regulations can trigger innovation (Porter & van der Linde, 1995). The hypothesis states that regulations can act as a motivator for companies in polluting industries, by enforcing new technologies to be applied.

In light of the notion that regulations are one of many institutional pressures that can trigger the evolution of sustainability and strategy development, the findings of this study support the Porter Hypothesis to some extent. At the same time, one must take into account that the Porter Hypothesis does not specify what is meant by innovation, and one has to consider the fact that innovation can be defined in several ways.

Our findings also reveal that companies consider saving fuel and emissions as a sustainable initiative, which reduces costs in the long-run. This result is in line with research by Porter and van der Linde (1995), who stated that pollution is a form of economic waste. However, our results do not show that sustainable measures in a corporate strategy lead to higher revenues. Nevertheless, we see that these findings are somewhat contradictory to what the informants have previously said about poorly developed regulations. Therefore, it is important to point out that, in order for regulations to be a driver for innovation of sustainable strategies, the regulations must function well for the specific industry.

4.5 Profitability

Profitability is an important aspect of developing competitive and sustainable strategies. Corporate operations and actions should aim at being profitable, and it is therefore necessary to look at whether sustainable strategies can contribute to even better financial results as some previous research indicates. An overview of the main findings on how profitability affects sustainable strategy development and implementation is provided in Table 6.

How profitability affects a sustainable strategy		
Connection between costs and strategic actions	Balance between costs and strategic actions	Market demand
<ul style="list-style-type: none"> ○ There is a positive relation if the investment is economically justifiable; <ol style="list-style-type: none"> 1) Reduced fuel = reduced costs = reduced environmental impact 2) The greater the investment, the greater the environmental impact ○ It is difficult to find the balance between costs and sustainability ○ Sustainability is not a decisive factor for profitability 	<ul style="list-style-type: none"> ○ Risk is the main challenge ○ Disagreement if it is worth being a first mover – risk reducing to wait ○ Investment cost might be a hindering factor for sustainable solutions ○ Lower operating cost on greater investments 	<ul style="list-style-type: none"> ○ Uncertainty if customers are willing to pay ○ Customers need to adapt to changes being made

Table 6: Overview of main findings on profitability

Connection between sustainable business strategies and profitability

All of the case companies agree on the importance of developing strategic choices and directions with respect to long-term financial goals. Furthermore, it was unilaterally emphasised that they must strive to develop strategies with an essential purpose of future profits.

“All our major investments will always have to be profitable. Of course, there are certain investments we make that may not always be profitable, but we need to find a balance on this.” (Company A)

“A sustainable business strategy requires long-term thinking and priorities at the expense of short-term profits.” (Company B)

“Strategic choices that have a long horizon; we must see that decisions we make today have a long-lasting effect and that they are satisfying also in two, three years. It is in an economic matter; if it works financially and it is sustainable environmentally, then it will work.” (Company C)

During the interviews, the informants were asked if they see a connection between financial results and sustainable actions. All of the informants agreed on the term that there is a strong connection between sustainable actions and financial results. Company A states that;

“I experience that there is a strong connection between financial results and sustainable actions taken. If you look at fuel consumption and we manage to reduce fuel consumption over a distance of a certain percentage, then the same percentage has an impact on the environment and the cost picture.” (Company A)

This illustrates that it is possible to both reduce emissions and lower costs at the same time. In addition, reduced food waste from restaurants onboard has a positive effect on the company's product costs, and furthermore a positive effect on the environment. Nevertheless, Company B mentions that they possibly could have had greater profits if they were not to invest in sustainable solutions;

“We would perhaps have earned more if we had not invested in this environmentally friendly solution – but we need to have a long-term perspective, it must be economically viable.” (Company B)

Further, the informant state that;

“Corporate actions that have the greatest positive environmental impact has the highest investment cost.” (Company B)

With regard to costs, the informant from the non-profit organisation highlights that more environmentally friendly ships have lower operating expenses with shore power and batteries, as shore power currently is cheaper than diesel. The informant also claims that maintenance costs will be lower at more energy effective ships, and states that this is not enough to outline the required investment cost. Further, it is stated that it is possible to reduce costs at a certain level;

“There is a lot of money to save on operating the ships more efficiently and doing things in a more environmentally friendly way. It is also a simple choice, such as having the right speed at the right time and getting to the destination at the right time. Here, companies can save a lot of money in relation to reduced costs.” (Non-profit organisation)

Furthermore, Company A and B state that some sustainable incentives and investments do not necessarily have to be profitable. Some strategic initiatives have been made due to the companies’ desire to act as responsible actors. The companies therefore strive to find a balance between profit and environmentally friendly initiatives;

“All sustainable actions do not necessarily have a positive financial effect, but we are proceeding with these actions based on a general feeling of social responsibility. You make certain choices with respect to other factors than the financial outcome.” (Company A)

“Some of the strategic action does not always have to be profitable, but we choose to proceed with these anyway. Finding this balance is also a challenge for us.” (Company B)

In this relation, the informant from the non-profit organisation mentioned new contracts with better prices as some of the financial gains’ companies can experience from being sustainable.

All the informants mention risk associated with costs and investments as one of the main challenges of developing and implementing sustainable strategies. The high investment costs are, for instance, related to ships that have a lifespan of 30-35 years, which creates a need for the companies to meet changes in market demand and customer preferences;

“Both advantages and disadvantages have to be balanced and requires long-term thinking. Seeing beyond this year's budget even though we have to deliver financially.” (Company B)

“One challenge for us is to see the economic effects of sustainable strategic actions, and whether we accomplish what we predicted, and later find out whether or not the choices made were right.” (Company C)

Related to increased costs when investing in, or using sustainable solutions, Company C focus on the market demand and the avoidance of high costs if the market does not demand these solutions;

“If it leads to a higher cost level and you are the only company that chooses this solution, you are out of the market, unless we have a market that demands it, we are not willing to pay.” (Company C)

“We chose to take on the investment cost related to be a sustainable actor, but it is not necessarily best to be a first mover. Maybe we should have waited until the solutions were well developed so we don't invest in something that later on turns out to be unprofitable and outdated.” (Company C)

Nevertheless, several of the companies claim that in general there are no higher investment costs related to sustainable solutions.

The informant from the non-profit organisation also mention investment cost as a hindering factor for sustainable solutions, supporting the results found from the case companies. The informant explain that several companies have invested in renewable technology without seeing the return on investment as fast as they wanted. The case companies also mention these challenges, as some are sceptical to use new solutions that are not thoroughly tested.

Market demand

Company C mentions the importance of the customers' willingness to pay as a factor for whether investments in sustainability will be beneficial;

“One of the challenges are the customers willingness to pay. They are not necessarily awarding our green choices. We need to have a payoff, we don't want to incur a higher cost level if it does not give any kind of gain, no companies would. As long as the customer does not want to pay more, it is ultimately those who set the framework conditions and define in which direction one should go.” (Company C)

Further in this relation, the companies state;

“The main goal is of course that we want to take environmental responsibility, offer the market (customers) solutions that are greener. Again, with respect to market acceptance of this cost, it is not always that customers are willing to pay for it. We must adapt to a price that is accepted in relation to willingness to pay.”

(Company C)

“For example, if we are to switch from takeaway cup to re-cups in the store requires something for customers, customers need to adapt to these changes. We can't take any big chances when it comes to customer satisfaction.” (Company A)

“We need to look at the balance between costs and actions, and what is appropriate to implement. We need to know what customers want, what the authorities want and what the market is looking for in relation to the environment and sustainability. We cannot make large investment based on assumptions; they must be worked through.”

(Company B)

The findings from the case companies are supported by the informant from the non-profit organisation, which addresses the connection between changing consumer preferences and sustainable strategic goals of the companies;

“Consumers are increasingly focusing on sustainability when buying products and services. This requires companies to evaluate their whole value chain to make sure that all of their actions are sustainable. The consumers are more demanding than ever before.” (Non-profit organisation)

Discussion

Previous literature indicates that it pays to be green, and that especially polluting industries seem to have a greater benefit in terms of financial results (Hart & Ahuja, 1996). Throughout the interviews, profitability was mentioned as an important driver for both the development of sustainable strategies and for the choice of strategic direction in regard to sustainability. It is not a remarkable finding that companies need to strive for satisfying return on investment. This is supported by research conducted by Christmann (2000), stating that strategic cost management is an important aspect of developing competitive and sustainable strategies. According to the informant from the non-profit organisation, sustainable solutions do have lower operating costs, but this does not necessarily mean that this equalises the investment cost. The case companies argue that there is a positive relation if the investment is economically justifiable and that it is possible to both reduce emissions and lower costs. Further, the case companies do not experience large differences in the cost picture by having environmentally friendly alternatives, some even claimed that it is more expensive to operate sustainable solutions in relation to the environment. Based on these findings, it seems that the higher degree of investment is more difficult to defend in a financial context, despite the fact that the environmental effect is greater. Accordingly, one can come to the conclusion that sustainable strategies are not necessarily more profitable nor equal in terms of financial results compared to other strategic directions. This is in line with the research done by Christmann (2000), who found that there is a marginally negative relationship between environmentally friendly measures and the total cost picture. This is also supported by research conducted by Walley & Whitehead (1994), which states that it is rarely profitable to carry out major investments in relation to the environment.

Findings also reveal that it is important for the companies to have a long-term perspective on their environmental investments. All investments, particularly investments in need of less capital, do not need to be profitable as social responsibility exceeds the financial value. This can be seen in context with research conducted by Lo & Sheu (2007), who found that investment in the environment will increase sales revenues and attractiveness among investors. As a result, smaller investments can be profitable in the long term as the company profile improves among stakeholders.

The findings further reveal that it is difficult for the companies to find a proper balance between costs and sustainability, mainly due to the increased risk associated with investment in new, sustainable solutions. When investing in sustainable, corporate actions with high investment costs, companies have to forecast future changes at their best. In terms of investment cost, the informants are generally conservative, which is not new findings as these supports basic economic theory. Thus, the findings show that investing in environmental solutions can provide a higher risk due to solutions not being fully developed and tested. Thereby, the companies do not necessarily see the value of always being a first mover in the industry with regard to new sustainable solutions. This indicates that it can be risk-reducing to wait with adopting new technological solutions until they have been well tested. This is supported by Christmann (2000), which states that environmental strategies do not necessarily lead to any cost advantages.

Further, Kumar et.al. (2012) claims that a focus on sustainable strategies is rewarded by both investors, the Government and consumers. This is also supported by Reyes-Rodríguez et.al. (2014), stating that environmental measures can lead to a competitive advantage. The case companies frequently point out that they are not willing to do strategic changes that require extensive adjustments for their customers, as they have to be willing to pay for the changed products and/or services. Companies therefore have to carefully consider future and expected market demand, solutions and customers willingness to pay. The informant from the non-profit organisation also points out that the consumers are more demanding than ever, and that future customers will reward sustainable measures. This is in line with findings from studies conducted by both Lo & Sheu (2007) and Kumar et. al. (2012).

Our study shows that it is not necessarily more profitable to have a sustainable business strategy, due to the possible high investment costs and risk associated with the investment. This can serve as a hindering factor in the development of sustainable strategies, which is supported by Rassier & Earnhart (2015) who states that management often can refuse to carry out strategic and sustainable solutions due to the fear of the economic prospect.

5. Conclusions and recommendations

In this chapter, concluding remarks will be presented in order to answer the given research question. Further, limitations of the study will be discussed. Lastly, propositions of a further research agenda will be given.

5.1 Conclusion

The purpose of this thesis is to provide an insight on sustainability and strategic management in companies within polluting industries. The main focus has been to obtain a thorough understanding of how the case companies develop and implement sustainable strategies, and how profitability is retained in these phases. Through the study process and collaboration with the chosen case companies, we were able to answer the research question *‘How can companies in polluting industries develop and implement profitable and sustainable business strategies?’*

Sustainability and environmental concerns are found to be of importance for all the participating case companies, as these are difficult to avoid in the strategic management process. Findings show that the companies strive to be a responsible actor within the industry, searching for a good reputation among stakeholders and a possible competitive advantage. Another identified motivation revealed is profitability and financial results, due to the possible cost reductions, increased number of investors and higher incomes from incorporating sustainability into strategy.

Findings show that a sustainable strategy should be based on thorough internal and external analysis with a long-term perspective. Analysis of the micro and macro environment contributes with valuable insight for the strategic manager, both with regard to industrial development and internal competencies. Competence on industry, market and technology was found to be important in the development process, as it constitutes the basis for obtaining competitive advantages. Lack of competence is a common concern among the companies and is found to be the reason for poorly developed strategies that is difficult to implement. Involvement of employees across company levels is found to be a way of increasing the quality of sustainable goals, as employees can contribute with tacit knowledge in the development process.

Laws and regulations constitute the basis for strategy development within polluting industries, and findings reveal that these have to be carefully considered in the process. Meeting the demands from laws and regulations is crucial in order to survive within the industry. Thus, the study shows that industry regulations can be a negative factor in sustainable strategy development if it turns out to harm the companies rather than providing them with guidelines and support. On the other hand, regulations can, in some cases, act as a driver for new innovative solutions, such as strategy innovation with regard to sustainability implementation. The study further reveals that companies operating in polluting industries can gain a competitive advantage by being a first mover in the industry, standing one step ahead to set an industry standard. However, it is found to be a major challenge to actually implement and somehow predict further development of regulations in the strategy process, as regulations are constantly changing. Even though it is important to use previous experience as a part of strategy development, companies in polluting industries need to take risk to some extent and shift the focus from the past to the future. Cooperation with governmental agencies can be a critical success factor.

Due to rapid changes in the industry, a good reputation among stakeholders and customers is found to be crucial, as they provide companies with both investors and income. A sustainable strategy developed without considering stakeholders, customers and competition is found to be less effective, and may lead to difficulties in the implementation process.

In order to manage the implementation process, the study revealed a need for key performance indicators related to sustainability. Each sustainability element in the strategy should be related to a performance indicator, in order to give the management an indication of whether the strategy implementation is successful or not. There is a need to constantly evaluate, revisit and, if necessary, adjust the sustainability goals to reveal which strategic actions are creating value for the company. In addition to formal measurements, the study reveals the need for informal systems as a supplement in order to manage a successful implementation. Managers encouraging change, communicating sustainability goals and actions through an open company culture, has a positive effect on the implementation. Internal communication across company levels increase the probability of sustainable goals being met, as the top management has to collaborate with employees in order to implement new technologies and solutions. Companies that manage to successfully obtain required competence on industry solutions through

education of employees and top management, may take on competitive advantages in the marketplace.

Our study shows that profitability is an important driver for both the development of sustainable strategies and for the selection of strategic direction. To justify sustainable investments, a long-term perspective on sustainable actions is necessary, in order to see both the financial and social value of sustainable actions. In some situations, companies must strive to look past just financial results in order to gain a competitive advantage. Companies have to predict market demand based on how sustainability is developing as a trend among stakeholders, as they set the company's operating conditions. Our findings further show that long-term planning and thinking with regard to financial results and profitability can be rewarded in the form of increased sales revenues and reduced costs. Further, our study reveals that the case companies are concerned with the risk associated with sustainable actions, and they do not necessarily see the value of being a first mover in this context. However, we find that sustainable actions do not necessarily require high investments. Smaller investments are usually associated with lower risk and are therefore easier to implement in sustainable strategies. Such investments can range from disposable cutlery in plastic to biodegradable disposable cutlery, and careful monitoring of emissions. Strategic actions such as waste reduction and reduced emissions can contribute to competitive advantage and could increase sales revenues. Thus, companies proceeding with sustainable strategies have to be willing to take on additional risk in order to obtain a possible competitive advantage.

By studying the sustainable strategy process of companies within the shipping and cruise line industry, this study contributes to existing theory and research by providing insight on the ongoing debate about companies within polluting industries and sustainability. The insight provides the basis for a better understanding of how companies can develop and implement sustainable strategies in order to cope with the challenges of polluting industries.

5.2 Limitations of the study

In addition to methodological limitations mentioned in Chapter 3, we find it important to be aware of some additional limitations of the study.

The strategic management process with regard to sustainability are broad fields of research, which limits the contribution of this study, as it is rather small. In order to explain how companies can develop and implement profitable and sustainable business strategies, more in-depth research should be conducted, focusing on different perspectives. In this study, we chose to focus on companies within the shipping and cruise line industry, in order to get an insight on their strategic management process and sustainable actions taken. Accordingly, we are aware that if we chose another polluting industry, our results could have been different. However, we identified a lack of industry-specific studies with regard to marine industries, and thereby chose this industry in order to provide some insight on the field.

This study has been conducted in Norway, a country that is well known for strict laws and regulations with regard to the environment and sustainable actions taken by companies. In addition, Norway is known for being one of the leading countries on clean technology and green solutions across industries. Our findings are conditioned by the fact that this study focuses on Norwegian companies mainly operating in Norway and the Nordic countries. Our results could have been different if we included case companies from other continents, due to other attitudes with regard to sustainability and the environment. Including companies from countries with laws and regulations different from Norway, could have given other results. However, generalising results apart from the sample included from Norwegian companies within the chosen industry has not been a goal of this study. Yet, we seek to provide valuable and general insight on how companies within polluting industries can develop and implement profitable and sustainable strategies. In addition, we could have included informants from both small, medium and large companies, as these often provide a different amount of resources on sustainability practices. Thus, small companies do not always have a strategic manager handling both strategic processes and environmental concerns, as we were searching to use as informants.

Another limitation of the study is the fact that the chosen industry is constantly changing with regard to both laws and regulations, technology and green solutions. By this, our study could have gotten different results if it was conducted in another time period, either before or after the year of 2019. Laws and regulations affecting the industry today might have been changed within a time period of five to ten years. As the industry is constantly changing, it is a limitation if the informants were not provided with the latest industry-specific information, which is difficult for the researchers to control. In addition, subjective opinions from the informants

within each company can provide the researchers with a view that is a deviation from the truth. The researchers anticipate that the answers given in the interviews are honest.

5.3 Further research agenda

Future research could include companies from polluting industries based in other countries, preferably outside the Nordic countries, due to differences in regulations and environmental responsibilities. An interesting approach for future research is to distinguish between small and medium sized businesses (SMB), and large companies with regard to sustainable strategies. We find this interesting because SMBs and large companies have different prerequisites with regard to capital, workforce and competence, which can have an impact on the strategic management process. On the other hand, it could be interesting to focus on companies within another polluting industry than the shipping and cruise line industry. A combination of companies within different polluting industries could also contribute to a deeper understanding of the phenomena and related challenges. Moreover, we recommend future research to further address the identified gap between the sustainable strategy development and implementation phases. This can be done through a more comprehensive data collection, getting a bigger sample in order to gain greater in-depth knowledge of sustainable strategies within polluting industries.

Further, we identified a gap in the literature on profitability and regulations in relation to sustainable strategy development and implementation. It would be interesting to conduct more research on how regulations affect sustainable strategies in companies within polluting industries, as our study found regulations to have a great effect on development and implementation. Our findings revealed that regulations can be a driver for innovation, but this has to be further investigated through extensive research in order to draw any conclusions. In addition, we found that profitability has an impact on sustainable strategies, as financial results are the foundation for all companies. Accordingly, a study addressing the direct relationship between profitability and sustainable strategies would be a great contribution to research on the field. Lastly, we recommend that further research investigate whether sustainable strategies leads to competitive advantages within polluting industries. As our results indicate, competence on sustainable solutions and technology, and customers willingness to pay for sustainable changes, are factors that can have an impact on competitive advantage. These can be further examined.

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Appendices

Appendix A: Interview guide – Case companies

Interview guide: English – Case companies

Personal background

- What is your position in the company?
- When did you start to work in the company?
- What are your areas of responsibility in the company?
- To what degree does your position cover strategic responsibilities?
- What does sustainability mean to you?

Background

- What are the main competencies of your company?
- How will you define the company's purpose?
- How will you describe the company's organisational culture?
- How does the company implement sustainability in daily corporate operations?
- What formal policies in relation to sustainability does the company have?
- Does the company define any specific KPIs as a way to measure sustainability?
- In what way is sustainability of importance for the company?
- What main challenges does the company face with regard to sustainability?
- How does the company cope with these challenges on a strategic level?
- How will you compare the company's actions with regard to sustainability with other actors in the industry?
- What are the advantages and disadvantages of a sustainable business strategy?
- What is the company's motivation to develop sustainable strategies? What is the motivation behind environmental actions taken by the company?
- Are sustainable strategies present in the company? If not: why?

Company purpose

- What is the main goal of the company?
- What is the main goal of the company in relation to sustainability?
- What operational changes, both internal and external, will give the company an ability to develop/further develop a sustainable strategy? Is there any need for changes?

Sustainable strategy development

The company's strategic direction

- How does your company take sustainability into account when developing and implementing a strategy?
- Who is responsible for, and/or involved in the strategic decision process?
- In what way do you experience that your personal work within the company related to sustainability is a part of the overall organisational culture, vision and strategy? Explain.

- What is the company's business strategy? Is it based on cost leadership, differentiation or other factors?
- What is the main challenge in the process of enhancing the relationship between the company's responsibilities related to the environment, sustainability and competing strategy?

The future relevance of sustainability

- What relevance do you think that sustainability will have in the shipping and cruise line industry in the future?

External factors

- What external factors affect the company's strategy development process?
- Are there any external factors limiting the strategic work towards a sustainable strategy?
- How does society as a whole react to your work with sustainability?
- What is your impression on how public actors support sustainable strategies?
- Is your strategy developed on the basis of something else than national/international industry demands?

Internal factors

- What internal factors affect the company's sustainable strategy development process?

Sustainable strategy implementation

- How does the company implement a sustainable strategy?
- What challenges are present in the implementation of a sustainable strategy?
- Is the implementation of a sustainable strategy more or less demanding than implementing a strategy that does not take the environment into account?
- Is there something you would like to change or improve in relation to the implementation of a sustainable strategy?

The company's incentives for developing and implementing a sustainable strategy

- What is the reason for the company incorporating sustainability in the business strategy?
- What challenges do you experience with regard to the implementation of a sustainable strategy?
- Is the implementation of sustainable strategies more or less demanding? Explain.
- What actions/strategic actions are taken by the company in order to have a more sustainable business strategy?

External factors

- What external factors affect the company's strategy implementation process?

Internal factors

- What internal factors affect the company's sustainable strategy implementation process?

- Are all of the company's employees involved in the implementation of the sustainable strategy?
- How does the management communicate the sustainability actions of the company to partners, investors and other stakeholders?
- How do your employees react to the company's work with sustainability?

Profitability

- What factors have to be considered in order to maintain profitability when introducing sustainable strategies?
- How do you view the relationship between financial corporate results and the company's sustainable actions?

Interview guide: Norwegian – Case companies

Personlig bakgrunn

- Hva er din stilling i selskapet?
- Når startet du i selskapet?
- Hva er dine ansvarsområder i selskapet?
- I hvilken grad omfatter din stilling strategiske ansvarsområder?
- Hvilken betydning har bærekraft for deg?

Bakgrunn

- Hva er kjernekompetansen til deres selskap?
- Hvordan vil du definere selskapets formål?
- Hvordan vil du beskrive selskapets organisasjonskultur?
- Hvordan implementerer dere bærekraft i deres daglige drift?
- Hvilke formelle retningslinjer har selskapet knyttet til bærekraft?
- Setter dere spesifikke KPIer som et mål på bærekraft?
- På hvilken måte er bærekraft viktig for deres selskap?
- Hvilke hovedutfordringer møter deres selskap knyttet til bærekraft?
→ Hvordan håndterer selskapet disse utfordringene på et strategisk nivå?
- Hvordan vil du sammenligne deres arbeid med bærekraft i forhold til andre aktører i bransjen/industrien/næringen?
- Hvilke fordeler og ulemper har en bærekraftig forretningsstrategi?
- Hva er motivasjonen for å utvikle bærekraftige strategier? Hva er motivasjonen bak de miljøtiltakene dere har gjennomført?
- Er bærekraftige strategier allerede tilstede i selskapet? Hvis ikke: hvorfor?

Selskapets mål

- Hva er selskapets hovedmål?
- Hva er selskapets hovedmål knyttet til bærekraft?
- Hvilke endringer, enten internt eller eksternt, vil gi selskapet muligheter til å utvikle/videreutvikle en bærekraftig strategi? Er det behov for endringer?

Miljøtiltak

- Hvilke miljøtiltak er hensyntatt i deres bærekraftige strategi?
- Hva er motivasjonen bak de miljøtiltakene dere har gjort/gjør?
- Hvilken innvirkning har den bærekraftige strategien på deres daglige drift?

Utarbeidelse av bærekraftig strategi

Selskapets strategiske retning

- Hvordan tar dere hensyn til bærekraft i utforming og implementering av selskapets strategi?
- Hvem er ansvarlig for, og/eller involvert i, den strategiske beslutningsprosessen?
- På hvilken måte opplever du at din egen aktivitet i selskapet som er knyttet til bærekraft er en del av den overordnede organisasjonskulturen, visjonen og strategien til selskapet? Gjerne spesifiser.
- Hva er selskapets virksomhetsstrategi? Er den basert på kostnadslederskap, differensiering eller andre faktorer?
- Hva er den største utfordringen i arbeidet med å forbedre forholdet mellom selskapets miljø, bærekraftig ansvar og konkurrerende strategi?

Bærekraftens relevans for fremtiden

- Hvor relevant tror du at bærekraft er/vil være for skipsfartsindustrien i fremtiden?

Eksterne faktorer

- Hvilke eksterne faktorer påvirker deres utvikling av strategi?
- Finnes det eksterne faktorer som setter begrensning på deres arbeid mot en bærekraftig drift?
- Hvordan blir deres arbeid med bærekraft møtt av samfunnet forøvrig?
- Hvordan opplever du at det legges til rette for utvikling av bærekraftige strategier fra statlige instanser?
- Utformes strategien med bakgrunn i noe mer enn nasjonale/internasjonale krav til industrien?

Interne faktorer

- Hvilke interne faktorer påvirker deres utvikling av strategi?

Implementering av bærekraftig strategi

- Hvordan implementeres en bærekraftig strategi i deres virksomhet?
- Hvilke utfordringer opplever du ved implementeringen av en bærekraftig strategi?
- Er implementering av en bærekraftig strategi mer/mindre ressurskrevende enn en strategi som ikke hensyntar miljøet?
- Er det noe du ønsker å endre eller forbedre i forhold til implementering av bærekraft i deres selskap?

Selskapets incentiver for utvikling og implementering av bærekraftig strategi

- Hva er bakgrunnen for at selskapet hensyntar bærekraft i strategien?
- Hvilke utfordringer opplever du ved implementering av bærekraftige strategier?

- Er implementering av en bærekraftig strategi mer eller mindre ressurskrevende? (Forklar)
- Hvilke tiltak/strategiske tiltak har dere gjort for å føre en mer bærekraftig strategi?

Eksterne faktorer

- Hvilke eksterne faktorer påvirker implementeringen av en bærekraftig strategi?

Interne faktorer

- Hvilke interne faktorer påvirker implementeringen av en bærekraftig strategi?
- Er alle medarbeiderne i bedriften med på å implementere den bærekraftige strategien?
- Hvordan kommuniserer leder budskapet om bærekraftig forretning ut mot samarbeidspartnere, investorer og samfunnet forøvrig?
- Hvordan blir deres arbeid med bærekraft møtt blant deres medarbeidere?

Lønnsomhet

- Hvilke faktorer må hensyntas for å opprettholde lønnsomheten i bedriften ved innføring av bærekraftige strategier?
- Hvordan opplever du sammenhengen mellom finansielle resultater i bedriften og bedriftens bærekraftige tiltak?

Appendix B: Interview guide – Non-profit Organisation

Interview guide: English – Non-profit organisation

Background

- What is your position within the organisation?
- How does the organisation cooperate with companies within the shipping and cruise line industry?

Main challenges

- What are the main challenges in relation to sustainability and the shipping and cruise line industry today?
- How do you think that companies can contribute in order to solve these challenges?
- What actions do you think that the companies can take in order to environmental friendly operations on board ships?
- Is there any moral/ethical dilemma existing within the shipping and cruise line industry?

Companies in the shipping and cruise line industry and sustainability

- What sustainable considerations should the companies take in the development of their strategy?
- How do you experience Norwegian companies within the industry take sustainability into account in their corporate strategy?

- Do you think that it is realistic for companies to implement such strategies?
- What do you think is the company's motivation to develop sustainable strategies?
- What relevance do you think that sustainable strategies will have for the shipping and cruise line industry in the future?
- What is your general impression of the companies' actions towards a more sustainable and environmental friendly industry?

Profitability

- What is the impact of sustainable strategies on companies' profitability?
- Do you think that profitability serves as a hindering or motivational factor for the companies?

Examples

- Do you have any examples of 'best practice' companies having a sustainable strategy?
- Do you have any examples of companies that have failed to develop and/or implement a sustainable strategy?

Interview guide: Norwegian – Non-profit organisation

Bakgrunn

- Hva er din rolle i organisasjonen?
- Hvordan jobber organisasjonen med selskaper innen sjøfart?

Hovedutfordringer

- Hva er hovedutfordringene knyttet til sjøfart og bærekraft i dag?
- Hvordan mener du at selskapene kan bidra til å løse disse utfordringene?
- Hvilke tiltak kan selskapene gjennomføre i henhold til miljøvennlig daglig drift ombord?
- Eksisterer det noen moralske/etiske dilemma i sjøfartsnæringen?

Selskaper innen sjøfart og deres arbeid for bærekraft

- Hvilke bærekraftige hensyn bør selskapene ta i utformingen av sin strategi?
- Hvordan opplever du at selskaper innen norsk sjøfart hensyntar bærekraft i sin strategi?
- Tror du det er realistisk for selskapene å gjennomføre denne typen strategier?
- Hva mener du er selskapers motivasjon for å utforme en bærekraftig strategi?
- Hvilken relevans tror du at bærekraftige strategier vil ha for sjøfartsnæringen i fremtiden?
- Hva er ditt generelle inntrykk av bedriftenes arbeid mot en bærekraftig og miljøvennlig industri?

Lønnsomhet

- Hvilken innvirkning har en bærekraftig strategi på selskapenes lønnsomhet?
- Tror du at lønnsomhet er et hinder/eventuelt en motivasjon for selskapene?

Eksempler

- Har du noen eksempler på “best practice” selskaper med en bærekraftig strategi?
- Har du noen eksempler på virksomheter som ikke har fått til å utvikle og/eller gjennomføre en bærekraftig strategi?

Appendix C: Coding Results

Theme 1: Sustainable Strategy Development		
Sample quotes	First-Order Categories	Second-Order Themes
<p># “We have to constantly build competence to understand the environmental context. This has to be kept in mind for everyone, especially key people in the company.”(Company B)</p> <p># “Something that can set limitations is the understanding of technological development, understanding what comes and understanding the changes in the market. We have some improvements to do here, which limits us.” (Company C)</p> <p># “Companies should take part in pilot projects, take advantage of the whole value chain in addition to follow up on changes on land in addition to on shore. This way, the companies obtain competence on what solutions that works, which creates the basis for company specific goals and sustainable strategy development.” (Non-profit organisation)</p> <p># “It is against its purpose if the strategy is a pure leadership product because every employee have an impact and are supposed to implement it in the daily operations.” (Company A)</p>	<p>Internal Factors</p>	
<p># “External factors influencing is governmental regulations, customers and employees, and the society’s’ general opinion, but I cannot say that these limits our strategy development in any way.” (Company A)</p> <p># “Basically, there is no external factors that limits our strategy development process, but we need to be proactive in relation to regulatory claims coming in the years to come.” (Company B)</p>	<p>External Factors</p>	<p>Regulations and legal compliance affect sustainable strategy development and implementation</p>

<p># “There are four factors that have to be balanced; reputation among stakeholders, long-term thinking, environmental adoption and going beyond compliance.” (Company B)</p> <p># “We wish to work with sustainability as something more than compliance. The distance from compliance to the level we wish to reach related to sustainability is huge, and sustainability is something way more than only compliance” (Company A)</p> <p># “We need to have a payoff and cannot take on higher costs unless it provides us some type of financial gain, no companies would to that. As long as the customer are unwilling to pay more, they are the ones that sets our operating conditions and defines strategic direction.” (Company C)</p> <p># “The market needs to accept that sustainable actions are costly... We have to adjust strategic changes towards something that is accepted in relation to willingness to pay among customers.” (Company C)</p>		
<p># “What is important regarding corporate sustainability is to value this throughout the whole value chain. They should not forget to consider what products and resources they buy from their suppliers.” (Non-profit organisation)</p> <p># “My impression of the companies within the industry is that sustainability is not high on the companies’ agenda. Some bigger companies have sustainable strategies in addition to the overall company strategy, but most companies have only a few sentences on their webpage.” (Non-profit organisation)</p>	<p>Planning</p>	
<p># “It is a challenge to come up with good ideas that have a measurable effect in the development phase.” (Company A)</p> <p># “We measure fuel consumption and efficiency, and waste management, but these KPIs are not directly seeking to measure sustainability, but rather financial performance.” (Company C)</p> <p># “Our company define KPIs, many of them are related to responsibility with regard to our operations. We also aim at using KPIs to ensure that our marine operations are implemented in accordance with current laws and regulations.” (Company B)</p>	<p>Defining key-performance indicators</p>	

Theme 2: Sustainable Strategy Implementation

Sample quotes	First-Order Categories	Second-Order Themes
<p># “We make sure that manuals and the sustainable strategy are followed through daily following mid-leaders, and checking key numbers such as revenue growth, customer satisfaction and several other key performance indicators that gives measurable results on a company level.” (Company A)</p> <p># “The strategic development and the way we are working with it are continuously revised and evaluated, and we measure the implementation on whether we reach our KPIs related to time and resources, before we move on. We have to see whether our strategic choices were right, if they are satisfying; yes, if not; no. If we have too many unsatisfying cases, we have to consider whether the strategic steps were right.” (Company C)</p> <p># “It is crucial to have defined goals and measurements to be able to implement a sustainable strategy. How to actually reach the goals set? How to measure whether the goals are met? Measuring progress and sustainability is necessary in all parts of the company.” (Non-profit organisation)</p>	<p>Formal Systems</p>	
<p># “Change management is needed when implementing a sustainable strategy, but it is a strategic component that engage people. As a company leader, it is important to see the possibilities of improvement and development.” (Company A)</p> <p># “Implementation is all about engaging people.” (Company C)</p> <p># “Implementation requires that employees are able to, have the willingness and understanding of change, and that leaders have the ability to follow up.” (Company A)</p> <p># “Development of employees is a key factor to ensure progress and development. This way you the employees reach their full potential and abilities.” (Company A)</p>	<p>Informal Systems</p>	<p>Formal and Informal systems is crucial for strategy implementation</p>

<p># “It is important that all employees are motivated to see the reason why we are taking sustainability into account, and that they actually follow our strategic goals and demands from the top management.” (Company B)</p> <p># “The company has a good organisational culture based on clearly defined value propositions and good management principles.” (Company B)</p> <p># “Many of our issues are solved through continuous dialogue and collaboration. Interaction between all company levels have a significant value.” (Company C)</p> <p># “We develop a corporate strategy and further communicate this out to all of our employees across divisions in shorter explanations that are easy to understand. Yearly, we go through our strategy where our CEO goes out and meet all our employees to briefly present the strategic content. We also communicate through physical meetings with employees onboard, a strategy-manual and ‘Facebook at work’ as a digital platform.” (Company A)</p> <p># “We communicate with onboard personnel on how we strategically can work towards reduced pollutions from our ships and are constantly learning from this, together with internal reports on environment and pollutions.” (Company B)</p> <p># “There are many challenges, one of them is having the ability to use new technology that requires new competence gained through learning and experience. One thing is the willingness to invest, another thing is having the competence to use these solutions.” (Company C)</p> <p># “The key is thorough planning and that you know what you do, based on analysis done beforehand. Implementation fail if it is done precipitous.” (Company B)</p> <p># “Implementation requires a good understanding of the company’s operating context.” (Company B)</p>		
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Theme 3: Regulations and Legal Compliance

Sample quotes	First-Order Categories	Second-Order Themes
<p># “When we decided to build LNG driven ships there was established a NOx-fond, and the price of the LNG fuel made the investment bearable. But then the Norwegian Government, Ministry of Finance and the Norwegian Parliament came up with new regulations that resulted in a price increase of 25 to 30 percent on the LNG fuel.” (Company C)</p> <p># “Regulations are not always well developed on the basis of empirical documentations and realism, which can result in regulations that does not have a positive environmental effect globally...” (Company B)</p> <p># “There is a lack of stable framework conditions, this is crucial.” (Company B)</p>	<p>Poorly developed regulations create uncertainty in the industry</p>	<p>Regulations and legal compliance affect sustainable strategy development and implementation</p>
<p># “We see that the development of infrastructure is not good enough, and we cannot invest in more sustainable transportations, like electric ferries, because not all ports have shore power.” (Company B)</p> <p># “When sustainable alternatives are fully developed, there is a need for development of required infrastructure, which is time consuming, 10-20 years if we are lucky.” (Company C)</p> <p># “Often, required infrastructure are not available for the companies as seaside development often don’t go and in hand with development of land infrastructure.” (Non-profit organisation)</p>	<p>Regulations and infrastructure are not in line with the development of the industry</p>	
<p># “If there are reasonable regulations coming, it makes us have a creative mindset and going beyond what is expected from us...” (Company B)</p> <p># “We wish to have a special competence as a part of our differentiation strategy in order to get a competitive advantage relative to our competitors.” (Company C)</p>	<p>Regulations can be a driver for innovation</p>	

# “It has been a motivation to get a competitive advantage related to sustainability, we are trying to fill the gap in the industry.” (Company B)		
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<u>Theme 4: Profitability</u>		
Sample quotes	First-Order Categories	Second-Order Themes
<p># “All our major investments will always have to be profitable. Of course, there are certain investments we make that may not always be profitable, but we need to find balance on this.” (Company A)</p> <p># “A sustainable business strategy requires long-term thinking and priorities at the expense of short-term profits.” (Company B)</p> <p># “Strategic choices that have a long horizon; we must see that decisions we make today have a long-lasting effect and that they are satisfying also in two, three years. It is an economic matter; it if works financially and it is sustainable environmentally, then it will work.” (Company C)</p> <p># “I experience that there is a strong connection between financial results and sustainable actions taken. If you look at fuel consumption and we manage to reduce fuel consumption over a distance of a certain percentage, then the same percentage has an impact on the environment and the cost picture.” (Company A)</p> <p># “We would perhaps have earned more if we had not invested in this environmentally friendly solution – but we need to have a long-term perspective, it must be economically viable.” (Company B)</p>	<p>Connection between costs and strategic actions</p>	

<p># “Corporate actions that have the greatest positive environmental impact has the highest investment cost.” (Company B)</p> <p># “All sustainable actions do not necessarily have a positive financial effect, but we are proceeding with these actions based on a general feeling of social responsibility. You make certain choices with respect to other factors than the financial outcome.” (Company A)</p> <p># “Some of the strategic action does not always have to be profitable, but we choose to proceed with these anyway. Finding this balance is also a challenge for us.” (Company B)</p>		
<p># “Both advantages and disadvantages have to be balanced and requires long-term thinking. Seeing beyond this year's budget even though we have to deliver financially.” (Company B)</p> <p># “One challenges for us is to see the economic effect of sustainable strategic actions, and whether we accomplish what we predicted, and later find out whether or not the choices made were right.” (Company C)</p> <p># “If it leads to a higher cost level and you are the only company that chooses this solution, you are out of the market, unless we have a market that demands it, we are not willing to pay.” (Company C)</p> <p># “We chose to take on the investment cost related to be a sustainable actor, but it is not necessarily best to be a first mover. Maybe we should have waited until the solutions were well developed so we don’t invest in something that later on turn out to be unprofitable and outdated.” (Company C)</p>	<p>Balance between costs and strategic actions</p>	<p>Profitability is an important driver for the development of sustainable strategies</p>
<p># <i>“One of the challenges are customers willingness to pay. They are not necessarily awarding our green choices. We need to have a payoff, we don't want to incur a higher cost level if it does not give any kind of gain, no companies would. As long as the customer does not want to pay more, it is ultimately those who set the framework conditions and define in which direction one should go.”</i> (Company C)</p>		

<p># <i>“The main goal is of course that we want to take environmental responsibility, offer the market (customers) solutions that are greener. Again, with respect to market acceptance of this cost, it is not always that customers are willing to pay for it. We must adapt to a phasing that is accepted in relation to willingness to pay.” (Company C)</i></p> <p># <i>“For example, if we are to switch from takeaway cup to re-cups in the store requires something for customers, customers need to adapt to these changes. We can’t take any big chances when it comes to customer satisfaction.” (Company A)</i></p> <p># <i>“We need to look at the balance between costs and actions, and what is appropriate to implement. We need to know what customers want, what the authorities want and what the market is looking for in relation to the environment and sustainability. We cannot make large investment based on assumptions, they must be worked through.” (Company B)</i></p> <p># <i>“Consumers are increasingly focusing on sustainability when buying products and services. This requires companies to evaluate their whole value chain to make sure that all their actions are sustainable. The consumers are more demanding than ever before.” (Non-profit organisation)</i></p>	<p>Market demand</p>	
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Appendix D: Reflection Notes

Reflection note: Elise Thu Johansen

This thesis aimed at exploring how companies in polluting industries can develop and implement profitable and sustainable strategies through a case study done in the shipping and cruise line industry. With an increasing demand from customers, government and other stakeholders, as well as international laws and regulations, companies operating in this specific industry needs to constantly adapt to the ever-increasing demand for sustainable solutions.

Through our findings we found that the case companies are aware of the challenges ahead of them, but many struggles to see new innovative solutions to the strategy work as not just a cost burden but also an investment in the common future for a greener planet. This does not mean, however, that the companies do not understand the consequences of the pollution their industry releases, but rather that they experience many obstacles on the road to actually innovating their strategies beyond compliance. One major challenge is the uncertainty surrounding the quality of laws and regulations that are constantly changing as well as the uncertainty surrounding new technology that has not been thoroughly tested. We also found that the development and implementation process of sustainable strategies needs thorough planning and a long-term perspective. Additional risk is necessary to be considered in order to obtain a possible competitive advantage.

International trends

During my studies at the University of Agder, I have acquired an international mindset in connection with how companies can operate to maximise their dividends in the form of corporate development. The country borders are becoming increasingly smaller due to globalisation. This means that companies must consider international laws and regulations on their daily agenda. Our case-companies operate mainly in the Nordic countries; however, this does not mean they are not affected by international laws and regulations. These laws and regulations usually affect several continents and countries regardless of where in the world they operate. This is mainly due to the increased global focus on reducing emissions and waste. To face these challenges, industries have to see the benefit of being a so-called first mover and dare to make new strategic choices. As stated in this thesis, laws and regulations can actually

trigger innovation and competitive advantage. Companies must dare to take a greater risk through legal interpretation and anticipate future trends both in terms of regulations but also in the general market. Being a first mover in this context, companies will have the opportunity to set an industry standard that can lead to a competitive advantage. At the same time, this may in some ways probably contribute to influencing new directions within international laws and regulations.

Innovation

In this master's thesis, the main focus has been on looking at sustainable strategies in an environmental context. Sustainability has been a known phenomenon for stakeholders for a long time, but the focus has become increasingly eminent in recent years. Different shareholders are in general concerned about the sustainable future, and they often prefer sustainable products or solutions. Through our study, however, we see that companies are struggling to combine sustainability and strategic actions. With renewed social focus on the environment and global development, it is also expected that socially responsible companies will contribute with strategic innovation initiatives in their field of industry, where the challenge for both the companies and society is to develop a sustainable economy that both the environment and the society can withstand. One argument can be that business strategy innovation for a long-term sustainable development, should be a prerequisite for business value creation. At the same time, too radical innovation with regard to sustainability, can be stopped by social responsibility when it extends beyond what existing stakeholders believe they will benefit. Sufficient innovation is already being carried out in connection with the development of environmentally friendly ships in the shipping and cruise line industry. What is needed is an innovation of environmentally conscious strategies, where the focus is on society and the environment. This entails, among other things, seeing new solutions to strategic measures, and not only focusing on measures in the form of emissions of pollutants and garbage. As consumers are becoming increasingly aware of sustainable alternatives, this can be the right direction to go in order to gain a competitive advantage in the chosen industry.

Responsibility

The pillar of our study is corporate social responsibility (CSR). CSR is about showing a social responsibility that goes beyond what is required by laws and regulations. At corporate level, the corporate social responsibility is reported as a key element in the company's business strategy. For most medium-sized and larger Western companies, CSR is now central to most company's strategic agenda, and for global companies; CSR has become a necessity.

Through my studies, I have learned how important CSR can be for company development, both in terms of the social environment but also in the form of brand marketing. In this thesis, all companies have a particularly emphasise on social responsibility. Through this thesis extensive literature research, we found that social responsibility could actually lead to a competitive advantage, in the context of sustainable solutions. Implementation of CSR can be a valid way to promote the corporate brand thus leading to a competitive advantage. But this should not necessarily exceed the social value. At the same time, our study shows that it can be difficult for companies to find the right balance between CSR and profits. The industry wants to take social responsibility, but this only applies as long as it does not adversely affect financial results. Ethical dilemmas can therefore arise. Companies cannot, however, in all contexts take social responsibility. If a corporation experience bankruptcy or undergo fundamental changes, social responsibility must be raised at a governmental level.

Reflection note: Malin Bjørnsen

The thesis seeks to explore and obtain knowledge on sustainable business strategies, by studying how companies within polluting industries can develop and implement profitable and sustainable strategies. We chose to conduct a multiple-case study, including three case companies, and one informant from a non-profit organisation with industry-specific competence. In addition, we chose to focus on companies within the shipping and cruise line industry, being the polluting industry, in order to get a better understanding of the industry as a whole. Data were collected through in-depth interviews of the chosen informants. The aim was to answer the following research question; *How can companies in polluting industries develop and implement profitable and sustainable business strategies?*

Briefly summarising the results, sustainability is found to be of importance for all the case companies, as they experience increasing laws and regulations, and stakeholder pressure with regard to responsibility. Thorough planning with a long-term perspective, based on internal and external analysis is found to be important in the development of a sustainable strategy. Nevertheless, competence on industry, market and technology is identified as a critical factor in the process, due to the positive relationship between competence and competitive advantage. In addition, involving employees across company levels is found to be positive when setting sustainability goals. Regulations create the basis for development of sustainable strategies, as these are the ones setting the rules to be followed for the industry as a whole. Thus, an interesting finding is that regulations that is rapidly changing can turn out to harm the companies as the changes are difficult to follow on a strategic level.

The strategy implementation is found to be somewhat challenging for the case companies, as stated in literature by Mintzberg & Waters (1985) and Epstein & Roy (2001). We identified a need for having KPIs related to sustainability goals, in order to find whether the strategy is successfully implemented, or not. Accordingly, we found the need for ‘informal systems’ as a supplement of formal measures, as these compose an important part of strategy implementation. These are found to be change management, company culture and employee involvement, internal communication and competence. If these are incorporated in the process, and KPIs are defined in relation to sustainability, findings imply that strategy implementation can be successful. Nevertheless, we found profitability to be an important driver for the sustainable strategic management process of the case companies. In this relation, it is found that companies need to view sustainable investments in a long-term financial perspective in order to see the financial value in addition to the positive environmental effects. Both market demand and customers willingness to pay must be considered when investing in sustainable actions. We found that the companies need to be willing to take on some additional risk in order to invest in sustainable solutions, such as waste management systems and battery driven ships.

To summarise, we found several internal and external factors influencing the companies’ development and implementation of a sustainable strategy. In addition, we carefully considered the financial perspective of such investments, focusing on value creation and profitability.

International trends and innovation

Environmental concerns and the need for companies to take on sustainable actions towards a greener economy, are challenges covering industries and companies across the globe. The addressed issues are, by no means, special for Norwegian based companies, as these are international issues that has to be coped with across company borders. There is no doubt that the environmental issues covering pollutions is the reason for increased industry laws and regulations, trying to force companies to take action. Both national and international regulations influence the companies operating environment, having an important impact on strategic directions, investments and long-term profits. In order for companies to survive within polluting industries, and for this study, to survive in the shipping and cruise line industry, they must carefully adapt to the changes needed in order to continue their business. Companies within the chosen industry cannot continue with their operations if they fail to, amongst others, regulations, cut their CO₂ emissions and reduce waste.

Accordingly, the companies within the industry create a pressure for ‘going beyond compliance’, as some companies take on leading positions by investing in new, innovative solutions going beyond what is required. In order to survive and be competitive, the companies have to develop competences, invest in R&D and seek for innovative solutions to emerging issues, thriving for change and renewal. Rapid changes in the operating environment demand continuous external analysis by the companies in order to follow and maintain their competitive position. Our findings imply that regulations can be a trigger to develop innovative solutions solving sustainability issues for the companies. On the other hand, it is found that environmental issues create a need for companies within polluting industries to take action and make a change ‘for the better’.

There are needs in the marketplace for better infrastructure on ports, which is due to a variety of investments from the public sector. Lack of shore power on Norwegian ports, limits the operating companies’ ability to use hydrogen or electricity driven ships, as these demand such infrastructure. Our interviews revealed the issue of regulations turning out to harm rather than benefit the market if they are constantly changing and not well developed. An identified issue is the fact that many of such regulations are developed by the Government alone, without

collaborating with the companies operating within the industry. The informant from the non-profit organisation in our thesis highlighted these issues, stating that a collaboration between companies operating and visiting ports along the Norwegian coast line, and the Government can be valuable. This is due to sharing of experiences, tacit knowledge and competence, all contributing to a thorough development of regulations and industry standards. My suggestion is in line with these findings, and I recommend the public sector to collaborate with companies within the industry, being a new practice for developing such industry standards. In addition, I suggest giving companies operating in Norway, using the Norwegian ports, the opportunity to access a better infrastructure with on-shore power will be my suggestion. In this relation, the public sector should encourage both product and service innovations on infrastructure and regulatory planning, in order to be competitive on the international market as well. This way, Norway might reach their long-term goal of having a zero-emission coast line. In addition, there is a need for a ‘universal standard’ as suggested by Galbreath (2009b) on how to respond to increased external pressure from shareholders, stakeholders and regulations. As Norway is considered to be one of the countries with most regulations on polluting industries, providing resources and collaborating with companies within such industries can have a positive impact on both national and international regulations and standards.

Responsibility for companies within polluting industries

With regard to responsibility, there are several ethical challenges rising for companies within polluting industries, and in this case, the shipping and cruise line industry. Environmental issues have become an obstacle and challenge for companies across the globe, and companies avoiding these issues are often stated as irresponsible. With these challenges comes the rising importance of companies taking on required social and environmental responsibility in order to experience improvements in the industry as a whole. Thus, today, there are large differences in regulations between, for example, the Nordic countries and underdeveloped countries across the globe. This gap is due to differences in regulatory forces, government and resources available. However, the goal should be to create some industry standards that is possible for countries to follow regardless of operating conditions.

Findings of this study revealed, supported by literature on the field, that companies that choose to be sustainable and invest in green solutions for their operations can obtain a competitive position in the industry. This is due to increased number of investors supporting sustainable businesses, new customers and a better reputation among stakeholders. On the other hand, companies taking on the minimum required with regard to environmental responsibility, can experience lack of customers, investors and reduced revenues, and finally lose their competitive position. Today, customers are increasingly aware of environmental issues, and many have an increasing demand to use products and services that are both morally right and environmental friendly. Thus, as our findings imply, it is challenging for the companies to continue its business and survive among its competitors, if it refuses to take responsibility. In order to cope with the challenges in the operating environment and among the companies, it is found a need to adapt to changes, and have the willingness to invest in sustainable solutions, taking the responsibility required in order to contribute to a sustainable industry development.