Master's thesis

NTNU
Norwegian University of Science and Technology
Faculty of Economics and Management
NTNU Business School

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The role of CSR, culture, and identity in accommodating the green transition

A case study of two organizations in the floating photovoltaic industry in Norway

Master's thesis in Management of Technology
Supervisor: Frode Heldal
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ABSTRACT

As environmental concern is growing worldwide it will be crucial for industrial and commercial actors to contribute toward a greener and more sustainable world. This study seeks to provide insight on how corporate social responsibility (CSR), green organizational identity (GOI), and green organizational culture (GOC) are perceived in the context of accommodating the green transition. Furthermore, the thesis also seek to discover challenges and opportunities that arise when faced with the concepts.

Existing literature has been utilized to comprehend the significance and potential implications of the findings presented in this thesis. The base theory consists of quantitative studies investigating how CSR, GOC and GOI can affect other factors, such as innovation, performance, legitimacy and competitive advantage. These studies generally display that all concepts might further stimulate such factors.

A qualitative study of two organizations developing floating photovoltaics (FPV) solutions has been conducted to serve as an supplement to existing research, but also to provide more in-depth findings. The empirical data of this study was collected through seven interviews with managers working in the two organizations. Interviews were conducted and transcribed using Microsoft Teams, and coded using Nvivo.

Our findings indicate that the managers in the two organizations perceive the concepts different. One organization display reluctance towards the adaptation of the concepts, while the other organization display more willingness. The findings revealed that CSR, GOI, and GOC could affect competitive advantage, and that there are other ways of innovating than utilizing technology. One major challenge mentioned from both organizations is balancing profitability and sustainability. Further, we found a uniform perception amongst our respondents that prominent actors within the industry are expected to participate and accelerate the green transition to a larger degree. These concepts will increase the legitimacy of the organization's green claims and reduce the risk of greenwashing.

The implications of the research might serve as recommendations for both organizations interviewed, but also for organizations in similar situations. The uncovered experience can provide insight in how to navigate a rapid-changing, highly competitive environment. Furthermore, the concepts enable organizations to accommodate the UN's Sustainable Development Goals - especially number seven, nine, and thirteen.

SAMMENDRAG

I takt med økende miljøbevissthet over hele verden blir det avgjørende for industri- og næringsaktører å bidra til en grønnere og mer bærekraftig verden. Denne studien søker å gi innsikt i hvordan bedrifters samfunnsansvar (CSR), grønn organisasjonsidentitet (GOI) og grønn organisasjonskultur (GOC) oppfattes i lys av det grønne skiftet. Videre søker oppgaven å avdekke utfordringer og muligheter som oppstår i møte med disse konseptene.

Eksisterende litteratur er blitt brukt for å forstå betydningen og potensielle implikasjoner av funnene som presenteres i denne oppgaven. Den teoretiske bakgrunnen består av kvantitative studier som undersøker hvordan CSR, GOC og GOI kan påvirke andre faktorer som innovasjon, ytelse, legitimitet og konkurransefortrinn. Disse studiene viser generelt at alle konseptene kan bidra til slike faktorer.

En kvalitativ studie av to organisasjoner som utvikler løsninger for flytende solceller (FPV) er blitt gjennomført for å supplere eksisterende forskning og gi mer dyptgående funn. De empiriske dataene ble samlet inn gjennom syv intervjuer med ledere fra de to organisasjonene. Intervjuene ble gjennomført og transkribert ved hjelp av Microsoft Teams, og kodet ved bruk av Nvivo.

Våre funn indikerer at lederne i de to organisasjonene oppfatter konseptene forskjellig. Én organisasjon viser motvilje mot å tilpasse seg konseptene, mens den andre viser større vilje. Funnene avdekket at CSR, GOI og GOC kan påvirke konkurransefortrinn, og at det finnes andre måter å drive innovasjon på enn å bruke teknologi. En viktig utfordring som begge organisasjonene nevnte, er å finne en balanse mellom lønnsomhet og bærekraft. Videre fant vi en felles oppfatning blant respondentene om at fremtredende aktører i bransjen forventes å delta og akselerere det grønne skiftet i større grad. Disse konseptene vil øke organisasjonens legitimitet når det gjelder deres grønne påstander og redusere risikoen for grønnvasking.

Forskningens implikasjoner kan fungere som anbefalinger både for de organisasjonene som ble intervjuet, og for organisasjoner i lignende situasjoner. De avdekkede erfaringene kan gi innsikt i hvordan man kan navigere i et raskt skiftende og svært konkurransedyktig miljø. Videre muliggjør konseptene at organisasjoner kan tilpasse seg FNs bærekraftsmål, spesielt nummer syv, ni og tretten.

PREFACE

This thesis is written as the final part of our Master's Degree in Management of Technology at the Norwegian University of Science and Technology (NTNU). During the project we have gained valuable insights and experiences that we will carry with us in our professional careers that follow next.

The scope of the thesis have been developed from collaboration with the University of Milan, where two master students and two supervisors have participated, in addition to one more student from NTNU. In total four master-students and three supervisors have had regular meetings where data has been shared and topics discussed. We would like to say thank you to the external participants for their feedback.

We would further like to express our gratitude towards the two organizations that have provided us with employees delivering in-depth interviews on the subject. All respondents have spoken openly on subjects that at first glance, might be difficult to comprehend.

Finally we would like to express our gratitude to our supervisor from the faculty, Frode Heldal, for giving feedback and pushing us in the correct direction.

We, the authors, assume absolute responsibility for the entire contents of this thesis.

Trondheim, May 25th, 2023

Haakon Halstensen

Even Ligård

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ABBREVIATIONS

List of all abbreviations in alphabetic order:

- **CER** Corporate Environmental Responsibility
- **CES** Corporate Environmental Sustainability
- **CSR** Corporate Social Responsibility
- **FPV** Floating Photovoltaic
- **GKN** Green Knowledge Management
- **GOC** Green Organizational Culture
- **GOI** Green Organizational Identity
- **LNG** Liquefied Natural Gas
- **PV** Photovoltaic
- **R&D** Research and Development
- **SDG** Sustainable Development Goals
- **UN** United Nations

CHAPTER

ONE

INTRODUCTION

In 2015 all United Nations (UN) members adopted the 2030 Agenda for Sustainable Development, a shared blueprint for peace and prosperity for both humans and the planet, for now, and into the future. At its core is the 17 Sustainable Development Goals (SDGs), a call for rapid action by every country, from least developed to industrial countries. The goals recognize that ending poverty and other hardships must occur simultaneously with strategies that improve health and education, contribute to reducing inequality, and foster economic growth - all while addressing climate change and preserving our oceans and forests. (United Nations, 2023)

In order to succeed in completing these goals, renewable energy technologies such as floating photovoltaic (FPV) systems are increasingly being adopted by organizations as a means to reduce carbon emissions and achieve energy independence. A report from DNV in 2022 named "The Future of Floating Solar: Drivers and barriers to growth" states that FPV will grow significantly in the coming decades. The overall capacity will be minor compared to utility-scale installations; however - its appearance will be noted in the market. (Horschig et al., 2022)

FPV is a regular solar panel installed on a floating device and anchored at sea. The technology serves some advantages compared to regular photovoltaics (PV), such as accessing more unused space for installations. Installing panels on water surfaces removes the competition factor of other usages, such as agriculture and settlements. FPV can further be used in combination with other purposes, like water treatment, irrigation, and hydropower. This has been the main driver for FPV installation, especially in densely populated areas, like South-East Asia and the Netherlands. Furthermore, FPV systems can be beneficial for reducing water evaporation, which is essential in areas challenged by drought and water scarcity. On the other hand, the still unsolved challenges witnessed in the industry are commercial, technical, and regulatory matters. (Horschig et al., 2022)

Some of the SDGs are more directly relevant than others regarding the impact of FPV. In figure 1.0.1, SDG 7, 9, and 13 are highlighted, and each one revolves around their specific topics as listed below:

- SDG 7 - Affordable and Clean Energy: The goal aims to provide everyone access to reliable, sustainable, and modern energy. In order to reduce nations' heavy reliance on fossil-based energy sources, promoting a renewable energy source like FPV can contribute to providing a more sustainable energy mix.
- SDG 9 - Industry, Innovation, and Infrastructure: This goal aims to construct resilient infrastructure, promote sustainable and inclusive industrialization, and foster innovation. By adopting new innovative technology like FPV, the goal can be accomplished by improving the energy infrastructure and promoting sustainable industrial practices.
- SDG 13 - Climate Action: The goal is to take urgent action in combating climate change and its impact. Using renewable energy sources like FPV can reduce greenhouse gas emissions and alleviate the negative effects of climate change.

Figure 1.0.1: Sustainable Development Goals 7, 9 and 13. (United Nations, 2023)

Successful commercialization of green innovations like FPV requires not only technical expertise but also a deep understanding of cultural and identity-related factors. These factors can shape organizational strategies, decision-making, and the external perception of the organization. For instance, expectations of being environmentally friendly can come from customers, investors, and governmental regulators. The UN's SDGs are an example of a set of global targets and principles that guide and encourage sustainable development practices, further creates expectation, and will affect how companies develop their strategy, business models, and their green focus.

The green focus leads to a bigger focus on environmental friendly processes and an increase in green consumers. This could in turn increase the need of having to consider green competitors in their business strategy. Thus, green innovation becomes a strategically important aspect to consider. External pressure from customers, competitors, investors, and regulators makes the fundamental strategy of continuous innovation. The need to adopt green innovation arises to satisfy the organization's stakeholders. (Soewarno, Tjahjadi, & Fithrianti, 2018)

To develop a green innovation strategy, developing technology that can solve issues regarding the green transition serves as a base to build the strategy further. At the same time, there are other aspects than technology that are not so tangible that also require consideration. The effect of these not-so-tangible variables has been under the scope of several studies highlighting how the variables affect how a company performs within the green innovation field. The variables, or concepts, include, amongst others, Corporate Social Responsibility (CSR), Green Organizational Identity (GOI), and Green Organizational Culture (GOC).

The effect of these concepts includes an array of potential advantages and challenges, such as the impact on an organization's reputation. To influence reputation and image, the culture and identity of the organization must be evaluated. It is crucial to know the values and be aware of "who we are" and "what do we want to be." An organization will always have some culture and some kind of identity, but it might not be affecting the organization in a positive matter, at least if there is a lack of communication of culture and identity within the organization. Another aspect that is often mentioned in literature is how competitive advantages can be obtained by pioneering in environmental management and green innovation. By taking advantage of the opportunities that arise due to the higher level of attention toward the green transition and becoming the first-mover, companies can enhance their green image and obtain a competitive advantage by undertaking distinctive differentiation strategies. (Chang & Chen, 2013)

However, much of the previous research is based on quantitative studies from Asian countries based on questioners that only scratch the surface of the perception and implications of these concepts. It would be beneficial to go deeper, face the leaders of organizations, and have conversations that provide further insight into how organizations perceive the concepts and what sort of challenges and opportunities they experience when faced with the concepts.

1.1 Purpose and Problem Thesis

The purpose of this thesis is to provide insight into how two organizations in the Norwegian FPV industry relate to the green innovation concepts CSR, GOC, and GOI. We try to understand if and how these concepts are being utilized by organizations that are exploring opportunities and investing in the market of FPV. Has there been given any thoughts on how to implement the concepts, how they view the effectiveness, and do they experience any challenges or opportunities in meeting their stakeholders' expectations? Specifically, the thesis aims to answer the following problem thesis:

> *What are the perceptions of companies in the Floating Photovoltaic industry in Norway regarding the concepts of Corporate Social Responsibility, Green Organizational Identity, and Green Organizational Culture, and what strategic challenges and opportunities is recognized when faced with the concepts?*

1.1.1 Contribution

By answering the problem thesis, this study seeks to provide insights into the role of culture and identity in shaping organizational choices around green innovation. It also offers recommendations for how organizations can better leverage these factors to achieve their sustainability goals. The theory investigating these concepts is mostly based on quantitative research. Our thesis will serve as a qualitative contribution and addition to the amount of quantitative research done in this field.

The master thesis aims to contribute to the understanding of how organizations in the Norwegian floating photovoltaic industry relate to and perceive green innovation concepts such as Corporate Social Responsibility (CSR), Green Organizational Culture (GOC), and Green Organizational Identity (GOI). The study provides insight into how companies that explore opportunities and invest in floating photovoltaics (FPV) utilize these concepts. The thesis also identifies the challenges and opportunities these companies face to incorporate these concepts into their organizational strategy.

The contribution of this thesis is that it offers a comprehensive analysis of how organizations in the floating photovoltaic industry in Norway perceive and implement green innovation concepts. By exploring the perceptions, challenges, and opportunities related to CSR, GOC, and GOI, our thesis provides valuable insights into the measures that organizations in this industry can implement. By doing so they could meet stakeholder expectations and remain competitive in the energy market where there are lots of different actors, where some of them are very large.

The study can also be significant to policymakers and stakeholders interested in promoting sustainable development and green innovation in the Norwegian floating photovoltaic industry. By identifying the challenges and opportunities related to the adoption of CSR, GOC, and GOI, policymakers can design policies and regulations that initiate and motivate companies to incorporate these concepts into their organizational strategy and way of thinking, thus contributing to the development of a sustainable and green economy.

1.1.2 Outline

We have structured our thesis into six main chapters. We have now presented the introduction in chapter 1. Next, we move on to chapter 2, where the theoretical framework is reviewed and presented. In chapter 3, we have described our choice of method, which serves to give the reader a justification of why we have chosen this particular research method in addition to an assessment of the quality of the research. Chapter 4 presents the empirical material and findings during the interviews performed during this study. Next, we move on to chapter 5, where findings are discussed and weighted against the theoretical framework. Finally, chapter 6 contains our conclusion of the research questions in addition to implications and further research.

CHAPTER

TWO

THEORY

This chapter provides an overview of research articles and theories relevant to the scope of the thesis. The main sources of theory was provided through the collaboration project with the University of Milan, but supplementary sources have been added where it was found necessary. The chapter starts with providing an introduction to CSR and other theoretical frameworks related to the subject of sustainability. Later in the chapter, the concepts of green organizational identity and green organizational culture are presented. Finally, we will present the effect of implementing these concepts into an organization seen from a strategic point of view in accommodating the green transition.

2.1 Corporate Social Responsibility

In this first section of the theory chapter we will have a look at CSR and present the aspects we considered most important for the scope of this thesis. First we will present the general theory about CSR followed by a Scandinavian view on CSR. Later in the chapter we present theory that can be linked to CSR. These are *sustainability and strategy*, *The Innovator's Dilemma*, and *greenwashing*.

Corporate Social Responsibility (CSR) is by many considered a near synonym with sustainability and, by others, a completely separate term. With the latter, CSR is often regarded as focusing on social issues and sustainability on environmental issues. In 2008, The Economist published a special edition on CSR, effectively validating the first approach by introducing the phrase "corporate responsibility - or sustainability or whatever" when describing businesses' efforts on social issues. The *whatever*-part of the statement indicates the imprecise and often interchangeable use of the different expressions. (Strand, Freeman, & Hockerts, 2015)

The definition provided by The European Commission of CSR states that it *"is a management concept whereby companies integrate social and environmental concerns in their business operations and interactions with their stakeholders"* (UNIDO, 2022). The expression sustainability is often described as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs", based on the definition of sustainable development provided by UN's Brundtland Commission in 1987. (Strand, Freeman, & Hockerts, 2015)

Sustainability has become the strategic keyword in recent decades. Phrases like sustainability, corporate social responsibility, corporate social performance, going green, and the triple bottom line all refer to organizations improving their long-term economic, social, and environmental performance. There is recognition from both industry leaders and academia that sustainability is crucial for the long-term success of both the firms and the community in which it operates. However, managers' methods and actions to lead and position their firms to be more sustainable are still uncertain. Companies today require a systematic approach to sustainability to be competitive over the long term. Without a thorough and methodical effort to create an organizational infrastructure that supports a sustainable strategy, the companies that attempt to implement these strategies will face severe challenges. In his article from 2015, Galpin attempts to address this by asking: *"How can managers lead their firms to be sustainable over the long term?"* (Galpin, Whittington, & Bell, 2015)

Creating win-win-win outcomes for the environment with innovative sustainability solutions depends on leaders deliberately fostering a "culture of sustainability" inside the organization. The organization's culture operates at three levels, which all are required to be addressed by leaders. The first level is made up of visible artifacts and behaviors and can be recognized by those not affiliated with the organization. The second level consists of the adopted values by the organization, which are explicitly stated values and rules of behavior that reflect how the organization presents itself internally and externally. The third level of culture is made up of shared assumptions that act as guidance for the organization's behavior. These assumptions often operate at a sub-conscious level but are still integrated into the organization's life. (Galpin, Whittington, & Bell, 2015)

In China there has been growing pressure for companies to adopt CSR. In 2006, the Corporate Law forced Chinese companies to become socially responsible. In 2008, it was taken further when the Chinese State Capital Management Committee stated that CSR would become an essential part of all state-owned companies. In 2014, Chinese government officials admitted that its rapid growth was not sustainable due to the environmental impacts, making it a core principle for large companies to consider their corporate environmental responsibility (CER). The term CER is derived from CSR but isolates the

consideration of environmental protection. In comparison, there is a societal benefit from CER, but the economic or profit-based advantages are seldom as evident. This is due to the associated costs of adopting CER concepts can cause product- or service prices to increase. Therefore, it is sometimes unclear to companies why, apart from a PR point of view, CER is a beneficial concept to adopt. (Strategic Direction, 2018)

However, a thorough implementation of CER can benefit the company from a strategic perspective. CER is linked to sustainable competitive advantage, which is naturally highly beneficial in markets where fast growth has been replaced by secure improvement and solidity. CER works especially well when linked with shared value. When creating shared value with the customer, the company is more attractive to potential customers and provides business opportunities. (Strategic Direction, 2018)

The core of CER is the concept of minimizing the impact of all involved parties in the planning, creation, and execution, in addition to the use of the product or the service provided by the company. This includes ecologically sympathetic designs, reducing waste from every process in the product creation, cutting down on travel and transportation costs, and minimizing materials used (Strategic Direction, 2018). Building on previous research, five different CER strategies are suggested by Long and Lin in their paper from 2018: (Long & Lin, 2018)

1. A focus on environmental resources input and output efficiency – such as using waste or bi-products to create something new.
2. The introduction of an international eco-standard (such as EMAS, ISO14001).
3. The development of environmentally friendly products.
4. Using chain management to lead an industry towards sustainability.
5. And the support of eco-organization and activities.

CER is clearly recognized as a supplementary part of CSR, following the same route of being difficult to financially justify until the benefits become clearer. Despite this, most global companies now agree that CSR is highly beneficial to sustainability. With the growing climate crisis, CER will undoubtedly quickly become correspondingly accepted as essential to competitive advantage and sustainability. (Strategic Direction, 2018)

2.1.1 Scandinavian Sustainability and CSR Performance

The Scandinavian countries and Scandinavian-based companies perform extremely well in CSR and sustainability performance measurements. Examples include the Dow Jones Sustainability Index (DJSI) and the Global 100 Index, where the top 10 list is scattered

with Scandinavian countries (Strand, Freeman, & Hockerts, 2015). Another performance measurement is triple-bottom-line performance. In the measurement, a combination of commonly used country-level indicators for economic performance was collected in each of the three economic, environmental, and social groups, and compared by country clusters. Table 2.1.1 displays the findings and indicates a disproportional performance by the Nordic countries.

Table 2.1.1: Triple-bottom-line performance by country cluster. As seen from the table Nordic countries has a high performance in all factors compared to other regions. (Strand, Freeman, & Hockerts, 2015)

Country cluster	**Economic**	**Environment**	**Societal**
Nordic	High	High	High
Anglo Saxon (incl. U.S.)	High	Low	Middle
Continental Europe	Middle	Middle	Middle
Mediterranean Europe	Low	Low	Low
Confucian	Middle	Low	Low

The environmental aspect is, amongst others, linked to ensuring clean air and water, taking care of the environment, and reducing the usage of natural resources. The social aspect focuses on the organizational relationship between people and society and ensuring human well-being with a focus on understanding their needs. The economic aspect considers a sensible approach to enhancing sales and reducing operational costs. Regarding whether traditional economic measurements help or harm societal welfare, the mentioned measurements provide insight and likely raise some attention. (Strand, Freeman, & Hockerts, 2015)

2.1.2 CES and Recruitment

While there is some discussion on the differentiation of the terms corporate environmental sustainability (CES) and CSR, both comprehend the same general aspects of being voluntary business activities that aim to provide improved performance in organizations when it comes to social, environmental, and economic aspects. The terms are sometimes used separately, in combination, or sometimes a completely different term might describe an organization's contribution to the above mentioned aspects. In the context of this thesis, the terms will be used to describe the same behavior. (Ashrafi et al., 2018)

Organizations that strive to adopt CES develop a green organizational image and can often be viewed as environmentally responsible. In addition, having an environmentally responsible workforce is essential for reaching environmental targets since the employee's attitudes and behaviors will contribute to deciding environmental performance. However,

employee involvement in environmental performance depends on green HRM practices, which attempt to facilitate the participation of pro-environmental employees. A study published in 2020 by Pham investigates this subject and tries to answer the question: *"What impact do a company's CES practices have on attracting pro-environmental job seekers?"* (Pham & Paillé, 2020)

The results are based on a comprehensive literature review and conclude that implementing CES is beneficial for the organization in gaining a green reputation and attracting environmentally conscious job applicants. A key finding was that the organization's green practices must be successfully communicated to pro-environmental job seekers to create organizational attractiveness. When an organization has a strong green image, it will be recognized by environmentally friendly citizens and gain the community's trust. Employees will feel proud to be connected to such an organization which will further enhance their self-esteem and recognition of the organization. (Pham & Paillé, 2020)

2.1.3 Sustainability and Strategy

A recent global survey of more than 1500 corporate executives shows that most respondents see sustainability becoming increasingly crucial for business strategy and that the risks of failing to act are growing. Despite the awareness, the importance of sustainability often translates into a chaotic approach in sustainability-oriented activities that are disconnected from the organization's strategy and have no meaningful social impact or strengthens the company's competitiveness. The initiatives are often delegated to marketing professionals or departments dealing with corporate sustainability, often not ideally positioned to align the efforts with the company's strategies. (Galpin, Whittington, & Bell, 2015)

To ensure the sustainability efforts provide long-term value to both company and society, sustainability must be integrated with the company's strategy to complement the company's goals and mission. This integration might result in multiple benefits on several levels of the organization, and firms that succeed in this matter might benefit from providing value to society and separating them from competitors (Galpin, Whittington, & Bell, 2015). Increased governmental and social awareness about environmental issues means that organizations must consider environmental issues in their strategic planning. A green innovation strategy is one of the most important types of environmental strategies to be sustainable. (Song & Yu, 2018)

Researchers have been exploring internal and external factors affecting an organization's green innovation capabilities. Most of the research done in this field focuses on external factors. Some of the findings are that greening of suppliers could promote green innovation, market demand affects green product innovation, environmental regulations

could positively affect the level of green innovation, and corporate environmental ethics motivate green product and process innovation (Song & Yu, 2018). According to Eccles et al. (2014), the early adopters of sustainability policies are found to significantly outperform competitors who adopt fewer of such sustainability policies. (Eccles, Ioannou, & Serafeim, 2014)

2.1.4 The Innovator's Dilemma

First presented by Clayton M. Christensen in 1997, The Innovator's Dilemma examines the challenges of maintaining a company's position when faced with innovative challenges. Since published, it has remained one of the most influential texts for describing the reasoning for why some of the most successful companies often quickly lose market shares to new competitors. Large organizations that have spent millions on R&D often fail to confront new challenges that emerge from innovation. Traditional practices in business, such as strategic planning and monitoring customer needs, often need to be revised when facing disruptive challenges in the market. This is known as the innovator's dilemma. (IRB Media, 2016)

Business leaders and managers must be prepared to confront this paradox. Instead of specific suggestions, a theoretical framework is required to manage the impact of disruptive innovation on well-established organizations. History from the disk drive industry from the 1970s until the mid-1990s suggests that business innovations arise in two different forms: Innovations that contribute to established firms maintaining their advantages and disruptive innovations that quickly can transform an industry. Disruptive innovations are likely to appear as low-cost products that initially only appeal to a few consumers and are likely to gain consumers in its market by providing a more convenient and low-cost alternative. Disruptive innovation is a remorseless process. Therefore, established firms must be prepared to face disruption when it appears in their markets. Christensen presents seven different key takeaways in his book: (IRB Media, 2016)

1. Improving a new technology is easy initially but becomes more difficult to achieve over a longer period.

2. Technological innovations are separated into two types: Sustaining innovations and disruptive innovations.

3. Listening to customers and responding to their desires and wishes might actually be counterproductive. Disruptive innovations create their markets.

4. While market research is a key part of product development in large companies, it is impossible to do market research with customers and clients with new technologies.

5. Market dynamics can provide a favorable position for new entrants into a given business's sector at the expense of well-established firms.

6. As large organizations often are bureaucratic, managing innovation within them is often found difficult.

7. Defectors who abandon successful companies to start rival firms can especially challenge the position of established firms in the market.

The Innovator's Dilemma can be linked to CSR as the green transition is a disruptive phenomena. The coming change will bring challenges in dealing with innovation on technology and strategic aspects. CSR will help organizations maintain their position in the market by proving to stakeholders that environmental responsibility is a priority while allocating resources toward innovation to accommodate the green transition.

2.1.5 Greenwashing

The phenomenon of greenwashing is linked to CSR, by making false environmental claims. This is irresponsible and can be considered as an opposition to CSR. Greenwashing is a misleading marketing practice involving making false or overrated claims about a product or service's environmental performance or benefits. Greenwashing occurs when companies use "responsible words" and "irresponsible walks" and communicate their poor green performance as positive. (Pizzetti, Gatti, & Seele, 2021)

Greenwashing in business is increasing as more and more firms seek to capitalize on the growing demand for green products and services. The problem with greenwashing is that it can mislead stakeholders and their trust in green products and services and thus limiting the transition to a more sustainable economy. Greenwashing might have large negative effects for both the consumers and investors in terms of the confidence in green products and "environmentally responsible organizations", which can in turn result in these stakeholders becoming reluctant towards rewarding organizations for environmentally friendly performance. (Delmas & Burbano, 2011)

The negative effects of greenwashing on stakeholders' confidence in green products and processes are significant. Consumers who purchase products or services marketed as environmentally friendly or green, to find out later that the claims were false, will most probably feel misled. This can lead to a loss of trust in the brand and a reluctance to purchase green products or services in the future. Investors may also be misled by greenwashing, leading them to invest in companies that are not truly committed to sustainability and green performance. Thus, their green investments are not so green after all. (Delmas & Burbano, 2011)

Mitigating greenwashing is particularly challenging in a context of limited and uncertain regulation. There are no clear and universally accepted standards for measuring and reporting environmental or green performance. This makes it difficult for stakeholders to distinguish between genuine sustainability efforts and greenwashing. The lack of regulations makes it easier for companies to engage in greenwashing without facing any consequences. (Delmas & Burbano, 2011)

In order to address the problem of greenwashing, organizations will need to be transparent and honest about their environmental performance and the environmental benefits of their products and services. This can be achieved using clear and specific language, in addition to avoiding vague and unfounded claims. The possibility of greenwashing will become more limited by providing verifiable evidence to support environmental claims. (Delmas & Burbano, 2011)

2.2 Green Organizational Identity

In this section we will present the relevant theory related to *Green Organizational Identity* (GOI). First, we present a general definition of organizational identity and later move on to GOI, as GOI is iterated from organizational identity. After that follows *Green Innovation Performance* and how GOI mediates other factors in an organization. Finally, we present the legitimacy aspect of GOI and how organizations can legitimize their claims and by that gain support from stakeholders by adopting GOI.

GOI is a concept presented by Chen (2011). The concept is derived from organizational identity, which was first defined by Albert and Whetten in 1985. The article is written in the search for an answer to the question *"who are we as an organization?"* (Whetten, 2006). Organizational identity is defined as *"a shared interpretive scheme that members collectively create to provide meaning to their actions, choices, and behaviors"* (Chen, 2011; Song & Yu, 2018; Whetten & Godfrey, 1998). Whetten (2006) tries to strengthen the concept by formulating the concept in such a way that it is distinguished from organizational culture and organizational image, which are related concepts.

An organizational identity has three main characteristics: Centrality, endurance, and distinctiveness. Central attributes have played a crucial role in shaping the company's history and, if changed, would have resulted in a different outcome. Enduring attributes are profoundly ingrained and considered essential to the organization's identity and are embedded in the organization's history. Distinctive attributes serve to distinguish the organization from similar organizations. Distinctive attributes could also be setting a benchmark and establishing norms for the industry or similar organizations. (Whetten & Godfrey, 1998; Whetten, 2006)

In other words, organizational identity refers to the core, enduring, and unique beliefs that define an organization, often based on historical events. It provides internal and external stakeholders a sense of the organization's interactions with other organizations, groups, and individuals. GOI is the same principle and refers to an organization's perceived values, principles, and behaviors focusing on sustainability, conservation, and protection when it comes to environmental matters. It encompasses the organization's reputation, image, and self-concept regarding its environmental responsibility commitment. GOI can be reflected in the company's policies, practices, products, and communication with stakeholders, such as customers, employees, and the community. (Chen, 2011)

Chen (2011) presents the concept of green organizational identity as "*an interpretive scheme about environmental management and protection that members collectively construct to provide meaning to their behaviors*" (Chen, 2011; Soewarno, Tjahjadi, & Fithrianti, 2018). GOI is, in other words, a shared framework and perspective that a group of individuals create to give significance to their actions when these actions are related to environmental management and protection. With this definition, there is possible to identify whether an organization has a green identity. An organization will develop an identity either way.

Chen (2011) states that green organizational identity can be measured using a method from a study by Gioia and Thomas (1996) (Chen, 2011). This method includes six measurable factors; all employees including managers at different levels have a strong sense of the organization's history regarding environmental management, have a sense of pride in the organization's environmental goals, feel that the organization has carved out a significant position with respect to environmental management and protection, have knowledge about the organization's environmental traditions and cultures and strongly identify with the organization's actions with respect to environmental management and protection. (Gioia & Thomas, 1996)

2.2.1 Green Innovation Performance

Green innovation performance refers to the ability of a company or organization to develop and implement its green innovation strategy, as well as its effectiveness in achieving sustainability goals and reducing its environmental impact. It can be measured by various indicators, such as the number of resources saved, emissions reduced, or the revenue generated from green products or services (Soewarno, Tjahjadi, & Fithrianti, 2018). Chang and Chen (2013) propose the following hypothesis related to this matter: *"Green organizational identity of a firm is positively associated with its green innovation performance"*. The study shows that GOI directly and positively affects green innovation performance. (Chang & Chen, 2013)

2.2.2 Environmental Organizational Legitimacy

Environmental, organizational legitimacy refers to the perceived authenticity and credibility of an organization's environmental claims and actions. It involves whether an organization's environmental initiatives, policies, and practices align with the expectations and values of stakeholders. Organizations with green environmental legitimacy are perceived to be committed to environmental protection and sustainability, rather than engaging in *greenwashing* or using environmental claims without a genuine commitment to sustainability.

Organizations with strong environmental organizational legitimacy are seen as responsible and trustworthy actors in the environmental space and are more likely to attract and sustain stakeholder support. On the other hand, organizations lacking environmental organizational legitimacy may face reputational risks, legal and regulatory reviews, and reduced stakeholder support. Due to these facts, GOI is positively associated with environmental organizational legitimacy. (Chang & Chen, 2013; Soewarno, Tjahjadi, & Fithrianti, 2018)

2.2.3 Mediating role of GOI

The organization's identity will influence and have a mediating role in the organization's actions. Soewarno et al. (2018) found that GOI mediates the relationship between green innovation strategy and green innovation. In addition to that, GOI and environmental organizational legitimacy mediate the relationship between green innovation strategy and green innovation. (Soewarno, Tjahjadi, & Fithrianti, 2018). GOI could positively influence green innovation performance indirectly, where environmental commitment and environmental organizational legitimacy are crucial factors.

These factors are two partial mediators between green innovation performance and green organizational identity. To improve green innovation performance, companies should enhance their green innovation identity, environmental commitment, and environmental organizational legitimacy because these factors are very much related to each other (Chang & Chen, 2013). In other words, the effect of implementing a green innovation strategy will be reduced if the organization neglects other variables and the importance of a green organizational identity.

2.3 Green Organizational Culture

This chapter presents the concept of *Green Organizational Culture* (GOC). First a general definition of organizational culture is presented followed by green organizational culture. Next, the aspects of Green Performance, Competitive Advantage, and Green Innovation with regards to how GOC can affect these aspects in an organization is presented.

The definition of GOC has been derived from the definition of organizational culture, which refers to shared mental presumptions, symbols, rituals, and social patterns that control the behavior of an organization. This combination of standards and shared values is consistent with the organization's characteristics (Aggarwal & Agarwala, 2021). Accordingly, when employees of an organization perform activities that go beyond profit-seeking objectives to minimize the negative environmental impact and maximize the positive impact, the organization's culture can be considered *green*. Therefore, the definition of the term Green Organizational Culture revolves around the values, beliefs, and behaviors of the organization's members regarding the natural environment. (Roscoe et al., 2019)

Recent years have seen stricter regulations and increasing pressure from stakeholders to preserve the natural environment, making these issues more important for industries. This awareness has led to green innovation responding with green strategies that ensure organizations achieve corporate objectives that protect the natural environment. However, current research is scarce and yields mixed results. Previous research shows that GOC substantially influences green innovation and has a pivotal role in developing successful environmental strategies. On the other hand, some studies show that integrating these strategies may lead to poor performance from increased development time and costs. A research paper from Wang (2019) examines these contradictions to determine how GOC influences green performance and competitive advantage. (Wang, 2019)

2.3.1 Green Performance

Green performance refers to measuring the interaction between a business and the environment, in addition to the efficiency of a firm's environmental actions. Former research indicates that GOC might alter existing mindsets in organizations, and the organization's employees are important agents of change in this process. It further indicates that organizations are more likely to adopt a green culture strategy if managers value and show concern for environmental protection. (Wang, 2019)

When organizations face environmental pressure, the challenge for managers lies in finding the correct balance between the optimal level of green performance despite the potential reduction of profit and ensuring the lowest possible adaptation of the green performance

to maximize profits. Organizations without green culture could be faced with limited resources to further invest in their green strategy, leading to managers allocating those resources to more fundamental priorities. The hypothesis made in the thesis on this subject was *"GOC has a positive impact on green performance,"* with results showing that GOC significantly predicts green performance. (Wang, 2019)

2.3.2 Competitive Advantage

Competitive advantage refers to a superior position in the marketplace that allows an organization to outperform its rivals. To achieve this advantage, organizations must create a positive value that equals or exceeds that of their competitors. GOC can be a source of competitive advantage because GOC has attributes that differentiate it from other organizations' cultures. In addition, it could be challenging for competitors to imitate because it is an invisible asset. Furthermore, GOC could stimulate competitive advantage with employees of an organization since it can lead them to accept environmental issues as a fundamental value of the organization. (Wang, 2019)

Moreover, a higher focus on the green orientation of an organization's culture can contribute to establishing a more distinctive picture in the eyes of consumers. Consequently, if competitive advantage relies on appropriate employee behavior and business value, a supportive GOC can be favorable for the firm. Hence, it hypothesized in the thesis that: "*GOC has a positive impact on competitive advantage*", with results showing that GOC significantly predicts competitive advantage. (Wang, 2019)

2.3.3 Green Innovation

There are many different definitions of the term green innovation. Based on a combination of these, Wang defines it as: "Products, processes, and managerial innovations that lead to a noticeable reduction in environmental burdens." Previous research states that innovation is driven by a company's culture, leadership, and strategic planning. Furthermore, a superior level of innovation in companies may result in a more clearly defined culture compared with those having less innovation. Thus, an organization's thoroughly defined environmental culture can facilitate green innovation. Managers in organizations where the culture is aligned towards environmental preservation have a higher probability of implementing environmental protection policies, which might enhance organizational green innovation. This could lead to organizations aligning their GOC to support environmental quality standards. The hypothesis made in the thesis was: "GOC has a positive impact on green innovation", with results validating the hypothesis. (Wang, 2019)

2.4 Green Innovation Strategy

In this section Green Innovation Strategy is examined in relation to previously presented concepts displaying how they might affect an organization's green innovation strategy. Multiple studies have found that GOI and GOC affect green innovation and green innovation strategy (Chang & Chen, 2013; Soewarno, Tjahjadi, & Fithrianti, 2018; Song & Yu, 2018). There is a famous quote by Peter Drucker that states *"culture eats strategy for breakfast"* (Engel, 2018). The interpretation of the quote is that an organization's culture can significantly impact the success of its strategies. Even the most well-thought-out and comprehensive strategic plans may only be effective if aligned with the organization's culture and values.

A *green innovation strategy* is a plan or approach adopted by an organization to develop and implement environmentally sustainable products, practices, and services. It involves identifying opportunities for innovation and integrating environmental considerations into the innovation process, from R&D to commercialization. A green innovation strategy may include investments in new technologies, processes, or products that reduce the environmental impact of the organization's operations, as well as measures to increase energy efficiency, reduce waste, or improve the sustainability of the supply chain. Soewarno et al.(2018) suggest that firms should develop a green innovation strategy and find this an important factor in further improving GOI. (Soewarno, Tjahjadi, & Fithrianti, 2018)

A strategy focusing on green innovation is one of the most important types of environmental strategies (Song, Ren, & Yu, 2019). Soewarno et al.(2018) suggest that organizations should develop a green innovation strategy reflected in their organizational identity, increasing their legitimacy and further improving their green innovation performance. (Soewarno, Tjahjadi, & Fithrianti, 2018)

2.4.1 Sustainability Outcomes

To ensure sustainability efforts are maintained at all levels of the organization, managers are expected to assist employees in formulating and implementing sustainability-based decisions in their daily jobs. To succeed, sustainability objectives should be developed as part of the employee-level performance planning process. Employers should help the workforce embrace the initiatives to be within the scope of their job expectations. (Galpin, Whittington, & Bell, 2015)

This can be done by providing instructions on how employees implement sustainability in their jobs, sponsoring educational events, and building an internal dialogue among employees and managers. Integrating sustainability into performance evaluations would signal to the employees that the actions performed to improve its social and environmental

performance are recognized. Thus, providing a strong link in the sustainability objectives developed in the performance planning process. (Galpin, Whittington, & Bell, 2015)

Creating a culture of sustainability not only leads to increased individual employee performance but can be beneficial for the firm as a whole. Studies show that sustainability can increase corporate profit by as much as 38%, and adopting social and environmental policies can lead to outperforming competitors in the stock market and accounting performance. In addition to common market factors such as brand image and value, environmental and social capabilities can help establish new markets. Studies show that as many as 20% of American consumers are "sustainability-driven", and as much as 50% of consumers consider at least one sustainability factor when selecting brands and stores. (Galpin, Whittington, & Bell, 2015)

2.5 Summary of Existing Literature

Throughout this chapter, several different theoretical perspectives have been presented. This last section of the theory chapter summarizes the theory presented to provide some repetition and highlight vital theoretical aspects before continuing the master thesis.

In section 2.1, the concept of CSR is defined and viewed in relation to sustainability. Other connected terms, such as CER and CES, are also presented, displaying how CSR currently has historically been adopted by organizations worldwide. Theory displays that CSR can be linked to competitive advantage, recruitment, and how it can contribute to shaping an organization's strategy. Furthermore, The Innovator's Dilemma is presented, examining the challenges of maintaining an organization's position when faced with innovative challenges. The section is concluded by presenting the phenomenon of greenwashing, which can be related to CSR and can be described as a misleading marketing practice involving making false or overrated claims about a product or service's environmental performance or benefits.

Section 2.2 presents and defines the concept of GOI as an organization's perceived values, principles, and behaviors focusing on sustainability, conservation, and protection when it comes to environmental matters. The section further displays how GOI can be measured using six factors and how GOI can be related to green innovation performance. Further, the section includes the theory on the mediating role of GOI on green innovation strategy and green innovation. Finally, the theory on how GOI is positively associated with environmental organizational legitimacy is presented.

The concept of GOC is presented in section 2.3 and defined as when employees of an organization perform activities that go beyond profit-seeking objectives to minimize the negative environmental impact and maximize the positive impact, the organization's culture can be considered green. Research is presented on how GOC can influence green performance and provide a competitive advantage, with results showing it can significantly predict both aspects. The section concluded with a theory displaying how GOC positively impacts green innovation.

Green innovation strategy is presented in section 2.4 and displays how the previous concepts might affect an organization's green innovations strategy. A *green innovation strategy* is a plan or approach adopted by an organization to develop and implement environmentally sustainable products, practices, and services. The section is concluded with a view on what sustainability outcomes might be achieved by adopting sustainable practices.

CHAPTER

THREE

METHODOLOGY

This chapter will explain and discuss our choice of methodology and research design. The first section provides an introduction to research and philosophy of research, followed by an justification of how we decided on our research design. Next comes an explanation of data collection and processing, including the selection of respondents, the interview process, and how the data was handled. Next, we evaluate our choice of method by looking at reliability, validity, and transferability. Finally, we review aspects that could be criticized in our study.

3.1 Introduction to Research

In his book from 2011, Robson states that it is valuable to assert a *scientific attitude* when performing research. This attitude includes that research is carried out systematically, skeptically, and ethically. Systematically means having a serious approach to what is performed and knowing how and why it is done. More precisely, it means that one is clear about the environment observations are made in, the situations they are made in, and the role the researcher takes. Sceptically means subjecting ideas to possible disconfirmation and considering different hypotheses and alternative interpretations. Ethically means that the research is conducted by a code that protects the interests and concerns of those involved or affected by the research. (Robson, 2011)

When performing social research, the scientist, for many years, had a direct choice between two different approaches; quantitative and qualitative. Quantitative attempted to follow the same path as research performed in the *natural* sciences like physics, chemistry, and biology. Believers in the qualitative approach stated that because social research focuses on humans in social settings, a very different approach to the research task is needed. Consciousness, language, and the social setting of interactions with both the researcher and research subjects being human - were all factors that required a different research

approach. The debate went on for years, finally coming to an end around the millennium. There is currently a growing recognition that values the combination of both approaches, but at the same time - both styles are considered two unique, distinguishable research styles. (Robson, 2011)

Completing a research project can be complicated as there needs to be an overall consensus on performing social research. One model states that the researcher needs to know the research's purpose before collecting and examining data. At the same time, a different approach expects the researcher to develop the design through interaction with the research subject, thus combining data collection and analysis. The two different approaches are named *fixed design* and *flexible design*, respectively, with fixed design coming from the quantitative tradition and flexible from the qualitative. (Robson, 2011)

3.1.1 Philosophy of Science

The choice of methodology in this will thesis will to some extent be affected by the researchers view on reality and the type in knowledge we find to be relevant, therefore this section of the philosophy behind science is included. Philosophy of science concerns a wide array of aspects covering foundational principles, assumptions, methods and implications of scientific exploration. Throughout this section the connection between epistemology, ontology and selection of method is further explored.

Epistemology is concerned with the nature of knowledge and how it might be acquired. It mainly revolves around understanding the ways in which scientific knowledge is obtained, justified, and revised. It examines the criteria that are used for determining what counts as evidence, the role of observation and experimentation, and the nature of scientific reasoning (Nyeng, 2017). Ontology regards the most fundamental philosophical questions about existence, being and reality, and seeks to understand relationship between structures. (Nyeng, 2017)

In social science it exists two main directions to view reality; positivism and hermeneutics. Positivism is about understanding and interpreting reality in an objective matter, while hermeneutics is about exists several truths and reality can be interpreted in several ways (Nyeng, 2017). In the case of our study, we are attempting to gain insights into the perceptions of organizations and how they interpret and make sense of the concepts of CSR, GOI, and GOC. We acknowledge that these perceptions might be affected by context, language and background of participants, making the perspectives diverse with several different perceptions. Based on acknowledgement, our master thesis is inspired by an hermeneutic approach.

3.2 Research Design

Design is mainly concerned with turning the problem thesis into a project and is considered a crucial part of any research project. It concerns various subjects that should be considered and evaluated when performing a research project. Figure 3.2.1 displays a model with a framework for research design with the components *purpose(s), conceptual framework, problem thesis, methods, and sampling strategy.* The model serves as a framework for matters that must be considered when selecting our research design. Each component is further explained in the following sections.

3.2.1 Purpose

Purpose refers to what the study tries to achieve and why it is being done. In our study, we are trying to understand if and how green innovation concepts are being used by the floating photovoltaic industry. Has any thought been given to these concepts, how to implement them, how they view their effectiveness, and whether they experience any challenges and opportunities? By obtaining this knowledge, we seek to provide recommendations for not only the two organizations investigated during our research but also organizations in the same situation that are going through the same process.

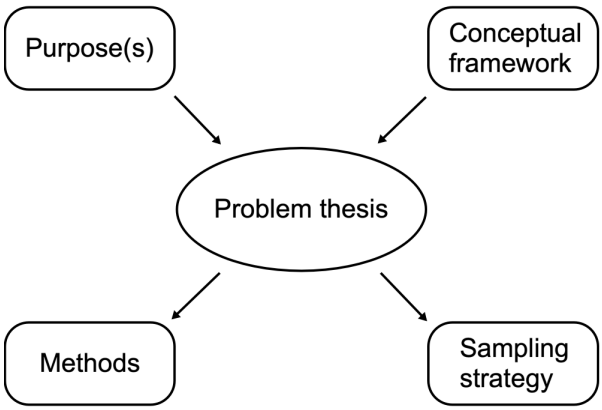

Figure 3.2.1: The figure displays the framework for components evaluated when deciding on the research design.

3.2.2 Conceptual Framework

The conceptual framework is the theory behind what is going on, what is happening, and why (Robson, 2011). Different aspects and features are assessed, and their relation to each other is discussed. Related theory is based on qualitative studies gathered, from online sources, by our collaboration group based at the University of Milan. These studies, amongst other things, investigate how green innovation concepts influence organizations' competitiveness and green performance. Furthermore, the actualization of the research topic is a relevant factor for the framework. Increased demand for reducing environmental impacts requires businesses to implement these factors.

3.2.3 Problem Thesis

The component problem thesis revolves around understanding what questions the planned performed research is prepared to provide an answer for. It needs to consider the required output to provide a substantial answer for the research. In addition, it is essential to consider how much is possible to get done, considering the available time and limitations of the research. For our thesis, time is a restraint, but also the reach of our study provides limitations. The conceptual framework sets a comprehensive foundation of possible trajectories and research questions. Thus, a decision was made early on to attempt to narrow down the scope of our thesis as much as possible. The final problem thesis presented in section 1.1 was developed during the research process.

3.2.4 Method

The method relates to specific techniques to collect data and how the data is to be analyzed. Also, how the data is validated and deemed trustworthy. Not only to supplement the existing quantitative data on the subject but also because of the nature of the research subject, our initial thoughts were to interview employees in relevant organizations. At an early stage of the process, the scope of our thesis needed to be fully clear. Therefore, a semi-structured interview guide was created and used during interviews. When performing the interviews, subjects that led to interesting conversations and potential findings were explored further while ensuring that every respondent had covered the same basis of themes and subjects during the interviews.

3.2.5 Sampling strategy

Sampling strategy refers to whom we will seek data from in addition to where and when. The selection of respondents started with establishing contact with an organization that one of the researchers previously had worked with. Based on this experience the organization was willing to provide lengthy and honest responses, and the initial plan was that this organization would provide enough data. However, at an early stage, it became clear that supplementary data was required due to restricted availability from the first organization. Several different organizations in the FPV industry were thus contacted, with mixed results. There were some challenges in gathering enough respondents, but eventually, one additional organization provided us with sufficient data from several interviews. Eventually we sampled sufficient data from different leaders in the FPV industry in Norway through two different organizations with different roles within the industry of photovoltaic in Norway. We finalized all interviews as early as possible in order to have sufficient time to perform analyses.

3.3 Flexible Design

Considering all of the components mentioned above, it became clear that we would have a flexible design for our research. This decision was largely based on the fact that concepts presented in this thesis are non-tangible, and it takes effort to pinpoint what they involve. Flexible designs begin with a general approach where the researcher gathers information and then aims for a direction for the project's scope. It further gives the ability to retract and change the direction of the scope if that is advantageous for the study. All mentioned components should be revisited for flexible designs as research is undertaken. Following, the details of the design emerges during the research. (Robson, 2011)

3.3.1 Case Study

A case study is a research method that involves an in-depth examination of a particular situation or event, often involving a real-world context or situation. Such study designs may include individuals, persons, groups, or organizations, as well as a specific event or situation. The case study is typically used to explore a complex issue or problem and might involve collecting and analyzing various data, such as observations, interviews, and documents. A case study aims to provide a detailed understanding of the subject being studied and identify key issues and insights that can inform decision-making and future research. Combining data collection methods such as interviews, questionnaires, and observations is typical when performing case studies. (Huberman, 2002)

Robson (2011) defines a case study as: *"Case study is a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence"* (Robson, 2011). Our mission with this master's thesis is to do research on the concepts CSR, GOI and GOC while studying two organizations within the FPV-industry in Norway. Hence, these two organization within the mentioned industry is defined as our *case*. Yin (2014) state that a case study research is done when you want to investigate a real-world case with the understanding that the context in which it occurs is crucial to fully understanding the case (Yin, 2014). Due to these statements, we have defined our study as a case study.

3.4 Data Collection

In a study such as ours, interviews can be used as the primary or only approach for collecting data. It is common to differentiate between structured, semi-structured, and unstructured interviews. They differ from each other in terms of the degree of structure and standardization. Semi-structured and unstructured interviews are widely used in

flexible designs and are also referred to as qualitative interviews (Robson, 2011). A semi-structured interview offers an approach that combines standardization and flexibility. (Johanessen, Christoffersen, & Tufte, 2020)

Using semi-structured interviews to collect primary data provided us with the opportunity to be flexible when asking questions and asking follow-up questions to dig deeper into some subjects if we found the initial answer interesting. Since people differ in both depth and length when elaborating, semi-structured interviews allowed us to ask follow-up questions. This ensured answers with relevant data by gaining more elaboration from the respondents that were shorter or more hesitant in their initial elaboration.

Our interviews were semi-structured following an interview guide due to our flexible design. This lead to a flexible plan, that made sure we covered the desired topics and gave the option to steer the conversation into preferred subjects, leaving room for follow up questions on some exciting or unexpected answers. The answers from the interview object will also be able to contain more data, such as personal opinions and thoughts, in addition to factual information.

Interviews are time-consuming, the length will vary and is resource dependent. When doing semi-structured interviews, it is possible to keep the time consumed within some limits by following an interview guide and leaving some spare time for other questions. Robson (2011) states that interviews should last between 30 minutes to 1 hour. Everything under 30 minutes is likely to have a small value, and interviews that last more than an hour are too time-consuming and will be too resource-demanding both for the researchers and the interview object, leading to an increased risk of losing possible participants due to time. (Robson, 2011)

Collecting relevant and valid data for the case is to state the obvious, important, and necessary. Being well-prepared for the interviews is an excellent way to start. We made several interview guides based on a template to prepare for each individual interview during this case study. This was to ensure that we covered essential topics and adjusted the questions to fit the respondent in the best possible way in terms of their position in the company.

3.4.1 Conducting Interviews

We conducted seven interviews with six individuals, three from each organization. All interviews were structured the same, following the same interview guide template. The interview-guide can be found in appendix A. The reason was to standardize the interviews, making it easier to compare answers in the analyzing phase of the study. We considered

semi-structured interviews the most beneficial approach for this study to obtain and retrieve relevant and detailed information.

Once the formalities were completed, the recording started, and we went through the interview guide. The interviews started with an introduction of us as the researchers, followed by presenting the purpose of the interview and how the participant's personal data would be handled. The initial questions were considered warm-up questions and included the participants introducing themselves, their position, and their responsibilities in the organization. We made sure that both their educational and professional career were covered. Next, we would cover every aspect of the interview guide through seven thematic areas. The seven themes were the green transition, green measures, green innovation, GOC, GOI, green organizational strategy, and their view on the years to come regarding the covered topics.

The interviews lasted around one hour each. We aimed for one hour since it was an adequate amount of time for the interviewees not to get tired and allowed for sufficient data to be gathered, following Robson's (2011) length recommendation.

3.4.2 Selection of Participants

The participants selected for this study is based on that they are actors in the FPV industry in Norway and are working towards implementing FPV as a source of renewable energy. We found that there are multiple possible organizations to use in this study. Our initial thought was to use one of them, but the resources are limited because most are small organizations in an establishing phase. Therefore, to get hold of enough informants, we decided to interview employees from two organizations. The organizations we used are in two distinct phases: One is a startup, and the other is well-established. Due to anonymization reasons, we will refer to the organizations as organization 1 and 2.

Organization 1

Organization 1 is a startup in the early phase, established just a few years ago. Their business model involves the development of technology for floating photovoltaics and making the production process, shipping, and assembly more effortless and cost-effective. They develop their products to have a strong position in the FPV market when the demand for solar energy increases. They are preparing for an increased demand for floating photovoltaics. As of today, they are around ten employees. A total of three managers were interviewed from organization 1. The respondents from organization 1 is in the thesis referred to as respondents A, B, and C.

Organization 2

Organization 2 is an established organization within offshore floating structures and anchoring. Since their early start in the 1980s, they have worked with large oil companies and developed solutions for oil rigs. They are still involved in developing solutions for non-renewable energy sources, where most of their income is generated. However, they are now also getting involved in renewable projects such as floating photovoltaics. With around 60 employees, some of them are allocated to work on projects with solutions for renewable energy. A total of three managers working with FPV were interviewed from organization 2. The respondents from organization 2 is in this thesis referred to as respondents D, E, and F.

3.5 Processing data

The phase of processing and analyzing data is essential in research. All interviews were recorded with video and automatically transcribed using Microsoft Teams. Recording the interviews provided us with the advantage of focusing on conducting the interview and reviewing data at a later point. Deciding what method was used to process data was decided before conducting the interviews, allowing for questions to be asked to provide answers suitable for processing. The data was coded using Nvivo, a program where transcribed interviews can be imported to organize, explore and connect data. After each interview, we played the recording while editing the transcription to ensure that the text was according to what the interview objects stated and to correct any misspellings and other errors made by the automatic transcription function in Microsoft Teams. Doing that extra work with our transcripts made our data more reliable and trustworthy, and we, as researchers, got a better overview of the data before we started the coding phase.

3.5.1 Thematic Coding

A common approach to qualitative analysis is the thematic coding approach. This is a generic approach and can be used as a realist method that reports the participants' experiences, meanings, and reality. Coding plays a significant role in the analysis when it comes to defining what the data analyzed is actually about. It involves identifying one or more passages or sections of text that, in some sense, exemplify the same theoretical basis or describes the same idea. Normally, several text sections are identified and linked to the name of that theory or idea, which becomes the code. The outcome is that all the text around the same subject is gathered under the same code. (Robson, 2011)

Thematic coding analysis is in the book Real World Research by Colin Robson from 2011, divided into five phases. The first phase is about familiarizing yourself with the data. This was done by transcribing the interviews, which meant replaying all interviews and

listening to all that was said. During this phase, we also attempted to note initial ideas and thoughts on recurring and interesting emerging topics. The second phase is called generating initial codes. It aims to provide extracts of the data with initial codes across the whole data set, where similar codes are provided to similar extracts (Robson, 2011). This phase was performed by both researchers going through every interview individually and providing codes to every section of the text, ensuring that both researchers had the same look at all the data. Examples of codes are GOC, green innovation, and GOI.

The third phase is called identifying themes and aims to combine codes into themes and collect all the relevant data for each theme. This also includes revisiting the initial codes if necessary. The themes created ranges from the perception of concepts to challenges and opportunities. The last two phases are called constructing thematic networks and integrating and interpreting (Robson, 2011). Due to the capacity of the thesis, we decided to integrate both these phases because separating was deemed unnecessary. Thus, exploring, describing, summarizing, and interpreting patterns were performed verbally.

3.6 Research Design Evaluation

During this section, we will evaluate the quality of our study. The evaluation of research design is essential to determine its strengths and weaknesses. In quantitative research, reliability and validity are commonly used to evaluate the quality of the research (Johanessen, Christoffersen, & Tufte, 2020). In qualitative research, which is characterized by subjective truths, applying the same criteria may be challenging. With this in mind, we will evaluate our research following Tjora (2017) and Johansen et al. (2020), evaluating reliability, validity, and transferability.

3.6.1 Reliability

Reliability is to what degree we can trust the data that is collected. Researchers usually understand the phenomena they are studying before starting the research from earlier experiences, which can influence the neutrality of the study (Johanessen, Christoffersen, & Tufte, 2020). The conducted interviews can affect the reliability of our study since we, as researchers, might expect or seek some answers we consider as "true" and total neutrality is, therefore, challenging to achieve (Tjora, 2017). Since our interviews were conducted using Microsoft Teams, we had an automatic transcription document and a recording of the interview on video. This made it easier to go through the interviews and present the data the way our informants intended, thus increasing the reliability.

To further increase our reliability, we have chosen to be transparent and justify the choices made during the data collection and analysis of this study. To assess the reliability, we can

ask ourselves the question: "*Would the result of the study be the same if other researchers had done the same?*" (Tjora, 2017). Since the answers we got from both organizations correlated with each other to some degree, we think that it is possible for other researchers to have the same result given the same circumstances with regard to the situation in the world. Different interpretations of results and a different situation in the world would likely give other results.

Since two researchers conducted this study, the choices made have always been an agreement between us. There has been room for discussion and weighing pros and cons before decisions have been made, which increases the reliability of the study. The researchers have different academic backgrounds that further provides value to discussions. It has also been helpful when interpreting the results as we have been analyzing the results individually and, in that way, ensuring that we interpret the results the same way and further increase reliability.

3.6.2 Validity

Validity is associated with whether the answers we find in our research correspond to the questions we are trying to ask (Tjora, 2017). To assess the validity, we ask ourselves the question: "*Have we obtained answers to the questions we intended to ask?*"

To assess the validity of our research project, we consider if the collected data and the emerging findings correspond to our proposed problem thesis. We collected data through multiple interviews, in total seven in-depth semi-structured interviews. All informants are considered primary sources, meaning they have good knowledge of the phenomenon because they experience it up close as they are managers of some sort in their respective organizations. Our informants differ in years of experience, but none of them are newly graduated and have at least five years of experience in the field of business from multiple organizations. Based on this, we consider their knowledge to be valid and reliable.

Even though we are sure that our informants are relevant and have the knowledge to be valid for our study, we can not be sure that the information is exclusively correct. The desire to appear as an attractive organization might cause informants to present false claims (Johanessen, Christoffersen, & Tufte, 2020). The organizations, to some degree, chose their participants, which could lead to the weakness of selected respondents providing answers that gave a positive impression of the organizations' green actions. We consider this point invalid for our study since organization 1 is small, and the employees we spoke to in organization 2 belong to a small department within their organization. Thus, those who contributed were the only possible candidates.

In qualitative research, validity is concerning if the phenomena being analyzed is describing what is being observed (Tjora, 2017). The findings cannot be seen as an absolute proper conclusion. As researchers, we are always influenced by our perspectives. When analyzing the data, it is crucial to recognize that researchers have their own opinions and thoughts that might impact the research project (Johanessen, Christoffersen, & Tufte, 2020). To reduce the source of error regarding our perspectives, we initially coded the data individually and later compared and discussed our findings. This was to ensure that there were always two critical eyes coding the data. The greater agreement in our categorizations, the more valid we considered the analysis.

By explaining our choices regarding the collection and analysis of our data in the methodology chapter, we have attempted to make the research project as transparent as possible and explain why we have made our choices. Tjora (2017) states that this contributes to better validity and, thus, quality. Additionally, our findings are based on data from interviews we have performed ourselves, which adds to the study's validity. Based on the above, we consider the validity of our research project to be good.

3.6.3 Transferability

Transferability refers to how the results from the study can be transferred outside of the frames of the particular study that is conducted. It can also be referred to as external validity (Yin, 2014). Qualitative findings tend to be oriented toward the context and significance of the aspect being studied. Thus, the statistical generalizations in quantitative research do not apply to qualitative methods (Bell, Bryman, & Harley, 2022). The transferability of results to other or similar settings is, however, possible. (Johanessen, Christoffersen, & Tufte, 2020)

To enhance transferability, it is important to present a thorough account of both the investigated phenomenon and the research process, thus enabling readers to assess the transferability to other contexts (Bell, Bryman, & Harley, 2022; Johanessen, Christoffersen, & Tufte, 2020). Case studies aim to develop analytical generalizations rather than statistical ones (Yin, 2014). This study presents a detailed depiction of the phenomenon and the theoretical expansion, making it possible for readers to evaluate the transferability. Furthermore, the research process is carefully delineated, thus increasing the possibility and quality of reader evaluation. Such descriptions allow readers to determine the applicability of this study's findings to their contexts.

3.6.4 Criticism of the Research Design

Some aspects of this study could have been performed in a different matter to improve the reliability, validity, and transferability. The samples included are based on six individuals from two different organizations, which is considered a limited number of representatives from the floating photovoltaic industry in Norway. Although limited in quantity, the respondents were all experienced in their industry, making the quality of the responses high. Due to this, we found the conducted interviews sufficient.

Another aspect that can be criticized is the need for representatives working specifically with identity and culture in the organization, such as an HR representative or a marketing director. The individuals that participated in this study were managers of some sort, but none were working specifically with culture, identity, or sustainability as their main field of work. Still, we consider the respondents as a good fit for our study due to their extensive experience in not only FPV, but also experiences they have gained as a managers.

All interviews were performed in Norwegian, which can be considered a limitation. As this thesis is written in English, all citations had to be translated into English, which can lead to a loss or change in meaning. There are benefits to performing the interviews in Norwegian as this is both the respondent's and researchers' native language. Performing interviews in the native language of the respondents entails a more precise way of expressing themselves. It allows for a more floating conversation between researchers and the respondents. The drawback of translating is considered to be outweighed by the benefit of performing the interviews in the native language.

3.7 Summary of the Research Method

In this methodology chapter, we have outlined the choices underlying our research project. In order to answer our problem thesis in the best possible way, we have chosen to use a qualitative approach with an intensive flexible design. Six individual interviews form the basis for data collection using semi-structured interviews following a pre-determined interview guide. All informants have some manager position in their respective organizations, and the positions vary from project manager to CEO-level.

CHAPTER

FOUR

RESULTS

This chapter display key findings from interviews and is structured into four sections. The first section displays the organization's interpretation of the green transition, their contribution, how they are witnessing the current change, and their thoughts on green-washing. The second section displays the organization's perception on green innovation, GOC, and GOI. The third section concerns how the organizations view organizational size's effect on implementing changes and adopting concepts. Finally, a summarizing section displaying key findings are included. The statements in this chapter represents the responses received through interviews and not the researchers opinions.

4.1 Interpretation of The Green Transition

The respondents were asked how they interpreted "the green transition" and if they felt that term had any substance or was just empty rhetoric. Everyone answered that the term green transition has substance and is a real thing happening due to the need for change regarding environmental impact and global warming. Respondent D stated:

> *"The green transition is about changing energy sources but also decreasing energy consumption to reach the climate goals."*

There seems to be a uniform perception among the respondents that the green transition is mainly about changing energy sources from fossil to renewable sources. It is worth noticing that everyone is focused on both the sources of energy and the consumption, which is natural when they all work on energy solutions. Respondent F from organization 2 did however, as the only one, mention overall sustainability in her answer and the change from fossil energy to renewable energy.

> *"The green transition is the change from fossil to renewable energy. It is easy to look at energy first, but it is also about making everything else sustainable."*

4.1.1 Contributions

Organization 1 and organization 2 have different points of view on why and how they intend to implement measures to meet the green transition. All respondents stated that their organization is taking measures and trying to accommodate the expectations and demands related to the green transition. They answered that it is all about gaining a favorable position in the market and preparing for the demand for oil & gas as an energy source decreases.

Statements indicate that the green transition is considered to be resource dependent, and demands a new way of thinking that may force innovation. Heavy investments, new business models, and strategies make the green transition a challenge that organizations are beginning to prepare for. Respondent B stated that the challenge with the green transition is the dependence on investments in new technology. It requires real innovation and more than fast solutions like existing technology adjustments.

Organization 2 is accommodating the green transition by exploring and getting involved in solutions for renewable energy, even if the margins are lower. Respondent D stated that the way to accommodate the green transition is to innovate their existing technology further and use their core competence within a new field of business. It is about minimizing risk and also gaining credibility for the work that they have done and the knowledge they have gained over the years. His opinion is that this makes their innovations trustworthy, and they will also have use of their track record that has been developed earlier.

Two respondents in organization 2 also stated that even if they know and believe that renewable energy sources are the future - they would not decline a request for developing and building a new oil rig as the margins are higher. The income will still be necessary for the organization. As the "green projects" are not generating decent financial results yet, the income has to come from somewhere for their company to exist. However, there seems to be a disagreement regarding what projects to choose as a manager from organization 2 stated the following:

> *"In the long term, choosing renewable projects with low margins is wise if you believe that the green transition is real."*

Respondent D describes large organizations as conservative. He states that you can not go to a large company and tell them that you have suddenly become very good at nuclear power when they know your company as an actor within Liquefied Natural Gas (LNG), for instance. Their reply will not be; *"we believe in you, the next large project within nuclear energy will be yours."* It takes decades to reverse the prejudices, and a revised business model will require large companies to change their recognition of

your organization. Further, he explains that organization 2 does not have a significant environmental footprint, and stated that *"we only produce written papers with solutions."* In other words, his opinion is that "greening" their processes and procedures will not affect the green transition hugely. However, by using their existing technology and being innovative, their contribution to the green transition is to make it possible and help their customers choose green solutions.

4.1.2 Winds of Change

It is pointed out that the world is in constant change, and with the green transition, there is an increased focus on how we produce and consume energy. Respondent F from organization 2 states that the green transition has led to a change of strategy. This is because their customers no longer want to buy their "historical products" and that their contribution to the green transition is to develop solutions for renewable energy, which happens to be something their customer wants to buy.

Despite being an organization involved in the production of oil & gas, respondents from organization 2 stated that they are not actively promoting this when discussing the green transition. When displaying their company on stands at universities and such arenas, they would instead show their projects related to renewable energy because these are the matters that create attention from students.

> *"Nobody has a stand at NTNU asking if the students want to work with oil & gas. You ask if they are interested in working with energy."*

Respondent F from organization 2 mentioned that research conferences, which earlier used to be completely oil-focused, now are approximately 50% focused on floating wind. This indicates that the offshore industry in Norway is now looking into renewable projects, and many are preparing for a change in the industry where renewable sources seem to be the "new thing".

> *"The offshore industry is trying to change hats. From oil & gas to renewable sources of energy."*

The investments needed to accommodate the green transition are heavy, and both human and economic capital is needed. Multiple respondents point out that pioneering is expensive and prominent organizations within the field of energy, have to contribute more actively to developing solutions, and it is a pity that they are not. Respondent F states that it is essential that prominent actors within the oil & gas industry contribute when it comes to the green transition. She says that there is no doubt about their capability to develop the technology, but the question is at what cost?

4.1.3 Greenwashing

One of the questions asked during our interviews was how the respondents relate to the concept *greenwashing*. Results indicate a consensus amongst respondents that *greenwashing* is associated with something negative, although some states that it does not necessarily have to be negative.

Respondent C from organization 1 states that the concept *sounds* very negative and can, when talked about may, be interpreted in a harmful matter, even though it might not be the case. He exemplified this by using the petroleum industry or other companies doing renewable projects and asking whether that is to greenwash themselves or to position themselves for a new market. In his opinion, the last mentioned would be the preferred answer and what he thinks might be the case in some organizations. The respondent elaborates on this in the statement below, by stating that organizations not necessarily are greenwashing, but are exploring to be ready for change.

> *"Multiple organizations are greenwashing, absolutely. But I think that many also do that in order have a sense about what is happening in other industries."*

Respondent D describes greenwashing as *"something you do that is not sincere and without a genuine desire for change"*. In other words, organizations that have a look at something green and then conclude that they have made an effort. He further states that he feels that greenwashing is in a historical phase and that almost everybody now understands that change is essential to survive as an organization. This also harmonizes with the quote mentioned above; in some cases, what is interpreted as greenwashing by externals is actually an exploration of a new market. The respondent would define greenwashing as follows:

> *"Greenwashing is something you do to gain a position in a market or a commercial pitch where the outcome is that you do not contribute to anything. You do not make any tough decisions to become a green actor in the industry, but you would like to make the world perceive that you are doing so."*

Respondent B brings up credibility while talking about greenwashing. Large companies looking into green projects and investments, and marketing themselves in that direction have only allocated a few resources to the project. This is something that reduces credibility. His opinion is that greenwashing is a type of agenda where an organization has 30.000 employees and allocates five of them to look at, for instance, floating photovoltaic. He does not think this is a credible investment where the organization wants to achieve something green and innovative but just wants the externals to perceive that they are doing something green, which he sees many actors do.

Upon asking the respondents for concrete examples of greenwashing, two managers from organization 2 use the same example when talking about greenwashing in their organization, referred to as "the green oil rig". This rig uses a hybrid system to save energy while drilling for oil and can do this operation with fewer emissions than a standard oil rig. The rig is marketed as green, which they both say is quite contradictory since it is oil-related and leads to a larger CO2 footprint than renewables. After explaining this case, respondent F "defends" the green oil rig by stating that the green oil rig is a better solution than a standard oil rig when drilling for oil. Her chosen words to summarize:

> *"Do you want something that is completely stupid, or just a little stupid?"*

Respondent F from organization 2 also reflects on whether greenwashing is negative or positive and compares it with the term *sportwashing*. She believes greenwashing, and sportwashing are the same principles, but the last mentioned does have any potential upside. On the other hand, greenwashing might be a step in the right direction because it means that someone is at least doing something to accommodate the green transition and reduce emissions.

Respondent F from organization 2 also reflects about their cooperation with a large oil company on a recent project. She states that renewable energy is expensive, at least when installing floating solutions. She has been a part of a renewable project for a couple of years, and her opinion is that we should use "oil money" to develop the technology. Before we reduce the production of oil & gas, we have to have a substitute to replace those energy sources, or else there will be an energy shortage in the world. The large oil company has participated in developing and financing its floating photovoltaic project. However, they have backed out and stated that they would be willing to buy the solution when it is finished. She believes that the particular large oil company, partly owned by the state, has an extra responsibility to develop sustainable technology. She stated that you would only need a few percent of their earnings to have much done within innovation and R&D on this technology. Finally, she summarized her reflections by saying:

> *"This is an example of greenwashing in this large oil company, and it is also greenwashing in a not-so-positive way, but at least they are doing something."*

4.2 Green Phrases

Throughout the interviews, respondents were asked open questions on their relationship to *green phrases*, such as their view on green innovation and adaptation of a green culture and a green identity. This chapter presents our findings for each concepts that were presented to the respondents during our interviews.

4.2.1 Green Innovation

Respondent B from organization 1 initially stated that he had trouble defining the phrase. When asked if his company was involved in green innovation, he stated that by providing solutions for renewable energy, the company was indirectly contributing to green innovation. The respondent further went on to say:

> *"It is what we do, so clearly, by replacing fossil energy sources, it is very positive - and green by definition. But at the same time, I would like to point out that it is not our primary motivation. We do not do it because it is green but because of financial aspects."*

Respondent C from organization 1 had a similar interpretation of green innovation by saying that "*everything we do is innovation, by definition.*" The respondent meant that since everything was a part of making up their final product - that is, a source of renewable energy - they are providing green innovation. This was despite some components not being produced in the most environmentally-friendly matter.

Respondent A from organization 1 defined green innovation as *"innovation that follows something green, and matters that eventually make the electricity price lower."* In his interpretation, it was clarified that it eventually boiled down to that the cost of energy was decreased. It is exemplified that by building a FPV installation close to Hydros furnaces in Brazil, one builds close to the consumer and thereby relieves the energy grid and could potentially earn revenue streams from the investment.

Another aspect mentioned by the same respondent was that it is implemented through most of the actions performed in the organization. Existing technology is utilized and adapted to their product in the production line. This can be seen by using a metal press to form the modules' plates, originally used in the car manufacturing industry. In addition, the respondent mentions water penetration of the panels as an essential aspect of green innovation.

Respondent D from organization 2 starts to reflect on green innovation upon receiving the question, talking about the technical area they are involved in, being product developers in the floating solar panels business. They want to develop products that the customer wants and enable them to buy a license to produce what they have designed. The process of designing this concept that can produce power in harsh weather conditions has been innovative because it is far from what the company previously has done.

Next, the respondent compares themselves to other actors in the business and how others often have emerged with competence within onshore solar panels, then reaches out into the marine environment. At the same time, organization 2 has an opposite approach. They

historically have marine competence and are now moving closer to shore by designing a solution that functions in coastal conditions. The respondent reiterates that whole process has been an innovation project in itself.

There is also additional examples of green innovation. The respondent mentions that developing structures for floating solar panels has been the most significant innovation project in recent years, especially since they started from scratch. He mentions LNG-related projects but states that the innovation gap is smaller because is is closer to their original business area. He also mentioned energy storage with batteries but says it is still in the early days. Respondent F also mentioned that a concrete action they performed in-house was setting aside time for brainstorming-session to develop new ideas. The sessions did not necessarily yield any outcome, but indicated selective action toward generation green innovation.

4.2.2 Green Organizational Culture

Moving into the concept of GOC, respondents were generally hesitant in their response and initially displayed a weak recognition when asked what sort of relationship they had with the concept. All respondents eventually managed to reflect on the concept, but the interpretation of importance and meaning varied.

Respondent A speaks vividly on culture and states that organization 1 is working actively to build a good culture in the company. The goal is that everyone involved should develop high ownership of the products produced. To achieve this, responsibility and trust are vital aspects, together with working towards fixed performance indexes. When building culture in this matter, the employees understand that performance is essential by being given responsibility and the opportunity to perform. He mentions that in this sort of setting, employees must strive to improve each other and not compete internally but rather reward or salute good performance. To summarize:

> *"We don't really have any focus on the green, but rather attempting to build a sustainable industry with a focus on quality in each component at that this can be produced efficiently."*

Despite the quoted focus, there is an awareness of the bigger picture. A status meeting is held every Monday, and every Friday, a status email is sent out to all employees. In these communication forms, respondent A states that he always attempts to give an awareness of why the company is making the choices they are and attempts to underline why they believe FPV is the future. This could refer to new directives from the EU or implications from the war in Ukraine, where Russia is using energy as a weapon. It is furthermore provided instructions for how to contribute towards reaching the 1.5-degree target. In

that sense, respondent A attempts to build an understanding amongst his employees that they are all part of a bigger team working together towards a bigger goal than simply producing FPV. This is exemplified through a conversation with one of his employees that stated he was *"very proud to be working with technology toward the green transition."*

Respondent B's first response was that he had not reflected on GOC and its effect. The response was dismissive when pushed forward with hints on whether it was communicated or could create motivation internally. At organization 1, the focus area is milestones and creating quality products together. They focus on making each other better colleagues through solid communication and giving pats on the back when success arises.

> *"We have more traditional means of action to incentivize common actions towards reaching our goals, like shared company stocks, competitive wages, and safe working conditions. Presenting a monthly graph of how much CO2 we saved is not something we have considered because it is not a motivational factor for our employees at all."*

Furthermore, respondent B went on to talk about his experience of managing people in his other company that he has managed since 2008. His view on what matters for employees when creating motivation is focused on what is close to the employee, or in this instance - what might be too distant to create motivation. He exemplifies drought in California as a factor, where installing FPV could potentially prevent this due to less evaporation. However, it needs to be more distant for the employees in Norway to relate to and, therefore, is not relevant enough to create motivation.

Respondent C was also asked about his thoughts on developing a green organizational culture and what lies within the phrase. His answer revolves around having the correct mindset on everything performed and thinking about the environment in every part of the operation. From the point where the decision was made to purchase something, for example, products for a developing solution, it means that considerations have to be made all the way back to when materials were collected from the ground. The whole lifespan of the product, and everything we are involved in, has to be considered. So it is not all about price anymore, even though many still consider it the most critical aspect.

When asked if the respondent had any thoughts on how this could influence their ability to accommodate the green transition, he answered that it likely could become a demand from the client to document that you can document every aspect of the product. Moreover, if your product is more environmentally friendly compared to the competitor, there is a high likelihood that this could lead to a higher payment will from customers. When asked if this subject was already being valued and discussed internally, the respondent answered that it was being discussed, but comparing it to other matters would be difficult.

> *"The subject of circular economy and traceability of the products in every joint repeatedly appear in research projects where government funding is provided. So clearly, this has to be a focus area."*

Upon further conversation on whether implementing such a culture could provide an advantage toward competitors in the same field, the answer was "*if it can be displayed to the customer, then yes.*" He believes that it could be attractive to the customer, but since floating solar panels are still a very young technology, other matters might be more important. However, it will become more important as the industry matures, and he believes customers will select different products if half of the components are considered dirty. In addition, he believes it affects both innovation and recruitment, as it is crucial to have an attractive organization and culture to attract the best people. With regards to innovation, he believes it could provide the innovation with guidance, helping facilitate green innovation.

When respondent F was presented with the question, she mentioned that the phrase *culture* is something she was not too fond of as an engineer. Despite her initial resistance, her relation to the concept was focused on project execution and how projects could be executed in a sustainable matter. In addition, she mentions smaller actions taken in the company, like using your company computer and telephone until it's actually exhausted and not replacing it regularly, even if it is nice to have something new.

Another aspect mentioned by respondent F was that 90% of environmental changes are in the beginning viewed by others as *over the top*, or *exaggerated*, but that it often takes a couple of years. Then everyone is in the same place. Apart from that one or two businesses are lagging behind, and now they are suddenly viewed as stone-age people for not recycling or adding that extra cost to ensure they are not unnecessarily polluting. Having already implemented green aspects in your business, it is thought that it is more easily transferable to product development. They could affect each other, starting a sort of snowball effect. This has not always been the case, with former *old-school* colleagues showing reluctance in implementing the mentioned changes, stating that *"this was attempted in the 80s and it didn't work then."* Respondent F states that these are different days and that organization 2 is good at promoting new ideas on sustainability in all projects.

Respondent D mentions that GOC starts with management and is about daring to select green innovation projects with lower margins compared to *black or brown projects* that could potentially yield up to 50% margin. When making these choices, the company is signaling to competitors that *"look at what we are choosing"*, we are selecting green innovation projects and not safe *black or brown projects* with higher margins. By doing this, the culture is turned around, and we will start looking at good solutions within

these lower-margin projects, like selecting green materials and not only the cheapest. Respondent D believes that a GOC will make you more aware of these aspects.

The respondent moves onto the subject of recruitment in the context of GOC and states that they have seen an expectation from new employees to work with green projects. These external expectations contribute to helping the organization change where they find green solutions. At the same time, people need to get paid, so they have to find the correct balance between selecting profitable projects and green solutions, which can be pretty brutal. However, he states that if an organization ignores this, it is only a matter of time before they are out of business.

That is why they are currently performing a change, he states. So that when the industry has completely turned around, they are already there with the right products and solutions for their customers. It would not be a problem for them to maximize their brown and black solutions right now, but as he states:

> "*It would be like pissing your pants, warm at first, then eventually really cold.*"

Respondent E from Organization 2 stated that he did not have any relation to the concept of GOC. However, in his attempt to define the concept, he mentions that he believes it is about how the company communicates internally, especially concerning ambitions toward the green transition. When asked if this was present in his organization, the answer was clear and concise: *Yes, definitely.*

The stated definition was then put to the test by asking the respondent if he believes this sort of culture could help or influence the organization's capability in accommodating the green transition. In his response, he mentions one of the slogans, or catchphrases of the organization; being on the front foot. He believes this is related to green innovation, making the employees more proactive and supporting them in green initiatives. An example mentioned is converting a gas carrier to a floating storage facility. During discussions of different solutions, the question of how to handle parts of the project emerged. The decision was made to recycle the components, even though that decision requires more work and effort. A decision the respondent claims would not have occurred ten years ago. When asked if adopting this sort of culture would provide the organization with a competitive advantage, the respondent answered:

> *"In the long run? Yes. But only when it actually results in delivering something different than the organization originally would."*

In a shorter time frame, the respondent was asked if he believed GOC could influence innovation or recruitment, which he stated he did. He believes newly educated people are very interested in working for green companies, and it is essential to appeal to the correct people that will contribute to develop a desired culture.

4.2.3 Green Organizational Identity

Regarding the term GOI, respondents were generally even more hesitant when describing the concept compared to GOC. In addition to being hesitant in describing the terms, they struggled to separate the terms culture and identity.

Respondent C, when describing his understanding of identity, mentions that it revolves around how the company views itself and how it frames itself externally and in what matter one communicates its business activities. When asked if organization 1 actively works towards implementing a green identity, respondent C responds that *"yes - indirectly we do, because it is related to branding."* He mentions that through channels like LinkedIn and networking events, they expose their identity and utilize this as one of the building blocks for branding. When asked what sort of identity organization 1 wants to promote, respondent C answered:

> *"That we are involved in a green industry, but that we are a technology supplier. It is based on research and development, with competent staff in the front seat and a leading role in the development of floating solar power."*

Respondent B states that he wants people to perceive their actions as a positive contribution to the environment and that it should be something people understand with their activity. But the identity they want to communicate is that organization 1 is a solid industrial actor with a focus on solidity, quality, and highly skilled employees, rather than that they are a *green* business. He mentions that this can be viewed through their logo, which shows a solid structure with strong lines and nothing reflecting a green aspect.

Some of the reasoning for this approach is explained by respondent B as well. Branding themselves as a *"bankable solution"* is explained by arguing that customers rank this as the most crucial aspect. The client is not necessarily really interested in whether the solution is environmentally friendly. For a customer in Africa with a processing plant that needs solar panels on 10-12 dams, the focus is to reduce water evaporation, power production, and how much time is needed to clean the panels. The green aspect is not necessarily the focus but a bonus they gain by choosing solar power.

When asked further on the reasoning behind branding themselves as solid technology providers, respondent B mentions that it comes down to the values he and his co-founder, respondent A, possesses. They believe there are better directions than focusing on green identity for reaching climate targets. It might appeal to some in the population, but then again, there are quite many that "*does not give a fuck about those matters*", he stated, and instead care about pumping up oil and making money. If one is focusing on making a green solution that appeals to everyone, then you are missing the target. This can be

viewed with the likes of Greta Thunberg, that have done more harm than good in his mind. They would rather focus on creating green technology that can be used widely and strike a large audience without necessarily having a green focus in marketing.

Upon further discussion, respondent B acknowledges that a green identity could contribute to winning certain projects that fit a green profile and could provide allocations or soft funding in connection with projects. In that sense, a green focus could be positive for the organization. This is relevant for "Innovasjon Norge", a state-run organization in Norway providing funding to innovation concepts. Certain EU calls that strongly focus on these aspects and hereby provide incentives to participate in these policies could also be relevant. When considering participation, the company has to consider if it is relevant to the focus of the company. Does it hinder progress on product development, or would it become too far-fetched from our main activities? He stated that we must make these considerations to decide on participating in these sorts of calls.

Respondent D initially responded that he had little relation to the concept of GOI. However, when explained that it relates to the company's external reputation and image, the respondent elaborated on the subject. He stated that they communicate through the products they work on by sharing them on LinkedIn and other forums. They want to share their new products and solutions through these platforms in order to provide the external world the impression that it is in their company, the green solutions are found.

The respondent continued by stating that he believes many customers approach them because the customer believe they need to be invested in the green transition. Many clients have experienced them through old technologies and know the competency that is present within these fields that the customer is still active in. These clients could be engaged in the transportation of LNG or others that know them through quality floating production storage and offloading (FPSO) designs. In addition, they have a long track record in drilling-semis, meaning drilling wells and solutions related to that. The fact that the organization is also engaged in solar panels or wind energy is irrelevant for these companies, so they could not care less. On the other hand, there are companies that know them solely through technology for renewables. The respondent stated that it would be interesting to ask a friend working with FPV technology in a competing firm what he believes they are engaged in.

> "*There are many that know us through green technology and believe we are engaged in renewable energy but do not know we are actually involved in hardcore oil exploration.*"

He believe it depends on what sort of environment is asked. When a company has existed for an extended period, it can be challenging to change the expectations because they have previously been delivering a set of products. In addition, some know the company well and are aware of the distribution of products and solutions from the company.

When respondent E was questioned about the concept of GOI, she asked if we had made our questions with a *"bullshit generator"* with green as input to see what came out on the other end. The statement was made with a smile, and the respondent eventually elaborated on her thoughts on the subject. She believes that a consequence of implementing a green identity could lead to an easier green transition for future projects. Once a green identity is established, the next project will be influenced by that, and eventually, it will become the norm to promote green initiatives instead of something promoting oil & gas or excessive use of materials.

Another point mentioned by the respondent is the use of images on their website. Previously they were designed with various colors, but now it is all green. She believes this is not coincidental and that the color green is there to display that the company is now more actively engaged in green businesses, not only oil & gas. She supports this initiative based on her experience talking to students, where it often becomes clear that oil & gas no longer seem interesting, as they want to work with something green.

4.3 Size of the Organizations

While researching to establish a base of theory, the difference in size of the organizations was often mentioned as an important factor in explaining decision-making. In addition to this, respondents also mentioned the responsibility prominent actors in the industry has to promote change toward the green transition. Our interview guide had no questions directly aimed to cover this subject. Still, it emerged as a subject mentioned in several of our interviews.

As mentioned earlier, the organizations we have talked to differ in size as one is considered a startup from 2019, and one is a well-established organization with roots back to the 1980s. Organization 1 is the startup, and organization 2 is the established one. There is a difference in how they view each other's advantages in the industry. The established organization says it is an advantage to be a startup as you can focus on developing one thing and have many alternatives for gaining funding. The startup claims it is advantageous to be established due to access to more resources. Respondent B from organization 1 has the following view on exploiting the green transition regarding organization size:

"The green transition can be used to gain a more favorable position in the market and develop a competitive advantage. For now, this is only possible for large organizations, and that might also be the case in the future."

Respondent D shared his view on being a startup contradicting an established organization. As an established organization with operations within multiple fields, they have to continue their daily work in addition to exploring other opportunities within renewable energy sources. In other words, the focus has to be on multiple arenas at the same time and be prioritized. It is mentioned that startups will also have access to innovation incentives that established organizations will not access. His chosen words were:

"We have been here all the time. We make changes, but we have to co-exist with the commercial part. A startup has one specific product and the freedom to bet everything on its chosen product. They also have programs to gain funding and investors that are willing to consider their business plan in another way than they would have done with ours since we have been here the whole time. We are not in the same position to gain funding as startups and will have to finance our activities using our profit."

The startup weighs its green focus against being recognized as a professional and product-focused technology supplier. Respondents concludes that being product-focused will generate a more significant stream of income and will therefore be their focus and prioritized above the green profile and the green transition. Respondent A states the following regarding prioritizing being product focused, rather than building a green profile:

"We have been reflecting around our organization with limited resources, which might be why building a profile where you are recognized as robust and product-focused is much more important than using resources to be green and marketing us as a green organization. Product focus generates a larger stream of income rather than building a profile of us as a green organization."

Respondent C stated that floating offshore renewable energy sources is a technology still in the early phase. He states that when the big actors first decide what technology to invest in fully and what they think is the future energy source, there will be significant changes to the industry. They will get a lot done in a short amount of time within innovation. Large organizations that have gained significant revenue and grown large in the oil & gas industry are now sensing the market and have small investments in renewable energy sources. These companies have large organizations and access to both human and economic capital.

Respondent F reiterates this by stating that larger companies like Shell, ConocoPhillips, Total, and Equinor, with vast amounts of money - should contribute more towards green innovation by providing financial support and testing new solutions. She stated that we are a country full of engineers, with loads of clever people, with vast experience from especially oil & gas, and particularly the extraction of energy is something we are really good at. She definitely believe that we have a responsibility to the rest of the world by contributing with what we can in order to create new solutions.

4.4 Key Findings

The results include statements from all respondents on several different topics. In order to provide a clearer understanding of what the respondents were attempting to communicate, this section summarizing key findings is included. Regarding the interpretation of the green transition, results display a uniform perception that the green transition is about changing energy sources from fossil to renewable. Organization 1 contributes by providing FPV solutions but states that the industry is still young and technology innovation will play a significant role. Organization 2 attempts to turn its organization towards renewable energy, despite the potential profit reduction. They will accommodate the green transition by providing green solutions for their customers.

Both organizations state that they can observe the current "winds of change", both in terms of what the customers ask for, and how they need to present themselves on university stands or the current focus area on marine-based conferences. Furthermore, the respondent's relationship to greenwashing is examined, with results indicating an ambiguous interpretation. The managers state that greenwashing can be used to promote a position in the market without actually contributing. However, the position can be utilized to prepare the organization for the actual change.

The results from "green phrases" overall display a lack of initial recognition, but upon conversation, respondents managed to reflect on their relation to concepts. Both organizations state that they are directly involved with green innovation in terms of the products they deliver and in actions performed to facilitate innovation. Organization 1 brings up their production method as particularly relevant, while organization 2 emphasizes their transition within the marine environment.

GOC is by organization 1 dismissed as something actively integrated by the organization as they focus on more traditional incentives to promote behavior. Organization 2 did neither display an active integration of the concept, but could to an extent, see how it could be beneficial to accommodate the green transition. GOI was further dismissed by organization 1, stating that their focus is not to be branded as a green organization. They

would instead be viewed as a bankable solution, an approach emerging from their experience with customers and from previous organizations the managers have been involved with. Organization 2 states that they wish to promote themselves as a provider of green solutions, despite being heavily involved in oil & gas. It indicates that their identity has some green aspects.

The final section revolves around how the organizations view the implication of organizational size. Organizations have different perceptions of whether being small is an advantage or disadvantage. Organization 1 states that larger organizations have the advantage of more resources. In contrast, organization 2 believes that smaller organizations have the benefit of only having to focus on developing one thing, in addition to a higher likelihood of receiving funding. As an established organization, they have to co-exist with the commercial part and fund their innovative projects using their profits. Furthermore, the aspect of prominent actors using their resources in contributing towards the green transition is presented.

CHAPTER

FIVE

DISCUSSION

This chapter is organized into two main sections in order to best answer the problem thesis stated. The first section concerns the manager's perception of the concepts and is is divided into three parts, one for each concept. The second section is about the strategic challenges and opportunities that occur when CSR, GOI, and GOC is a part of the organization's way of thinking and strategic planning. The section is divided into four topics covering our key findings; *innovating the future*, *competitive advantage*, *balancing profitability and sustainability*, and *size implications*. Throughout this chapter, the results from will be extracted and put into context with relevant theory.

5.1 Perceiving the Concepts

The first section of our discussion chapter seeks to answer how the respondents perceive the concepts when presented to them and, more importantly, why do they perceive them as they do? By investigating their relationship with the concepts and if they are actively being integrated into the organization, we would like to know whether CSR, GOC, and GOI are utilized in their organizations and what effect they experience.

The results display a similar mindset from all respondents regarding the green transition. It mainly revolves around the change of energy sources and decreasing the consumption. There is also a uniform perception that they contribute to the transition by providing renewable energy solutions. Interesting subjects further emerged on the role of innovation, how change is becoming more visible, and the role of big organizations, especially regarding greenwashing.

Regarding green phrases, the two organizations had different perceptions of green innovation, but both stated they are innovative. The concept of GOC and GOI were by both organizations met by no real sign of initial recognition or ability to separate the

terms. Upon further conversation, organization 1 displays a negative attitude and lack of recognition towards the concepts. For organization 2, the results display more mixed signals and higher awareness and willingness to adopt green culture and identity. The next sections will further investigate why they deviate in perceiving and accommodating these concepts.

5.1.1 CSR, Sustainability, or Whatever

The term sustainability is something everyone can attempt to define and will have an opinion about. The same goes for CSR, although it might seem like an unknown term for many. It is closely linked to sustainability and can also be seen as a synonym for sustainability (Strand, Freeman, & Hockerts, 2015). As described in section 2.1, CSR can take many forms and defining what is sustainable might be difficult, thus the whatever part of this section.

However, at its core, it is about organizations taking responsibility for their operations' social and environmental impacts and improving long-term economic, social, and environmental performance (Galpin, Whittington, & Bell, 2015). This can include reducing their carbon footprint, adopting sustainable business practices, and investing in renewable energy and other green technologies. In this section we will have a look at first-movers, the three dimensions of CSR and the irresponsible side of CSR; greenwashing.

Findings indicate that all respondents have knowledge and an opinion about what the green transition will entail for their organization. From our results, we found that respondents' interpretation of the green transition is concerned around *changing energy sources and decreasing energy consumption to reach the climate goals.* As seen in section 2.1, there is a growing pressure for organizations worldwide to adopt CSR, which can be closely linked to the green transition and may influence how organizations accommodate the green transition.

We believe that organizations that are embracing CSR are at the forefront of this movement and might gain first-mover advantages. Being the first mover in innovating and implementing new technology into their business models is however considered challenging by our respondents. It is found that early adopters of sustainability policies are likely to outperform competitors that adopt fewer of these policies (Eccles, Ioannou, & Serafeim, 2014).

Being sustainable is not something you become overnight. Many processes and procedures have been implemented in an organization over time, and changing these will be both time- and resource-consuming. Sustainability is not something you implement as a concrete item. It takes continuous work to maintain the sustainability of an organization

and the best way to remain sustainable is to implement green identity and culture. Our respondents acknowledge this through statements pointing in the direction of a world in constant change where there are setbacks due to unforeseen global events.

In section 2.3, GOC is presented as the values, beliefs, and behaviors of the organization's members regarding the natural environment. The culture can be considered green when employees perform activities beyond objectives that generate economic profit to minimize negative environmental impact (Roscoe et al., 2019). In our opinion, by continuously working with culture and aiming for having a GOC, organizations will increase their ability to stay sustainable in the long term and by that embracing CSR.

In order to gain first mover advantages, concrete actions of incorporating CSR can be divided into its three dimensions; environmental, social, and economic. Scandinavian organizations have been recorded to perform well in these areas, as seen in section 2.1.1. One of the approaches for organizations to embrace and incorporate CSR in the context of the green transition is by adopting sustainable supply chain practices as a part of the environmental dimension. This means working with suppliers prioritizing sustainable and ethical production methods, and ensuring that the entire supply chain is as environmentally friendly as possible. As presented in the results, both organizations will, as suppliers, accommodate the green transition by making it possible for their customers to choose green energy sources instead of natural resource-based sources like oil & gas. This will enable companies to reduce their carbon footprint by investing in renewable energy sources such as solar or wind power.

Another important aspect of CSR in the context of the green transition is community engagement and the social dimension. This involves working closely with related industries to identify and address environmental concerns and engaging in projects that promote sustainability practices. Organizations can also support and help initiate environmental education initiatives and cooperate with universities to promote sustainability and environmental awareness. Doing so might be interpreted as greenwashing, especially if the engagement is only responsible words without action. (Delmas & Burbano, 2011)

The economic dimension of CSR can involve investing in R&D of new green technologies. This can include everything from new materials and manufacturing processes to more efficient energy storage systems and renewable energy sources. By investing in these technologies, companies can not only reduce their own environmental impact, but also contribute to the broader goal of transitioning to a more sustainable and environmentally-friendly economy. Whereas organization 2 states that they only produce written papers with solutions, they contribute to developing green technology for others to produce. Organization 1 is developing a production line and wants to provide a holistic FPV solution. Thus both organizations contribute to the economic dimension.

In section 2.1.5, the concept of greenwashing is presented and described as a misleading market practice. The aspect of greenwashing can be connected to CSR. Mainly as the opposite of CSR. When organizations do responsible talk but no responsible walk, it is irresponsible. However, throughout our interviews, we found that what is interpreted as greenwashing by externals might not be intended as greenwashing but rather an exploration of a new and unknown market. This also points to the fact that being the first-mover is challenging as many big actors seem stuck in the exploration phase with small pilot projects and no commercialization. That leaves us with the question: "*What will motivate the actors to become the first-mover?*" The answer to this question is complex, but we believe that key factors will be cooperation and measures for minimizing the consequences and risk of failure.

Incentives from stakeholders and regulators that encourage investments towards the green transition and reduces the risk is something we believe will have an effect. As the maturity of the FPV technology is considered to be in the early phase, those few who invest largely can be considered early adopters. There is however a larger certainty that the same actors also will become the first movers, if the technology is able to perform. We believe that incentives from regulators and stakeholders that initiates investments to prove the technology's capabilities will contribute to the motivation of becoming the first-mover.

To summarize, CSR involves organizations taking responsibility for their social and environmental impacts and improving long-term performance toward transitioning into green business models. This can include reducing carbon footprint, adopting sustainable practices, and investing in green technologies. There is a recognition of the importance of the green transition and that embracing CSR can provide first-mover advantages, although it requires continuous effort where we believe that GOC will be an important aspect.

5.1.2 GOC - Different Perceptions

As stated in section 2.3, embracing GOC means that the organization performs activities that go beyond profit-seeking objectives in order to minimize the negative environmental impact and maximize the positive impact (Roscoe et al., 2019). Based on the results, it seems that the concept of a GOC is not equally perceived by both organizations nor actively integrated into their daily operations. Organization 1 focuses on product development, high responsibility, and recognition of success, with little emphasis on environmental responsibility. There seems to be an awareness that creating a *good culture* is important, but whether this culture needs to be green is not the most important factor. On the other hand, organization 2 has a more active approach to adopting GOC, focusing on selecting green projects despite the potential for reduced profits. The question arises of why the organizations' perceptions differs, and what implications it might have.

One respondent from organization 1 states that "*they do not really have any focus on the green.*" Instead, their focus revolves around developing their product, creating high responsibility for their actions, and saluting good performance. This is reiterated by another respondent, stating that the organization's focus is on milestones and creating a strong team culture through communication and recognition of success. This approach is not random but an active approach the organization's managers have chosen based on their previous experience of managing organizations.

There seems to be a belief that traditional incentives such as company stocks and competitive wages are of better use to motivate employees. Presenting information like CO2-savings or the impact on environmental concerns for situations like the drought in California are considered too distant for employees in Norway to relate to. The theory presented in 2.3 states that organizations are more likely to adopt a green culture strategy if managers display concern for environmental protection. The statements mentioned above suggest a lack of emphasis on environmental responsibility within the organization. The implications might lead to becoming a hindrance to green innovation, competitive advantage, and green performance.

Despite the mentioned focus area, the organizations' employees have some value for environmental protection. This can be seen through status meetings and emails, where the purpose is to build an understanding that the employees are part of the bigger picture by providing a solid technological solution to customers. One employee further emphasizes this by stating the need to consider the environmental impact of every aspect of the product's lifecycle, from purchasing materials to production and disposal. Also, environmental concerns are becoming increasingly important to customers, and a focus on sustainability and environmental responsibility could provide a competitive advantage.

We argue that the perception and importance of green culture vary within the organization. However, there is a uniform acknowledgment that other factors may be more important to customers since the FPV industry is still in its early stages of development. Organizations foremost seek to create profits, and in a highly competitive environment, other priorities than seeking to be green have been prioritized. This might be some of the core reasoning behind the organization's mindset. However, it can be beneficial to consider implementing GOC, in our opinion.

A lack of evaluation of the culture in an organization can lead the organization on to wrong traces and possibly be harmful in the future. No considerations of a green culture can create a culture that only seeks to maximize profit and industrialize efficiently, which will not be the way to meet our future needs. If there is to be a change in strategy in the future, this change will be challenging. At least if the famous quote by Peter Drucker, "*culture eats strategy for breakfast,*" is correct.

Organization 2 perceives the concept of GOC as a more valuable matter and more actively integrated into its operation. A manager in the organization states that GOC starts with management and is about daring to select green projects instead of *black* or *brown* projects that could potentially lead to higher margins. Wang (2019) defines such choices as green performance. By choosing green, the organization signals to competitors that they prioritize green innovation projects over safer, higher-margin projects. This points to having a GOC and will further stimulate green performance. (Wang, 2019)

Being a more established organization with more leeway when selecting projects is part of the reasoning for allowing such an approach. We believe that this approach could have a reinforcing effect by making the company more aware of green aspects and improving knowledge. On the other hand, it is crucial to find the correct balance between selecting profitable projects and green solutions. Organizations have to maintain profits while exploring new fields of future profitable environmentally friendly projects. If they do not, the company will eventually be out of business.

The organizations' employees initially displayed a lack of awareness and relation to the concept of GOC. However, upon conversation, it becomes clear that maybe without knowing it, GOC is already integrated. This can be seen through internal communication and ambitious actions toward the green transition. An example provided was converting a gas carrier to a floating storage facility, where the decision was made to recycle the components, even though it required more work and effort. This action can provide the organization with a competitive advantage in the long run and influence innovation and recruitment in the short term. Recruitment in the sense that newly educated people are interested in working for green companies, and it is essential to appeal to them. In chapter 2.1.2, Pham & Paillé's study from 2020 was presented. They found that people feel proud to be connected to environmentally friendly organizations, which will enhance their self-esteem. (Pham & Paillé, 2020)

Time and age are essential aspects for the green transition, and it is mentioned that it takes time for people to accept environmental changes. However, eventually, everyone will be on the same page except for a few businesses lagging behind. It is further noted that old-school colleagues may show reluctance to implement changes. One respondent believes that organization 2 is good at promoting new ideas on sustainability in all projects, thus convincing those with doubt. Being at the forefront of implementing green aspects in a business might be transferable to product development and thus create a snowball effect toward green innovation and green performance. This is an essential part of the transition that organization 2 seems to grasp.

Interestingly, both organizations have employees who value environmental protection and sustainability, suggesting that there is potential for further integration of GOC. The

different perceptions of GOC may be related to the company's stage of development, as organization 1 is a startup, while organization 2 is an established organization. This might allow for more freedom to explore new strategies without being hindered by an urgent need for progress, development and regulations. Organizational culture is often shaped by leadership and management practices, which vary between the two organizations.

The perception and importance of GOC vary within the organizations, with one prioritizing profit over environmental responsibility while the other actively integrates GOC into their operation. Organization 1's focus on profitability is understandable, competitive advantage in the long run. However, the employees increasing awareness of the importance of sustainability and environmental responsibility might potentially influence the organization's attitudes toward GOC.

The transition towards a more sustainable future will take time and requires that everyone is on the same page. Promoting new ideas on sustainability in all projects is crucial to convince those with doubts, including old-school colleagues. While implementing GOC may take time and might be costly, organizations that prioritize it can create a competitive and strategic advantage in the long run by improving innovation and recruitment. Leaders of organizations play a key role in welcoming and allowing the transition, and we believe that the leaders of organization 2 are on the right path.

5.1.3 GOI - Does it Matter?

The concept of GOI, presented in section 2.2, highlights the importance of shared values and beliefs among employees regarding environmental management and protection, which will further affect the organization's environmental values. By collectively constructing an interpretive scheme about sustainability, employees can develop a sense of pride in the organization's environmental goals and a strong identification with its actions (Chen, 2011). This can create a positive work culture, enhance employee motivation and engagement, and positively affect recruitment. It is further beneficial for employees to be able clean their consciences by going to work every day, knowing they make an effort to reduce their environmental impact. (Pham & Paillé, 2020)

Despite the initial hesitance when we presented the term GOI, our results show that the green transition is a motivational factor that will influence the organizational identity as there is a uniform understanding that the green transition is real. The respondents' statements suggest that their respective organizations strongly emphasize environmental values, specifically by being involved in a green industry and believing that the technology they are developing will be a valuable contributor towards the green transition. This implies a commitment to reducing carbon emissions and promoting renewable energy, which are vital environmental values associated with GOI.

The organizations are technology suppliers and developers, meaning they are likely engaged with stakeholders in the energy industry, including customers and other suppliers. By promoting their involvement in a green industry and developing sustainable technology, the organization will likely engage with stakeholders to promote environmental sustainability and encourage others to adopt similar practices. GOI emphasizes the need for organizations to communicate their environmental management and protection efforts to stakeholders. By showcasing their commitment to sustainability through policies, practices, products, and communication, organizations can enhance their reputation and attract customers increasingly concerned about environmental issues, thus becoming a key driver toward a green transition. On the other hand, our results show that the focus amongst industrial consumers might be different.

One statement in our result indicated that some actors *"does not give a fuck about those matters,"* which points to the fact that the GOI of the organizations they interact with is not something they evaluate. The green identity of the technology provider might not be as important as the quality and ability to deliver technology. The new technology and way of exploiting resources to generate energy might be more important than the green image. It is more of a bonus that the technology is green, or greener than its substitutes. However, as stated in section 2.2.1, adopting GOI might positively affect green innovation performance. Thus, the question of whether not caring about the organization's identity might lead to poor green innovation performance, becomes important.

GOI provides a framework for understanding how organizations perceive and implement actions toward their sustainability efforts, the shared values and beliefs that underpin these efforts, and the need for communication with stakeholders (Chang & Chen, 2013; Chen, 2011). However, we believe that GOI requires a concrete action plan and implementation of sustainable practices to legitimize the green identity, which should be implemented in the organization's strategic work.

Even though GOI is interpreted as an undefined concept by multiple of our respondents, the managers of the two organizations we interviewed seem to have an opinion about identity and how identity is communicated externally. The other employees, such as engineers, seem to be aware that an identity exists, but the term GOI is not so tangible to them. However, the statements of our respondents suggest a willingness to be transparent about their environmental impact and to be held accountable for their actions which indicates that a green identity is present.

By highlighting their involvement in a green industry and commitment to developing sustainable technology, the organizations are signalling that they are aware of their environmental impact and are actively working to reduce it. The fact that some other organizations that they interact with does not seem to care about the environmental

friendly aspects of their product, is not something they can affect directly. It can however be influencing other organizations indirectly. By being a role-model and convince actors in the market that green identity will yield a positive outcome, others might see the positive effect of implementing GOI, and thus make an effort into developing it.

5.2 Challenges and Opportunities

This section seeks to answer what challenges and opportunities emerge that companies in the FPV industry in Norway face when trying to incorporate CSR, GOC, and GOI into their organizational strategy. Whether active in their perception and integration of concepts or not, different challenges and opportunities emerge that might influence how the organization deals with the concepts.

This section will examine some of the most important challenges and opportunities that have become visible through results. These include a section named innovating the future, examining how The Innovator's Dilemma is relevant to the problem thesis. Further, we will examine how competitive advantage can be achieved by adopting the concepts and how balancing profitability and sustainability is a major challenge. Finally, the size of the organizations is evaluated in relation to different aspects.

Results display many challenges and opportunities mentioned by all respondents from both organizations. On the subject of the green transition, both organizations recognize the urgency for preparing for the coming change in the market and positioning themselves favorably. This means making the correct investments, innovations and recruiting the right personnel. However, how they plan to accommodate and implement measures for the green transition differs. One key challenge is balancing sustainability and profitability. Organizations are well aware of the current issues regarding sustainability, but at the same time, has to keep up profitability to survive as an organization and to be able to pay wages. Both organizations state competitive advantage towards other organizations as a potential outcome of adaptation.

5.2.1 Innovating the Future

In section 2.1.4 the Innovator's Dilemma is presented, which is about maintaining a position and mitigating the risk of being disrupted. When on the topic of technology and innovations, it is easy to think that the best solution will be the "winner". That might also be the case in many situations, and technology is an important influence in gaining success. But other factors such as identity and culture might be equally important when gaining market shares and success.

Working actively with identity and culture might be contributing to gaining trust and loyalty and enhance their reputation amongst customers and investors, leading to a competitive advantage and making it harder for disruptive startups to enter the market (IRB Media, 2016). This can be beneficial for organization 2 as they are already established in a market, while organization 1 is a startup that would like to be disruptive and gain market shares and trust in the FPV industry. While we did our research, we found that many small startups are trying to establish themselves within FPV in Norway. The technology is mostly the same, but the business models separate them from each other.

Organization 2 accommodates the green transition by innovating its existing technology and, in that way, keeps its track record amongst stakeholders. Our results showed that organization 2 is still not confident enough to do a full transition in its business plan. They are still pursuing projects related to oil & gas, which has been their core business since their establishment in the 1980s. This matter is justified by a manager in organization 2 stating that the larger organizations, as customers in this case, are conservative. They know the organization for their core technology, and trying to offer customers a different solution than they are known for might be difficult.

Respondent B from organization 1 stated that they believe the green transition depends on real innovation and not just an adjustment of existing technology. Hence, their way of accommodating the green transition in terms of innovation differs. This might be why they differ in how they perceive and plan to accommodate the green transition. Organization 1 will have to be disruptive to gain market shares which further underlines their focus on becoming an actor known for their world-class technology within FPV and does not put too much effort into implementing the concepts of CSR, GOI, and GOC at this point. As a startup, that is understandable due to limited resources. Another aspect is that without the technology they develop, their organization would not be able to exist. The principle "*first things first*" is a good description of their way of conducting business when developing a startup.

This points to the fact that CSR, GOI, and GOC could be difficult to justify until the benefits become clearer, making the investments financially withheld. By being disruptive and gaining market shares early, there is a possibility to force bigger actors to make investments within FPV or other renewable energy sources to be a part of the transition from fossil energy sources to renewable energy sources. This is where startups such as organization 1 will be able to contribute in terms of forcing prominent organizations to commercialize green innovations faster. We believe that disruptive startups can create a situation where large organizations have to catch the train before it leaves the station.

For the actors in the energy industry to accommodate the green transition effectively, there is a need for not only innovative technology, but also innovative practices. Section 2.4 underlines this by stating that adopting GOI and GOC, and creating a green innovation strategy can contribute to green innovation and affect green innovation performance. Our results further emphasize this. We will still depend on oil & gas for many years to come, but consumption can be reduced. A transition to green energy sources will take time and effort by all actors. This opinion is also shared with the respondents in our interviews. Responsible words should also be transferred to responsible walks where all actors in the industry are to contribute. Our opinion is that the implementation of concepts like CSR, GOI, and GOC will be a measure to make sure that the green transition will go in the right direction.

5.2.2 Competitive Advantage

Competitive advantage can be viewed as a valuable opportunity emerging from embracing CSR, GOC, and GOI. As stated in section 2.3.2, achieving competitive advantages means that the organization creates a positive value that equals or exceeds that of its competitors. This can be accomplished by several factors, such as brand reputation, innovation, and recruitment. GOI and GOC requires concrete action and implementation of sustainable practices such as strategic measures as stated in section 2.1.3. GOI can provide a framework for organizations to assess their sustainability efforts, but it is important to back this up with action which GOC can support. Being transparent and prepared to be held accountable for their statements regarding green performance and sustainability will increase environmental organizational legitimacy, as described in section 2.2.2. This chapter will discuss competitive advantages that emerged through results.

GOI is a valuable concept for organizations prioritizing environmental management and protection and accommodating the green shift. It provides a framework for understanding how organizations perceive environmental management and protection efforts. Identifying the central, enduring, and distinctive attributes of an organization's commitment to sustainability makes it possible to assess its green identity (Chen, 2011; Whetten, 2006). This can be useful in benchmarking and comparing different organizations based on their environmental practices. Being able to prove a green organizational identity might be able to provide the organization with a competitive advantage.

The respondents' organizations are furthermore actively engaged in R&D. That suggests a commitment to continuous innovation and improvement of their environmental practices. As stated in section 2.2.3, GOI might be an important factor in mediating the relationship between strategy and green innovation. Developing new technologies for renewable energy, such as FPV, can be used as an example of an environmentally sustainable prac-

tice. When this is combined with a sustainable supply chain, the effect of implementation will be able to affect GOI in a positive matter and thus provide competitive advantages.

Research presented in section 2.3.3 states that GOC positively impacts innovation. When questioned on the subject, respondents also indicated that adopting a green culture might benefit innovation. A green culture can help drive innovation by encouraging companies to develop new technologies and processes that are environmentally sustainable. By prioritizing sustainability, it can catalyze innovation, leading to new products and services that provide a competitive advantage. This needs to be supported by managers of an organization, as innovation is essential for organizations to maintain their edge in the current highly competitive business environment.

Brand reputation is an essential aspect in the current highly competitive business environment. By prioritizing sustainability, organizations might improve their reputation by demonstrating their engagement in environmental responsibility. As stated in section 2.4.1, consumers are becoming increasingly environmentally conscious and are more likely to choose products and services from organizations that display environmental concern and responsibility. A strong brand reputation can result in higher customer loyalty and increased sales, providing companies with a competitive advantage. This is backed up by one of the managers, stating that a more environmentally friendly product could lead to a higher willingness to pay. At the same time, the respondent states that it needs to be made visible to the customer in order to provide value.

Respondents from both organizations mention the effect on recruitment, stating that a green culture could enhance an organization's reputation, attracting highly qualified candidates interested in working with green projects. By adopting GOC, the organization can attract environmentally conscious job seekers. This is caused by the increased awareness about climate change and the need for sustainability, resulting in many individuals prioritizing working for organizations that align with their values. These individuals are likely to be attracted to an organization that displays a strong commitment to environmental sustainability, but as stated in section 2.1.2, it is essential that its efforts are communicated to potential employers.

We further believe that it could potentially attract a diverse pool of candidates, as the increased focus on sustainability worldwide will lead to individuals with different backgrounds and cultures applying to the company. This could, in turn, lead to increased diversification in the workplace, something proven to be highly beneficial to both creativity and innovation and thus give competitive advantages. Furthermore, increased employee engagement and job satisfaction are other factors influenced by GOC. As stated in section 2.1.2, employees will feel proud to be connected to such an organization, further

enhancing their self-esteem and recognition of the company. This could, in turn, reduce costs connected to recruitment and training.

This section has highlighted the importance of embracing CSR, GOC, and GOI in order to achieve competitive advantage. Achieving a competitive advantage means creating a value that exceeds that of competing organization, and is possible to acquire through factors like reputation, innovation, and recruitment. By prioritizing sustainability it is possible for the organization to improve its brand reputation, thus attracting consumers concerned with the environment, resulting in higher customers loyalty and increased sales. Altogether, integrating CSR, GOI, and GOC might provide valuable opportunities for organizations seeking competitive advantages, which we assume all organizations are.

5.2.3 Balancing Profitability and Sustainability

One of the most vital aspects uncovered through interviews is balancing profitability and sustainability within the organization. Respondents from both organizations mentioned this as something that has to be considered, but to different degrees. Organization 1 clearly states that profitability is of the highest concern right now, while organization 2 is in a transition period where more and more green projects are being pursued. It is stated that this affects profitability negatively in the short term, but is considered to yield a better profit in the longer term. In section 2.3.1, the challenge is explained and shows that implementing GOC can positively predict green performance, which refers to the interaction between an organization and the environment. Throughout this section we will explore how the two organizations deal with this challenge.

Organizations are designed to make profit, and implementing environmentally sustainable practices such as GOC or GOI will often come at a cost. For example, investing in projects considered brown or black can increase profitability in the short term but potentially shape the organization to such an extent that they cannot take on green projects when they are more profitable. Furthermore, implementing sustainable practices in project development may result in increased costs for raw materials or transportation, which can also impact profitability.

The challenge of balancing profitability and sustainability is, however, not an impossible task to handle. One key method for implementation is to look at sustainability as an investment instead of a cost. As stated in chapter 2.4.1, we also believe that investing in sustainable practices can be beneficial to the organization by can achieve long-term benefits such as cost savings, increased efficiency, and improved brand image. Organization 2 seems to be more aware of this compared to organization 1, but it remains to be seen what the long-term effect of the different approaches might become.

Another method of coping with the challenge is to integrate sustainability into the core values of the organization. Creating a culture of sustainability where all employees understand and value the importance of sustainable practices is essential and can be achieved through education and support from managers. If integrated successfully, GOC might become a driving force for innovation and efficiency instead of an obstacle to profitability.

As mentioned, leaders of an organization play a vital role in implementing both GOC and GOI in a matter that balances profitability and sustainability. Leaders must create a vision for sustainability and communicate this vision to all employees. Additionally, leaders must be willing to take risks and make decisions to achieve sustainability goals. This might involve selecting materials with less environmental impact, altering the business model, and making difficult decisions prioritizing sustainability over short-term profitability. By leading by example and demonstrating a commitment to sustainability, organizational leaders can inspire employees to embrace sustainable practices and contribute to a culture of sustainability.

5.2.4 Size Implications

The two organizations we interviewed consider it crucial to cooperate with others, preferably larger ones, towards the green transition. This is beneficial from an economic point of view, and an R&D point of view. However, a common theme amongst respondents from both organizations revolves around how the different sizes of organizations has implications on their ability to implement CSR, GOC, and GOI. In addition, the role of prominent organizations in the industry when it comes to "paving" the way or taking responsibility for innovating new green solutions is mentioned by multiple respondents as important. We believe that both viewpoints are crucial in determining the success of both implementations but also creating a sustainable future.

Organization 1 or similar startups might often be more flexible and able to rapidly shift their focus toward sustainability initiatives. This is a consequence of smaller organizations having flat hierarchies, with less bureaucracy and more flexible organizational structures that might allow them to quickly adapt to changing market conditions and stakeholder expectations. On the other hand, larger organizations, like the well-established organization we interviewed, have more resources and access to funding. These can be invested in R&D and contribute towards reducing costs and increasing efficiency. This allows the organization to make larger changes toward sustainability that actually has an impact.

However, there are some disadvantages to being a large organization. Large organizations often have multiple departments, each with its priorities, making it difficult to focus on sustainability initiatives. This can be seen in organization 2, which has a department focused on FPV, at the same time handling oil & gas projects in another department.

Combined with the notion that large organizations often face pressure from shareholders to prioritize short-term profits over long-term sustainability targets, it is understandable that it might become a challenge. Respondent D from the established organization highlights the challenges of balancing sustainability initiatives with their existing operations.

Another aspect regarding organizational size is that large organizations have the resources and influence to drive change at a larger scale. One method this can be performed is by investing in sustainable technologies or implementing sustainable business practices. Large organizations can create a market for new technologies and practices, which will be easy for smaller organizations to tap into. In that sense, "paving the way" for smaller organizations to follow. Several respondents mentioned this as an area that needs more focus, and that larger organizations should contribute more.

Some respondents pointed towards the larger petroleum companies as important contributors to financing and developing preferred technology. These companies have earned a lot of money from natural resources like oil & gas, and should use some of their profit to contribute towards the green transition. There is a case where oil companies produce energy from fossil sources much cheaper than what is possible with renewable energy sources. In that way, it undermines other organizations' investments in renewable technology due to pricing. This will further imply that they are undermining the green transition and the concept of CSR due to their own earnings and revenue streams. The prominent organizations have a large influence on the energy market, especially compared to startups and smaller organizations. The undermining is not likely to happen which is supported by respondents telling us that the offshore industry is trying to change hats from oil & gas to renewable energy sources.

Smaller organizations can also have a critical role in promoting sustainability. Smaller organizations can be more agile and innovative in their transition to sustainability and can, in addition, often be more closely connected to local communities and stakeholders. By implementing sustainable practices and demonstrating their viability, smaller organizations can inspire larger organizations to follow. Smaller organizations are also more eligible to receive innovation funds that can be used toward green innovation projects.

The relationship between organization size and sustainability implementation is complex and has several sides. Larger organizations have more economic capital and larger human resources, thus providing the ability to make a greater impact on a larger scale. In comparison, smaller organizations are often less restricted by bureaucracy and can be more innovative. If organizations can work together and learn from each other, both large and small organizations can help drive positive change toward a more sustainable future. We believe organizations of all sizes must prioritize sustainability and have initiatives toward creating a more sustainable future for everyone.

CHAPTER

SIX

CONCLUSION & FURTHER RESEARCH

Until this point we have provided an introduction to the thesis in Chapter 1, where our problem thesis is stated. The theoretical framework is presented in Chapter 2, where the main topics are CSR, GOI and GOC. In Chapter 3 our methodology is presented along with a justification of our choices. In Chapter 4 we presented our empirical findings which were further discussed in Chapter 5.

This chapter is structured by first presenting a summary of our research, followed by a repetition of the problem thesis. In the paragraph below the problem thesis our conclusion is presented, followed by an further elaboration of conclusions and implications they have. Finally, suggestions for further research is presented.

6.1 Conclusion

This study have been researching the concepts CSR, GOI, and GOC by attempting to discover how managers perceive them, how they affect, and could potentially affect strategic challenges and opportunities. A qualitative research has been conducted, interviewing six employees from two Norwegian organizations. The common denominator between the employees in these organizations is that they are working within the field of FPV. The research have been conducted with the following problem thesis in mind:

> *What are the perceptions of companies in the Floating Photovoltaic industry in Norway regarding the concepts of Corporate Social Responsibility, Green Organizational Identity, and Green Organizational Culture, and what strategic challenges and opportunities is recognized when faced with the concepts?*

The two organizations perceive the concepts different. Organization 1 display reluctance towards the adaptation of the concepts, while organization 2 display more willingness. There is a perception that other approaches could yield better outcomes due to *size implications*, which brings us to the recognition that *balancing profitability and sustainability* is challenging. Another challenge is that the green transition has to be acknowledged by all actors in the industry. The opportunities from implementing the concepts are gaining *competitive advantages* by increasing legitimacy, brand reputation, innovation and recruitment. The process of *innovating the future* is dependent on actors being disruptive, which can accelerate the green transition and attract prominent actors to participate.

The organizations perceptions differ due to the level of establishment. Organization 1 prioritize product development and being recognized as a trustworthy technology provider as they are a startup. Organization 2 is established and would like to "change hats" and prepare toward a green transition. All managers relate to sustainability and view their respective organization as contributors toward the green transition by providing renewable energy solutions. Managers recognize that it will have an effect in the long run. However, since the possible profitability are uncertain, other strategic aspects, like developing world-class and highly competitive technology is seen as a better way to accommodate the green transition. We recommend paying attention to identity and cultural aspects in the long run due to the positive effects.

Developing innovative technology is one method of accommodating the green transition. Another way is to incorporate sustainable values into the organization. Being able to prove sustainability, their green identity, and green culture will mitigate the risk of being disrupted. This will provide organizations a stronger position and increase legitimacy amongst stakeholders. Our opinion is that *innovating the future* is not only about technological innovations but also about performing innovations toward organizational identity and culture, putting an emphasis on being green.

Our opinion is that GOI and GOC will be able to provide *competitive advantages*. Both concepts serve to stimulate motivation, recruitment, and brand reputation. This will further lead to a stronger position in the market and provide the ability to gain market shares. Being dismissive towards the concepts can lead to missing out on these opportunities and create an unfavorable culture or identity.

Implementing these practices will have to be balanced with other operations, hence *balancing profitability and sustainability*. This is because the implementation is resource-demanding and organizations will not see the opportunities from implementing these concepts right away. Putting to much effort into sustainability will affect other profitable operations, but the right amount of effort could provide a beneficial position.

Considering the *size implications*, large and small organizations must contribute to the green transition. However, more prominent industry actors have a greater responsibility and capacity to drive change due to their influence and resources. Collaboration between different-sized organizations can stimulate green innovation and foster a collective effort to address the challenges of climate change and achieve sustainable development.

This thesis provides valuable insight into how two organizations operating in one of the most influential industries toward reaching UN's SDGs view their contribution and how they face new approaches. The organizations contributes to SDG 7 by promoting affordable and clean energy sources, reducing reliance on fossil fuels, and mitigating climate change. Implementing sustainable practices and adapting operations aligns with SDG 9, fostering innovation and developing resilient infrastructure that supports sustainable development. Moreover, GOI and GOC are relevant to SDG 13, as they emphasize the need for organizations to address climate change and reduce their carbon footprint. By incorporating these concepts into their strategies, organizations can contribute to global efforts to combat climate change and meet the goals set forth by the Paris Agreement.

However, organizations must go beyond conceptual understanding to effectively contribute to these SDGs. Implementing GOI and GOC may require resource allocation and long-term commitment, but organizations should recognize the potential competitive advantage they can gain. Embracing these concepts can enhance brand reputation, stimulate stakeholder motivation, and attract top talent. This, in turn, can lead to a stronger market position, increased market share, and improved profitability over time.

Existing research on the subject consists of quantitative research displaying how organizations relate to the concepts. This thesis contribute to existing research by serving as a supplementary, but more in depth research paper with qualitative results. The final conclusion provides insight into how two organizations in the FPV industry view and contribute towards the green transition. Furthermore, their experience of dealing with CSR, GOC, and GOI can be useful empirical data for similar organizations or organizations working in the same industry.

6.2 Further Research

As the articles we have based our theory on is mainly using Asian industrial actors as a source of information and data, these studies lack comparison from other European and American industrial actors. Our research serves as a European/Scandinavian/Norwegian supplement to the articles and theory developed in Asia, where especially China and Taiwan have a lot of quantitative research done in this field.

Further research can be performed concerning several aspects of our study. It would be interesting to investigate how other industries face the concepts and if any similarities or differences are found. In addition, further in-depth research papers on some of the challenges and opportunities uncovered in this paper would be valuable. Especially the relationship between concepts and financial performance in both the short- and long-term would benefit organizations. Another aspect is the role of stakeholders and how the need for communication with the stakeholders is relevant to driving change.

Finally, we suggest further research on the impact of regulatory frameworks and sustainability practices. This aspect was mentioned by respondents during the interview process but left out in order to have a clear scope of the thesis. Is it possible for regulatory frameworks to incentivize and facilitate the implementation of sustainable practices, but at the same time, it might be challenging to meet these new frameworks. A study displaying the effect of these frameworks and the challenges experienced would be valuable.

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A - INTERVIEW GUIDE

1. **Introduction**

   - Present ourselves.
   - Describe project and give a brief of the status.
   - Execution: How the interview will be conducted, recordings and confidentiality.
   - Send confirmation when recordings are deleted.
   - About the respondent: education, year of working in the company, position.
   - Information about the company and its role in the industry.

2. **The green transition**

   - The green transition is a broad term that is interpreted differently. What is your interpretation of the green transition and do you feel that the term has a meaning or is empty rethorics? Justify why/why not.
   - The green transition is a global phenomenon and something many strive to meet, how do you tackle this challenge?
   - What does it mean to be a green organization?
   - What does it mean to you to be green in a globalized market?

3. **Corporate Social Responsibility**

   - What is your interpretation of Corporate Social Responsibility?
   - Which measures have been implemented in the organization to accommodate the green transition?
   - Which are the most important factors a green organization should emphasize?
   - How do your stakeholders identify a green organization?
   - What relationship do you have to the term "greenwashing"?

4. **Green innovation**

   - How would you define green innovation?

- Can you give some examples of green innovation in the organisation?

5. **Green Organizational Culture**

   - What are your thoughts when presented with the term green organizational culture?
   - Do you have any thoughts on how a green organizational culture might affect your ability to handle the green shift?
   - Do you see any other effects of the implementation of a green culture?
   - Do you think a green culture can affect their relationship with competing companies?
   - Effect on innovation?

6. **Green Organizational Identity**

   - What are your thoughts when presented with the term green organizational identity?
   - Does the organization work actively to create a green identity?

7. **Green innovation strategy**

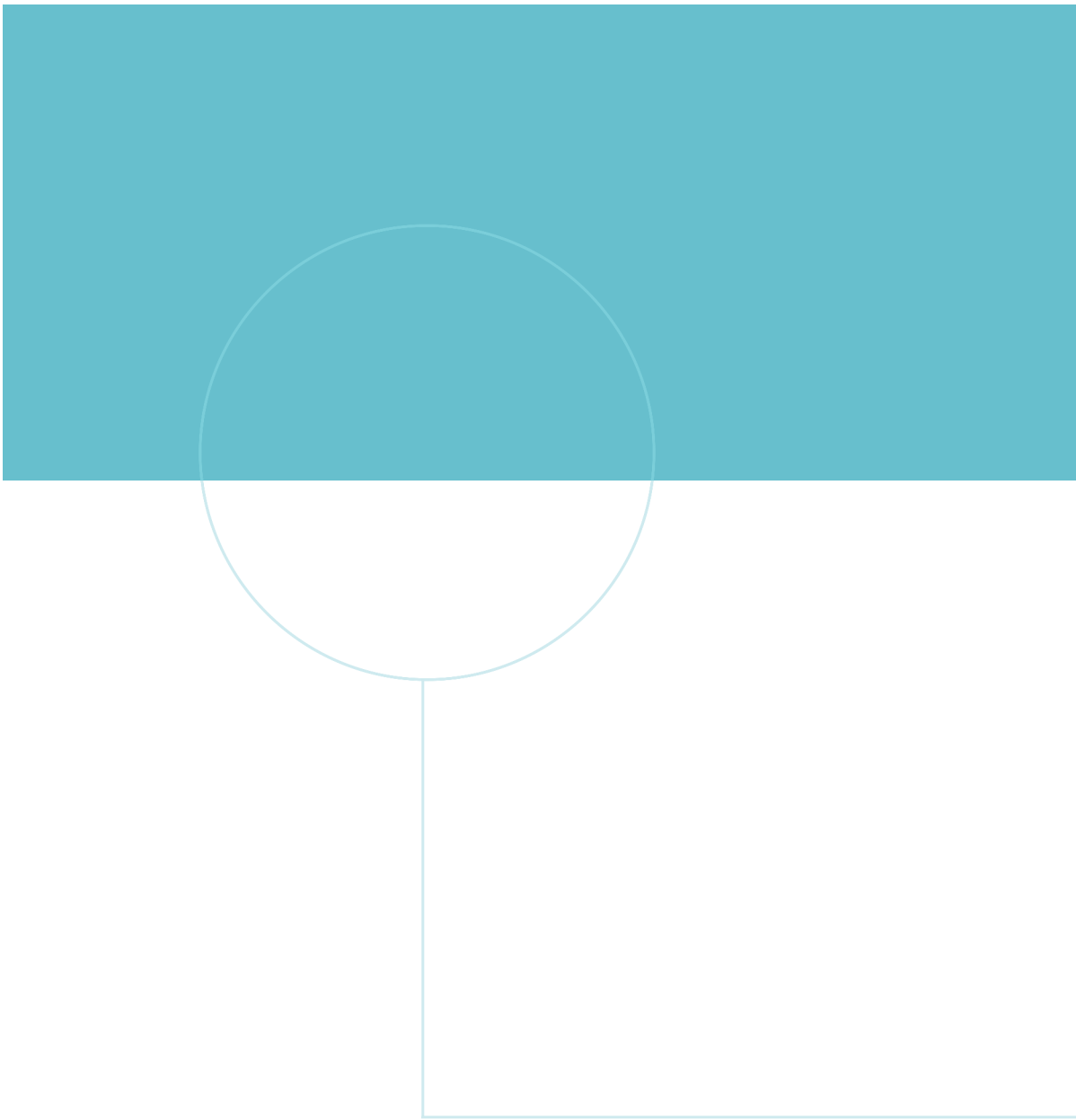
   - What does the term green innovation strategy mean to you?
   - Do your organization have a long-term goal to reduce your environmental impact?
   - How do you feel about the implementation of the green innovation strategy in the organization?

8. **A view of the future**

   - What does the organization see as the most important trends and developments in green innovation in the future?
   - Will you emphasize meeting these trends?
   - Which factors possibly make you want to accommodate the trends?
   - What challenges can you imagine facing in the near future in relation to the green?

9. **Summary**

   - Short summary of the interview and comments from the company.
   - Thanks for participating.



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