BEYOND THE OFFSET

A QUALITATIVE STUDY ON THE IMPLICATIONS OF THE USAGE OF CARBON OFFSETTING ON VOLUNTARY CLIMATE ACTION IN CORPORATE SUSTAINABILITY

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Master Thesis
Stockholm School of Economics
2024

Abstract
The world economy has relied on fossil fuels since the dawn of the industrial revolution. Global consumption has since then increased steadily, intensifying the pace with which human activity prematurely releases carbon dioxide into the atmosphere, putting the carbon cycle out of balance resulting in excessive planetary warming. Consequently, addressing this imbalance caused by human action has been placed at the top of the agenda for many governments, corporations and other institutions – yet the emissions curve has not been bent. In addressing climate change, actors can use various methods and tools – some more straightforward and with more tangible results than others. One such method that has sparked controversy is carbon offsetting, where one purchases units of carbon that has been removed from the atmosphere. The criticisms for this method are many, despite that it is still widely used. Yet, there seems to be a lack of understanding with regards to the strategic implications that the use of carbon offsetting has. Without consensus and a unified approach on addressing climate change, international cooperation will be challenging. To answer whether the use of voluntary carbon offsets on a meso-level shape companies' mitigation efforts, a qualitative, cross-sectional study was conducted with 23 representatives from 20 companies either providing, using or abstaining carbon offsets. The main findings show that the use of voluntary carbon offsetting on all residual emissions in organisations did not negatively shape their mitigation efforts. However, under different circumstances, where usage is aimed to offset specific business areas' emissions, there was an observable pattern of down-prioritisation in mitigation efforts connected to those business areas. Furthermore, a significant emphasis on external pressure and scrutiny experienced by companies was identified, showing that public voices had an effect on shaping the future environmental sustainability pathways for organisations.

Keywords
Climate Change, Carbon Offset, Carbon Offsetting, Emissions Mitigation, Climate Strategy, Environmental Strategy, Moral Hazard

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We would like to extend our sincere gratitude to our supervisor, Örjan Sjöberg, Professor at the Department of Marketing and Strategy, for the advice and guidance during the semester. We also want to thank Svetlana Gross, Ph.D. student at the Mistra Center for Sustainable Markets and the Department of Management and Organisation, for valuable advice and discussions.

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1. Introduction

Since the dawn of the industrial revolution, our economies have run and relied on fossil fuels and as living conditions have improved we have increased our consumption levels, further fuelling this fossil economy. Whether aware or unaware, we have, by consistently burning fossil fuels, put our planet's system out of balance resulting in rising temperatures, presenting us with dangers and challenges to address these rising temperatures.

1.1 Kyoto Protocol Era and the Paris Agreement Era

By the 1990s international negotiations attempted to find common ground for a collaborative approach to strengthen the response to addressing climate change. The result of these negotiations was the Kyoto Protocol.[1] In what has become known as the Kyoto Era, the world was introduced to centrally governed and decentralised market mechanisms based on the one hand on compliance and on the other hand on voluntary action.[2] These market mechanisms were aimed at promoting flexibility and cost-effectiveness in efforts to comply with the targets set by the Kyoto Protocol.[3] Frameworks governing the generation of Kyoto Units, or credits (corresponding to one tonne of permissible greenhouse gas (GHG) emissions),[4] Clean Development Mechanism (CDM) and Joint Implementation (JI), were rolled out alongside the International Emissions Trading (IET) mechanism which enabled the trading of all types of Kyoto units.[5]

Upon the evident failure of the Kyoto protocol to produce the intended outcomes,[6] it was clear that adaptations needed to be made. Following this, a new era began in 2016 when the Paris Agreement entered into force.[7] The Paris Agreement departed from the Kyoto Protocol in two primary ways. Firstly, a long-term focus on emissions reductions – namely net zero by 2050. Secondly, a requirement of all nations to implement mitigation targets – as opposed to the Kyoto Protocol which did not.[8] The Paris Agreement had a significant impact on the dynamics of carbon markets by blurring the lines between the mandated and the voluntary and, through countries' National Determined Contributions (NDCs), also blurred the line between government and corporate efforts.[9] In addition, the Paris Agreement introduced a dynamic component commonly referred to as the "ambition cycle", implying that countries had to revise their NDCs on a five-year basis and set increasingly ambitious goals.[10] These mechanisms have contributed to an increase in non-state mitigation action.[11]

[1] United Nations Climate Change (UNFCC), n.d.
[2] Ahonen et al., 2022
[3] Ibid.
[4] European Environment Agency, 2010
[5] Ahonen et al., 2022
[6] Napoli, 2012
[7] United Nations Climate Change (UNFCC), n.d.
[8] Ahonen et al., 2022
[9] Ibid.
[10] Ibid.
[11] Ibid.

Hence, the Kyoto Protocol and Paris Agreement paved the way for the development of an increasing amount of mitigation possibilities and markets in which emission offsets can be traded between entities to collaborate towards the mid-century goal.

1.2 Climate Mitigation Efforts and Carbon Offsetting

The new market mechanisms and the collective vision that the Paris Agreement introduced inspired more companies to reach the mid-century goal of net-zero by reducing their own emissions as much as possible.[12] Mitigation has been the preferred method of choice to reduce one's climatic footprint. This has largely been due to the tangibility of one's own emissions reductions at source in comparison with other interventions – such as offsetting. With emissions reductions, the effects are immediate, time-independent and easier to verify.[13] This has proven to be a challenging task, as many businesses have found themselves unable to eliminate, or even reduce their emissions at the desired pace. Hence, carbon offsetting has become a critical component in many companies' efforts moving towards the mid-century targets.[14]

1.3 Problem Discussion

Today, close to a decade in the Paris Agreement Era, voluntary carbon markets (VCM) are fragmented and still scrutinised for a lack of credible verification and environmental robustness.[15] This causes distrust and in many cases may prevent firms from doing all they can.[16] In addition, some technological advancements have given large promises and been presented as "solutions" to climate change, which has given rise to concern of procrastination in anticipation of what is to come.[17] The economy remains reliant on a large capital stock made for a fossil fueled world, generating strong economic and political forces resisting change,[18] also on company-level, given companies' cost-emphasis often leading to the choice of cheaper methods such as offsetting rather than deep and rapid mitigation in one's own value chain.[19]

1.4 Purpose and Research Questions

The purpose of this thesis is to investigate if the use of carbon offsetting can affect companies' voluntary climate mitigation efforts. To fulfil this purpose, the thesis will attempt to answer the following research question:

Can the use of carbon offsetting, as an option in a company's sustainability strategy, shape its voluntary (as opposed to mandated) climate mitigation efforts?

[12] Blaufelder et al., 2021
[13] Moore et al., 2023
[14] Blaufelder et al., 2021
[15] Ibid.
[16] Hildén, 2020
[17] McLaren et al., 2021; Stoddard et al., 2021
[18] Morgan & McCoy, 2012
[19] Anderson, 2012; Peterson St. Laurent et al., 2017

1.5 Expected Contribution

This thesis aims to contribute to literature on sustainability strategy, climate mitigation and carbon offsetting, from a company-level perspective, delimited to companies' voluntary efforts to address climate change. To the authors' knowledge, there have been few to no prior studies published that assume the perspective of the individual corporation, with specific regard to voluntary efforts. To establish such contributions, this thesis aims at obtaining an improved understanding for how the usage of certain voluntary (as opposed to mandated) climate interventions may affect the consequent usage of other voluntary intervention methods and the future development of companies' environmental sustainability work. This may shed light on how to make future policy changes more effective and give companies a guiding light in the development of their sustainability work.

2. Literature Review

First, the current knowledge within climate change and global warming is presented (section 2.1), followed by an assessment of the previous literature within climate mitigation (Section 2.2) and carbon offsetting (Section 2.3). Lastly, the identified research gap is acknowledged (Section 2.4).

2.1 Climate Change and Global Warming

One of current generations' largest conundrums is how to address climate change and global warming.[20] Global warming is driven by a naturally occurring phenomenon referred to as the greenhouse effect.[21] The greenhouse effect, in short, is the process during which ultraviolet (UV) radiation from the sun is absorbed by Earth's atmosphere, trapping the heat and warming up the planet. What regulates the degree of the warming effect, i.e. how much heat is trapped, is the concentration of so-called GHGs in the atmosphere. These gases have properties making them effective at absorbing heat, out of which carbon dioxide (CO_2) is the most influential.[22]

While the greenhouse effect might have a negative tone to it in today's debate, it is an essential process as it maintains favourable living conditions on Earth. The process is very delicate as it relies on a balance of GHGs in the atmosphere. This balance is managed by the carbon cycle, which can be divided into two parts – the slow and the fast carbon cycles.[23] The slow carbon cycle occurs over hundreds of millions of years, where biomass (such as dead plants and animals) is sedimented and processed naturally under high temperatures and pressure to form fossil fuels – storing carbon in Earth's crust. This carbon is then brought back into the atmosphere through volcanic activity. The fast carbon cycle revolves around the processes of photosynthesis and respiration. This is more cyclical in its nature and absorbs more CO_2 during the growing season. Together, these two cycles maintain a delicate balance of carbon on Earth. However, due to the burning of fossil fuels, the natural system is put out of balance as we prematurely release the carbon stored in Earth's crust at a higher rate than these natural processes can handle, resulting in an increased warming effect that can have adverse consequences for life on Earth if managed improperly.[24] Despite decades of significant political and academic efforts, CO_2 emissions today are 60 percent higher than they were in 1990.[25]

Climate change has the characteristics of both a principal-agent problem and a collective action problem, where individual players are incentivised to pursue their own interests independently.[26]

[20] Amundson & Biardeau, 2018
[21] Global Monitoring Laboratory, n.d.; Morgan & McCoy, 2012; NASA Earth Observatory, 2011
[22] Global Monitoring Laboratory, n.d.; Morgan & McCoy, 2012; NASA Earth Observatory, 2011
[23] Global Monitoring Laboratory, n.d.; NASA Earth Observatory, 2011; Coppola et al., 2022
[24] Morgan & McCoy, 2012
[25] Stoddard et al., 2021
[26] IPCC, 2014; Millard-Ball, 2012

First, companies do not bear the costs of their actions and have free leeway in this space of imperfect information to frame their interventions in a beneficial way to promote their own interests over others', 'intervening for show'.[27] This illustrates a landscape in which there are risks of adverse behaviour and moral hazard, where the motives of actors may be dubious.[28] In addition to that, Peterson St. Laurent et al.[29] found that private actors focus more on revenue maximisation and flexible systems, such as offsetting, with easily accessible financing and marketing options which could indicate that motives are misaligned. A moral hazard situation can be described as "where one party is responsible for the interests of another, but has an incentive to put his or her own interests first".[30] It is this nature of risk-taking that is inherent in many moral hazard situations, where individuals and organisations act more responsibly when they have to bear the costs of their actions and more risky when they do not have to bear the costs of their actions.[31] It has been shown that this can cause an increase, rather than decrease, in emissions.[32] It may also hint that the underlying motives behind interventions may be directed primarily towards clearing the pressure of appearing "good" in the response to more scrutiny of corporations. Holmström asserts that a natural counterweight to such behaviour would be to neutralise such information asymmetry through monitoring and the subsequent penalisation of defective behaviour.[33] However, full observation and monitoring may be either impossible or extremely costly.[34]

Second, perhaps enhancing the moral hazard, organisations, countries, or individuals who are high emitters are often also the least vulnerable, disincentivising action.[35]

Third, when new climate technologies are presented as solutions to climate change, the speculative potential may result in less mitigation efforts today and a continuation of "risky and irresponsible behaviour" in terms of emitting GHGs as the new technology promises to eliminate that impact in due course.[36] In the academic debate, such deterrence is partly explained by the attraction of delay, as it is quite convenient for actors to delay any costly changes accompanying rapid and deep mitigation today. It is also partly explained by the prevalence of moral hazard.[37] This may indicate that the framing of new technologies may play an important role and if re-framed as ways to buy time while implementing necessary mitigation efforts as opposed to complete solutions, perhaps moral hazard risks could be reduced.[38]

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[27] Christiansen et al., 2023
[28] Mollaoglu, 2020; Christiansen et al., 2023; Lovell et al., 2009
[29] Peterson St-Laurent et al., 2017
[30] Dowd, 2009
[31] Ibid.
[32] McLaren et al, 2021; Anderson & Peters, 2016; Baker, 1996; Lin, 2013; Campbell-Arvai et al., 2017; Jebari et al., 2021
[33] Holmström, 1979
[34] Ibid.
[35] Stoddard et al., 2021
[36] McLaren et al., 2021
[37] McLaren et al., 2021; Christiansen et al., 2023; Stoddard et al., 2021; Campbell-Arvai et al., 2017; Jebari et al., 2021
[38] Jebari et al., 2021

Given the resemblance of the outcome of climate change intervention among companies to moral hazard situations, the theory of moral hazard could be an appropriate lens to examine the phenomenon of climate change intervention from companies. It is worth noting, however, that the outcomes' resemblance to moral hazard does not necessarily imply that there would be any dubious motives or malicious intent from agents.

In the academic debate, however, another side to this topic has emerged. Other studies have found little evidence for moral hazard and instead claim that it is the anticipation of moral hazard rather than moral hazard itself that undermines climate change mitigation.[39] The consequence of this could potentially be a reluctance to invest in reductions of emissions at source.

2.2 Climate Mitigation in Academic Literature

Mitigation can be defined as actions taken to reduce emissions at source, or enhance the sinks, i.e. absorption and storage, of GHGs.[40] In other words, there are two, neither not mutually exclusive nor completely exhaustive pathways to take: (1) reduce emissions at source, or (2) remove CO_2 from the atmosphere and store it. The latter is also known as carbon dioxide removal (CDR), a process encompassing the removal and storage of CO_2 using biological or chemical processes.[41] Reducing emissions at source on the other hand, requires promoting all mitigation options throughout one's entire value chain, including optimising production processes, demand management and energy efficiency.[42] Mitigation efforts can be both voluntary[43] and compliance-oriented.[44] Compliance-oriented refers to mitigation efforts taken in response to new legislation forcing action, whilst voluntary mitigation efforts refer to what companies engage in beyond what is required of them by legislation.

There are several challenges in climate mitigation. Firstly, there are prominent political and economic interests in favour of the status quo that work hard against change resulting in a continued reproduction and maintenance of the status quo.[45] Much of this is driven by the fact that large existing investments in the "old system" cannot be abandoned overnight without creating large stranded costs.[46] Secondly, many mitigation technologies are in early stages of development and costly to use, representing a barrier to adoption, while simultaneously incentivising actors to opt for the cheapest-possible option, not necessarily the most effective.[47] Despite continuous cost decreases in the 2010s on aggregate and policy-induced stimuli to adopt new climate technologies, large-scale mitigation technologies have seen

[39] Andrews et al., 2022
[40] IPCC, 2014
[41] Smith et al., 2015
[42] IPCC, 2022
[43] Christiansen et al., 2023; Mollaoglu, 2020; Energy, Efficiency & Conservation Authority, 2021
[44] The European Parliament and the Council of the European Union, 2021
[45] Stoddard et al., 2021
[46] Morgan & McCoy, 2012
[47] Mollaoglu, 2020; IPCC, 2022; Joppa et al., 2021

minimal cost decreases and adoption increases.[48] Third, the emergence of new technologies causes procrastination and delay as it takes time to develop and roll out on a large scale, where the speculative potential of the new technologies in the future substitutes rapid and deep mitigation today.[49] Lastly, there are discrepancies in the beliefs on how to approach climate mitigation, where some see it as a "one solution fits all" and others see it as a part of a larger arsenal of tools that needs to be rolled out together.[50] A sound approach may therefore be to start by reducing the emissions over which the specific actor has most control, while simultaneously investing in other mitigation strategies.[51]

Previously, the focal actors in climate mitigation have been governments, but in the past decades, non-state actors have been assigned a greater role to play in the global effort to address climate change for a set of reasons.[52] Firstly, governments have promoted a balance between mitigation and offsetting efforts, but it has fallen short and companies have been shown to prioritise cheaper and more flexible carbon offset systems over mitigation.[53] This illustrates that governmental policy has its limit and that much is still in the hands of businesses. Secondly, industry, agriculture, forestry and other land use and transport account for and control approximately 70 percent of global anthropogenic GHG emissions, making them an important actor in addressing climate change.[54] With the complex value chains of modern businesses, reaching net zero is a challenging prospect – but possible.

2.3 Carbon Offsetting in Academic Literature

In literature, carbon offsetting and climate compensation are occasionally used interchangeably, even though they denote distinct concepts.[55] Climate compensation refers to actions taken once climate-related events have occurred, such as targeted migration and climate financing. Conversely, carbon offsetting is defined as the purchase of units of removed carbon, derived either from removal projects or subsidised renewable energy production. Carbon offsets are units of removed carbon that can be traded between companies.[56] It is used as a way for organisations to assume responsibility for their emissions by internalising the externalities they produce.[57] Carbon credits are occasionally used interchangeably for carbon offsets as well, whilst describing slightly different concepts elsewhere. Here, carbon offsetting is used for the general concept and carbon offsets used for the traded units of removed carbon

Carbon offsetting comes with its share of challenges. On a practical note, one of the main issues is bureaucratic and legal limitations, where the pain point lies in the ambiguity

[48] IPCC, 2022
[49] McLaren et al., 2021; Stoddard et al., 2021; Amundson & Bideau, 2018
[50] Mollaoglu, 2020
[51] IPCC, 2022; Joppa et al., 2021
[52] IPCC, 2022
[53] Peterson St-Laurent et al., 2017
[54] IPCC, 2022
[55] carboncredits.com, n.d.; Grantham Research Institute on Climate Change and the Environment, 2022
[56] carboncredits.com, n.d.; Gurgel, 2022
[57] Mintz-Woo, 2023

regarding the environmental integrity of offsetting schemes – i.e. if the scheme fully offsets the promised amount of emissions, or if it just builds on a set of false promises.[58] Over time, legislation has tightened in many countries, but there is great variation and inconsistency from country to country, remaining a hurdle for legitimacy.[59] In addition, if offsetting is deemed to be equal to mitigation, it may run the risk of impeding the development of mitigation efforts due to its often lower cost in comparison to deep mitigation today.[60]

2.3.1 Carbon Markets

Carbon markets are marketplaces where carbon offsets are traded between entities. Carbon markets are divided into what is known as compliance carbon markets (CCM) and VCM.[61] CCMs are regulated by the framework set out in Article 6 of the Paris Agreement and facilitates trading of so-called Internationally Transferred Mitigation Outcomes (ITMOs) between private and public actors who need to meet their Nationally Determined Contributions (NDCs).[62] NDCs are commitments made by countries to reduce their aggregate emissions.[63] VCMs on the other hand, operate in parallel to CCMs, where buyers with various mitigation pledges outside of any regulatory mechanism, can purchase various offsets.[64] These do not have a foundation made of regulations, rather, they are built on situations where companies face public expectations and pressure to reduce their climate impact.[65] Hence, buyers of VCMs aim to reduce this public pressure on themselves by creating an image of being a "good and responsible citizen".[66]

The carbon markets have been subject to continuous legitimacy crises and has been referred to as a "cowboy market" where companies have spent large sums of money on offsets that have not yielded any carbon reductions.[67] Consequently, carbon markets have received somewhat of a negative reputation.[68] This, coupled with a difficulty in establishing clear governance standards and a feasible market structure in a credible way, has severely hampered progress towards increased commercialisation of removal projects.[69] Companies also play a critical role in determining the direction of the carbon market development. What has been seen is that when large companies are faced with more stringent regulations, they may threaten to exit countries and "flee jurisdiction". As a result, national legislators may end up in a situation where the costs of introducing this legislation may rise to a point at which countries cannot afford to lose the business presence, inhibiting progressive policy implementation.[70]

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[58] Wara & Victor, 2008; Lovell, 2010; Gifford, 2020; Watt, 2021
[59] Lovell, 2010; van der Duim et al., 2010
[60] Anderson, 2012
[61] World Bank, 2022
[62] Ibid.
[63] Ibid.
[64] Ibid.
[65] Ahonen et al., 2022
[66] Ibid.
[67] Lovell, 2010; Watt, 2021; Dhanda & Hartman, 2011; Kreibich & Hermwille, 2021
[68] Watt, 2017
[69] Lo & Cong, 2017
[70] Gage & Wewerinke-Singh, 2017

The general perception is that carbon offsets also affect the market.[71] Carbon offset distributors, as well as the utilisers of carbon offsets, therefore surround themselves with advantageous narratives, such as justification, compelling story-telling about projects and identity work.[72] Yet, there still seems to be a line between two camps, one placing larger faith in the promises of offsets and one that does not fully trust and identify with it. Many companies cannot fully identify with carbon offsetting as a tool to become fully carbon neutral. A main concern among those businesses is the lack of systems validating the mechanism, concept and the promises it makes.[73] This phenomenon has been observed in practice. Hildén,[74] studying a sample of Finnish businesses, found that despite knowing about carbon offsetting they did not use it to its fullest extent, where fullest extent implied the possibility of reaching carbon neutrality overnight.

2.3.2 Carbon Offset Projects

Carbon offset projects are projects aiming at offsetting emissions selling carbon offsets. They can take a variety of shapes, such as subsidised constructions of green energy plants/parks,[75] and restoration and/or conservation of the terrestrial biosphere and water bodies.[76] Carbon offset projects have met some large hurdles. Firstly, carbon offset projects are often marketed as financially and humanitarianly beneficial to the affected community. However, it has been found that this is not always the case due to a lack of structural and relational mechanisms locally that would enable financial and humanitarian benefits from these projects.[77] This has raised questions as to whether these alleged benefits are enough to justify offset trading as opposed to emission reduction at source.[78] There is also ambiguity with regards to the amount of CO_2 that is offset and how long the carbon is stored and accounted for.[79]

2.4 Research Gap

The literature review highlights a gap in understanding the usage and strategic implications of climate mitigation and carbon offsetting. Without a unified approach to addressing climate change, international cooperation will be challenging. To foster consensus, it is crucial to understand how the implementation of actors' interventions affects the choices of another. Given that 70 percent of global anthropogenic GHG emissions come from companies, and their growing role in addressing climate change, this thesis focuses on studying their strategic sustainability choices rather than government policies. This study aims to investigate if the use of carbon offsetting as an option in companies' sustainability strategy can shape its

[71] Peterson St-Laurent et al., 2017
[72] Lovell et al., 2009; Watt, 2017
[73] Watt, 2021
[74] Hildén, 2020
[75] Calel et al., 2021
[76] Aschan & Pettersson, 2019; Peterson St-Laurent et al., 2017; Galatowitsch, 2009; Hurd et al., 2022; Sapkota & White, 2020
[77] Corbera & Brown, 2009
[78] Galatowitsch, 2009
[79] Anderson, 2012; Moore et al., 2023

voluntary, as opposed to mandated, climate mitigation efforts. In order to do so, this thesis only considers what is encompassed by the voluntary domain. Firstly, it represents what organisations choose to do, not what they have to do. Secondly, it enables uncovering the motives behind choices. This could hint at whether an intervention is used as a temporary measure to mitigate harm done while simultaneously working to reduce emissions at source and reduce future damage done or if it is seen as a substitute to emissions reduction. Gaining such insights could help in establishing a greater understanding for how the private sector can collectively address climate change in a more efficient way and may give valuable insights for policymakers in designing future climate directives.

In addition to the aforementioned research question, more specific exploratory questions need to be asked to fill the identified research gap. Specifically, three areas of importance are identified. Firstly, contextualising information needs to be captured to ensure that the surrounding circumstances are relevant. This needs to include general knowledge about the company representatives, the companies and the companies' environmental sustainability strategies. Secondly, if the companies utilise carbon offsets in their environmental sustainability strategies, the motives, intentions, internal and external reactions and the practical nature of the offsets is highly pertinent. Lastly, if the companies do not utilise carbon offsets, the motives, intentions, and previous intentions are equally important. Based on these three areas of consideration, the interview questions aim at capturing all relevant information needed in order to answer the specifics of this thesis' research question.

3. Methodology

In this section, the methodology used in the thesis will be elaborated upon. First, the methodological fit will be assessed (Section 3.1), to ensure adequate precision to answer the designated research question in an stringent and efficient manner. Second, the data collection process will be assessed (Section 3.2), before the data analysis (Section 3.3), quality considerations (Section 3.4) and lastly the ethical considerations (Section 3.5) are presented.

3.1 Methodological Fit

Internal consistency has been brought to attention as an important characteristic for high quality research in organisations.[80] In order to ensure internal consistency among the different elements of the thesis when designing the study, it is essential to take into consideration the research question and prior research done within the subject, in order to answer the proposed research question.[81] The choice of overall research philosophy and tradition is elaborated on, before the general research approach, research method and the research design is presented.

3.1.1 Research Philosophy and Tradition

Since the aim of the study is to discover the ways in which organisations and decision-makers act, why they act in this way and what consequences it may have, it is a constructed meaning or truth that is sought, rather than an objective truth that holds across all cases.[82] It also aims at capturing phenomena that most likely varies over time and across organisations. Therefore, the research philosophy follows a constructivist ontology. Furthermore, since it is the subjective meanings behind the organisations' choices that are pertinent and that humans in more cases than not are the ones making these choices, an interpretivist epistemology is applied.[83] Since this epistemological orientation relies on the subjective leanings of the researcher,[84] a careful stance of objective observation is argued for (see 3.4 Quality Considerations).

3.1.2 Research Approach

As explained in the literature review, Moral Hazard theory could be a useful supportive tool to frame the issue at hand. Furthermore, the novelty of the subject, as well as the lack of meso studies at an organisational level on the use of voluntary carbon offsets and the strategic implications that it may have, leaves little room for theoretically founded hypotheses.[85] Following Edmondson and McManus,[86] the thesis aims at exploring the subject and inductively figure out what is important as the data collection progresses. This leaves room

[80] Edmondson & Mcmanus, 2007
[81] Ibid.
[82] James & Busher, 2009
[83] Bell et al., 2019
[84] Ibid.
[85] Edmondson & Mcmanus, 2007
[86] Ibid.

for flexibility, but simultaneously demands rigorous learning and adaptation from the data in the meantime. We therefore employ an inductive approach to this study.

3.1.3 Research Method

Due to the inductive approach applied, and the interpretivist epistemology where choices made by humans are researched and the view that the social reality is emerging over time, a qualitative research method is applicable.[87] Following the same logic, as presented by Edmondson and McManus,[88] qualitative, open-ended interviews are preferable when answering open-ended research questions, such as (in this case) the question 'can'. Qualitative data will therefore be collected through open-ended, semi structured interviews on a primary sample of company representatives which will compile the study's main sample. Additional data will also be collected, such as expert interviews with companies and knowledgeable professionals and document collection from the main sample companies' online resources. The method of collecting data from multiple resources is a commonly used method when researching with a nascent state of the prior theory available.[89] This will complement the pattern recognition process and strengthen the credibility and therefore the trustworthiness of the data collection.[90]

3.1.4 Research Design

This thesis will employ a cross-sectional research design. We will collect data from several different companies, interviewing between one and two people from each. Furthermore, the interviews will be conducted at roughly the same time, with the timespan separating the first and the last interviews should not exceed two months. Even though the interviews are semi structured, the aim of the interviews is to recognise patterns, as well as the justification of these patterns. To achieve this, a standardised interview guide will be used as a foundation, with follow-up questions to nuance and further explore the answers given by the company representatives. Based on these premises, all elements of a cross-sectional research design proposed by Bell et al.,[91] are fulfilled. We may argue for two variables' relationship in the context of the study. However, with the choice of a cross-sectional research design, we are aware of the lack of internal validity that causal inferences we draw may have,[92] and such statements will therefore be avoided.

3.2 Data Collection

The data collection process consists of three sections, whereas two comprise the study's main data set. Below, a detailed assessment of the expert interview, as well as the company interviews and document collections, is provided.

[87] Bell et al., 2019
[88] Edmondson & Mcmanus, 2007
[89] Lincoln and Guba, 1985
[90] Ibid.
[91] Bell et al., 2019
[92] Ibid.

3.2.1 Expert Interview

Subsequent to several interviews being held, a sanity check was performed. This sanity check was to evaluate whether we had adequately reviewed available, previous research and whether we had asked the best possible questions to answer the research question. A semi-structured interview with a well-renowned climate scientist was held, with a duration of approximately 1 hour and 4 minutes. This interview assisted with understanding the subject, as well as some valuable insights regarding the business life in this context (see Appendix 1 for interview guide). It further provided us with context and information that was crucial during the analysis of the research's empirical observations.

3.2.2 Interviews

As the foundation of our research, semi-structured qualitative interviews were held with three employees at three different suppliers of carbon offsets (for interview guide see Appendix 2), as well as 20 communication, management and/or sustainability employees, during 18 interviews, at 17 different companies that either did use any form of carbon offsetting, or did not (for interview guide see Appendix 3). Two of the carbon offset suppliers were in their infancy and had a revenue of below SEK two million in fiscal year 2022, but nevertheless ran their own carbon capture projects. The third carbon offset supplier was an established actor on the market. The companies utilising any form of carbon offsetting, or did not, had a revenue of at least SEK 50 million in fiscal year 2022, with several firms exceeding SEK one billion in revenue. The employees at all firms either held a position within communication, sustainability or held a leadership position. The average age of the company representatives was 42.3 years and the average tenure at their respective companies was 6.8 years. Three interviews were held physically, with 18 interviews being held on Microsoft Teams. The average duration of the interviews was 38 minutes and 16 seconds, between the interval of approximately 22 minutes and 1 hour and 9 minutes, and the interview language alternated between English and Swedish.

At least the day before, a standardised interview guide was sent to the company representatives, but leaving out any possible follow-up questions that might have already been formalised. company representatives were also notified of the interviews' semi-structured nature in the same email. At the start of the interviews, all ethical considerations were taken in accordance with research praxis (see 3.5 Ethical Considerations). Interview questions were slightly altered during the course of the data collection as things emerged, but without having an overall effect on the consistency of answers across respondents.

Because of the cross-sectional research design employed, there may be a greater necessity for a larger sample size.[93] Because of this, emphasis was put on reaching an identified state of empirical saturation. This state was reached when the empirical observations started to repeat themselves and additional variation in answers ceased to appear. We initially argued for

[93] Bell et al., 2019

reaching this state after 18 interviews, but eventually continued to 21 interviews to ensure empirical saturation, considering time and practical limitations.

3.2.3 Document Collection

As part of the quality consideration taken into account (see 3.4 Quality Considerations), and to reach a state of internal validity, we triangulated our collected qualitative data from the interviews by scraping data from available online sources of every representative's company. The data scraping was performed at least a few hours prior to the interviews taking place, but most often the day before, to ensure that nothing could be altered subsequent to the interview (whether or not as a result of it). The data collection from available documents consisted of answering the predetermined interview guide, with additional follow-up questions, to the best of our capability and public information availability. This served two purposes in our research: firstly, to ensure that the answers we received were comparable to the information communicated publicly. Secondly, it provided us with important insights regarding how they communicated their sustainability strategy in general. This information was also utilised in the analysis of this thesis.

3.3 Data Analysis

Subsequent to the interviews, the transcriptions were refined and corrected. The refinement mainly consisted of spelling corrections and restructuring the text to make the data more easily observable. Thereafter, they were entered into the ATLAS.ti interview analysis tool, where each document represented an interview.

As the analysis methodology, we employed the Gioia Methodology.[94] Firstly, several 1st order concepts were identified from the interview transcriptions with the main focus of capturing information as presented by the company representatives. It initially resulted in approximately 60 narrow concepts, which were then condensed into 18 final 1st order concepts. These concepts were then carefully grouped into seven distinct 2nd order themes, trying to distinguish what the various concepts entail and how to categorise them. Lastly, these seven themes are contextualised in three overarching aggregate dimensions which, from our analysis, explains the foundation to the answer of our research question (see 5. Analysis and Discussion and 6. Conclusion).

Extensive considerations were taken to ensure the replicability and quality of the data analysis. Firstly, all transcriptions were coded independently by both coauthors of the thesis. Secondly, the first-order concepts were grouped into 2nd order themes after several discussions. Lastly, we were not hesitant to pivot, in order to bring forward the findings most related to the research question. The most relevant concepts derived from the interviews could be identified and structured into the model, leaving us with peripheral findings to be discussed outside of the main conclusion (e.g., see 6.4 Suggested Future Research).

[94] Gioia et al., 2012

3.4 Quality Considerations

In order to ensure the highest possible quality of a qualitative study, it is important to assess the study in light of the evaluating criteria: reliability, replicability and validity.[95] However, since these evaluating criteria mainly are outlined for quantitative research with a positivist philosophy[96] we have decided to apply the framework proposed by Lincoln and Guba,[97] translating the three criteria into more applicable criteria for qualitative research. Under one of the two main criteria, trustworthiness, 'reliability' is replaced with 'dependability', 'replicability' with 'transferability' and 'validity' with 'credibility'.[98] Adding to that, a fourth criterion: 'confirmability', e.g. meaning ensuring intersubjectivity, is included.

Firstly, in order to build trustworthiness around the research pursued, we need to evaluate each of its four criteria. To ensure the credibility and internal validity of our research, we utilised the technique of prolonged engagement, especially during our assessment of prior research as well as during the initial stages of the data collection.[99] In addition to thorough work with prior studies, we conducted an expert interview with a climate researcher, as well as with multiple suppliers of carbon offsets. Furthermore, emphasis was put on triangulating sources to verify and better understand the empirical findings.[100] Prior to the interviews with a company, all questions were answered by data scraping the company's public resources, such as their websites and sustainability reports. To ensure transferability and external validity, enabling conclusions about the research's applicability in other contexts, a wide variety of company representatives were used to compile the data.[101] Dependability and reliability was made certain by rigorous documentation of our data collection process and analysis. This enables the possibility of an external audit of the process and product of the study.[102] Lastly to ensure trustworthiness, conformability and objectivity was achieved by similarly utilising rigorous process and product documentation, as well as triangulation of sources.[103]

3.5 Ethical Considerations

To address the ethical principles of business research, we will apply the four main areas that derive from certain recurring ethical issues, proposed by Diener and Crandall:[104] whether there is harm to participants, lack of informed consent, invasion of privacy and deception is involved.

[95] Bell et al., 2019
[96] Ibid.
[97] Lincoln and Guba, 1985
[98] Ibid.
[99] Ibid.
[100] Lincoln and Guba, 1985; Denzin, 1978; Patton, 1999
[101] Lincoln and Guba, 1985
[102] Ibid.
[103] Ibid.
[104] Diener & Crandall, 1978

3.5.1 Avoidance of Harm

In order to avoid any type of physical or psychological harm, we took several precautions. Firstly, all company representatives, as well as their respective companies, are kept anonymous during the study. Their roles at the companies are standardised across the sample and their names and genders randomised. Secondly, we informed the company representatives of the overall theme of the study, the anonymity precautions and gave them the choice of performing the interview physically or online. Lastly, all company representatives were sent the standard interview guide beforehand, to avoid any possible misconceptions about the questions to be asked. A reservation that follow-up questions may be asked, in addition to the provided questions, was also included.

3.5.2 Informed Consent

To provide the possible company representatives with a well founded choice of participating in the study or not, we sent an overall description of the study. We did not provide a complete, detailed description since we wanted to avoid any defensive stances towards the interview, due to it being about carbon offsets - a highly criticised concept. It is in alignment with what for instance Lee[105] states, concerning the undesirability to provide participants with a complete account of the research topic.

Additionally, careful consideration was taken to properly inform participants of any techniques used by us to capture their answers, as well as the management of their data. Before every interview started, a GDPR information and consent form (see Appendix 4) was sent to each participant. It consisted of standardised information about Stockholm School of Economics' (SSE) GDPR regulations, including the promise of safe storage and subsequent deletion of their personal data. Furthermore, it contained contact information to our supervisor, as well as important information about us as students. This document had to be formally accepted in an email before the interview could commence.

Before the data collection could continue after GDPR consent was retrieved, we asked for permission both to record and transcribe their answers and the interview did not proceed until explicit acceptance was given to do so.

3.5.3 Privacy

Privacy was considered during both the interview itself, as well as during the subsequent management of data. Limited personal data was collected. Except for the temporary storage of contact information to the company representatives, only name, age, role at the company, years at the company and company name was obtained from the company representatives. The relationship between who was at what company and between what years, etc., was not in any way presented in the study to avoid the aggregation of personal data to identify certain employees at companies. Instead, they were exclusively used as separate variables to contextualise the larger sample.

[105] Lee, 1998

3.5.4 Preventing Deception

As discussed in Section 3.5.2, we provided sufficient information about the research performed in the thesis to each possible company representative. This allowed them to make an informed decision about whether to participate in the study or not, whilst still leaving out possible negative stances towards the specific research question at hand. Furthermore, to avoid any type of deception risk, we always provided further information to the possible company representatives if requested.

4. Empirical Findings

The following chapter presents the empirical findings from the interviews conducted for this study. The chapter is structured as follows; a brief introduction to the reference frame of this study is presented (Section 4.1) being followed by a review of the findings (Section 4.2). See Appendix 5 for an overview of the company interviews conducted for this study.

4.1 Empirical Background

As a reference frame to the interviews done with the companies either utilising or not utilising carbon offsets, the findings derived from a climate scientist ('the Climate Scientist') and representatives of companies providing offsets ('the Carbon Offset Provider(s)') are presented briefly. They are structured to, and aim at, providing an additional view to the main data sample. The Climate Scientist and Carbon Offset Providers interviewed in this study agree that there is no "silver bullet" to solve climate change. More specifically, the company representatives emphasised clearly that in order to effectively manage climate change, an arsenal of multiple tools will need to be utilised. Furthermore, they also agree on somewhat of a mitigation hierarchy where actors in the ecosystem should prioritise actions in the following order:

1. Avoid emissions in the first place;
2. where emissions cannot be avoided, reduce emissions as much as possible;
3. offset the residual emissions that cannot be abated.

However, the rationale for why and how offsetting may be used by organisations and institutions differed. The Climate Scientist asserted that we are in such a deep, intensifying crisis today that we are left with no choice but to use all available tools, out of which mitigation must dominate our efforts in order to successfully create long-term, sustainable change. The Climate Scientist saw issues with the long-term reliability of offset efforts in that there is no guarantee that offsetting will "compensate" fully for the emissions it intends to neutralise as the forest may burn down or droughts may render the land inoperable. The Climate Scientist illuminated the notion that the first thing emitters should do is to map the emissions in their value chain, followed by setting long-term targets regulated by shorter-term stage-targets. The Climate Scientist further expressed concern over moral hazard behaviour in the sense that the high-emitting parts of the world might be more resilient or less affected by climate change, resulting in longer reaction times and reduced understanding and motivation to act.

On the other hand, the Carbon Offset Providers saw a much bigger, more active role to play for offset products to be used to a large extent, providing additional benefits such as circular raw materials. However, the Carbon Offset Providers did not share the same view on the future of offsets. Offset Provider A and C speculated that there will be a stagnation and decline in the offset markets within a decade or two, following the anticipated technological progress and as implementation of long-term mitigation strategies bears fruit. Offset Provider A and C were both under the belief that offsets will continue to be used in the longer term as well, but in the peripheral. Offset Provider B on the other hand, exhibited strong beliefs that

offsets will be around for the long-haul on a larger scale. The rationale of the argument was that our emission levels matter less if we stop using fossil fuels and replace them entirely with the bi-products of offsetting schemes such as new biofuels and input materials for production. Offset Provider B expanded the reasoning by mentioning that perhaps the main purpose will change towards becoming more about sustainable fuel and raw material production rather than offsetting emissions.

4.2 Company Interviews

The following section presents the findings of 18 interviews conducted with representatives of companies in various industries. The general structure follows the sequence of the data collection. However, not all areas of the data collected during the interviews are presented, only data deemed pertinent to the research question (see 2.4 Research Gap), data points appearing more often and/or data appearing often in specific groups of the sample (e.g. companies utilising offsets). Furthermore, the data triangulation from available online resources provide either confirmation or rejection of the company representatives' statements. Since it is used as a measure to ensure quality, only the observed data that do not correspond to the provided interview answers are highlighted in the following sections. For a compilation of the online data triangulation, see Appendix 6.

First, companies' environmental sustainability strategies are assessed (Section 4.2.1). Second, communication of sustainability is presented, and the subsequent reactions and pressures experienced (Section 4.2.2). Lastly, the use of, or abstaining from using, carbon offsetting is presented, including how it is used and the opinions of it (Section 4.2.3).

4.2.1 Companies' Environmental Sustainability

In this section, the perceived costs for companies engaging in sustainability work, as well as the common theme of inadequate goal-setting by companies is presented. In general, the cost of climate work, whether it be mitigation or offsetting, is deemed as a resource-intensive task by several respondents. Furthermore, the trend of setting ambitious environmental targets were strongly coupled with various climate initiatives, but the absence of concrete practical environmental goals was evident.

4.2.1.1 The Cost of Environmentally Sustainable Business

Climate mitigation efforts are described as costly and time-consuming, creating a dilemma for businesses as they want to be sustainable but simultaneously have to generate profit. Money was not the sole resource alluded to as it is also seen as time consuming. Some companies simply do not have those resources to spare in which case it is more convenient to "outsource" this climate action elsewhere. This is predominantly the case among companies that use offsets.

"I think sustainability work is associated with something that is time consuming and very expensive. It's something you don't want to touch. Perhaps some think it's just a burden, especially small businesses" – Company 6 representative

"Just the sheer size of it all. We have dozens of production sites and just the implementation alone is costly [...] and if I just think about how many hours we spend in meetings doing kick-off sessions for our work streams. That's an immense amount of resources right there" – Company 11 representative

Among companies not using offsets, the situation is occasionally reversed. Companies did not explicitly say that it is more cost-effective to launch mitigation efforts and internal climate investments, but a few did say that offsets were seen as expensive and the effects of these offsets were dubious. Hence, they would rather spend money on internal work where they know the effects than to spend it on external projects.

"It costs a fortune, there is absolutely no business gain for us, at least when we looked at using offsets the last time, about a year ago" – Company 1 representative

How money and other company resources are used is a significant issue when it comes to environmental sustainability work for the companies interviewed. At the end of the day they are businesses and have to deliver shareholder value and stay profitable.

"Working with sustainability, obtaining a sustainable supply chain and so on, it has to be profitable. If it weren't profitable we wouldn't keep going in this direction" – Company 2 representative

"A business should be sustainable, but for it to survive at all it has to be profitable" – Company 3 representative

"So it's not just that we want to help the planet, we also see that there's a business case in being sustainable if you do it in a smart way" – Company 5 representative

4.2.1.2 Non-Concrete Goals

A recurring theme in the company interviews was the emphasis on "looking good" for stakeholders, making communicating an integral part of sustainability strategies. Consequently, sustainability strategies in many instances implied valiant and high-level goals, in some instances lacking specific plans to reach said goals.

"So, and they are quite general, perhaps not very measurable goals but more to talk about direction. We are not 'there' yet in any way, we will have to work on all of these areas to make it better all the time [...]and we have tried to concretise further, but as mentioned, there are still some things that are more difficult to put measurable goals on than others" – Company 5 representative

"I can't say that there are specific goals, but we're talking continuous improvement" – Company 8 representative

"We want to be net zero in our direct supply chain" – Company 13 representative

Much of what contributed to this, one company representative reflected, was the fixation with CO_2 units which reduces fundamentally different resources to the same unit, without taking their respective characteristics into account when shaping reduction solutions.

"First and foremost it is about carbon dioxide which implies looking at energy and transports" – Company 16 representative

"One litre of diesel is still one litre of diesel, and when you don't look at it for what it is you might miss opportunities to use that resource more efficiently" – Company 17 representative

In addition, several of the interviewed companies mentioned applying and signing up for Science Based Targets initiative (SBTi) and that an important aspect of that was, apart from bringing evidence-based targets to the table, to communicate these targets publicly and thereby generating commitment throughout the organisation. Many organisations were still in the early stages of work with these targets, and the targets were to be reached sometime in the future.

"We have applied for Science-Based targets on sustainability to make sure that we have a data-driven approach" – Company 4 representative

"Yes now in recent years we have still tried to apply more focused goals, for instance in the climate area we have committed to Science-Based targets." – Company 5 representative

"So one and the biggest one I wanna say if you ask me is of course that we committed to Science-Based targets." – Company 14 representative

"We are setting up climate targets based on the Science-Based Targets initiative to ensure that our targets are anchored in science" – Company 18 representative

4.2.2 Communicating Environmental Sustainability

The company representatives testified of an increasing external pressure to act on climate change, and to do so transparently. Acting accordingly also implies an increasing scrutiny. A large portion of the sample were wary of greenwashing, affecting what and how they communicate their sustainability efforts. This was shown to result in yet another phenomenon referred to as greenhushing, namely being intentionally quiet about one's sustainability work to avoid the risks, whilst also resisting the urge to receive positive reinforcement for work

well executed. Hence, greenhushing and the fear of greenwashing is influenced partly by external pressure, and partly by increased scrutiny.

4.2.2.1 External Pressure

In the interviews, external pressure emerged as a driving force in climate action among businesses. Interviewees testify of increasing demand for sustainable products and services, as well as pressure from other stakeholders such as legislators and investors. These changes incentivise companies to develop sustainability strategies.

"Sustainability is our licence to operate, we are in an industry that is being heavily scrutinised for our emissions […] so we have to work with sustainability. Otherwise we will not even be part of the consideration set of the customer" – Company 4 representative

"Legislation is needed because it's a push for a lot of companies that are maybe less intrinsically motivated to change" – Company 11 representative

"Sustainability has become a large part of our offering I'd say. We are seeing a significant push from customers, especially our larger ones that they expect us to work actively and thoroughly with sustainability for them to even consider continuing their business with us. Examples of what they want to see are life cycle analyses general footprint snapshots for how much emissions their purchase from us results in" – Company 18 representative

Furthermore, external pressure from and to suppliers seems to cause a domino effect along respondent companies' value chains. This comes as a result of supply chains being tightly interlinked and requirements on, or commitments made by, one firm down- or upstream will affect the rest of the chain as well. One instance capturing the importance of trying to reduce their Scope 3 carbon emissions footprint was a sustainability employee at a global company in the pharmaceuticals industry. The company representative explained that the absence of an equally ambitious commitment to SBTi in suppliers' work on sustainability might be motive enough to dispose of that supplier (with start 2026).

"Then we also have partnerships or dialogues with our transporters all the time and we have chosen to work with transporting companies that are in the frontline with having a modern vehicle fleet run on as good fuel as possible." – Company 3 representative

"In 2021 or 2022 we opened the sustainability incentive model which incentivises our farmers to reduce their climate impact." – Company 4 representative

We are very eager that our suppliers can collect this data for us or give us like relevant materials to work with" – Company 7 representative

"And of course, we also have Scope 3 target that's associated where we're looking into reducing our emissions from our upstream supply chain and also engaging with our suppliers

to also make them develop their own emission reduction road maps." – Company 14 representative

"It is to get our sales people in dialogue with our customers and plan better, to understand how their behaviour affects our emissions as well." – Company 17 representative

"Within Scope 3, when it is connected to suppliers, it is very much about engaging ourselves with our suppliers. We have a lot of suppliers that are bigger than us and they already have very ambitious road maps themselves. There, we can really keep their backs and follow their lead about what they do so to speak." – Company 18 representative

"Yeah, because if you think about the domino effect in the value chain when a company sets a target or makes a commitment. Then their suppliers will also have to set targets and so on. It's a chain reaction because things must happen and if you don't work with your closest suppliers or your largest suppliers I think you'll struggle with reducing your emissions" – Company 18 representative

Company representatives also testified that sustainability is becoming an increasingly significant competitive factor, intensifying efforts to improve sustainability performance. This emerged as a motivator for companies to go beyond what is required of them by legislators and be innovative to differentiate themselves from the competition in their sustainability work.

"A big player in our industry lost a huge contract after not being able to guarantee to a client that all of their services would be fossil-free, they went to a competitor instead who was able to make and fulfil such a promise" – Company 6 representative

"It will be a competitive hygiene factor in due course. You won't get any business if you don't have a clear sustainability strategy and actively work with it" – Company 6 representative

"It's a hygiene factor to have good sustainability work" – Company 12 representative

Contrary to what companies claim that their customers express vocally however, there is a discrepancy between what they say, and what they do. According to the data, customers seldom act as they speak, which in turn leads to poor sales numbers for sustainable product or service lines. In some cases, the sustainable offering could even be deemed more cost efficient for the customers, but rooted behaviours remained. It had various effects for the companies experiencing this discrepancy, but it was often used as an argument for discontinuing sustainable initiatives. However, what emerged as a relevant factor in this was that customers' focus was not solely based on cost. Customers were rather shown to be less willing to change, even if the price was objectively lower. When the nature of the product or service was altered too much to accommodate the more sustainable features, indications were apparent that whilst they do want more competitive prices they do not want to be inconvenienced. However, in relation to price, the rate of change in the nature of the product or service was overshadowed in the interviews.

"The environment and sustainability has become more of a wallet question [affordability] today and you have to look at the finances first" – Company 6 representative

"No one wants to pay for it but rather it should be as expensive or less and we are not really there yet." – Company 7 representative

"We had a rental product line a couple of years ago where we rented out products to the customers since we thought that it was a lot smarter from a sustainability perspective. That you can share a screwdriver or a saw or like a carpet cleaner or whatever it may be. But the customer behaviour was not there, so even if it did not cost many SEK to rent a screwdriver, people still preferred to buy their own screwdriver or borrow from someone else. What do I know?" – Company 9 representative

"I don't think that our customers have been so demanding yet [about sustainable initiatives]." – Company 14 representative

"There is still a focus on cost from customers." – Company 17 representative

4.2.2.2 Increased Scrutiny

Company representatives testified that businesses are under increased scrutiny for their actions or inactions with regards to climate change. The line between public backlash for insufficient efforts and greenwashing is thin and difficult to navigate according to company representatives. Communication of sustainability strategies is the tool which companies use to be transparent about what they do, to show that they engage in sustainability work, while simultaneously being very careful with what they say and to substantiate everything in order to avoid greenwashing allegations.

"Also because we will be under close scrutiny from customers and consumers [...] we will be called on for greenwashing if we solely rely on carbon credits" – Company 4 representative

"I don't think it would've looked very good if we were doing a bunch of offsetting for our core business emissions" – Company 15 representative

"Greenwashing is always a challenge. It's easy to make claims, but it has to hold up when you dissect it and look into it in detail. We are thinking really hard about this to avoid falling into that trap [...] this may cause intended mitigation and offsetting efforts to take longer time to roll out because we need to think harder and longer about everything that we do so as to avoid any possible greenwashing allegations. At the end of the day, it takes longer but it may result in a higher quality of climate interventions rolled out" – Company 16 representative

"The fear of greenwashing is a shame, because there are lots of companies out there that do many great things. But being aware of the potential criticism for even the smallest of things, I think most companies just choose to keep quiet and not risk it" – Company 18 representative

On the other end of the spectrum, positive media attention is an apparent motivation factor for companies to continue developing their sustainability work. Receiving sustainability awards, or even media coverage, can be enough to spur people internally. This enforces the twofold argument that both negative and positive media attention affects the way companies conduct and communicate sustainability work.

"It [positive media attention] spurs engagement in the sense that you receive attention for it [sustainability work], and it becomes a reward for doing a good job, and you can see the difference. It creates a continued engagement and a drive to become even better…" – Company 8 representative

"It [positive media attention] very much motivates people." – Company 11 representative

"Since sustainability is the business idea itself, it has affected us very positively, the attention we have received in the media." – Company 15 representative

Absolutely, attention is always good as long as it is positive and that it gives us traction aid. It gives us energy to do even more. – Company 16 representative

4.2.3 Carbon Offsetting

Presented below are the empirical insights on the utilisation of, or abstaining from, carbon offsets. This includes the various opinions expressed, as well as the way in which offsets were utilised. Overall, the opinions were varied, with both negative and positive statements made on what respondents believed to be good grounds. Adding to that, companies seemed to be utilising offsets in two distinct ways: either as a way to reduce the climate footprint from their residual emissions or by reducing the climate footprint from specific areas of their business.

4.2.3.1 Opinions on the Use of Carbon Offsets

The view on offsetting varied among the companies interviewed. Some saw it as a tool aimed towards emissions reductions in the first hand, whilst others saw it primarily as a tool to get the numbers in order for reports. In addition, the awareness of the variety of so-called offset products available varied among company representatives. Some associated offsets with purchasing rights to emit certain volumes, others associated it with tree-planting or climate investment – three fundamentally different things.

"I haven't heard that much about offsetting lately, previously there has been many debates about offsets and what type of… I mean that you just buy land and plant some trees at random" – Company 3 representative

"We offset through an external consultancy on climate investment projects in poor countries. They are very thorough and transparent with the projects and make sure that everything meets a high standard" – Company 6 representative

"If you hold a renewable energy certificate you can, in official carbon accounting, claim that the electricity you consume is considered renewable, even if it isn't" – Company 14 representative

"You buy your way out of it so to say. You buy your way out by purchasing rights to emit, contributing to increasing your emissions" – Company 16 representative

Among companies that offset, a vast majority were very keen to ensure that some form of verification of their offset service could ensure that the project unfolds as told and has the effect it is intended to have. This suggests that there is a general awareness of the concerns regarding carbon offsetting and that the interviewed organisations that use offsets take this into consideration when deciding to use offsetting.

"And then we are working with a company specifically for the carbon offsetting and they plant trees in accordance with some method called Plan Vivo [a certification scheme] which is an offset forestry standard that is supposed to ensure that everything unfolds in the correct way and that the offsets fulfils their promise" – Company 2 representative

"We work with a consultancy firm, they provide large tree-planting projects that are executed in accordance with plan vivo, which is like a standard for that type of projects that ensures the quality of the project" – Company 3 representative

"We offset through an external consultancy on climate investment projects in poor countries. They are very thorough and transparent with the projects and make sure that everything meets a high standard" – Company 6 representative

"So what Ecovadis is, is that it's a sustainability rating company, and what's key about them is that they are evidence-based" – Company 13 representative

Lastly, among the companies that did not use offsets, there were opposing views on offsetting. Some saw it as a potential future tool and did not want to rule it out prematurely, whilst others were against it in principle.

"We will most likely have emissions even in the future to be realistic, so in due course we'll probably need to offset them somehow. We won't start with it because we want to have incentives to exhaust internal possibilities first. But when we do in the future, if we do it, it won't only be tree planting, it'll probably be carbon capture and storage" – Company 5 representative

"We don't want to start using carbon capture and storage too early because then we might lose momentum and incentive to reduce our emissions" – Company 5 representative

"We're not entirely convinced that those tree-planting projects really live up to their promise, so we simply keep a distance" – Company 7 representative

"It's an easy way out. I think that, fine you offset, but have you really given effort and time into doing everything you can to reduce your own emissions first, or is it just an excuse to leave it for later?" – Company 8 representative

"It's really not gonna make any difference for us anyways. If we really want to be a net zero business, we have to be net zero. That means we can't stay on the same levels and rely on offsets" – Company 15 representative

"Buying ourselves free, that's simply not our style. You buy your way out of it so to say. You buy your way out by purchasing rights to emit, contributing to increasing your emissions and that's obviously not good" – Company 16 representative

There were respondents that represented companies that did not offset and had a clear, opposing standpoint on carbon offsetting, that answered contrary to the information available on the companies' online data sources. Specifically, two company representatives representing companies that previously had utilised offsetting in their sustainability strategy, had no knowledge about this fact.

"I don't think so. I've never heard of anyone using carbon credits. Carbon credits is a bit the thing that you're saying: Okay, I release emissions in my company and I need to compensate for that by buying some carbon credits." – Company 4 representative

"I don't know [if they used carbon offsets before]. Yeah, it could be" – Company 11 representative

In another instance, a company representative who was vocal about the company's negative standpoint on offsetting, represented a company that less than two years prior considered utilising offsets as an integral part of their sustainability strategy. They later dismissed this due to heavy stakeholder resistance, which was not brought to light by the company representative despite being asked about it.

Yes exactly, to buy our way out of trouble? No, that is not our way of doing things. [...] It has never been our way of working." – Company 16 representative

4.2.3.2 Offsetting Residual Emissions

Companies utilising various offsetting schemes as a tool in their sustainability strategies do so for varying reasons. Some argue that it is a general tool to reduce their overall carbon

footprint, without putting any substantial emphasis on what specific emissions they offset. What characterises them is that they set clear targets, measure the emissions from their entire value chain, and that they use offsets as an additional tool in parallel to reducing the climate footprint from difficult-to-remove, often Scope 3, GHG emissions. In other words, these companies are internalising their operations' externalities, often offsetting beyond their calculated, actual emissions.

"We don't only offset for the emissions that we have, we offset an additional 10%" – Company 2 representative

"Yeah, we've had discussions about offsetting more than 100% of our emissions. We haven't arrived at a conclusion there quite yet, but I'm fond of the idea of, for instance offsetting 110%" – Company 6 representative

A common theme in the interviews was that offsetting is often used to 'cancel out' emissions that are seen by companies as difficult, or impossible from a practical and cost-effective standpoint. Industries are subject to differing circumstances, making it more or less difficult to take action in a timely manner, or are more or less dependent on materials that will produce GHGs during production. More often than not, companies make the choice of offsetting these residual emissions because they feel a desire to do so, as a way of alleviating the impact they have on the climate, not because they are required to by law.

"But what it means is that we don't only offset the emissions we generate, but an additional ten percent. Because I think it's not enough to just reduce emissions if you want to reach the Paris Agreement's reduction goals" – Company 2 representative

"When we choose certain materials, we can choose options that are manufactured in a better way and re-use more materials. But even if we do that we will most likely still have emissions when we operate in the future" – Company 5 representative

"Our industry has very stringent regulatory and safety requirements meaning that there are quite long lead times when we try to work with new recyclable materials or changes in processes etcetera, because any changes have to be approved by regulatory authorities" – Company 12 representative

How companies define what constitutes residual emissions differ among the company representatives. Some have a wider perspective, including emissions that can be avoided but where it may be out of their control or not financially viable. Others define it as the emissions that remain after having exhausted all opportunities to abate and reduce emissions. Often the two types overlapped, for instance Scope 3 emissions where certain materials and services purchased cannot avoid emissions.

"After having worked through our supply chain, we get to priority number three, which is planting trees to offset the emissions that despite all efforts, still occur. What constitutes such emissions is of course a topic of debate in and of itself" – Company 2 representative

"We can't be carbon neutral as an industry" – Company 4 representative

"From now until 2045 offsetting will be a smaller and smaller part as we reduce our Scope 3 emissions" – Company 12 representative

Companies therefore invest substantial resources into a tool they deem short term, or transitional, including offsetting beyond their emissions, as well as hiring employees with the specific intent of managing the tool.

"It is a partnership. Yes, we are pretty involved in each other so to speak." – Company 2 representative

"We have full-time employees who only work with this [offsetting]" – Company 12 representative

4.2.3.3 Offsetting Specific Business Areas

Some organisations offset emissions stemming from specific parts of the business, commonly business trips and transports, but sometimes also larger and more central parts of their operations. In general, the areas of their business that were offset were clearly specified and, in a sense, made peripheral in the larger Scope of their sustainability strategy.

"[Employee 1]: Yes and we have some transports that run on fossil fuels because we import a lot. We have transport by car, railway and boat. A lot with boats, and then we offset these parts. [Employee 2]: And also business travel, yes." – Company 3 representative

Yes and that's how it is, otherwise what we offset today is basically business flight travel and then we purchase forest from [carbon offset provider] so" – Company 5 representative

"We measure this and that's when [offset provider] comes into play and we measure tonne [carbon] kilometres, what we transport, how much, how many kilometres each tonne transports so to speak, and that there are numbers for everything. Then, we see through it to offset everything. – Company 6 representative

"There is a possibility. For instance, in these agreements for freight transports there exists in the agreements the possibility of offsetting to make the transports green, so we have the option." – Company 7 representative

Furthermore, there was a tendency among organisations to not have clear mitigation or abatement plans for the emissions in that part of the business. Often in those cases, there was no clear plan for how to get out of that situation, it was portrayed as a waiting game or that it is an impossibility for their operations, for the time being.

"Well, as long as we have emissions we will offset them and at the moment, there are no fossil fuel free solutions on all fronts since you can't get all your transports fossil free. But for example today, we try to choose the modes of transport that emit the least emissions, like boats instead of car, or train instead of car." – Company 3 representative

"[how they try to avoid using flight travel, which they offset] Well, there is a section in the company's travel policy to avoid travel by flight, but I also wonder if it also is when… Okay I'm a bit unsure now but I believe they implemented something where the manager needs to sign off before you book a flight." – Company 5 representative

"[on their own work to reduce emissions] Yes, we have continuous dialogues with our transport suppliers. And yes, we have no partners today that do not have a good plan, but I don't think it will be the reason for choosing a transportation company." – Company 6 representative

"We have a lot of different companies, but in general we have a lot of suppliers in the far east or like from Asia. I mean, it's a choice to do something we have discussed, and we chose to do an investment with our business in Asia and we believe that it is the best solution for us at the moment." – Company 7 representative

An additional common theme that was present generally among the sample of companies is the notion of "outsourcing" the sustainability responsibility, either to consumers, customers, suppliers or even other group companies within larger organisations. A common way of leaving the final decision to others also is to offer the sustainable option, either with or without incentive, and then avoid enforcing it in the end.

"But everything is optional. It is not like we need to do these things [mitigate emissions at the transports from their suppliers] but we say that if you do this, we pay more money" – Company 3 representative

"Yes, but in some way it is aimed towards those [within the company] that choose to fly. [...] If you choose to fly you have to be aware of the cost for it." – Company 5 representative

"Not from our side, but it is the transporting companies that do all that. And of course, they optimise based on their own needs." – Company 6 representative

"But the customer behaviour wasn't really there [when a sustainable product was offered, and why it later was removed from the product line]." – Company 9 representative

5. Analysis and Discussion

The analysis is divided into three parts, as Figure 1 shows. The analysis will go through the themes generated from the Gioia method, as well as the triangulation of data from public resources, providing sufficient information regarding companies' choice of utilising or abstaining, carbon offsetting, and the part it plays in shaping mitigation efforts. The analysis will run through the themes in the form of a chain of events observable in the study that play a part in companies' climate interventions. Following the analysis of the empirical findings, the chapter will be concluded with a general discussion of the findings and their implications.

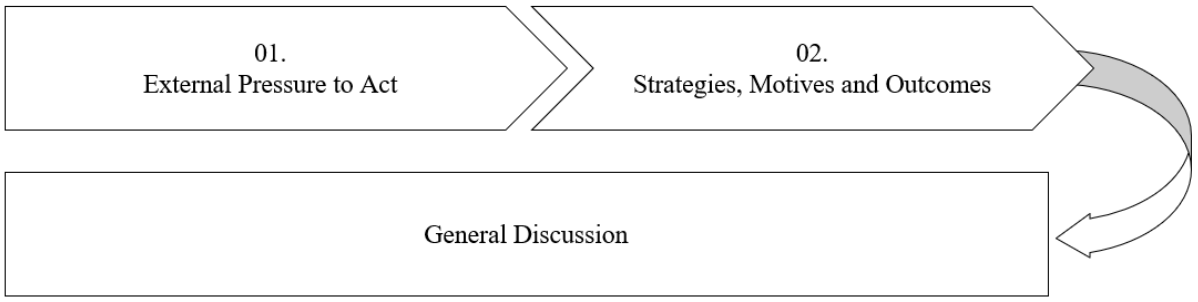

Figure 1: Structure of the analysis and discussion

5.1 Data Analysis

The application of the Gioia method (see 3.3 Data Analysis) led to the data structure seen in Figure 2.

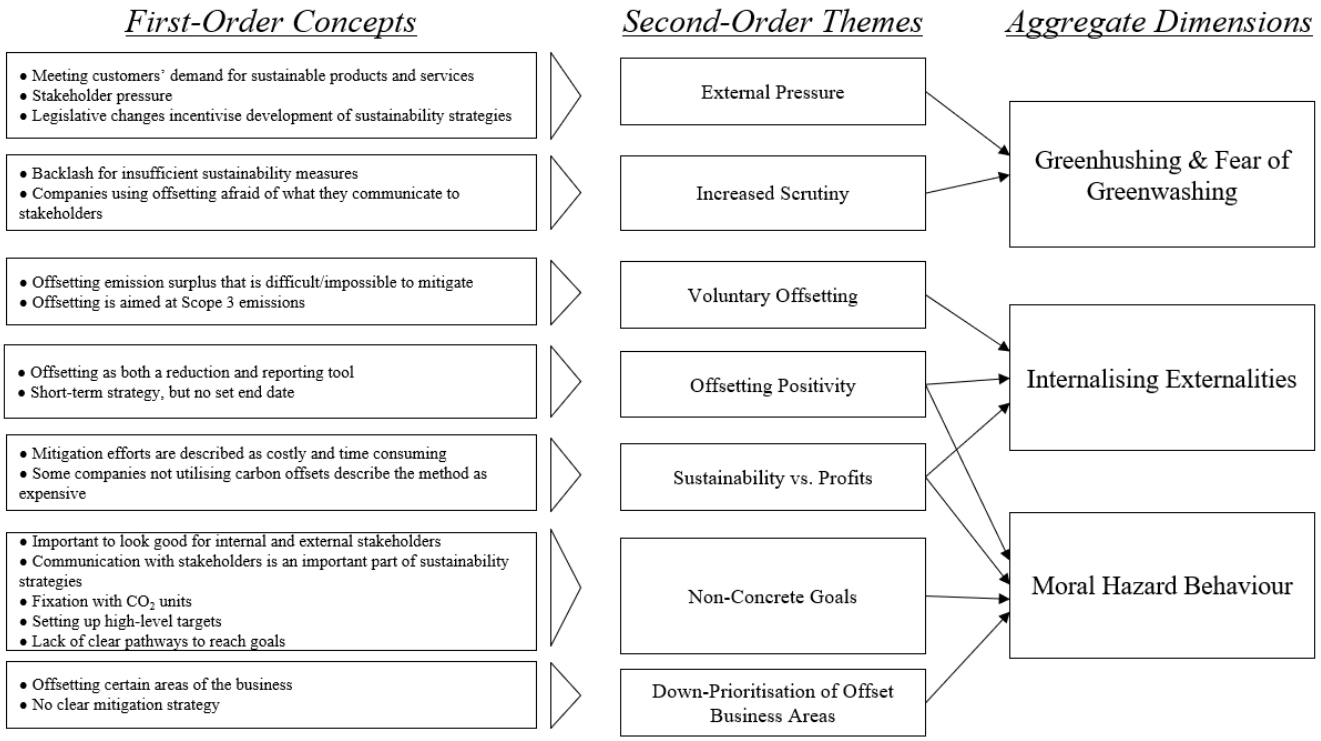

Figure 2: Data Structure Themes From the Gioia Method

External pressures to address climate change transparently, stemming from customer demands, a legislative focus on sustainability and pressure from other stakeholders was revealed. However, company representatives simultaneously emphasised the risks of severe backlash and expressed caution when communicating corporate sustainability initiatives, revealing another phenomenon known as greenhushing. This increasing scrutiny appeared to heighten the challenge of maintaining transparency while avoiding accusations of greenwashing, creating a delicate balance.

Furthermore, the data revealed that companies are increasingly viewing sustainability as a key competitive factor, motivating many organisations to go beyond mandatory legislative requirements. For many organisations in the sample, this involved voluntary offsetting, particularly for Scope 3 emissions beyond their direct control. Offsetting was also seen to serve another purpose – to improve the looks of the numbers in sustainability reports, emphasising the importance of stakeholder communication. Many company representatives saw offsetting as a short-term strategy with no set end date, reflecting a broader trend among organisations seeking to internalise the negative externalities of their operations. Cost considerations also emerged as a factor making offsetting a convenient option, as organisations want sustainability and profitability to go hand-in-hand, with mitigation efforts often entailing significant cost increases compared to offsetting. Despite the latter, a small portion of the interview sample thought the opposite, perhaps seeing mitigation spending as investments that generate improvement and offsetting as a simple cost without improvement value.

On a similar note, the emphasis on cost also influenced the choice of intervention, where cost-efficiency was sometimes prioritised over genuine impact. Further, it was expressed that looking good towards stakeholders is important, in which communication is a pivotal part. Companies main form of communication regarding sustainability was the sustainability reports which often led to a fixation on CO_2 units or units of CO_2 equivalents to make it easily comprehensible for stakeholders. This simplification often led to high-level and ambitious goals, not seldomly lacking clear short-term objectives. These factors, alone and on an aggregate level, resulted in what could be seen as non-concrete goals, where it is difficult to decipher whether the purpose is to look good, make change, or a combination of the two – regardless, whichever comes first may tell where the core of the motives lie. Lastly, the way in which organisations use offsetting differs and we could identify two categories among offsetters – (1) those that offset all of their residual emissions and (2) those that offset specific part(s) of their business, often lacking a clear plan to mitigate and reduce dependence on offsets in those areas. This disparity indicated a possible tendency to prioritise offsetting over mitigation in the latter case. In sum, these factors hinted at outcomes resembling moral hazard situations where business-as-usual may be maintained behind the good-looking facade. It is important to note that while outcomes may raise questions regarding the motives, they do not necessarily imply dubious intent as unintentional outcomes are a possibility.

5.1.1 Pressure and Scrutiny: When Companies Are Faced With a Balancing Act

The external pressure to act reflects the stakeholders' expectations on what companies should do with regards to climate intervention. In the empirical material, it came forth as a pertinent factor in driving the mapping of emissions, shaping of sustainability strategies and the subsequent intervention choices resulting from the mapping and strategies. This external pressure appeared to affect different companies in different ways, resembling some sort of mechanism bridging the gap between shareholder value and broader stakeholder value. However, there is a risk, as noted by Christiansen et al.,[106] of organisations prioritising intervention framing over actual impact, such as the superficial impact of the green energy certificates. The transparency requirements and incredulousness towards organisations that appear to be hiding something resemble the effects anticipated by Holmström,[107] in that the information asymmetry is being countered by:

A. Requiring organisations to be transparent, triggering a domino reaction, as one company representative testified, that soars through the entire value chain.
B. The adverse effects that may arise whenever a company receives backlash for insufficient action.

This was prominent in the empirics as many companies touched upon the fine balance between being open whilst simultaneously careful with what they share in order to avoid allegations of greenwashing. This was particularly true to organisations that engage in carbon offsetting. This could suggest that carbon offsetting as a means to reduce one's negative impact on the climate is still a frowned-upon method that is distrusted by the public and consequently many organisations, echoing the findings of Hildén.[108] This also enforces the notion of climate change sharing fundamental characteristics with the principal-agent problem of moral hazard, as suggested by IPCC[109] and Millard-Ball.[110] However, it might be wise to be cautious and hesitant to take these effects at face value without digging deeper into the phenomenon.

When dissecting the empirical material further, another side can be found. While the pressure and scrutiny appears to have changed the playing field, it has not appeared to change the game. It is still an environment characterised by information asymmetry that is seemingly being exploited. It has evolved into greenhushing wherever the effects of interventions would be dubious (and even in some cases where the effects are not dubious). This points in the direction of Hildén[111] and substantiates the notion that organisations do not fully trust or identify with carbon offsetting. This was observable even among companies that use offsetting. In the interviews, one explanation emerged that could be pertinent to clarify why such mistrust and lack of identification with offsetting; that offsetting as a concept is often

[106] Christiansen et al., 2023
[107] Holmström, 1979
[108] Hildén, 2020
[109] IPCC, 2014
[110] Millard-Ball, 2012
[111] Hildén, 2020

misunderstood and consequently underutilised or used in an inappropriate manner. Another possible explanation that was given in the interviews was the legitimacy issues with offsetting, linking back to the findings of Wara and Victor;[112] Lovell;[113] Gifford;[114] and Watt.[115] Interestingly, this scepticism was seen not only by organisations that do not use offsetting, but also among organisations that do offset emissions.

What we could see in this new playing field, was the emergence of two primary, non-mutually exclusive ways of dealing with these new conditions. It appears as companies:

A. Tread more lightly, are more thorough and cautious.
B. Surround corporate sustainability initiatives with carefully orchestrated narratives to put themselves in a good light and avoid scrutiny.

In the case of the former, one company representative specifically reflected that being more cautious and thorough may be good at the end of the day in the sense that while it may take more time and slow down work, it is also more likely to result in more effective interventions. Hence, this illustrates a double-edged sword that on the one side results in outcomes that may imply better sustainability work and on the other side generate more complex and potentially disguising narratives. These could be regarded as two potential defensive strategies developed to counter the risks associated with this shift in conditions. One company representative specifically reflected upon that the level of intrinsic versus extrinsic motivation to tackle climate change within the organisation may influence which strategy a company deploys.

Media attention appeared to affect the level of motivation within organisations, which indirectly aligns with what previous literature[116] predicts in wider terms. What deviates from previous literature here is that a specific domain is pointed out and the effects within it can be observed more clearly. Companies that admitted to having been criticised in the media usually responded by pivoting in their sustainability strategies. It would be difficult to decipher whether or not this is caused by an increase in intrinsic motivation to do good, or if it is caused solely by the negative consequences on business that any such backlash results in. More commonly mentioned in the interviews, was the positive media attention that organisations received, testifying of strong morality boosts along with them. The common denominator for the two is the media attention. This indicates that public appearance, and the subsequent reaction, is of great importance to companies and their strategic direction onwards, in line with Lovell et al.[117], Corbera and Brown,[118] and Watt.[119] This is also reflected in the data by the increasing emphasis on sustainability reports and the communication of

[112] Wara & Victor, 2008
[113] Lovell, 2010
[114] Gifford, 2020
[115] Watt, 2021
[116] Christiansen et al., 2023; Lovell et al., 2009; Watt, 2017; Corbera & Brown, 2009
[117] Lovell et al., 2009
[118] Corbera & Brown, 2009
[119] Watt, 2017

sustainability work. This could once again point at the risk of dubious motives – whether or not it is for appearances' sake alone. On a similar note, it could also point out that while there may be limited mitigation potential within the offsetting realm, it may have commercial potential which might be what organisations are attempting to capture instead of the former. Scrutiny and increasing demands on transparency also pertains to Offsetting Providers. Consequently, one would expect to find similar survival strategies among them. Indeed, they too surround themselves with beneficial narratives and cherry pick what to share with customers, as to be expected following the findings of Corbera and Brown.[120]

The data also underscores the pressure experienced by companies from their immediate customers and end consumers, shaping the way their climate sustainability strategies and mitigation efforts are formed. Customers directly pressure companies to act and consequently sustainability has become a key factor, or even an essential hygiene factor, in the product and service offerings. This dual pressure indicates that sustainability efforts are not solely about meeting customer demands but can be critical for business survival. However, a discrepancy between how customers and end consumers vocally express themselves versus how they act in practice emerged from the data. Several companies testified that customers could explicitly demand or seek sustainable solutions, but still prioritise cost or already learned behaviour when push comes to shove. How this impacts the way companies choose to formulate their climate sustainability strategies is difficult to decipher. Companies dealing with such inconsistencies have a need to balance external pressures with customer demands which is not an easy task as 'looking good' externally may not always align with satisfying customer needs.

In addition, what has not, to the authors' knowledge, been addressed in previous literature on carbon offsetting or climate mitigation are various voluntary initiatives and their impact on corporate sustainability initiatives. Several companies that both did and did not offset any of their emissions had committed to various sustainability initiatives, where the SBTi was the most recurring. Initiatives such as this are substantial commitments for a business to make and they have a domino effect that trickles along the entire value chain, where other companies follow-suit. Since SBTi does not count the use of carbon offsets as a legitimate tool to reach their set goals and principles,[121] it could hint at new leads to distinguish whether motives behind using carbon offsetting are purely business-oriented or more genuine. One could expect that offsetters with pure business-oriented purposes (e.g. marketing purposes) would seize the purchase of offsets. Though, so long as offsets can be utilised in official carbon accounting, incentives may still remain to maintain them in one's toolbox for the sustainability reporting even for the most business-oriented. Hence, it is difficult to discern, the motives for utilising offsets in conjunction with a commitment to SBTi, could be seen as an argument for genuine motives to use offsets.

Furthermore, a significant information asymmetry could be seen in the relation between offset providers and buyers, favouring offsetting providers in shaping selling narratives. The

[120] Corbera & Brown, 2009
[121] Science Based Targets initiative

empirics shed a light on a discrepancy between the motives of offset providers and the motives of the offset buyer, where offset providers seemed to be focusing on laying a foundation for a future where they would be producing and selling biomaterials and fuels that are today seen as the bi-product of offsetting projects. The offset buyers on the other hand, seemed to regard it mostly as a short-term tool to aid in transitioning. This misalignment in motives may intensify the risks of moral hazard from the point-of-view of the offset providers who are incentivised to keep companies purchasing offsets for long enough to create a market for their bi-products. This is something that has not been well-documented in previous studies and could be worth looking into in another study. In a speculative manner, one could thus be concerned that this also implies incentives to overstate project narratives due to low customer insight and involvement. This could be a relevant factor as to why offsets are still frowned-upon by many organisations as well as why the level of trust is low even among companies that use offsets.

5.1.2 Strategies, Motives and Outcomes

The empirical data strengthens the belief of what Lovell, Bulkeley and Liverman;[122] and also Watt[123] found, namely that organisations surround themselves with beneficial narratives. This could lead to questioning the motives behind the intervention, or rather, the framing of intervention. This may also spur reflection around the 'attraction of delay' as mentioned by McLaren et al.,[124] namely that it could be interpreted as such that organisations would benefit from delaying the costs of transitioning today and offset instead.

Another note that resonated in the data was a concern in line with that of Andrews et al.[125] that fixation on offsetting measures prematurely may result in less reduction and mitigation efforts, which would highlight the notion that the anticipation of moral hazard situations could be pertinent in understanding how carbon offsetting may affect the rollout of other voluntary mitigation efforts. However, in order to grasp the motives behind climate interventions, there are a few factors that could be of relevance to consider as they emerged as important in the data.

Firstly, the dependence on capital investments in the existing technological paradigm. As Morgan and McCoy;[126] and Anderson[127] mention, many companies are dependent on large investments in the old equilibrium and this vast capital stock cannot be replaced overnight, making the attraction of delay[128] even more attractive. Hence, some industries are affected by larger degrees of inertia with regards to large fixed investments that affect their ability to change fast. However, it became apparent that this argument does not hold entirely true in practice. Among the industries represented in the sample, there were companies with large capital stock in the existing technological paradigm. What these companies showed was that

[122] Lovell et al., 2009
[123] Watt, 2017
[124] McLaren et al. 2021
[125] Andrews et al. 2022
[126] Morgan & McCoy, 2012
[127] Anderson, 2012
[128] McLaren et al. 2021

while they cannot change everything overnight, they can modify what they have already done to be kinder to the climate whilst simultaneously designing any future work entirely from environmental sustainability principles.

Secondly and not as thoroughly reflected in previous literature, the industry of the organisation in question. All industries have different conditions from which they work, naturally this also applies to working with climate change. Some industries represented in the sample could be considered such that the fundamental characteristics of the industry involve a certain degree of GHG emissions that are not technologically dependent. An example of this is dairy or meat production – it would be quite a strenuous task, if not impossible, to prevent animals from "breaking wind". Hence, for industries like these, offsets may be the only viable option, subsequently playing a different role than for other companies – if and only if current business models are to be preserved, which is a topic in and of itself that is worth exploring. What embroils things further for companies in these industries is that the emissions stemming from, e.g. livestock holdings are usually uncontestedly the largest emission post. In other instances, the mitigation technologies and methods available were described as immature, costly and/or resource-intensive, hampering the possibility of financially viable sustainability investments. This can be an important factor to take into account when analysing sustainability work since it affects how they work without necessarily affecting the motives behind their choices.

The empirics suggest that the underlying motives behind intervention choices may vary depending on if actors are intrinsically or extrinsically motivated with regards to the green transition and combating climate change, where extrinsically motivated may be seen as inclined towards revenue-maximisation; and intrinsically motivated could be seen as focusing predominantly on impact driven by an internal desire to address climate change, rather than to maximise commercial potential – not necessarily assuming they cannot coincide. The data shows signs that in the case of less intrinsically motivated organisations, the motives behind voluntary efforts are different and perhaps more business-oriented in the sense that cost and convenience are criteria that assume higher positions in comparison with more intrinsically motivated organisations. In the case of the less intrinsically motivated organisation, it may thus be arduous to distinguish between what constitutes a dubious motive and what unintentionally ends up becoming an ineffective intervention that is framed beneficially in corporate communication with stakeholders. This distinction adds nuance to previous assumptions of inherent revenue-maximisation in corporate behaviour.

5.1.2.1 Motives Among Companies That Offset

The data also reveals a necessary distinction between companies that offset emissions throughout the entire value chain and companies that use offsetting only to alleviate climatic impact from specific parts of their business. Companies that offset emissions throughout their entire value chain appeared to integrate it deeply into their overall sustainability strategy, with clear plans for reducing the reliance on offsets as mitigation efforts progress. Companies offsetting only parts of their emissions exhibit less integration, potentially reflecting a lack of

initiative to mitigate or abate those emissions. This could suggest that the way in which offsets are used may give insight into the motives behind voluntary climate intervention choices and how the use of offsetting may affect the companies' voluntary mitigation efforts.

As emphasised by the literature, the Climate Scientist, companies as well as the Carbon Offset Providers, there is a clear and widely accepted mitigation hierarchy (avoid, reduce, offset). Companies that offset their residual emissions typically adhere to this hierarchy, setting clear long term goals supported with shorter term goals and offsetting only what emissions cannot currently be reduced or abated. Adding to that, they often distinguished themselves by proving to be significantly invested into their offsetting usage, dedicating specific employees to managing the partnership with the offset provider(s).

Companies that offset a designated part of their business often diverged from the mitigation hierarchy and lacked concrete short-term objectives to support their overall long-term goals. Their goal formulation, evident in the interviews and online resources, were vaguely formulated and often communicated as distant aspirations. This was particularly noticeable when discussing the specific business areas that were offset, which was often transports or business trips. Little efforts were made at the companies to stop employees from travelling by plane for short, national business trips. Adding to that, little was made in terms of rerouting transports, putting pressure on transport companies or sourcing suppliers locally, all along the notion as discussed by Anderson.[129] Furthermore, even though there may have been a more responsible alternative to these business areas, a recurring theme was to "outsource" the responsibility of choice to someone else. Some companies gave the choice of travel to the employees, and therefore argued that the amount of sustainable consideration was up to each and every employee's personal preference. Companies that utilised vast logistical networks either justified their choice of suppliers and/or way of transport, or justified the choice of transport companies and those companies' sustainability strategies.

5.1.2.2 Motives Among Companies That Do Not Offset

Among companies not utilising offsets, two distinct underlying factors emerged: (1) a lack of knowledge and (2) critical approach. The first, revolves around the few companies without any clearly distinguishable sustainability strategy in the first place. Their reasons for not offsetting were often vague, and their knowledge about both global warming, and what carbon offsets are, could be considered inadequate. Occasionally it was also due to companies still being in the stage of formulating their initial sustainability strategy. In those cases, their general strategic direction and goal-setting was yet to be set, leaving little room for further speculation.

The second factor concerns companies that had well-developed sustainability strategies. While these firms often dismissed carbon offsets for similar reasons to each other, knowledge about carbon offsets varied. They did, however, often express a more nuanced debate as to whether offsets truly were the right way for them to address sustainability. One company

[129] Anderson, 2012

representative argued that carbon offsets would be more expensive for them than actually reducing their emissions – perhaps thinking of mitigation investments as value-creating and of offsets as a pure cost with no value-add potential internally, however, no one else in the sample seemed to share that view. More interestingly, some companies problematised the uncertainty with carbon offsets and if they actually offset the amount of CO_2 they claim, as well as the doubtful social benefits that they claim to bring versus what they actually bring (or do not bring), echoing the concerns raised by Lovell and Watt;[130] and Corbera and Brown.[131] With regards to the claimed social benefits of offsetting schemes, the Climate Scientist expressed concern that the case in many offset schemes is that these claimed social and environmental benefits can often be considered low-hanging fruit, especially when the offsetting scheme is conducted in poorer parts of the world – arguing that the wealthy part of the world must leave the low hanging fruit to the poorer countries and deal with the more complex, technologically and financially straining issues in the first hand. This also underscores the role that stakeholder communication appears to be playing in the choice of intervention, i.e. some sort of cost-benefit calculation in how the efforts can be utilised for commercial purposes. Offsetting providers seem to be aware of this and use it to elevate their offerings to companies.

5.1.2.3 Outcomes

When critically assessing the companies that utilise carbon offsets in their sustainability strategies and those who do not, it is evident that carbon offsetting does not automatically imply a push in any particular direction on either a company's sustainability strategy or their mitigation efforts. What instead sparks interest is the circumstances surrounding each company that uses offsets and how that may have an impact on the companies' mitigation efforts, which has been addressed to a limited extent by Anderson.[132] When asked about their true intention with the use of offsets, companies offsetting all residual emissions more often than not emphasised a downscaling use of offsets. Furthermore, they clarified that the offset emissions were difficult, or nearly impossible, to avoid or reduce at the current point in time. Based on this, there is no indication that utilising offsets shapes the mitigation efforts of those companies. There may, of course, be either a negative or positive impact in reality. This however, is difficult to decipher from the data.

Under certain circumstances, where carbon offsets target specific business areas, we find that it may influence a company's mitigation efforts, a point not extensively addressed in previous literature. Firstly, the lack of clear targets and mitigation plans for these specific business areas could portray a sense of reluctance to change, or at the very least postponing change which in that sense would resonate with McLaren et al.[133] When asked about what the companies did to mitigate the emissions from these areas, the answers often revolved around other people's choices, that it was up to the providers of the service or some other justification. Few companies presented a timeline for reducing dependence on offsets for

[130] Lovell, 2010; Watt, 2021
[131] Corbera & Brown, 2009
[132] Anderson, 2012
[133] McLaren et al. 2021

these business areas. Instead, they circled around their recent policy changes or that the direction/choice of the company is set, for the time being.

It is difficult to decipher how the use of carbon offsets influences mitigation efforts in these companies. There may be a reality where the absence of carbon offsets as a tool instead would mean that business continues as usual, and that the emissions from the specific business areas continues. However, the data reveals a contrast in the presentation of long and short-term environmental sustainability strategies between companies using carbon offsets in this way versus those that utilise it to internalise their externalities and offset their residual emissions.

The data shows no signs of companies seeing offsetting and mitigation as equal, which according to Anderson[134] would imply that offsetting should not act as a disincentive to move towards lower carbon technologies and behaviours. Nevertheless, there were certain circumstances observable in the data which would suggest the opposite to be true. There was a clear distinction observable in the data between the attitudes of those companies that utilised offsets, and those who did not. Specifically, companies utilising offsets generally had a positive attitude towards offsetting, while the opposite generally was expressed by the companies not utilising offsets – perhaps not unexpected. This could be the case for various reasons, all not explicitly decipherable in the data. It could however point at the fixation with narratives, lifted by many academic scholars.[135] At the very least, companies are not hesitant to defend the choice they have made, probably with good reason, whilst being critical of choices they have dismissed. Adding to this finding, a few company representatives stated that offsets were irrelevant for their businesses, and one even stated that it "has never been our way of doing things" – despite having previously intended to use offsets as a tool in their sustainability strategy before receiving backlash and deciding not to. The reason for these three respondents' definite statements could be because of poor knowledge about their company's previous engagements, poor internal knowledge-sharing within the companies, or in order to instil and strengthen their narrative – being critical of the dismissed options, even to the point of denial.

The data also visualised that companies utilising offsets were not hesitant to acknowledge the verification of their offsets, strengthening the external narrative and positive attitude towards offsetting. This is an interesting distinction from what the various offset providers stated regarding current state of verification schemes for carbon offsets in the market. Offset Provider A distinctly stated that reliable verification methods do not exist, and that the verifications stated by various actors are made by independent organisations without central governance. On the other hand, but in the same argumentative direction, Offset Provider B stated that the only tool assessing the quality and credibility of offsets today is validation methodologies, meaning that the validation needs to be verified in due time, when the promised carbon storage can be confirmed. This discrepancy between companies' and offset

[134] Anderson, 2012
[135] Lovell et al., 2009; Watt, 2017

providers' stated offset credibility could be due to a complicated language barrier (as previously discussed in Section 2.3), but could once again be likened with companies wanting to strengthen their own narrative. The company representatives' questionable knowledge about both carbon offsetting specifically, and environmental sustainability in general, could be a plausible explanation as well, shadowing the discrepancy in even more uncertainty.

5.2 General Discussion

In the following section, we will proceed to critically discuss the empirical findings and the results of the analysis with regards to their relevance to the main purpose and research question of this study.

5.2.1 Greenhushing and Fear of Greenwashing – A Balancing Act With Conflicting Interests

From the analysis above, some insights can be deciphered:

First, external pressure and scrutiny appears to have a significant influence in shaping environmental sustainability strategies. As a result, companies seem to navigate between treading cautiously or generating beneficial narratives aimed at reflecting various levels of intrinsic motivation and underlying motives. These strategies ultimately reflect efforts to mitigate risks in a stringently observed environment, where information asymmetry leaves opportunity for one party to use their information-edge to favour their interests. Nevertheless, this is a fast-changing landscape and new legislation is continuously developed to stabilise it. One such emerging legislation that may change the nature of the narrative strategy for companies is the EU's Green Claims Directive, which recognises the absence of rules on claims regarding the "green nature" of products. This directive will "require companies to substantiate the voluntary green claims they make in business-to-consumer commercial practices". It could be argued that this directive will, through the lens of the findings of this study, likely alter the commercial potential in carbon offsets and consequently the way in which they are used today. However, one could simultaneously argue that the public scrutiny and the role that greenwashing allegations and a "consumer boycott" plays today already fulfils that purpose. But, it is worth noting the Green Claims Directive and its potential effect on the carbon offset landscape as it, by its likelihood of altering the commercial potential of carbon offsets, may limit the opportunities further for organisations to partake in offsetting schemes for commercial gain. One could speculate that this would also have an effect on reducing the risk for moral hazard in corporate sustainability. What the effects of this directive will be remains to be seen.

Second, what appears to be affecting the motivations is the impact of media attention. Companies facing media criticism often pivot their sustainability strategies. It is difficult to decipher whether the pivot is resulting from a boost in intrinsic motivation or from business-oriented motives as a result of the backlash – or a combination of the two.

Conversely, positive media attention appears to boost morale and instil a sense of moral purpose. Regardless of whether it is positive or negative, it underscores the perceived importance of public perception among companies. This could raise questions about the authenticity of the motives behind such actions. One company representative reflected that the choice of intervention may depend on the degree of intrinsic motivation existing within the company, going hand-in-hand with the underlying motives. Assuming that is true, this could imply that intrinsically motivated organisations may be less likely to surround themselves with narratives and more likely to be more thorough. Regardless, it resembles situations where asymmetric information can be used to favour one party's interests over other parties' interests. What may be unclear, however, is applying the concepts of intrinsic and extrinsic motivation on an organisational entity, as the organisation in and of itself is incapable to act and possess a motivation. Rather, it could be argued that the actions stem from the leadership and employees, individuals who can be of varying degree of intrinsic and extrinsic motivation as well as have differing priorities. Since there are many different functions involved in the decision-making organs of organisations, one could assume that the decision-output reflects some sort of aggregate motivational-level.

Third, while customers are part of the broader stakeholder umbrella term, they exert a different kind of influence in terms of putting direct pressure sometimes determining whether you get the business at all. Nevertheless, the vocal expressions of the customers differ from their actions in many cases, as they are shown to still prioritise cost and/or convenience over environmental sustainability when push comes to shove. This dissonance presents a challenge for companies in formulating effective sustainability strategies. Balancing the external pressure to appear environmentally responsible with meeting customer desires for sustainable solutions poses a dilemma where companies need to navigate between external perceptions and customer preferences. This could spur reflection on whether and how this may influence organisations' interventions – if one aims to be just good enough to keep a good appearance, but cheap enough to not dissatisfy the customer whilst similar enough to not inconvenience the customer, it may not be the recipe for impactful intervention.

Fourth, a growing number of organisations are embracing the SBTi, which implies that offset emissions cannot count towards their targets. When companies commit to these, it ripples through value chains prompting others to commit as well. This puts offsets in a different light among companies that use offsets despite committing to SBTi and could potentially point in a direction where the underlying motives of using offsets are more genuine as it cannot contribute to the targets set through SBTi. However, offsets can still be a useful marketing tool, leaving the question as to whether initiatives such as SBTi renders companies less suspicious unanswered for now.

Fifth, it is also worth taking up the discussion of residual emissions as there is no universal definition of this in academic literature, which is evidently also the case in the practitioner's landscape – perhaps making into a subjective term, where the residual is what is inconvenient or financially unviable to the decision-maker at the time.

Lastly, misalignment in motives and interests in conjunction with asymmetric information also exists between Offset Providers and the buy-side, a dynamic which contributes to the ongoing scepticism and low trust surrounding offsetting practices.

5.2.2 Internalising Externalities – Where Moral Hazard Meets Climate Change

From the pressure and subsequent intention to act emerges motives, strategies and outcomes which will be discussed below.

While dubious motives are not guaranteed in situations resembling moral hazard, the distinction between dubious motives and ineffective interventions framed positively in corporate communications is still blurry, making it difficult to decipher whether or not intentions are genuine. There are also signs of an attraction of delay which could result in offerings like offsets being a convenient choice to delay expensive overhauls for later, in that sense substituting deep mitigation today with offsetting.

To truly understand the motives behind climate interventions, one should consider some factors that determine the conditions from which organisations work. Namely, the nature of the industry and the dependence on capital investments in the old system. These two will likely play a role in delimiting what can be done, giving offsetting a different role than in other organisations that have less stringent limitations. However, as seen, where there is a will there is a way – as companies in industries exhibiting such characteristics have shown that mitigation is still possible. This could point at such factors being something that other organisations hide behind as a way to say “my hands are tied for now”.

In the interviews, a few respondents mentioned market studies performed by industry organisations, claiming that companies that offset also tend to do more to reduce their emissions. However, such a direct link between the use of offsetting and corporate climate leadership was not visible in the data, hence we cannot confirm whether this might be the case.

6. Conclusion

In this chapter, the research question will be answered. Further, we will discuss the theoretical contributions, practical implications and limitations of this study, concluding with suggested future research. Based on the available literature of the subject, as well as the methodology chosen, the research question was formalised as:

Can the use of carbon offsetting, as an option in a company's sustainability strategy, shape its voluntary (as opposed to mandated) climate mitigation efforts?

We found the use of carbon offsetting not to be a contributing factor to shape voluntary mitigation efforts in general. However, under certain circumstances it appears that it can shape companies' voluntary mitigation efforts. Hence, the answer deriving from this thesis is twofold, as visualised by Figure 3. In line with our inductive approach, this visualisation serves as a systematisation of the observations that can be made based on the returns to the interviews conducted. As such, the situation described in Figure 3 can be regarded as a set of relationships that might serve as future input for hypotheses to be tested.

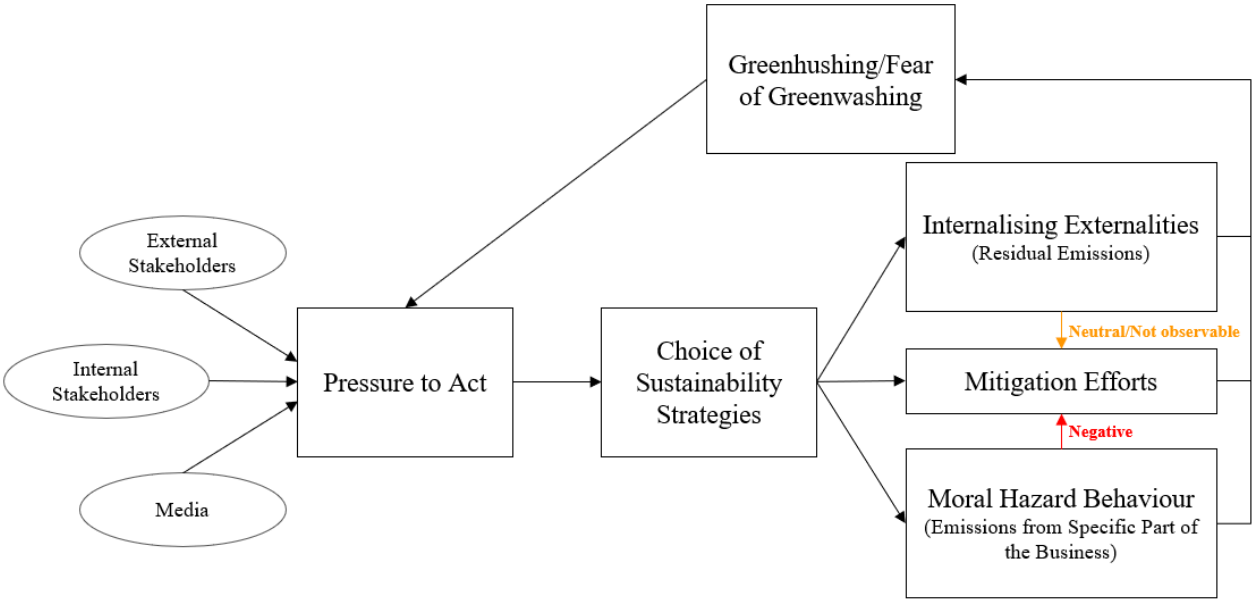

Figure 3: Visualisation of the main findings

Firstly, a distinction was made in the analysis to accentuate the circumstances surrounding the various companies in the sample, thereby shaping how the research question is answered. Two distinct ways of utilising offsets as a tool in companies' environmental sustainability strategies were observable: using offsets to reduce the climate footprint from residual emissions across the value chain; and using offsets to reduce the climate footprint from specific areas of the business. In the first case, the use of carbon offsets did not seem to shape the companies' voluntary climate mitigation efforts in our empirical findings. To the very least, it was not evident in the data and hence not observable in the analysis. In the visualisation it is therefore presented as "neutral/not observable". In the latter case however,

the use of carbon offsets did seem to shape the companies' voluntary mitigation efforts for the business areas that specifically were offset. In the data, and the subsequent analysis, the specific business areas were down-prioritised and mitigation efforts from the companies were limited. In the visualisation it is therefore presented as "negative".

Secondly, a factor was discovered that indirectly shaped companies' voluntary mitigation efforts, relevant for all companies in the sample. External and internal pressure to act sustainably was evident in the sample, with customers, shareholders, the media and other stakeholders all playing a contributing role. Furthermore, a company's inability to act sustainably, or engaging sustainably in the "wrong way", often led to scrutiny both in public and internally. On the other hand, acting sustainably, and doing so in the desired way, often leads to public praise, raising internal morale to further engage in environmental sustainability. Consequently, the fear of what might happen if their companies proved unable to run their business in an environmentally sustainable manner that also was accepted by the public, or the desire for public praise if they prove to be able to, seemed to have an effect in what environmental sustainability strategy was chosen. As a result, greenwashing and the fear of greenwashing, leading to greenhushing, contributed to the pressure to act sustainably experienced by the companies, which in turn contributed to the choice of environmental sustainability strategy. Therefore, it was deemed to have an indirect contribution to a company's voluntary mitigation efforts.

6.1 Theoretical Contributions

Several empirical findings were in line with existing literature and theory, contributing to enriching the current state of research. Firstly, the effects of external pressure on companies, and the subsequent actions derived from this pressure, was evident in the data. Companies act partly to appear "good" and therefore surround themselves with advantageous narratives. In turn, a risk of focusing on framing rather than practical effects when it comes to climate strategies is apparent, in line with previous research. Secondly, the public view of offsets is in line with several points of criticism in literature. Companies clearly expressed the various legitimacy crises of carbon offsets, as well as showcasing a reluctance to identify with the method fully, even if they already utilised it moderately. Thirdly, the attraction of delay seems to hold in several cases, where companies' investments in business infrastructure is one contributing factor. Lastly, the anticipation of moral hazard is evident in the data, in line with the theoretical lens applied to this thesis.

Adding to this, several findings did also either contradict previous literature, or was not apparent in the previous literature, to the authors' knowledge. Firstly, a domino effect that appeared to be caused by wide-spread commitments to environmental initiatives was a distinguishing feature when analysing companies' target-setting and cooperation across the value chain. This emerged itself as a theme in the data, but was not evident in previous literature. Furthermore, even though the opinions of carbon offsets are widely spread, the discrepancy of the intended role of carbon offsets in climate mitigation strategies differed among companies utilising and companies distributing carbon offsets. This was not evident in

the previous literature. Secondly, even if the literature emphasises the various angles of carbon offsets, the different intentions of using carbon offsetting deriving from whether it is intrinsically or extrinsically motivated, is not brought up. Specifically, if companies are intrinsically motivated to address climate change or if they do it as a response to external pressure.

Thirdly, under which circumstances companies utilise carbon offsets in different ways is not explicitly brought up in previous literature, which is the foundation of this thesis' main findings. Lastly, the notion brought up by Anderson[136] that if carbon offsetting is deemed unequal to mitigation, its availability shall not disincentive companies' mitigation efforts, does not hold in this data sample. This does not establish whether it is true in all cases or not. It does, however, establish that it is of interest to investigate under which circumstances it does hold.

6.2 Practical Implications

This thesis aims to contribute to on what grounds companies may choose to utilise carbon offsets in their environmental sustainability strategy, and how this may be a contributing factor to their voluntary mitigation efforts. In no way does the data allow us to conclude that carbon offsets are an adequate or ineffective tool to combat climate change, or even to reduce one's climate footprint. It does, however, show two usages of carbon offsets and the possible roles it may have in shaping companies' voluntary mitigation efforts.

Furthermore, this thesis is not constructed to provide a toolkit or a "best way" of using carbon offsets, but to merely shed light on a relatively unexplored field of meso-level studies and provide information based on observations that may, at the very least, inform companies about prospective possibilities and risks of carbon offsetting in one's organisation. We hope that the findings of this study may contribute as one of the points of consideration when evaluating if, and how, carbon offsets can be used in a business to reduce its climate footprint.

6.3 Limitations of the Study

Several limitations to the study have been identified. For methodological considerations, see 3. Methodology.

Due to the thesis' methodological design, the conclusions aim at presenting observable factors in the sample of companies that shape these companies' climate mitigation efforts, without claiming any generalisable inferences. Therefore, a limitation to the study is that it will, even though the main findings are of both theoretical and practical interest, be difficult to extend the findings to other samples with scientific certainty.

Furthermore, it is imperative to acknowledge that company representatives cannot be guaranteed to speak the entire truth, whether consciously or not, even if their anonymity was

[136] Anderson, 2012

guaranteed beforehand. Especially, since follow-up questions during the interviews often could be considered critical, or at the very least explorative, the respondents may have answered defensively or conservatively as a natural response. The triangulation of data was included in the study partly to mitigate this limitation, acting as a second source of information. If the information retrieved from the additional sources corresponded to the company representatives' answers, no remark in the empirics were made. If not, it was acknowledged alongside the relevant quotes. Once again however, even companies' available online resources might not tell the complete truth, hence why the limitation is most likely still present.

Furthermore, during the data analysis, several quotes deriving from interviews held in Swedish were translated to English to align with the written language of the thesis. As a consequence, one limitation is the human error which could play a part when translating certain words or phrases when aiming at conveying quotes as they are intended.

The sample of companies was deemed adequate for reaching the answer to the research question. One limitation to the study, however, is that an even larger and wider sample could further ensure certainty regarding the main findings, and possibly generate even more interesting conclusions. During data collection, the notion of empirical saturation was applied to ensure an adequate sample size, considering time and resource constraints. Under different circumstances, an even bigger sample would be desirable.

6.4 Suggested Future Research

During the course of the thesis, several interesting subjects for further research were identified, that both builds on the main findings and also holds in a standalone context.

Firstly, this area of research at a meso-level is still rather underexplored as previously explained. Even though this thesis has provided an initial insight it is imperative that research continues to dig deeper into the usage of carbon offsets as a tool in companies' environmental sustainability strategies. Not only could more qualitative studies enlighten the subject further, but quantitative studies could provide crucial in order to draw generalisable inferences, given that scientifically founded variables and applicable theories have been identified.

One area of research that emerged early on during the data collection process, and that was evidently confirmed as it progressed, was the limited knowledge about global warming generally and carbon offsets specifically. This thesis did not dive deeper as to why this was the case, leaving room for further research within these areas. In light of the emerging environmental regulations for companies both nationally and globally, companies will need to hire even more people to their sustainability departments. These people's environmental knowledge will consequently be imperative to these companies' sustainability strategies.

Carbon offset providers, as well as some companies utilising offset, often referred to industry studies/papers showing that companies that utilised carbon offsets generally where better at

mitigating their emissions, as well. Even though these industry reports can be considered partial and subjective, they still provide an interesting facet of study to build on the main findings from this thesis. In a way, these industry studies contradict part of the answer to the research question in this thesis. Replicating these studies, from a scientific standpoint, could provide breadth to the literature.

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Appendices

Appendix 1: Interview Guide for Climate Experts

Questions (English):	Questions (Swedish):
Are you okay with us recording this interview to make the transcription easier for us?	*Är du okej med att vi spelar in denna intervju för att underlätta transkribering?*
Could you please, in sort, tell us about your work as a researcher and what areas you are active in?	*Skulle du vilja utveckla lite kortfattat om ditt arbete som forskare och de områden du är mest aktiv inom?*
What challenges does researchers within climate and the environment face in their daily work?	*Vilka utmaningar möts forskare inom klimat och miljö av i sitt dagliga arbete i att forska och driva frågan?*
What do you see as the biggest challenge to success to address climate change, mainly related to GHG?	*Vad ser du som det största hotet mot framgång i arbetet för att adressera klimatförändringarna, främst kopplat till utsläpp av växthusgaser?*
Have you ever come into contact with the term 'Moral Hazard' in your work? *- If yes: In what way can the issue of climate change be seen as a Moral Hazard situation?*	*Har du någon gång varit i kontakt med begreppet moral hazard i ditt arbete?* *- Om ja: På vilket sätt kan klimatfrågan ses som en moral hazard situation?*
What is your take on the division of responsibility in the climate matter, and what actors bears the responsibility of driving the change?	*Hur ser du på ansvarsfördelningen i klimatfrågan, vilken eller vilka aktörer bär ansvaret för att driva agerandet framåt?*
What actors (e.g. governmental bodies, private companies or individuals) have research within your research area generally focused on the most?	*Vilka aktörer (t.ex statliga myndigheter, privata företag, eller individer) har forskningen inom ditt område lagt störst fokus på i sitt arbete generellt?*
What tools do companies have at their disposal to address climate change and how do you that these should be used to maximise their effects? *- What is your view on climate compensation or 'carbon offsetting' as a tool in addressing climate change?* *- What is your view on carbon dioxide removal as a tool in addressing climate change?*	*Vilka redskap har företag till sitt förfogande i att adressera klimatförändringarna och hur anser du att dessa bör användas för att uppnå så stor effekt som möjligt?* *- Hur ser du på klimatkompensation, eller "carbon offsetting" som ett verktyg i klimatfrågan?* *- Hur ser du på carbon dioxide removal som ett verktyg i klimatfrågan?*
What do you believe is the biggest challenge for companies to address climate change?	*Vad tror du är den största utmaningen för företag i att adressera klimatfrågan?*
How do you define so called 'residual emissions' and how do you reckon companies should handle these?	*Hur definierar du så kallade 'residual emissions' och hur anser du att företag bör hantera dessa?*
Why do you you believe it takes time for companies and countries to transition?	*Varför tror du att det dröjer så mycket för företag och länder att ställa om?*
If you had free reins to construct a implementable sustainability strategy for a large company, how would you do it, in general terms?	*Om du hade fått fria tyglar i att lägga upp en implementerbar hållbarhetsstrategi för ett stort bolag, hur hade du lagt upp det då, i grova drag?*

Appendix 2: Interview Guide for Offsetting Providers

Questions (English):	***Questions (Swedish):***
Are you okay with us recording this interview to make the transcription easier for us?	*Får vi spela in för att underlätta vår transkribering?*
Age? Role? Number of years at the company?	*Ålder? Roll? År på företaget?*
Can you, in short, describe your business, what products/services you offer, your projects, etc.?	*Kan du kortfattat beskriva er verksamhet; vad ni erbjuder för produkter/tjänster, era projekt, m.m.?*
Regarding your carbon offsets, what is your target group?	*När det kommer till era carbon offsets, vem är er målgrupp?*
How do you arrive at how much an offset compensate for? *- How do you take into account the carbon storage time?* *- How do you ensure that the carbon is stored the intended time?*	*Hur kommer ni fram till hur mycket t.ex. en carbon offset kompenserar för?* *- Hur tar ni lagringstiden av koldioxid i beaktning?* *- Hur säkerställer ni att den lagras i den tid ni anger?*
Are your carbon offsets verified?	*Är era carbon offsets verifierade?*
How do you price your offsets?	*Hur prissätter ni era carbon offsets?*
Where do you sell your offsets?	*Var säljer ni era offsets?*
What emissions does your customers usually compensate for with your carbon offsets?	*Vilka utsläpp kompenserar era kunder vanligtvis med hjälp av era carbon offsets?*
Could you describe the type of projects you manage?	*Hade du kunnat beskriva den typ av projekt ni använder er av?*
What media channels do you utilise in your marketing?	*Vilka mediekanaler använder ni i er marknadsföring?*
How do you market your offsets? I.e. what is the reason that companies should purchase your offsets? *- Do you communicate about your project?*	*Hur marknadsför ni era offsets? Alltså, vad är anledningen till att företag ska köpa era carbon offsets?* *- Pratar ni om era projekt?*
Do you market your services/products as a long term or more short term sustainable solution?	*Marknadsför ni era produkter/tjänster som en långsiktigt hållbar lösning eller som en tillfällig hållbarhetslösning?*
Do you market your products/services to compensate for parts of customers businesses that are difficult or impossible to reduce emissions from or do you recommend your offsets for all emissions from a business?	*Marknadsför ni era produkter/tjänster för att kompensera för delar av verksamheter som är svåra eller omöjliga att minska utsläppen från, eller rekommenderar era offsets för alla typer av utsläpp för en verksamhet?*
How is the relationship with your customers? Is it purely transaction-based or is it long term cooperation?	*Hur är samarbetet med era kunder uppbyggt? Är det rent transaktionsbaserat eller är det långsiktiga samarbeten?*
What role do you think climate compensation plays in today's sustainability work? *- And in the future?*	*Vad tror ni att klimatkompensation spelar för roll i dagens hållbarhetsarbete?* *- Och i framtiden?*

Appendix 3: Interview Guide for Companies

Questions (English):	***Questions (Swedish):***
Are you okay with us recording this interview to make the transcription easier for us?	*Får vi spela in för att underlätta vår transkribering?*
Age? Role? Number of years at the company?	*Ålder? Roll? År på företaget?*
Can you, in short, describe your business, what products/services you offer, your projects, etc.? *- What are the biggest emission sources from your business?*	*Kan du kortfattat beskriva er verksamhet; vad ni erbjuder för produkter/tjänster, era projekt, m.m.?* *- Vilka skulle du beskriva som de i nuläget största utsläppsposterna inom er verksamhet?*
In short, can you describe your sustainability strategy? *- What are your goals regarding CO2 emissions? What is it that you aim to achieve?* *- To what extent does your sustainability work affect day-to-day work?* *- To what extent does your sustainability work affect the overall strategic direction of the company?*	*Har du möjlighet att kortfattat beskriva ert hållbarhetsarbete idag?* *- Vad är målen med ert hållbarhetsarbete för koldioxidutsläpp? Vad är det ni ämnar att uppnå?* *- I vilken utsträckning spelar hållbarhetsarbetet in i verksamhetens dagliga drift?* *- I vilken utsträckning spelar hållbarhetsarbete in i strategiska beslut?*
For how long have you had a sustainability strategy? *- Could you tell us about any major changes to your sustainability strategy in recent years?*	*Hur länge har ni haft en uttalad hållbarhetsstrategi?* *- Berätta om den/de senaste större förändringarna ni genomfört i er hållbarhetsstrategi?*
How do you communicate your sustainability strategy? *- What role does your sustainability work play in your product/service offering (a thing on its own or a part of your offer)?*	*Hur kommunicerar ni er hållbarhetsstrategi?* *- Vilken roll spelar er hållbarhetsstrategi/hållbarhetsarbete i er marknadskommunikation (sak för sig eller en viktig del av ert erbjudande?)?*
What tools do you use in your voluntary sustainability work to reduce or mitigate your climate footprint from your emissions? *- To what extent are these tools used?*	*Vilka verktyg använder ni i ert frivilliga hållbarhetsarbete, för att minska avtrycket av era utsläpp?* *- I vilken utsträckning används verktygen?*
If climate compensation: What type of climate compensation do you use? (Carbon credits? Verified?)	*Om klimatkompensation: Vad är det för typ av klimatkompensation? (Kolkrediter? Verifierade?)*
If climate compensation: What type of supplier is providing these credits?	*Om klimatkompensation: Vad för typ av aktör tillhandahåller er de kolkrediter ni använder er av?*
If climate compensation: How is your relationship with this supplier? Pure transaction-based or more of a partnership?	*Om klimatkompensation: Hur är er relation till denna aktör? Rent transaktionsbaserat eller har ni ett mer långtgående samarbete/partnerskap?*
If climate compensation: What parts of your business do you primarily compensate for?	*Om klimatkompensation: Vilka delar av er verksamhet kompenserar ni primärt utsläppen för?*

If climate compensation: What role does climate compensation play in your sustainability strategy?
- Is it a short or long term tool for you?

Om klimatkompensation: Vad spelar klimatkompensation för roll i er hållbarhetsstrategi?
- Är det ett kort- eller långsiktigt verktyg för er?

If climate compensation: How much of your total emissions do you compensate for?

Om klimatkompensation: Hur stor andel av era utsläpp kompenserar ni för?

If climate compensation: Are you concurrently working with reducing the emissions from the parts of your business that you compensate for? How do you do it?
- If not: What is your reasoning of only compensating?

Om klimatkompensation: Arbetar ni med att minska utsläppen även för de delar av verksamheten som ni kompenserar för? Hur gör ni det i sådant fall?
- Om inte: Hur resonerar ni kring att enbart kompensera?

If climate compensation: How have you been portrayed by media or consumers in relation to your utilisation of climate compensation?
- If yes: How has it affected how much you use climate compensation, or how you used it?

Om klimatkompensation: Hur har ni blivit porträtterade av t.ex. media eller konsumenter i samband med användning av klimatkompensation?
- Om ja: Har det påverkat hur ni använder er av det, eller mängden?

If climate compensation: Have you noticed other companies being acknowledged in the media for their use of climate compensation?
- How has that affected your use of climate compensation?

Om klimatkompensation: Hur har ni upplevt att andra bolag uppmärksammas i media kopplat till klimatkompensation?
- Hur har det påverkat hur ni använder er av klimatkompensation?

This question comes last in this part: How would you deem that your use of climate compensation has affected the shaping of your sustainability strategy?

Frågan måste komma sist i denna del: Hur anser ni att användningen av klimatkompensation har påverkat utformandet av er hållbarhetsstrategi?

If they do not use climate compensation:
- Have you used climate compensation before?
- If yes: Why did you quit?
- Why are you not using climate compensation?
- Are you planning on using climate compensation in the near future?
- Has your sustainability work been portrayed in the media in any way?
- How has that affected your sustainability work?
- This question comes last in this part: How do you deem that you not using climate compensation has affected the shaping of your sustainability strategy?

Om de inte klimatkompenserar:
- Har ni tidigare använt er av klimatkompensation?
- Om ja: varför slutade ni?
- Varför använder ni er inte av klimatkompensation?
- Planerar ni att använda er av klimatkompensation inom en snar framtid?
- Har ert hållbarhetsarbete blivit porträtterat eller uppmärksammat i media, i någon bemärkelse?
- Hur har det påverkat utformandet av er hållbarhetsstrategi?
- Frågan måste komma sist i denna del: Hur anser ni att det faktum att ni inte använder er av klimatkompensation har påverkat utformandet av er hållbarhetsstrategi?

Appendix 4: GDPR Information and Consent Form

Standard text and consent to participation student's survey / interview

The student's project. As an integral part of the educational program at the Stockholm School of Economics, enrolled students complete an individual thesis. This work is sometimes based upon surveys and interviews connected to the subject. Participation is naturally entirely voluntary, and this text is intended to provide you with necessary information about that may concern your participation in the study or interview. You can at any time withdraw your consent and your data will thereafter be permanently erased.
Confidentiality. Anything you say or state in the survey or to the interviewers will be held strictly confidential and will only be made available to supervisors, tutors and the course management team.
Secured storage of data. All data will be stored and processed safely by the SSE and will be permanently deleted when the projected is completed.
No personal data will be published. The thesis written by the students will not contain any information that may identify you as participant to the survey or interview subject.
Your rights under GDPR. You are welcome to visit https://www.hhs.se/en/about-us/data-protection/ in order read more and obtain information on your rights related to personal data.

Project title	Year and semester
Master Thesis in Business & Management	**2024, Spring**
Aim of the study **Seek a better understanding for the use of voluntary climate interventions and how the use of one intervention affects the inclination to use another**	
Students responsible for the study or interview **Victor Kjellström, Otto Svensson**	
Supervisors and department at SSE **Professor Örjan Sjöberg, Department of Marketing & Strategy**	Supervisor e-mail address **orjan.sjoberg@hhs.se**
Type of personal data about you to be processed **Name, age, number of years at your company, company name**	

I have taken part of the information provided above and consent to take part in this study:

Name	Place and date

Appendix 5: Summary of Companies

#	Industry	B2B or B2C	Offsetting
Company 1	Home construction	B2B & B2C	Do not offset
Company 2	Food and drink	B2C	Offset
Company 3	Food and drink	B2B & B2C	Offset
Company 4	Food and drink	B2B	Previously offset
Company 5	Construction and real estate	B2B	Offset
Company 6	Logistics	B2B	Offset
Company 7	Logistics and trading	B2B & B2C	Do not offset
Company 8	Food and drink	B2B	Do not offset
Company 9	Retail	B2C	Do not offset
Company 10	Industrial goods	B2B	Do not offset
Company 11	Food and drink	B2B	Previously offset
Company 12	Pharmaceutical	B2B	Offset
Company 13	Supply chain management	B2B	Do not offset
Company 14	Aerospace	B2B	Offset
Company 15	Transport	B2B & B2C	Do not offset
Company 16	Industrial goods	B2B	Previously intended to offset
Company 17	Electricity supplies	B2B	Do not offset
Company 18	Communication	B2B	Do not offset
Offset Provider A	Carbon Offsetting	B2B & B2C	Provided offsets
Offset Provider B	Carbon Offsetting	B2B	Provided offsets
Offset Provider C	Carbon Offsetting	B2B	Provided offsets

Appendix 6: Overview of Data Triangulation

#	Data Retrieved	Available Resource
Company 1	2024-03-04	Website, sustainability report
Company 2	2024-03-06	Website, sustainability report
Company 3	2024-03-06	Website, sustainability report
Company 4	2024-03-11	Website, sustainability report
Company 5	2024-03-12	Website, sustainability report
Company 6	2024-03-12	Website
Company 7	2024-03-13	Website
Company 8	2024-03-20	Website, sustainability report
Company 9	2024-03-20	Website, sustainability report
Company 10	2024-03-21	Website, sustainability report
Company 11	2024-03-06	Website, sustainability report
Company 12	2024-03-24	Website
Company 13	2024-03-25	Website
Company 14	2023-03-24	Website
Company 15	2023-04-01	Website, sustainability report
Company 16	2024-04-02	Website, sustainability report
Company 17	2024-04-02	Website, sustainability report
Company 18	2024-04-02	Website, sustainability report
Offset Provider A	2024-02-27	Website
Offset Provider B	2024-03-01	Website
Offset Provider C	2024-03-24	Website