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How does the Norwegian Government Lack Responsible Actions for Future Generations?

Exploring the Intersection between Normative Theory and Norwegian Petroleum Production

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Master's thesis in political science

Abstract:

This thesis examines the Norwegian government's approach to ensure justice for future generations and clarifies why the current petroleum policies fail to safeguard the rights of future generations. The thesis employs a historical analysis that traces how intergenerational justice has been ensured since the first discovery of petroleum in Norway and discusses whether it is possible to ensure justice between generations without addressing exported petroleum emissions.

The thesis finds that the Norwegian government shifted from focusing on a Rawlsian perception of justice by limiting exploration licenses and restricting the production of petroleum to a Utilitarian perception of justice that enabled an increase in petroleum production and a departure from supply-side constraints.

The discussion encompasses two aspects drawn from the Norwegian climate lawsuit. The first aspect discussed is how the government safeguards the rights of future generations, as established in the Norwegian Constitution. The second aspect discussed is whether the government should be responsible for exported petroleum emissions.

The arguments presented find that, in light of Utilitarian and Rawlsian theory, the government does not sufficiently safeguard the rights of future generations. The present conception of intergenerational justice does not align with the theories employed in this thesis, and the denial of responsibility for exported petroleum emissions is incompatible with both schools of thought. The thesis finds that the government should define the rights that future generations have and implement supply-side climate policies to ensure justice between present and future generations.

Keywords: Intergenerational justice, Climate ethics, Norwegian petroleum

First and foremost, I would like to express my sincere gratitude to my supervisor, Berit Kristoffersen. In addition to all the valuable feedback and guidance, Berit has given me far more opportunities and help than one can expect from a supervisor. Amongst the opportunities she has provided, was the possibility to attend COP26 in Glasgow as a delegate for the University. Even though the thesis does not directly discuss our attendance there, the COP26 attendance has influenced and been a major inspiration for writing this thesis about climate change and ethics.

I also want to thank my father for valuable feedback on the final draft, and for always being interested in the thesis.

Another person that has influenced this thesis is Cristopher Rossi. The thesis would not have been the same without his theoretical knowledge and feedback.

And lastly, a big thanks to my fellow students at the master's student office. I would not have been as good a table tennis player or quizzer without you. And of course, for being good company during the too often too long breaks. This journey would not have been the same without you!

This we know: the earth does not belong to man: man belongs to the earth. ... Whatever befalls the earth, befalls the sons of the earth. Man did not weave the web of life: he is merely a strand in it. Whatever he does to the web, he does to himself.

Chief Seattle (1786-1866)

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1 Introduction

In the opening speech of "The Conference of the Parties 27" (COP27) in 2022, Antonio Guterres, leader of the UN, stated that "We are on a highway to climate hell with our foot still on the accelerator" (Kimathi, 2022). Currently, the world is most likely reaching a temperature rise of 2.7 degrees above pre-industrial levels (IPCC, 2023). In reference, when ratifying the Paris agreement, most governments agreed to limit "the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels" (UNFCCC, 2015, p. 3).

At the same time, the Norwegian government seeks to continue developing the petroleum industry (Ministry of Petroleum and Energy, 2022a). That is despite what was found in the production gap report, a report written as a collaboration between several research and academic institutions, amongst them are the Stockholm Environmental Institute (SEI), and the United Nations Environmental Programme (UNEP). The report found that "Governments plan to produce more than twice the amount of fossil fuels in 2030 than would be consistent with limiting warming to 1.5°C" (SEI, IISD, ODI, E3G, & UNEP, 2021, p. 2).

An increasing number of organisations argue that in order to limit global warming to 1.5°C, there is no need for new exploration licences as the global demand for fossil energy will be covered by the existing deposits (IEA, 2021; SEI et al., 2021). However, in 2023, the Norwegian government awarded 19 new exploration licences with an investment value of 200 billion NOK (Ministry of Petroleum and Energy, 2023b). The current government, and the majority of the Norwegian parliament does not envision phasing out petroleum production (Szulecki, 2023). The government does not consider exported petroleum emissions to be its own responsibility, as international cooperation do not capsulate exporters as responsible for fossil fuels ("HR-2020-2472-P," 2020).

The government persists to further develop the petroleum industry, without intention to implement supply-side constraints (Ministry of Petroleum and Energy, 2022a). That has not always been the main petroleum policies, during the 1970's Norwegian petroleum production was limited by the government (Ministry of Finance, 1974). This thesis explores how and why Norway rejects a supply-side perspective on Norwegian oil and gas even though it was an important policy objective in the 1970s. The thesis will unpack contradictions through an

historical analysis of Norwegian petroleum politics and discuss whether it is possible to ensure justice between generations without being responsible for exported petroleum emissions. The government argued that it is not responsible for exported petroleum emissions during the Norwegian climate lawsuit (hereafter the climate lawsuit). The climate lawsuit is central to this thesis, as the discussion is based upon the arguments from the Supreme Court decision. The climate lawsuit is one out of many trial of environmental preservation in courtrooms around the world (Burger & Tigre, 2023).

1.1.1 The climate lawsuit

The global rise of climate lawsuits reflects the growing concern for climate change. In 2017, 884 lawsuits were defined as climate lawsuits, in 2022, that number was 2 180 (Burger & Tigre, 2023). The first successful climate change litigation, "Urgenda Foundation vs. The Kingdom of the Netherlands" happened in 2015. The Urgenda Foundation won, and the court of Hauge found that:

> "the current Dutch climate policies [is] inadequate and unlawful, [the court] labelled them as hazardous negligence and ordered the Dutch government to limit the joint volume of Dutch annual GHG emissions by at least 25 per cent at the end of 2020 compared to the 1990 level" (Cox, 2016, p. 144)

The Norwegian climate lawsuit was a test of what is conceived as fair and fundamental rights when applied to Norwegian climate change policies (May, 2019). The plaintiffs, being multiple parties from the climate movement, challenged the governmental decision to open for new exploration for oil and gas deposits in the Barents sea (May, 2019). The argument was that exploring the Arctic Barents Sea contravenes the Constitutional article 112 ("HR-2020-2472-P," 2020) which reads:

> "Everyone has the right to a healthy environment and to nature where productivity and diversity are preserved. Natural Resources shall be managed based on a long-term and versatile perspective that safeguards this right also for future generations.
>
> Citizens have the right to information about the condition of the natural environment, and the effects of planned and implemented interventions in nature, so that they can safeguard the right they have according to the preceding paragraph.
>
> The public authorities shall implement measures that fulfil these fundamental principles." ("Grunnlova – Grl. – nynorsk," 1814)

The final ruling rejected the climate coalitions appeal. Meaning that the Norwegian government was not in violation of the constitution when granting exploration licences in the Barents Sea ("HR-2020-2472-P," 2020). The ruling in the lawsuit set the limit to what degree the right to a liveable environment can restrict petroleum production in Norway (Østerud, 2019). The two aspects from the climate lawsuit that this thesis will discuss are the rights of future generations and the responsibility for combustion of exported petroleum.

1.2 Research question

The research question that will be answered is the following:

> How can normative political theory clarify the government's ethical considerations of future generations? Additionally, can political theory enlighten whether it is possible to safeguard the rights of future generations without addressing exported petroleum emissions?

In order to answer the research question this thesis will first analyse petroleum policies in a historical perspective, followed by a discussion on the preservation of future generations rights and whether the government should take responsibility for exported combustion. The discussion will be divided into three main sections. The first section will discuss aspects of intergenerational justice. The second will discuss responsibility for exported petroleum. The third section will clarify how the government could call for supply-side polices in order to ensure the rights discussed in the two other sections.

The discussion is based on normative theory. The study of ethics holds many roles. Amongst the roles is to find common ground between opposing arguments (Rawls, 2001). In order to find common ground between opposing arguments it is especially important to ensure the following premise:

> "Justification proceeds from what all parties hold common. Ideally, to justify a conception of justice to someone is to give him a proof of its principles from premises that we both accept, these principles having in turn consequences that match our considered judgement" (Rawls, 1999, p. 508).

As Rawls states, to "justify a conception of justice", the "conception of justice" can only be just if the argument is based on premises opposing parties can accept. It is therefore important to apply theoretical premises that can be deemed as just by large parts of society. Two

impactful normative theories are Utilitarian theory, and Rawlsian theory.[1] Using Utilitarian and Rawlsian theory allows for a consideration of both outcomes (Utilitarian theory) and the distribution of benefits and burdens (Rawlsian theory). That is why these theories are chosen to deductively discuss ethical considerations for Norwegian petroleum policies, and supply-side actions.

1.2.1 Research purpose

The purpose of this thesis is influenced by how Rawls and Sidgwick perceives the purpose of political philosophy. Sidgwick (1907, p. 77) argues that "The aim of Ethics is to systematise and free from error the apparent cognitions that most men have of the rightness or reasonableness of conduct". That is similar to how Rawls finds political philosophy valuable.

Rawls sees political philosophy as a continuous contestant to what can society perceives as practically possible politically (Rawls, 2001, p. 3). This thesis focuses on normative principles that clarify "What a just democratic society would be like under reasonably favourable but still possible historical conditions, conditions allowed by the laws and tendencies of the social world" (Rawls, 2001, p. 4).

By critically analysing the government's current petroleum policies, this thesis intends to illuminate why it is difficult to ensure the rights for future generations without addressing Norwegian petroleum's global climate impact. As such, the thesis aims to clarify why the government should be responsible for exported petroleum emissions and take further steps to ensure intergenerational justice in light of general theoretical arguments.

1.2.2 Statistics and background for the research question

In 2022, Norwegian oil and gas accounted for 73,4 percent of Norwegian exports, cumulating to an export value of 1 933,7 billion NOK (SSB, 2023). Norwegian petroleum exports is estimated to annually emit approximately 500 megatons CO_2 (Szulecki, 2023). In 2021, Norway's domestic emissions were 48.9 megatons of CO_2 (SSB, 2023). In other words, Norway exports about ten times as much as is domestically emitted (Fæhn, Hagem, Lindholt, Mæland, & Rosendahl, 2017).

[1] Justice as fairness is Rawls' theory. This thesis will only write justice as fairness when directly citing Rawls' theoretical notions. Theoretical arguments and assumptions based on similar theoretical structures are referenced to as "Rawlsian".

While often taking initiative for international climate cooperation, that does not necessarily reflect national climate contribution. According to the European commissions, in the time period 1990 – 2020, Norwegian CO_2-emissions increased by 13 percent. The same study finds that the Scandinavian neighbouring countries Finland, Denmark and Sweden decreased their CO_2-emissions by 29, 52 and 27 percent (Crippa et al., 2021). Norway is however not alone, global emissions have steadily risen throughout the 21st century (Crippa et al., 2021; IEA, 2023). The problem with growing emissions is the effects of global warming (IPCC, 2023).

The start of these effects is beginning to show. In 2022 the temperature was at 1.1C° above pre-industrial levels. The same year, 735 million people, approximately 10 percent of the human population, lived in a state of chronic hunger, an increase of well over 100 million in three years (Ripple et al., 2023). Additionally, more than 1/3 of Pakistan – a country of over 220 million people was flooded (ESA, 2022). The Horn of Africa has gone without the rain season for five consecutive years, here more than 20 million children are "facing the threat of severe hunger, thirst and disease" (UNICEF, 2022). That same drought that has lasted five years is predicted to have taken the lives of approximately 43 000 people in 2022, only in Somalia (WHO, 2023). These, and many other recent weather event and broken temperature records are signs that "we are pushing our planetary systems into dangerous instability" (Ripple et al., 2023, p. 1).

In 1988, The Intergovernmental Panel on Climate Change (IPCC) was appointed by the World Meteorological Organization (WMO) and the UNEP to regularly assess the scientific basis for climate change. The reports are written by leading climate scientists and is a rigorous reflection of the existing knowledge of climate change. The newest report, being the AR6 synthesis report states that most likely the world will reach 2.7 degrees warming, and for each increase in global warming, the consequences will become more severe (IPCC, 2023). Global warming is a product of increased Greenhouse-gas emissions (GHG-emissions), and fossil energy is the source for over 70% of global emissions (IEA, 2023).

Norway is one of the world's largest exporters of fossil energy with a long-term determination to lead international climate cooperation (BP, 2023; Ministry of Environment, 1989; Ministry of Petroleum and Energy, 2010, 2022a). In this thesis, the contradiction between these roles, how the government came to them, and how it leads to a failure of intergenerational justice will be elaborated.

1.3 Structure of thesis

The next chapter will introduce the theoretical elements. The chapter has three main sub-chapters. Firstly, the philosophical foundation of science (2.1) for this thesis will be elaborated, followed by the normative theoretical elements (2.2), and supply-side literature (2.3).

Chapter three will consist of three sub-chapter. Sub-chapter 3.1 clarifies the method of Normative analysis applied in the discussion. Sub-chapter 3.2 clarifies the method of idea analysis as it is used in chapter four, and chapter 3.3 illuminates how data is collected.

Chapter four will elaborate on the historical development of Norwegian petroleum. As petroleum and climate change is interrelated, this chapter will enlighten how international climate cooperation and petroleum policies are connected. The chapter will be chronologically structured, starting with the discovery of petroleum resources and how petroleum was administered until the 1990's (4.1). That section is followed by a brief introduction to the beginning of international climate cooperation, and how that effected the administration of petroleum in Norway (4.2). The last section elaborates on how petroleum resources have been managed since the 1990's, and a brief introduction to the relevant aspects in the Paris Agreement (4.3). There will be a separate section under sub-chapter 4.3 for the climate lawsuit (4.3.1).

The discussion will focus on aspects relevant to the research question by applying theoretical elements to discuss the relevant aspects from the climate lawsuit. The discussion will be divided into three sub-chapters. Chapter (5.1) focuses on intergenerational justice. Chapter (5.2) discusses responsibility for exported emissions. The last chapter (5.3) discusses how supply-side literature can enlighten alternative policy-options.

Chapter 6 will answer the research question and give end notes. Chapter 6 is divided into three main sections. Chapter 6.1 gives a brief summary of the findings in chapter four. Chapter 6.2 concludes whether the government is able to safeguard the rights for future generations without addressing exported petroleum emissions. Chapter 6.3 some concluding remarks.

2 Theory

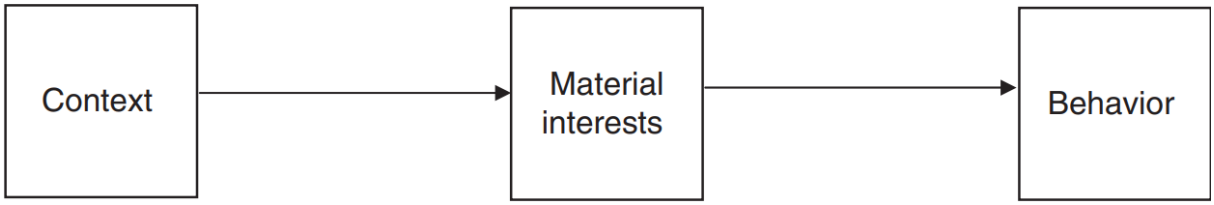
The following chapter will introduce the theoretical concepts that are used to answer the research question. The relevance of this chapter to the thesis lies in its ability to provide a strong theoretical framework for the analysis of Norwegian petroleum policies, drawing connections between the domains of technology, nature, politics, and ethics. The chapter contains three sub-chapters. Chapter 2.1 introduces the philosophical foundation of science in this thesis. The foundation is constructivism, the purpose of clarifying the philosophical foundation is that it directly influences the analysis of societal perceptions of justice, and therefore the foundation for the whole research project. Chapter 2.2 introduces the normative theories. Chapter 2.2 is divided into two sections. Section 2.2.1 aims to introduce the utilitarian framework. Section 2.2.2 introduces the Rawlsian framework. Chapter 2.3 introduces the theory on supply-side climate policies that is discussed in chapter 5 as an alternative to the current climate policies.

2.1 The philosophical foundations of science

The following sub-chapter focuses on contrasting positivism and constructivism. This thesis holds a constructivist philosophical foundation. In this thesis, moral considerations of future generations and fairness are added to the constructivist approach. The contrast between constructivism and positivism is best understood by first explaining positivism, then focusing on how constructivists criticise the positivistic ontology, and epistemology. August Comte (1853, p. 2) explains positivistic knowledge as the last and highest state of knowledge:

> "In the final, the positive state, the mind has given over the vain search after Absolute notions, the origin and destination of the universe, and the causes of phenomena, and applies itself to the study of their laws, - that is, their invariable relations of succession and resemblance. Reasoning and observation, duly combined, are the means of this knowledge. What is now understood when we speak of an explanation of facts is simply the establishment of a connection between single phenomena and some general facts"

As Comte writes, the positivistic knowledge is the search for laws, similar to the laws of nature. Since the epistemology of positivism assumes laws of society exists similar to laws of nature, positivists will argue that it is possible to objectively understand the causal laws that constitute our society. Positivism is thus based on the perception that social laws exist. These laws will then describe how a context and agent's interests lead to behaviour. Meaning that actions can be predicted though the following assumption:

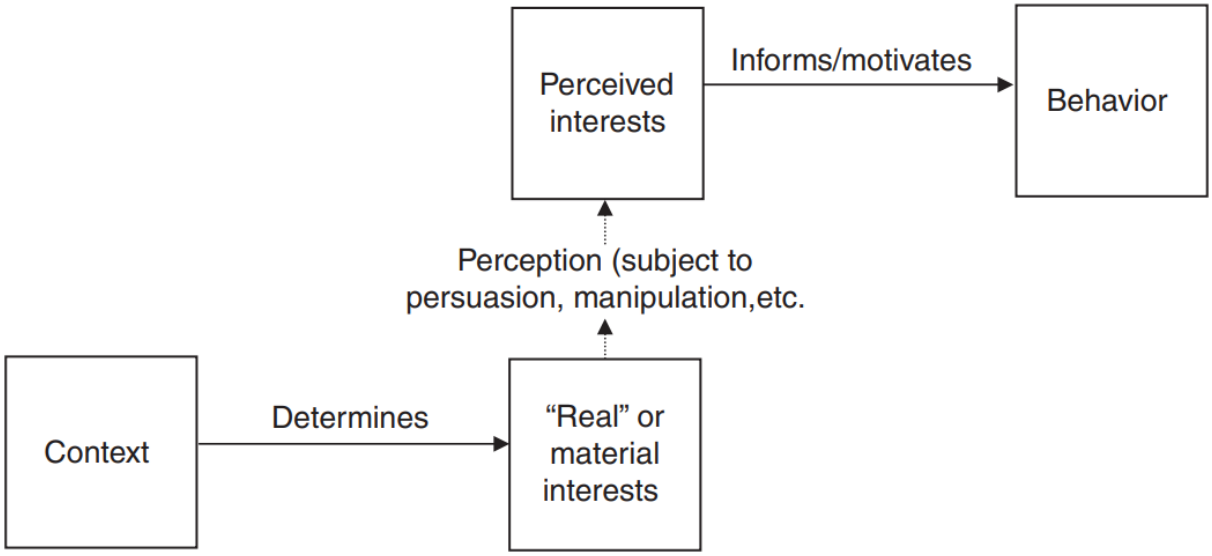


(Hay, 2010, p. 72)

Constructivists oppose this assumption. The constructivist epistemology argues an objective reality might exist, but our perception of it and the values we attribute to it are not objective. Thus, if there exists a real world, it is meaningless until one constructs meanings and interpretations in reference to it, assuming that all humans interpret the world though our individualistic assumption (Onuf, 2013). For example, climate change is real, but outside the context of climate change as a part of our reality, one cannot predict with social-positivistic laws how agents will act to solve that problem. It is impossible to predict what an agent finds as a rational pathway.

This approach has strong resemblance to the notion of co-production; "Co-production is shorthand for the proposition that the ways in which we know and represent the world […] are inseparable from the ways in which we choose to live in it" (Jasanoff, 2004, p. 2). Jasanoff is critical of assuming agents are rational, and that technological development is a rational process (Jasanoff, 2004, p. 3). Instead of assuming that energy policies are a product of rational perceptions, energy policies, as all other political domains reflects assumptions of what is "right" and what is "good". The problem is not necessarily that agents are *irrational*, the problem is rationality is not an objective matter. One agents' rationality might differentiate from another's.

When rationality is subjective, the positivistic assumption of how context and interests lead to behaviour becomes an insufficient description of agent's actions. If rationality is a social construct, influenced by agent's social context and subjective perceptions, it is not possible to predict their actions through causal laws. Therefore, the following model is a better reflection of the constructivist assumption of agent's rationality:



(Hay, 2010, p. 74)

In the latter figure, the process from context to behaviour becomes more complex, and the process can be subjected to outside influence, such as persuasion or manipulation. Thus, what people perceive as the best option is a conclusion constructed by them and the society that surrounds them "people, *and* society construct, or constitute, each other" (Onuf, 2013, p. 36. Emphasis added). Constructivism is based on three assumptions; "knowledge is socially constructed, social reality is constructed, knowledge and reality is mutually constitutive" (Pouliot, 2007, p. 361). Because of this reasoning, our social reality and what we perceive as knowledge is in an interrelation where one cannot develop or exist without affecting and being affected by the other. This complex relation between context and actions directly impacts the choice of method. Analysing causal laws becomes less important, and the focus is rather on political theoretical assumptions that can influence agent's behaviour.

To critically analyse agents' actions, and potential other actions, this thesis seeks to deductively apply aspects of political theory and utilize these assumptions to analyse the perception of intergenerational justice and responsibility for exported fossil fuels as it is constituted in Norway through the climate lawsuit. By applying political theoretical assumptions that can be accepted by a large part of society, these assumptions can be used to argue in favour of or criticize certain sets of action. By discussing theoretical and empirical observations, the thesis's scope is to manifest a set of arguments regarding intergenerational justice, exported petroleum and Norwegian supply-side policies where the basic structure for the conclusion is derived at from normative perspectives.

2.2 Normative theory

The previous sub-chapter clarified how the constructivist foundation of science means people can hold opposing ideas of rationality and ethics. The following sub-chapter will clarify two opposing perceptions of ethics. As chapter four and five will show, these theories are well founded as analytical tools for Norwegian petroleum policies.

Section 2.2.1 introduces Utilitarian theory. Utilitarian theory is consequentialist, meaning the focus on optimal action is based on the outcome (De Lazari-Radek & Singer, 2017). Section 2.2.2 introduces Rawlsian theory. Rawlsian theory is not consequentialist. Rawlsian justice focuses on a just distribution of burdens and benefits (Rawls, 1999; Weiss, 1989). The latter section focuses on justice as fairness, and environmental theoretical component from Edith Brown Weiss.

2.2.1 Utilitarian theory

In the vast amount of political philosophy that exists today, one of the most important ethical theories is utilitarianism. Utilitarianism was founded in the 18-19th century, and the most central philosophers are Jeremy Bentham, John Stuart Mill and Henry Sidgwick. Much of the social norms we follow today, for example what modern societies consider fundamental human rights can be linked to Utilitarian thought (De Lazari-Radek & Singer, 2017).

The first formulation of utilitarianism as a systemic ethical theory was made by Bentham in 1776; "greatest happiness for the greatest numbers" (Bentham cited by De Lazari-Radek & Singer, 2017, p. 4). This definition does not fully capture the logic behind it. Using this definition, one could argue that if 10 people benefit from an action, it is ok that 9 people lose largely. That is not Bentham's argument. Bentham argued that one should seek actions that generates the highest total welfare. However, that also means what matters is only the total welfare, not the distribution of it (De Lazari-Radek & Singer, 2017).

Classical utilitarians are often misinterpreted as hedonists who search for pleasure and utility through happiness and pleasure. As John Stuart Mill (1863, p. 14) wrote "[…] pleasure, and freedom from pain, are the only things desirable as ends". The problem is that classical utilitarians sees pleasure as more than sensations, as Mill (1863, p. 16) continues:

> "If one of the two [pleasures] is, by those who are competently acquainted with both, placed so far above the other that they prefer it, even though knowing it to be attended with a greater amount of discontent, and would not resign it for any quantity of the other pleasure which their nature is capable

> of, we are justified in ascribing to the preferred enjoyment a superiority in quality, so far outweighing quantity as to render it, in comparison, of small account"

Still, classical utilitarians are often criticised for being too hedonistic. Modern utilitarians critique is that many types of utility exists (De Lazari-Radek & Singer, 2017, p. 42). One famous objections to the idea that only happiness and pleasure is what positively impact our lives is the following example presented in De Lazari-Radek and Singer (2017, p. 42) and originally formulated by Roger Crips:

> Crips asks us to imagine we have the choice between the life of an immortal oyster, in which we experience endless, but very limited pleasures, or the life of composer Joseph Haydn, who lived only 77 years but had various pleasurable experiences of different intensity. The life of the oyster will, because it is endless, bring a greater sum of pleasure than Haydn's finite lifespan, but will you choose it?

The argument represented by Crips here essentially argues that there are more values to life than maximizing pleasure or avoiding pain. Albeit Mill might rather argue that the human life holds pleasures of higher quality that outweigh the oyster's quantity of pleasure despite pains Haydn might have experienced.

What is most important is that when utilitarianism is applied, theorists tend to focus on reducing the suffering, not increasing happiness (De Lazari-Radek & Singer, 2017). The reason for this is that it is often easier to reduce suffering than to increase happiness. It is easier to give a piece of bread to a starving man than food that outweigh that pleasure to a satisfied man. This argument can be made at a collective level as well. It is better to feed 10 starving people with bread than overfeed 10 satisfied people with wagyu beef.

These reflections are the beginning of some difficult problems. How do we measure utility, and how do we distribute it?

2.2.1.1 Measuring utility

Measuring an actions impact on the society can be difficult as people can have different perceptions of what actions are beneficial. As people have different self-interested and perceptions of utility, it is not necessarily possible to give utility an objective value. People may simply not agree upon what action is the best. In a society people will have different perceptions of morale, or people are in different societal situations; One illustration of this is how younger generations generally are more concerned with climate change than older generations (Aasen, Klemetsen, Reed, & Vatn, 2019). We know that the impacts from climate

change will only worsen with time. It is therefore in the self-interest of younger people to care more about climate than older generations. Because climate change impacts different age groups differently, it can cause different generations to have different perceptions of what climate measures should be taken. Additionally, if generations yet to be born had a voice, they might address climate change in a different way than the issue currently is handled. Knowing that the self-interest of people can change over time, and that our actions can benefit – or negatively impact future generations, one must discuss to what extent future generations have value.

2.2.1.2 Value of future generations

Discussing the value of future generations is central for this thesis because the consequences of climate change involve long term measurement and are increasingly if not disproportionately impactful for future generations. The extent of climate change in the future is uncertain, the only fact we know for certain is that the consequences will worsen as the global temperature rise, with the first tipping point most likely being reached around 1.5-degree warming. Because temperature rise leads to harsher living conditions, there is a high probability that future generations will have a substantially lower quality of life than current generations. Food scarcity, water scarcity, more extreme weather, and consequences from rising sea levels – countries now habited will be under water forcing millions to move, are just some of the consequences that will become normal as global temperatures increase (IPCC, 2023; Mulgan, 2019, pp. 5-6).

In Utilitarian theory all generations have equal value. Concerning climate change, acknowledging that the way current generations live negatively impacts people in the future should affect what actions are chosen. What lacks in the utilitarian-theoretical school of thought is a productive way to handle the long-term consequences, and possible decline in welfare that is likely to happen for future generations because of climate change. Classical utilitarians did not have to consider climate change as a factor when arguing that all generations matter. For a long time, a reasonable assumption has been that welfare seems to generally increase over time. Believing welfare only will increase in the future makes it easy to say future generations matter equal to living (Mulgan, 2019). When we no longer can argue for a steady increase in peoples well-being, the value of future generations welfare is an issue that must be discussed. Some would argue one should not count in future generations. Other argue for “discounted utilitarianism”, meaning future generations matter less than living generations (Mulgan, 2019; Parfit, 1984).

How future generations are valued will greatly affect the choices of climate policies, but utilitarians have no true answer to how future generations should be valued. Parfit calls this problem "Theory X". Theory X is a solution to the non-identity problem, which is Parfit's notion of intergenerational justice that avoids a whole range of theoretical dilemmas introduced in the book "Reasons and Persons". Parfit fails to find this theory, and he argues nobody have found it. This thesis will not discuss theory x, but it is important to note. The unfound solution is a theoretical weakness that one of the most influential modern utilitarians find it an inherent weakness of his theory. As the chapter on justice as fairness will enlighten as well, Rawls also finds intergenerational justice as an inherent weakness of his theory. Thus, discussing intergenerational justice is complex and cannot be done without accepting inherent theoretical weaknesses. That is however not an argument to avoid intergenerational justice. As both Utilitarian and Rawlsian philosophers find it an important issue to solve (Parfit, 1984; Rawls, 1999; Weiss, 1989).

One way in which philosophers have handled intergenerational justice that is highly relevant for economic theory, is the social discount rate. Economists have used the social discount rate in discussions on future generations utility (Parfit, 1984, p. 480). One example that is based on real-life discussions on the utility for future generations, and a clear example of why a social discount rate is a bad solution to the problem of intergenerational justice is represented in Parfit's book "Reasons and Persons":

> "Suppose we are considering how to dispose safely of the radio-active matter called nuclear waste. If we believe in the Social Discount Rate, we shall be concerned with safety only in the nearer future. We shall not be troubled by the fact that some nuclear waste will be radio-active for thousands of years. At a discount rate of five per cent, one death next year counts for more than a billion deaths in 500 years. On this view, catastrophes in the further future can now be regarded as morally trivial." (Parfit, 1984, p. 357)

A social discount rate is unapplicable in this thesis is because there is no theoretical structure that gives account to *why* there is a moral argument to *not* be concerned with future welfare. This thesis is based on Parfit's argument, being that a social discount rate can lead to absurd conclusions, and therefore should be rejected (Parfit, 1984). The aspect of Utilitarian intergenerational justice is rather considered as a theoretical weakness where other theoretical approaches might better suited.

2.2.1.3 Collective vs. individual evaluation

When assessing the quality of an action one can use both individual and collective principles. The difference being whether we should assess what each individual can do, or what people as a collective should do (Mulgan, 2019). Utilitarians have opposing views on this matter. Comparing our current societies to previous societies we live in a more populated, globalised, and complex world. As such the consequences of each action isolated can easily become invisible, but the action can still be part of a negative trend that will lower the amount total welfare in sum. An excessive emphasis on individual evaluations can lead to ethical dilemmas, as demonstrated by Garret Hardin, in his notion of the tragedy of the commons. Following is the example used by Hardin to illustrate the paradox of individual evaluations.

> Picture a pasture open to all. It is to be expected that each herdsman will try to keep as many cattle on the commons. Such an arrangement might work reasonably for centuries because tribal wars, poaching, and disease keep the number of both men and beast lower than the carrying capacity of the land. Finally, however, comes a day of reckoning, that is, the day when the long-desired goal of social stability becomes reality. At this point, the inherent logic of the commons remorselessly generates tragedy.
>
> As rational beings, each herdsman seeks to maximize his gains. Explicitly or implicitly, more, or less consciously he asks, "What is the utility *to me* of adding one more animal to my herd?" This utility has one negative and one positive component.
>
> 1) The positive component is a function of the increment of one animal. Since the herdsman receives all the proceeds from the sale of the additional animal, the positive utility is nearly +1.
> 2) The negative component is a function of the additional overgrazing created by one more animal. Since, however, the effects of overgrazing are shared by all herdsmen, the negative utility for any particular decision-making herdsman is only a fraction of -1.
>
> Adding together the component partial utility, the rational herdsmen concludes that the only sensible course for him is to pursue is to add another animal to his herd. And another; and another… But this is the conclusion reached by each and every rational herdsmen sharing a common. Therein is the tragedy, each man is locked into a system that compels him to increase his herd without limit – in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in the commons brings ruin to all.
>
> (Hardin, 1968, p. 1244)

When reviewing an act in light of maximizing utility, both individual and collective considerations are legitimate tools. However, if one focuses too much on the total cost from one act alone, it is easier to justify an act that impacts the total utility negative if the impact is trivial.

A problem with the utilitarian discussion of individual versus collective values is that with too much focus on individual ethical considerations it could cause a long-term decline in welfare, but with a too strong focus on the collective perspective one can risk constraining individual freedom too much.

For example, Hardin argues that one way to address a commons problem is population control. It is controversial to argue for population control, as Hardin (1998) states about reactions to the argument of restricting population growth "the slightest attempt to limit this freedom [to have children] is promptly denounced with cries of Elitism! Big-Brotherism! Despotism! Fascism!". The reason for these reactions could be because limiting population growth is limiting people's freedom too much in the name of collective utilitarianism. In other words: One must search for the equilibrium between the individual and collective principles, but the equilibrium is yet to be found. However, what would easily solve the commons problem for the fishermen and for the herdsmen is if they all act in terms of the *principle* of collective evaluations; That they cannot morally defend an action if that action is disastrous when everybody does the same.

> It is not enough to ask, "Will my act harm other people?" Even if the answer is No, my act may still be wrong, because of its effect on other people. I should ask, "Will my act be one of a set of acts that will together harm other people?"(Parfit, 1984, pp. 85-86)

2.2.2 Rawlsian theory of justice

For inspiration to a theory of justice John Rawls points to how influential utilitarianism has been on modern philosophy. Rawlsian theory of justice aims to be a "superior" theory of justice to the utilitarian doctrine. He aimed to define principles of justice on another basis than the utilitarian welfare-maxim, with a better distribution of utility. The framework for the theory is based on the structures of contract-theory (Rawls, 1999).

Based on the contractual theories from Thomas Hobbes and Jean-Jacques Rousseau, Rawls aims to create a better and more systemized theory of justice that will be more sophisticated than the utilitarian school of thought. In A Theory of Justice the object of societies basic

structure is to fulfil the principles of justice as fairness (Rawls, 1999). As best explained by Rawls (1999, p. 10) "They are the principles that free and rational persons concerned to further their own interest would accept in an initial position of equality as defining the fundamental terms of their association". The idea is to create a theoretical position where rational individuals must agree to a set of basic structures to assign rights and duties in a society. The basic structures for society must be agreed upon by all individuals in the original position, behind the veil of ignorance:

> "The essential features of this situation is that no one knows his place in society, his class position or social status, nor does any one know his fortune in the distribution of natural assets and abilities, his intelligence, strength, and the like. I shall even assume that the parties do not know their conceptions of the good or their special psychological propensities." (Rawls, 1999, p. 12)

The theory starts with some general principles that social orders such as states should be based upon. As Rawls would call it – a fair distribution of justice in a social order. Rawls argues that the principles he introduces will be the basic structure rational people would agree upon when placed behind the veil of ignorance. Strengthening the normative reasoning behind the distributional principles. I will now introduce the principles of justice introduced by Rawls (1999, pp. 302-303): [2]

First principle

> Each person is to have an equal right to the most extensive total system of equal basic liberties compatible with a similar system of liberty for all.

Second principle

> Social and economic inequalities are to be arranged to that they are both:
>
> (a) To the greatest benefit of the least advantaged, consistent with the just savings principle, and
> (b) Attached to offices and positions open to all under conditions of fair equality of opportunity.

First priority rule (The priority of liberty)

[2] In some books and writings, the principles have multiple different formulations, Rawls changing words based on critique from readers. Still, the meaning of the principles is the same.

The principles of justice are to be ranked in lexical order and therefore liberty can be restricted only for the sake of liberty. There are two cases:

(a) A less extensive liberty must strengthen the total system of liberty shared by all;
(b) A less than equal liberty must be acceptable to those with the lesser liberty.

Second priority rule (The priority of justice over efficiency and welfare)

The second principle of justice is lexically prior to the principle of efficiency and to that of maximizing the sum of advantages; and fair opportunity is prior to the difference principle. There are two cases:

(a) An inequality of opportunity must enhance the opportunities of those with the lesser opportunity:
(b) An excessive rate of saving must on balance mitigate the burden of those bearing this hardship

General conception

All social primary goods-liberty and opportunity, income and wealth, and the bases of self-respect-are to be distributed equally unless an unequal distribution of any or all of these good is to the advantage of the least favoured.

The structure of a society should be grounded in the principles of justice. By using the principles of justice, Rawls brings up several important problems societies should discuss in order to ensure justice. Some of his notions are used in this thesis. The principles that will be elaborated in this sub-chapter is the just savings principle and the notion of rational deliberation. Note that the following sections focuses on Rawlsian theory, including discussions from Weiss, and a notion from Sidgwick.

2.2.2.1 Just savings and intergenerational justice

An important note is how Rawls defines the "just savings principle". A just savings principle is how Rawls defines intergenerational justice. Rawls does not conclude with a clear just savings principle. He sees it as one of the weaknesses of a Theory of Justice and sees that it must be decided by the parties behind the veil of ignorance. He does however formulate some principles that should be considered for a just savings principle. First off, "When people are poor and saving is difficult, a lower rate of saving should be required; whereas in a wealthier society greater savings may reasonably be expected since the real burden of saving is less" (Rawls, 1999, p. 255). Another important aspect Rawls introduces is how the aspect of time

reflects ethical considerations for an action "The mere difference of location in time […] is not itself a rational ground for having more or less regard for it" (Rawls, 1999, p. 259). This would mean that an action that is ethically justifiable, is justifiable irrespective of the temporal dimension.

A present or near future advantage can be regarded as an argument for an act. Thus an action that will generate more welfare today can be more justifiable than the same action later if it generates less welfare later. However, that is not an excuse to commit to an action today that will negatively impact the future simply because the consequences are in the future (Rawls, 1999, pp. 258-263).

As an addition to justice as fairness, this thesis includes Rawlsian theory from Weiss. Weiss uses the original position to argue in favour of her theoretical principles of intergenerational justice. Just as Rawls defines the individuals in the original position to not know their generational belonging, Weiss argues similarly.

> "No generation knows before it is a living generation at what point in time it will be the living generation, nor how many members it will have, nor even how many generations there will ultimately be. […] To address this, it is appropriate to assume the perspective of a generation that is placed somewhere along the spectrum of time, but does not know in advance where it will be located." (Weiss, 1989)

Edith Brown Weiss (1992) introduces principles, which one could argue would be accepted behind the veil of ignorance, such as the principle that each generation should inherit the planet in a state similar to how previous generations inherited it. The planet should not be passed on to new generations in a state worse than it was before. What Rawls can add to Weiss' principle of the planets state is that in a world where the planet is treated rightfully, no generation can find fault to previous generations (Rawls, 1999, p. 256). Additionally, in the case where one generation leaves the planet off in a worse state than before, the next generation is obligated to repair the damage. The cost of this obligation can be made long-term, spanning across generations. But if the world is in a worse state than the original position the living peoples should repair the damages, even if it is at a high cost (Weiss,

1989). Building on these values, Weiss introduced three basic principles of intergenerational equity:[3]

> 1) Each generation should be required to conserve the diversity of the natural and cultural resource base, so that it does not unduly restrict the options available to future generations in solving their problems and satisfying their own values and should be entitled to diversity comparable to that of previous generations.
> 2) Each generation should be required to maintain the quality of the planet so that it is passed on in no worse condition than the present generation received it and should be entitled to a quality of the planet comparable to the one enjoyed by previous generations.
> 3) Each generation should provide its members with equitable rights of access to the legacy from past generations and should conserve this access for future generations.
>
> (Weiss, 1989, p. 38)

The argument in favour of these principles is that it is shared by major cultural traditions and is consistent with a multitude of political and economic systems. For example, they are consistent with the World Commission on Environment and Development's definition of sustainable development (Weiss, 1992).[4] And in Norway, §112 of the constitution states that "Natural resources shall be managed based on a long-term and versatile perspective that safeguards this right also for future generations" ("Grunnlova – Grl. – nynorsk," 1814). Weiss's principles are therefore reasonable to implement in the current social order.

2.2.2.2 Rational deliberation

Even when the principle of justice is clear, making the right decision can be difficult. Often, one must act with limited information, and without a clear pathway towards a goal. For situations where it is unclear what is the correct way to respond to a situation, Rawls introduces the notion of "Rational deliberation" (Rawls, 1999, pp. 365-372). The idea of rational deliberation builds on a concept derived at from Sidgwick. Rawls is influenced by Sidgwick's discussion of what makes the term "good". What Sidgwick attempts to clarify is what is "good", and how "good" differentiates from desires and temptations. Sidgwick wrote that:

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[3] These principles are based on four guiding criteria's for intergenerational equity found on page 38 (Weiss, 1992).

[4] Sustainable development is defined as "development that meets the need of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987; Weiss, 1989)

> "Suppose we derive pleasure from a thing today and pronounce it "good": Then tomorrow it no longer gives us pleasure, we do not therefor say that it has become less good: we consider the fault to lie in our temporary incapacity to apprehend its goodness" (Sidgwick, 1907)

Sidgwick's argues that what is indeed good will always be good, but what gives us pleasure can change. Sidgwick implies " that all that we commonly judged to be " good " is thought to be such not in itself and absolutely, but as contributing to the excellence of human existence" (Sidgwick, 1907, p. 102). What Rawls sees from Sidgwick's discussion on the "good" is that when one is to decide upon a plan, the best plan is the one that would be chosen "in light of all the relevant facts, what it would be like to carry out these plans and thereby ascertained the course of action that would best realize his fundamental moral desires" (Rawls, 1999, p. 366). However, as Rawls acknowledges, often we do not know all the information needed to choose an action based on the principles above. Often, we do not even know what our own good is. Therefore, choosing a satisfactory plan that only meets certain minimal conditions can be sufficient.

Based on the assumptions above Rawls's formal rule for rational deliberation "is that we should deliberate up to the point where the likely benefits from improving our plan are just worth the time and effort of reflection" (Rawls, 1999, pp. 366-367). If a plan is rational, one will never regret a course of actions when consequences that are predictable are revealed because when one follows a rational plan a person will never blame himself for following it, no matter the outcome. Therefore, the individual has always done what was perceived as the best choice, "there was no way of knowing which was the best or even the better plan" (Rawls, 1999, pp. 369-370). Or to put it in another way, when plans are decided upon by the principles of justice as fairness, "the parties cannot agree to a conception of justice [a plan] if the consequences of applying it may lead to self-reproach should the least happy possibility be realized" (Rawls, 1999, p. 371).

One example where awareness of Rawls's notion of deliberative rationality could be important is when one is situated in a "commons problem". A commons problem is based on Hardin's tragedy of the commons, and a term used for similar situations. In the book "Governing the Commons: The evolution of institutions for collective action", Elinor Ostrom (1990) introduces multiple theoretical and empirical solutions to commons problems. Ostrom finds that often the relevant policymakers find commons problems unsolvable. She finds if

dangerous if one assumes that commons problems cannot be solved as the end result in such a situation could be collapse of the ecosystem in danger.

> "By referring to natural settings as "tragedies of the commons", "collective-action problems", prisoner's dilemmas, "open-access resources," or even "common-property resources", the observer frequently wishes to invoke an image of helpless individuals caught in an inexorable process of destroying their own resources" (Ostrom, 1990, p. 8)

She finds multiple examples where innovative institutional arrangements have been created to solve commons problems in the past. When situated in a commons problem it would therefore be important to understand the process of deliberative rationality in order to become certain that the actions a society is committed to is the best available "plan". In a globalized world, that could mean policymakers should look outwards for solutions. One can argue that global warming is a consequence from a commons problem. However, global warming is in many regards an international problem, as Guterres stated at COP27 "Humanity has a choice: cooperate or perish" (UN, 2022). One option that could be introduced to address fossil fuels as a global common is supply-side climate policies (SEI et al., 2021). The following sub-chapter will elaborate on supply-side climate policies.

2.3 Supply-side climate policies

In existing climate cooperation there is little focus on limiting the supply of fossil fuels. It is uncertain why international structures are demand-side focused, and it does not necessarily reflect how a decline in the demand and supplies of goods normally is managed (Moss, 2016). For example the Montreal protocol focused on curbing the supplies and demand of Chlorofluorocarbons, and other dangerous goods such as asbestos, mercury and tobacco have been subjected to supply-side constraints (Gaulin & Le Billon, 2020; Green & Denniss, 2018; UN, 1987). Even in the beginning of existing climate negotiations, there was a focus on limiting the supplies of fossil fuels (UNFCCC, 1992). However, during the 1990's one saw a shift away from curbing supplies of fossil fuels (Piggot, Erickson, van Asselt, & Lazarus, 2018).

The lack of focus on international structures that limit supplies might be why fossil fuel exporters are reluctant to limit their supplies (Moss, 2016). From Kyoto to Paris, the focus has been on lowering emissions as a strictly demand-side action (Piggot et al., 2018). For example, in the Paris agreement countries do not have to measure how much their fossil fuel production increases or decreases, it is only combustion of fossil fuels that must be measured

(Piggot et al., 2018; UNFCCC, 2015). That reflects Norwegian climate policies as well. The Norwegians government's aim is to decrease domestic emissions and increase petroleum production, even if 60 percent of the existing fossil fuel deposits must be left unexploited in order for the world to have any chance of limiting global warming to the 1.5°C target (Ministry of Petroleum and Energy, 2022a; Welsby, Price, Pye, & Ekins, 2021).

This thesis will discuss whether the government should limit the production of fossil fuels, introducing supply-side climate policies as an additional policy option in order to ensure intergenerational justice and take responsibility for exported petroleum emissions. As such, the following chapter gives a brief introduction to supply-side climate policies.

The following sub-chapter will introduce the supply-side literature. Section 2.4.1 introduces arguments in favour of supply-side policies. Section 2.4.2 introduces supply-side principles for a just transition, that is followed by section 2.4.3 which introduces difficulties with supply-side policies. The final section will clarify the existing call for international supply-side cooperation. The supply-side literature is further discussed as alternative Norwegian climate policies in chapter 5.4.

2.3.1 Why supply-side policies?

The argument in favour of supply-side climate policies is not that supply-side constraints are superior to demand-side constraints. The main argument for implementing supply-side policies is based on the need to accelerate the transition to renewables in order to limit climate change. The ongoing usage of predominantly demand-side policies regarding fossil fuels has not been as efficient as necessary, that is why a mix of both demand- and supply-side policies is argued for by its advocates (Green & Denniss, 2018; Le Billon & Kristoffersen, 2020; Pellegrini & Arsel, 2022). This chapter provides arguments in favour of limiting the supply for fossil fuels, but there are also negative aspects. One being that carbon leakage is likely higher when limiting supplies than demand of fossil fuels (Fæhn et al., 2017).[5]

[5] Carbon leakage is «the phenomenon of companies moving emissions-intensive operations abroad to escape regulation, displacing rather than reducing emissions" (Grubb et al., 2022, p. 755)

2.3.1.1 Benefits from Supply-side policies

The inherent benefit from implementing supply-side measures is how these policies can be more efficient as additional policies needed to limiting warming to 1.5°C (Fæhn et al., 2017). Opening for the usage of supply-side climate policies will open the possibility to implement a range of new climate policies, just as there exists a range of demand-side policies. Additionally, there are benefits when compared to demand-side actions (Green & Denniss, 2018). Two benefits that are considered most relevant for a Norwegian implementation of supply-side measures will be introduced in the following two sub-sections. That is streamlined monitoring, reporting and verification and how it can be a measure to avoid unprofitable petroleum investments.

2.3.1.1.1 Streamlined monitoring, reporting and verification

The first benefit is that supply-side policies will often have lower administrative and transactional costs. The reason why there most likely is a lower cost of implementing supply-side policies is because there are fewer agents that must be monitored, and much of the infrastructure needed to report and monitor fossil fuel production is already in place. It is also easier to monitor production of fossil fuels than emissions from consumption. For example, to ensure that governments fulfil their Nationally Determined Contribution's (NDC),[6] one of the main goals for COP26, the climate summit in Glasgow 2021, was to ensure credible solutions for monitoring, reporting and verification (MRV) of policies (Hunter, Salzman, & Zaelke, 2021). COP21 in Paris, where the ratification of the Paris agreement took place was in 2015. In other words, it took 6 years to find a viable solution for MRV of demand-side actions. As Green and Denniss (2018, p. 77) points out, MRV of demand-side actions is intricate and "require detailed and complex rules, procedures and regulatory institutions […] often across hundreds or even thousands of facilities/installations".

On the other hand, supply-side policies affect fewer agents, and production often takes place in large and easily identifiable projects. Firms extracting fossil fuels often monitor and measure production levels already for other purposes, and when extraction of fossil fuels become more expensive, all downstream consumption will be affected. Meaning that

[6] NDC's are essentially a summary of a countries post-2020 climate actions. NDC's are publicly available information about the amount of greenhouse gases a country releases – and the extent of future emission cuts (UNEP, 2021).

implementing taxes on production of fossil fuels or removing subsidies will make commodities affected more expensive, and therefore all downstream activity will be incentivised to become less dependent on oil and gas (Green & Denniss, 2018).

2.3.1.2 Avoiding unprofitable investments

Fossil fuel production often hold high transactional cost. Meaning that much of the needed investments for production and exportation happens before production or exports begin. An example being that Norway exports gas to the EU via pipeline infrastructure (Cheng, 2023). To export gas through pipelines, one must first build the pipeline before exports being. Such investments risk becoming sunk costs.

A rational producer will ignore sunk costs because one cannot change past investments. That is why production could continue even if future fossil fuels prices are too low for the investments to be profitable. To use the example of Norwegian gas exports: If Norway builds new pipelines to the EU, but in a decade figure out that it was an unprofitable investment. Norway might still export gas through the pipeline as long as prices are higher than the marginal-cost of production because it would lower the economic loss from the pipeline-investment. That is why production of fossil fuels might continue even though it is unprofitable in a long-term perspective (Green & Denniss, 2018). Implementing supply-side policies might help investors avoid unprofitable investments, because it sends a clear signal for future development.

There are clear benefits for implementing supply-side climate policies, but that does not mean it comes without difficulties. The next section will introduce the main difficulties with an implementation of supply-side climate policies.

2.3.2 Difficulties of implementing supply-side climate policies

As most political decisions, supply-side policies also have its difficulties. The implementation of supply-side cuts could have large geopolitical and economic consequences, amongst them the reduction and reorientation of major financial flows (Le Billon & Kristoffersen, 2020). The public must find the policies necessary and wanted. With the current rules of accounting emissions in the Paris agreement, where the only measurement of emissions is by consumption, one risks undervaluing the effectiveness of supply-side measures (Green & Denniss, 2018).

Cutting Norwegian supply will most likely have a positive climate effect and is likely cheaper and less impactful than implementing more demand-side policies (Fæhn et al., 2017; Randers, 2019). This hardly reflects the public's view of the fossil fuel market. A typical perception is that the fossil fuel market reflects Hardin's idea of a commons tragedy, and that all producers are profit-maximizing agents that can simply increase their production when another lowers production (Fæhn et al., 2017; Lazarus, Erickson, & Tempest, 2015). The undervaluation of supply-side policies combined with the potential large geopolitical and economic consequences makes it imperative to gain public support.

To gain support, it is important to overcome barriers that hinders potentially effective climate measures. What an "effective climate measure" is, will vary depending on a country's socioeconomic structure. For Norway, it is likely that effective climate measures *are* to reduce production of fossil fuels. If the goals in the Paris agreement are met, there are economic incentives for countries such as Norway to implement supply-side policies (Fæhn et al., 2017). To address the perception of the fossil energy market as a commons problem, the government could seek to address supply-side policies through international bodies.

2.3.3 Call for international supply-side cooperation

There are multiple parties speaking out for international cooperation to curb fossil fuel supply (Asheim et al., 2019; Le Billon & Kristoffersen, 2020; Muttitt & Kartha, 2020). There are clear advantages of seeking international structures to curb the supplies of fossil fuels. Most importantly, international bodies could be efficient to hinder carbon leakage. Even if an international supply-side agreement is not ratified by a large amount of exporting countries, it could be an effective measure to enhance an energy transition (Asheim et al., 2019). The ideal situation is a large-scale ratification of a supply-side agreement, however that is unlikely to happen considering the current lack of advocates for supply-side climate policies (Pellegrini & Arsel, 2022). The government could for example be the first large-scale producer to endorse the Beyond Oil and Gas Alliance, an informal agreement between fossil fuel producers acknowledging responsibility for their supplies (BOGA, 2021). Another option would be to measure and acknowledge responsibility as a supplier of energy in the governments NDC under the Paris agreement. Both these options could be effective measures to develop anti-fossil fuel norms and policies (Green, 2018; Piggot et al., 2018).

Denmark and Costa Rica have already committed to phasing out fossil fuels through the BOGA agreement. BOGA aims to set an end-date for fossil fuel production in order to align

the oil and gas industries prospects with the agreed limit of emission presented in the Paris agreement (BOGA, 2021). BOGA does not hold any instruments for cooperation in order to cut emissions, it is rather a common statement for states that aims to set an end-date for their fossil fuel production. The other option is to address fossil fuel supplies through official UNFCCC bodies, for example by including supply-side policies and measurements it the country's NDC.

The clear advantage of addressing fossil fuel supply through official UNFCCC procedures is that it could efficiently help reducing both demand and supply-side leakage, as it would be introduced to a body already addressing the demand side (Fæhn et al., 2017; Green & Denniss, 2018; Piggot et al., 2018). Including phase out strategies such as limiting or phasing out exploration or even production could re-emerge climate and petroleum policies (Piggot et al., 2018). NDCs are highly flexible, and even though the focus is not on the production of fossil fuels in current NDCs there is no part of the Paris agreement that stops countries from addressing production (Piggot et al., 2018). To the contrary, the Paris agreement specifically encourages countries to pledge for stronger climate policies than what the minimum requires (UNFCCC, 2015).

This chapter has focused on the theoretical elements that are applied in chapter four and five. In chapter four, Rawlsian theory and Utilitarian theory is inductively used to clarify ethical reasoning throughout the petroleum history. In chapter five, the normative theories are deductively applied to discuss whether the government takes sufficient consideration for future generations, and responsibility for exported petroleum emissions. The theory on supply-side climate policies is used in chapter five in order to clarify how addressing fossil fuel production is viable policy options.

3 Methods and data

The following section will clarify the method used in this thesis, as well as how data collection is done. The first sub-chapter will focus on the main method for the discussion in chapter five. Sub-chapter 3.2 focuses briefly on the idea analysis as applied in chapter four. Additionally, sub-chapter 3.3 briefly elaborates on the data collection.

3.1 Normative analysis

As the research question clarifies, the discussion in this thesis seeks to discuss how the current petroleum policies neglects responsibility for future generations in light of Rawlsian and Utilitarian theory.

As such, the analysis is a normative analysis where the theoretical frameworks are deductively applied to discuss the Norwegian governments contemporary petroleum policies. That means the discussion "aims to contribute to our understanding of important public values- to ideas, for example, […] what responsibility organizational leaders should attend to" (Thacher, 2006, p. 1632). The discussion therefore seeks to uncover and criticise the norms that is played out though institutional patters. To conduct such an analysis the thesis is influenced by a case study design. When conducting normative research with a case study design, focusing on legal decision are particularly valuable (Bauböck, 2008).

Methodically, using legal decisions as the basis for a political theoretical normative analysis is valid because "both judges and normative theorists must consider the details of the case at hand, the former in order to reach a verdict, the latter in order to illustrate their preferred interpretations of the norms involved" (Bauböck, 2008, p. 57). In this case, the analysis is broadly based on the conclusion from the climate lawsuit, however the main data analysed is data highlighting the governments considerations of intergenerational justice.

As clarified, the discussion seeks to explain why the current petroleum policies fails to sufficiently consider future generations rights. To derive at that conclusion, the method of reflective equilibrium has been influential. In short, reflective equilibrium means aligning actions with perceptions of justice (Rawls, 2001).

3.1.1 Applying normative theory

Reflective equilibrium is a methodical procedure introduced by Rawls, with the intention to unify our considered judgement of political justice with political action. Thus, it is a state of affairs where our judgements and principles coincide. In order to endure reflective equilibrium one must know what principles our judgements is based upon (Rawls, 1999). This is done by continuous critical analysis of our political views by reflecting over a set of views impact on other people (Rawls, 1999; Thacher, 2006).

The methodical procedure for effective equilibrium holds multiple pinpoints. The most relevant pinpoint for this thesis is number six; "It is required that the judgement be stable, that is, there be evidence that at other times and at other places competent judges have rendered the same judgement on similar cases" (Rawls, 1951, p. 182). By systemizing ethical reasoning, normative theory can be used to discuss cases, such as petroleum policies, in light of principles that are *intrinsically* valuable (Sidgwick, 1907, p. 58). Meaning that this thesis discusses policies in light of principles that are good in its own existence. Intergenerational justice is not some means to an end, nor is it a legal obligation. Fairness for future generations will not necessarily positively effect living generations. However, fairness for future generations is, in light of the theoretical frameworks in this thesis, principles that are deemed good in itself.

Rawls' idea is therefore to structure ethical reasoning without tailoring principles of justice to one's own case (Rawls, 1999, p. 16). That is why this thesis adapts ethical principles that are well formulated theories of ethics. Essentially, reflective equilibrium can be used "to show that there exist considered judgments of competent judges on specifiable cases for which it either fails to yield any judgments at all or leads one to make judgements inconsistent with them" (Rawls, 1951, p. 185).[7]

Lastly, it is possible to question whether the government can be responsible for actions directly made by more or less private companies. Similar analysis that discusses non-governmental responsibility are done (Umbers & Moss, 2020). However, this thesis is

[7] Note that competent judges are not necessarily juridical judges, a competent judge is someone that has proven their competence for ethical considerations (Rawls, 1951). Philosophers can for example be competent judges.

focused on ethics of the state as “to an important extent the Law of a man’s state will properly determine the details of his moral duty, even beyond the sphere of legal enforcement” (Sidgwick, 1907, p. 15).

3.2 Idea analysis

As the discussion is based on how the government perceives and have perceived ideas of intergenerational justice, chapter four focuses on clarifying how the perception of obligation towards future generations have developed. Essentially, ideas and society is co-dependent; “The most important things to know about a society and its politics are its prevailing assumptions” (Metha, 2010, pp. 45-46). Therefore, it is important to clarify how the relevant ideas have affected the development of petroleum policies (Bratberg, 2021).

What differentiates the discussion in chapter five from the idea analysis in chapter four is whether the theory is used inductively or deductively. In the discussion, the theory is applied deductively, but in the historical analysis the theory is used inductively. The reason why the theoretical principles is used this way is to clarify and highlight the historically prevalent ideas (Bratberg, 2021).

3.3 Data collection

Whereas the previous two sub-chapters have clarified how the data is used in chapters four and five, the following sub-chapter will clarify how the data is collected.

For the normative theoretical literature this thesis focuses on primary sources. For example, focusing on writings by Rawls, Weiss and Parfit as primary sources. The use of primary theoretical literature ensures that the theory applied is well-established and not a secondary interpretation. This approach ensures theoretical accuracy and authenticity. Where it has been considered necessary, secondary sources have been applied. That is mainly when clarifying Utilitarian theory. For the supply-side theory, mainly peer-reviewed research articles are used. When articles are chosen, there has been continuous effort to ensure both new data and well-cited articles.

For the empirical data collection, the main source of information has been official governmental papers. For this thesis, official governmental papers are defined as white papers and governmental reports. The reason for focusing on official papers is because policy solutions are clear and narrow conceptualizations of ideas (Metha, 2010, p. 28). Since ideas are easily conceptualized in policy solutions, it is suited to clarify the prevalent ideas that

affected the reason a policy was made. These ideas are then mapped to their historical belonging and contextualized through theoretical systemization (Bratberg, 2021).

Party-policy papers and parliamentary discussions have been avoided so that ideological arguments do not impact the analysis (Wach & Ward, 2013). Where official governmental documents have been insufficient other sources are used to supplement. Either to provide clarification, or to support the analysis on multiple sources such as peer-reviewed literature, and some press releases and news articles (Bowen, 2009).

4 Norway's history with oil in a supply-side perspective

In 1969 the first commercial petroleum deposit, Ekofisk, was found (Heidbreder, 1978). During the following years, the government realised that there potentially was large amounts of petroleum resources in Norway (Ministry of Industry, 1971). In the first decade, it was essential for the government to control petroleum production by regulating the supply-side and keeping democratic institutions in charge of production (Ministry of Finance, 1974). During the 1980's there was a move away from supply-side management (Energy, 1983). Instead, the government focused on limiting the investment levels in order to not overheat the economy (Ryggvik & Kristoffersen, 2015). It was not until the 1990's, when the government created "The Government Pension Fund Global" (hereafter the oil fund) that the government could increase investments without concerns of overheating the economy (Ministry of Finance and Comstums, 1989). The policies from the 90's was the foundation for petroleum politics during the following decades. The international climate cooperation also made a decoupling of petroleum- and climate policies possible (Asdal, 2014). A decoupling that was challenged during the climate lawsuit ("HR-2020-2472-P," 2020).

The following chapter will provide an historical analysis of Norwegian petroleum policies. The chapter will follow a chronological order, ending with the current societal role of petroleum and petroleum policies. There will be three sub-chapters. Chapter 4.1 starts in 1945 and ends in 1987. The chapter introduces how economic development laid the grounds for growing petroleum demand, and how happenings before Norway found petroleum influenced the governments choice of actions. It introduces the ideological changes happening in the 80's and ends with the ratification of Our Common Future. Chapter 4.2 begins in 1987 and ends in 2010. As climate change became an increasingly more important concern, the government managed to separate petroleum production from climate politics, how it came forth is elaborated in this chapter. Additionally, petroleum extraction grew to new hights, how it was possible to justify that development will also be elaborated. Chapter 4.3 elaborates on 2010 until today. In 2010, new boarders made it possible to explore new areas for petroleum deposits. A development that rejoined climate and petroleum concerns. Still, the government aims to develop the petroleum sector for the foreseeable future. How that became a possibility will be elaborated in this section 4.3.1.

It should be noted that the history of Norwegian petroleum is extensive. Much is excluded in this chapter, also important historic aspects. These aspects that are important for the development of the petroleum sector but not introduced here might have historical importance but lie outside the scope of this thesis.

4.1 The first decades: 1945 – 1987

Before Ekofisk, there was little belief in oil on the Norwegian continental-shelf. As Geological survey of Norway wrote in a letter to the ministry before exploration began "You can disregard the possibility of there being coal, oil, or sulphur on the continental shelf along the Norwegian coast." (Helle, 1984, p. 14).

Still, before any oil companies were allowed to explore the Norwegian seabed for petroleum resources, the government established new laws on the exploration and exploitation of offshore natural resources ("Lov om andre undersjøiske naturforekomster," 1963). The law of 1963 states that "The right to offshore resources belongs to the state", and "Specific conditions can be imposed on such permits [permits to explore and extract]" ("Petroleumsloven – petrl," 1996, §§2, 3. Translated from Norwegian).

Whether or to what extent the government should participate in the petroleum industry was disputed during the 60's, but the government did find a lack of knowledge about the new industry. As the government found they had little experience with the new industry, they used the negotiations before any large deposits were discovered to let international oil companies educate the public sector (Helle, 1984). The discovery of Ekofisk established the existence of petroleum in Norway, and in 1970, the government concluded "there is reason to assume there will be commercial petroleum production on the continental-shelf" (Helle, 1984, p. 74).

In 1970, the government created a committee that would establish how the new industry should be administered. Their finding was that a National Oil Company (hereafter NOC) must be established, and additionally to the industrial department, an oil department should be established to ensure democratic control of petroleum resources (Ministry of Industry, 1971). The preposition highlights the government's main objective with the petroleum industry, which was that "the continental-shelf should be utilized in such a way that it benefits the entire Norwegian society" (Ministry of Industry, 1971, p. 9). This statement is an acknowledgement of the justice as fairness principle of benefit to the least advantage. The government could only legitimize the new and growing industry if *all* parts of society benefit

from it. Another important aspect was that petroleum resources should not be used in such a way that society becomes dependent on the income, the government should be involved at all levels of exploration, extraction and development of the industry, and the industry must take sufficient consideration for environmental concerns, and industrial concerns (Ministry of Industry, 1971).

During the 70's, most companies involved in the Norwegian industry where international companies. During this decade, the exploring phase was used to control production levels, thus exploration happened gradually. Still, the blocks explored was those most promising. These where explored successfully according to the government (Ministry of Petroleum and Energy, 2021). As large deposits were discovered, a new parliamentary report was published in 1974, called "Petroleum industry in the Norwegian society.

> "The aim of this report is to provide the basis for important decisions which will have to be taken in the near future. These particularly concern the allocation of new concessions on the continental shelf and guidelines for the use of the increased revenues" (Ministry of Finance, 1974, p. 5)

4.1.1.1 Petroleum industry in the Norwegian society

The white paper published in 1974 was a clear establishment of the perception that Norway would become richer as a result of the growing industry. It also further established the already existing idea of petroleum as a societal good. Stating that the main goal for Norwegian petroleum is to create a "qualitatively better society"(Ministry of Finance, 1974, p. 6).

With the aim of improving society, the report emphasises the importance of democratic control and self-constraint. First sentence of the second chapter "Democracy and Control" states that "Democratically elected institutions must have full control of all important aspects of petroleum policies: exploration, rate of extraction, safety measures and localization".

Throughout the report, self-constraint in order to ensure controlled economic growth for the whole Norwegian society is noted as a central aspect for the future development of the industry. Additionally, it is stated that the government should ensure that petroleum resources, nationally and internationally, should be utilized with care in order for non-renewable resources to last as long as possible (Ministry of Finance, 1974, pp. 13-14).

It was also important that non-renewable industries should not be developed at the expense of renewable industries. Fisheries is emphasised as an important renewable industry, and argued as more important in the long-term, as non-renewables only gives income for a limited time

period (Ministry of Finance, 1974, pp. 16-17 Appendix). From behind the veil of ignorance, it is possible to argue that non-renewables can be exploited as long as extraction does not harm the renewable industries that can produce income over multiple future generations, as one does not know *when* one will live, a short-term income should not have a negative long-term impact. Additionally, as natural resources easily can negatively affect a countries economy, the democratic control of resources is in accordance with Rawls' second principle$_{(b)}$ "Social and economic inequalities are to be arranged to that they are both […] attached to offices and positions open to all under conditions of fair equality of opportunity". Thus, the constrain of petroleum supply argued on favour of in 1974 can be argued as fair in light of justice as fairness, and constraining the supply of Norwegian petroleum is central in the white paper.

4.1.1.2 Self-constraint through exploration-license limitations

The government experiences that once a commercial found is made, it is usually hard to keep the deposit unextracted. Therefore, the main regulator of supplies was done by limiting the amount of exploration licences. However, since the size of deposits found through exploration is hard to predict, there was an implementation of a extraction-rate cap in order to ensure that "any largescale discoveries are not exploited faster than the popularly elected institutions consider desirable" (Ministry of Environment, 1989, pp. 16-17 Appendix). The maximum rate desirable was defined as 90 million tons of oil, with a parliamentary minority wanting a extraction limit of 50 million tons (Andersen, 2017, p. 213).

The physical limitations are also in correspondence with Rawlsian theory. To ensure just management of resources, Weiss' does not focus on the maximization of welfare. Weiss' focus is how natural resources are utilized and governed. The argument here is that fair management of natural resources in correspondence to Weiss must be based on the concept of "Strong sustainability". Strong sustainability means that natural capital (natural resources) and human capital (financial assets) are not interchangeable. The opposite is "Weak sustainability", which means natural- and human capital is interchangeable (Takle, 2021, pp. 148-149). As the government set as a policy objective, there should be a physical limit to petroleum production in order to extract petroleum in a justifiable manner. However, limiting extraction was not easily done.

The white paper found that the current licencing for extraction made it difficult to implement extraction constraints, thus the focus on limiting exploration licences, with the clearly defined, desired production limits (Ministry of Finance, 1974, p. 16. Appendix). The report

also stresses how the government should try to implement supply side policies in order to keep full control of production rates to ensure that Norwegian petroleum generates a benefit for the entire Norwegian society. It also emphasises that Statoil (now Equinor), the Norwegian National Oil Company, should be an important element to ensure a democratically controlled industry (Ministry of Finance, 1974, p. 17 Appendix).

As the white paper predicted, there was a steady rise in production of petroleum in the following years (BP, 2023). However, the 80's proclaims a shift in Norwegian petroleum policies. Whereas until 1980, around 20 exploration wells were drilled yearly. In the 1980's, there was drilled approximately 40-50 wells annually (Andersen, 2017, p. 213). Additionally, it was in 1980 the minority desired limit of petroleum extraction was breached for the first time, in 1988 the clearly defined annual limit of 90 million tons was breached for the first time. These shifts happened simultaneously to the growth of neoliberal ideology and policies which marks the economic policies of the 1980's (Steigum, 2010). This was marked by a change of government in Norway in 1981 where the conservative party gained parliamentary control after a long period of primarily social democratic rule (Mjøset, 1987, p. 446). The following section presents how the political shifts influenced the perception of justice towards weak sustainability, meaning an increased focus on monetization of resources.

4.1.2 New principles for Petroleum management: The 1980's

The tempo plan is a white paper published in 1983. The white paper is based on a long term plan to regularly assess how the petroleum industry should be managed (Energy, 1983; Ministry of Environment, 1989). The tempo plan marks a shift in how the ideal extraction rate should be measured. Whereas the white paper from 1974 defines clear physical values of measurement to ensure environmental, economic, and political interests. The tempo plan discusses the ideal tempo for extraction in purely economic terms, and that projections for petroleum prices should be the main factor for production levels. That means, if it is likely that the price of oil will increase in the long-term, extraction should be slow. If it is likely that the price will lower, one should extract as fast as possible, and rather keep the savings in a monetary fund (Energy, 1983).

With the policies presented in the tempo plan, the new ideal rate of extraction was not based on the physical rates presented in 1974. The focus was rather towards maximizing profits from petroleum as the optimal extraction rate (Energy, 1983). If the government could make higher profits by increasing production levels, the tempo plan argued they rightly could do so.

The shift in what was defined as the ideal extraction rate marks a shift in how politicians and bureaucrats perceived justice. As extraction limitations where no longer based on physical limits there was a move away from strong sustainability perceptions of justice towards weak sustainability as the main justification of extraction rates.

The growing idea amongst politicians in the 1980's was that the success of the petroleum sector could be measured through profit margins, and these profits should be managed to ensure the publics interests. Oil was no longer conceived as a scarce non-renewable resource that future generations should have ensured access to through self-constrain. Oil was just another tool to ensure a growing national wealth, and the government should rather ensure long-term maximal wealth than intergenerational planetary access. As written in the report "The choice of the depletion rate can then be made based on purely economic calculations. One forms an opinion about future price and cost developments" (Energy, 1983, p. 84). That was a shift away from petroleum policies that corresponded with the Rawlsian ideals, towards clear utilitarian perceptions of justice where the ultimate goal was welfare maximization, and that petroleum policies should seek that ideal.

4.1.2.1 Growing petroleum dependency

As exploration, extraction and income from the petroleum sector grew during the 1980's, the government became increasingly dependent on the income. In 1989, Statistics Norway warned about the development they had seen the last decade stating that "The economy has gradually become very vulnerable to changes in oil revenues" (*SIMEN*, 1989). The report claimed it should be central for national economic policies to reduce oil dependency.

The dependency on petroleum income was the main reason for the budget deficit of 27 billion NOK in 1986, when oil prices fell (*SIMEN*, 1989, p. 24). [8] When Statistics Norway wrote the SIMEN report, in the 1980's, petroleum was on average 13.3% of share of state revenue. However, production did not slow down, with oil production reaching the highest production level in 2001 (BP, 2023). Equally, petroleum became an increasingly bigger part of the states revenue, and from 2010-2020 petroleum accounted on average for 21.8% of state revenue (Ministry of Petroleum and Energy, 2022b). As the next section will show, in order to protect

[8] Adjusted for inflation the 2022 value is 64,3 billion NOK. Tool for inflation adjustment: https://www.ssb.no/priser-og-prisindekser/konsumpriser/statistikk/konsumprisindeksen

the economy, the government established a fund similar to the one argued in favour of in the tempo plan. Thus, the problem was not where the growing income should be saved. What became a growing concern was how climate change would affect the petroleum sector.

4.2 Climate leadership and a growing petroleum industry: 1987 – 2010

The warning of global climate change had already existed a long time in Norway in 1987. The media had been writing about climate change, and how energy systems could lead to ecosystem collapse with melting polar ice and rising sea levels early as 1971 (Anker, 2018). Norway had a strong environmental movement during the 1970-80's, and this movement argued for the opposite path of the one chosen by the government (Ryggvik & Kristoffersen, 2015). Whereas the government moved towards a path of higher extraction levels for monetary gains, the environmental movement argued that moving towards higher levels of production could lead to devastating effects (Anker, 2018, pp. 30-31).

That did not mean the government had no interest in climate change. Gro Harlem Brundtland stated in the parliament in 1975 that environmental effects "would set finite limits to growth in the use of energy in the world" (Brundtland cited by Anker, 2018, p. 33). Brundtland had a long history working with difficult political cases, for example by strengthening female's rights to abortion. She also had a genuine concern for the climate. She worked close with Eilif Dahl, one of the first to introduce ecology as a research topic in Norway, and Jorgen Randers, one of the main writers of "Limits to Growth". A book that warned about global warming in 1972 (Anker, 2018; Meadows, Meadows, Randers, & Behrens III, 1972).

She was therefore a capable choice to lead the commission chosen by World Commission on Environment and Development (henceforth WCED) towards its goal of solving difficult questions of the deep economic inequalities left after the colonial time, and to solve the problem between economic growth and environmental degradation (WCED, 1987). The commission came to an agreement, and Brundtland was central to its success (Borowy, 2013). The report was influential, and remains one of the most read papers published by UN (Borowy, 2013). One of the key factors being the definition of "sustainable development". Which "seek to meet the needs and aspirations of the present without compromising the ability to meet those of the future" (WCED, 1987, p. 49).

4.2.1.1 Growing ambitions for Norway as a climate leader

After her work with WCED, Brundtland became prime minister in Norway. One of her main priorities as prime minister was to publish a white paper that ratified Our Common future, with the goal to make Norway a leader of international climate cooperation (Anker, 2018; Ministry of Environment, 1989). Ratifying the commission's report meant a stronger governmental focus on both inter- and intragenerational justice principles. With strong resemblance to Our Common Future, the white paper stated that sustainable growth must be central to the government, meaning the government must seek "development that meets the needs of the present population without compromising the ability of future generations to meet their needs", and that "No country can shield itself from climate change, and no one can solve it alone" (Ministry of Environment, 1989, p. 7. Translated from Norwegian).

The report is a clear ambition to address the growing climate concerns, but the report holds strong technocentric and international ambitions, as one of the government's main goals was to "Adapt international agreements to new knowledge about environmental and technological solutions" (Ministry of Environment, 1989, p. 44. Translated from Norwegian). At this point there was no large-scale international cooperation with the intention of addressing global warming. The report therefore states that the government should seek to create an international agreement with the intention to address global warming in a socially just manner, meaning upholding the intergenerational principle of sustainability, and addressing intragenerational justice by lower global economic inequality (Ministry of Environment, 1989). The report gives little attention to Norway's growing petroleum industry as an environmental problem as it finds Norwegian emissions to have little influence in a global scale. Still, Norway could therefore contribute through ratifying international bodies. That was a large success. Norway got a role as an international driver for climate cooperation, and the government was influential to the end-result of the Kyoto protocol.

In Kyoto, the government sided with the US in order to ensure countries with high emissions, and high cost of reducing emissions possibility to invest in emission reduction in other countries, this mechanism is called "joint implementation" (Pearce, 1995). Additionally, Norway and the US managed to create carbon markets, making it possible to trade emissions. Joint implementation and carbon markets are called flexible mechanisms. The idea behind the flexible mechanisms was to cut emissions as economically efficient as possible. The idea is based on a solution of the tragedy of the commons "It is clear from economic theory, if not also common sense, that well-informed trade between two consenting parties is likely to

improve the lot of both parties" (Hepburn, 2007, p. 379). However, critiques find that these mechanisms are "ethically dubious at best, if not obnoxious". The argument being that these mechanisms allow wealthy countries to keep high emissions while moving responsibility to less wealthy countries (Hepburn, 2007, p. 379). Still, the Kyoto protocol was a success for Norway, and the new international arrangement also made it possible to decouple petroleum from climate politics domestically (Anker, 2018; Asdal, 2014).

4.2.1.2 The separation of climate and petroleum politics

During the late 80's there was a growing concern that climate change would negatively affect the petroleum industry. Statistics Norway stated that reducing the consumption of oil could be a climate measure that efficiently stabilized emissions (*SIMEN*, 1989). The ministry of finance was sceptical. The ministry of finance was concerned that the increased focus on climate change could affect the demand for Norwegian petroleum. Resulting in lower demand, thus lower oil prices and production. That was why the Ministry of Finance aimed to separate climate- and petroleum politics (Andersen, 2017; Asdal, 2014).

Separating climate and petroleum were done by advocating climate policies that would not interfere with the petroleum industry or income, disregarding the impact petroleum have on the climate. Such bodies could be implemented through the international climate regime Brundtland visioned Norway to lead. The Ministry of Finance played a key role when the government decided what policies it should advocate for an international climate regime. As letter exchange between the Ministry of Petroleum and Energy and The Ministry of Finance finds "an international agreement that builds upon a principle of harmonisation [ie, joint implementation] … will enable Norway to increase our emissions to a considerable extent in line with our comparative national production advantages" (The Ministry of Petroleum and Energy cited by Asdal, 2014, p. 2121). Just as flexible mechanisms had its vocal critics, the idea was not initially positively accepted amongst governments. Multiple European countries opposed the idea in the time leading up to the first climate summit in Rio, 1992. These countries argued that "Norway should perhaps curb its own emissions instead of buying the achievements of others" (Anker, 2018, p. 37).

In the years leading up to the Kyoto climate summit, Norwegian delegates spent a considerable amount of time persuading poorer countries that carbon trading was a viable solution. Norway, with one of few allies, the United States, was successful with the work leading up to Kyoto. Carbon trading and Joint implementation became key features in the

international climate regime (Anker, 2018; Hepburn, 2007). The international implementation of these structures made the Ministry of finance's goal of separating climate policies and petroleum policies successful, and Norway could develop the petroleum industry in order to ensure high income from petroleum without concern of growing domestic emissions. In this time period, the government had created a fund as suggested in the tempo plan. That fund made it possible to safeguard the government from fluctuating oil prices (Ryggvik & Kristoffersen, 2015).

4.2.1.2.1 The Government Pension Fund Global

The idea of a petrol fund stems from the tempo plan. The idea was that increased petroleum exports will not harm the national economy if it is not all spent momentarily. Rather, it can be saved and invested abroad. That is what the government did. The fund, formally named the Government Pension Fund Global was founded in 1990 (Takle, 2021). The oil fund allowed for higher production levels as the government could safeguard itself against fluctuating oil prices (Energy, 1983). The fund also holds clear normative values of intergenerational justice. The Norwegian Bank Investment Management holds that:

> "The aim of the oil fund is to ensure responsible and long-term management of revenue from Norway's oil and gas resources in the North Sea so that this wealth benefits both current and future generations" (NBIM 2019 cited by Takle, 2021, p. 148)

A new white paper was published in 1993 about the future for Norwegian petroleum. The report stated that "The central approach in a petroleum policy perspective and the primary objective of the oil and gas activities is to create the greatest possible value for the Norwegian society" (Ministry of Trade and Industry, 1993, p. 54). Note that at this point, the government was fully aware of the impact petroleum had on the climate. Still, the white paper suggests that the main objective of Norwegian petroleum is to maximize profits.

That meant that the petroleum production would increase, oil reaching the record production in 2001, with an extraction rate more than three times higher than what was considered a rational extraction rate in 1974 (BP, 2023; Ministry of Finance, 1974). The rationale behind the rise in petroleum extraction was that the best utilization of petroleum was to maximize production for high profit margins. As Jens Stoltenberg, future prime minister, stated in 1993: "There is little benefit to future generations if we leave oil in the ground until it becomes as

worthless as coal" (Mathiassen, 1993, p. 6. Translated from Norwegian).[9] Stoltenberg's argument is based on an idea of weak sustainability, and directly related to the Ministry of Finance's concern of how growing climate cooperation would impact the energy market. The risk of concern was thus not that the world was dependent on fossil fuel, it was whenever Norway could maximize its income from petroleum. While the rationalization of the pension fund and increased petroleum productions have clear resemblance to a utilitarian perspective of ethics, it is in direct conflict with Weiss' principle.

Still, with the concern of falling oil prices, the government wanted to develop the petroleum industry to ensure high profits (Ministry of Finance and Comstums, 1989). The policies have continued to emphasise high production and saving in the monetary fund. Norwegian petroleum production and income was and still is high. But the search for new deposits have moved north since the beginning, and with the new Russian boarder agreed upon in 2010, it became possible to explore the Southeast Barents-sea (Ministry of Petroleum and Energy, 2013). A highly vulnerable area (Steinberg & Kristoffersen, 2017).

The foundation of a Norway-Russia boarder in the Southeast Barents-sea also marks a shift for Norwegian petroleum history, as exploration licenses in this area was the reason for the climate lawsuit ("HR-2020-2472-P," 2020).

4.3 Petroleum and climate re-emerging: 2010-2023

> "The main goal of petroleum policy is to facilitate profitable production of oil and gas in a long-term perspective. Petroleum resources should also continue to contribute to a qualitatively better life in Norway. To achieve this goal, management must be comprehensive and based on knowledge and facts. […] The role as a petroleum producer should be combined with an ambition to be a leader in environmental and climate policy" (Ministry of Petroleum and Energy, 2010, p. 6. Translated from Norwegian).

The words above is the introduction to the white paper "An Industry for the Future – On Petroleum Activities", published in 2010. The report restates the ambitions formulated from the beginning of the petroleum industry in Norway. Meaning petroleum should be managed as a societal good.

[9] During the postwar period coal saw a downturn in demand as it was being steadily shifted out in favour of oil and gas (Bjerkholt, Offerdal, & Strøm, 1985).

The report underscores the same principles introduced in the tempo report, meaning that petroleum should be managed to ensure high economic returns (Ministry of Petroleum and Energy, 2010). Even though concerns for climate had grown, the report stated that the plan for the future of Norwegian petroleum is to continue the successful management. However, the report found it problematic that the continental-shelf holds fewer resources as production levels had steadily decreased. As deposits are depleted, extraction becomes increasingly difficult. The white paper therefore acknowledges the need to explore for new resources in order to increase productivity (Ministry of Petroleum and Energy, 2010).

The report was written the same year as the border in the Southeast Barents Sea between Norway and Russia was ratified. With the new border to Russia, it became possible to explore this area for petroleum resources (Moe, Fjærtoft, & Øverland, 2011). As the possibility to explore new locations made it possible to solve the problem expressed in the white paper from 2010, a new white paper was published in 2013 called "New Opportunities for Northern Norway – Opening of the Barents Sea Southeast for Petroleum Activities" (Ministry of Petroleum and Energy, 2013).

"The government aims for the industry to make positive contributions to the Norwegian society for generations to come" (Ministry of Petroleum and Energy, 2013, p. 5). The report is positive towards opening these areas for exploration, but it emphasises the need for an impact assessment of the environmental impact extraction in the Barents Sea Southeast will have. The Southeast Barents Sea is particularly vulnerable to environmental damage, and whether it is possible to justify production there was unclear. It was the exploration after new petroleum deposits in the Southeast Barents Sea that was discussed in the climate lawsuit which re-merged climate- and petroleum politics.

4.3.1 The climate lawsuit

The plaintiffs in the climate lawsuit were Nature and Youth Norway and Greenpeace Nordic. The plaintiffs argued that opening the Barents Sea for new exploration would pose significant environmental risks due to the area's vulnerability and could lead to the exploitation of more oil and gas than is environmentally sustainable, thereby hindering efforts to limit global warming to an acceptable level (Hambro, 2016). As stated by the then leader of Nature and Youth Norway, Ingrid Skjoldvær "With these licenses, they are flipping us off, both the youth of today and future generations" (Valvik, 2016). Skjoldvær has a clear, different view of both inter- and intrageneration justice than what the government holds.

The argument was based on two key points. The plaintiffs argued that the assessment from the ministry of Oil and Energy was biased towards making new deposits seem more valuable than what was realistic (Greaker & Rosendahl, 2017). The other key point was that when opening for the exploration of the 23rd licencing round, there was no assessment of how exploiting new deposits would affect Norway's domestic and international climate policy obligations (Greaker & Rosendahl, 2017). The government disagreed, arguing that sufficient consideration was made, and that exported emissions are not the responsibility of Norway, because current climate cooperation consider emissions from the point of combustion, not point of production ("HR-2020-2472-P," 2020).

The climate movement lost the lawsuit in the Supreme court. The Supreme court found that Article 112 was not an enforceable right, it is rather a set of legal principles. Following, the court agreed with the government, ruling that the government is only responsible for domestic combustion ("HR-2020-2472-P," 2020). However, the Supreme court did acknowledge that the government must make further assessments of the long-term impacts from petroleum production, and that global emissions does impact Norway, and most emissions from Norwegian petroleum happens abroad. So while the climate movement did not win overall, they did get some partial victories ("HR-2020-2472-P," 2020).

The climate lawsuit has a special role as a case that that bridges between politics and law (Fauchald & Smith, 2019). Meaning that the lawsuit defined the extent courtrooms in Norway can impose restrictions on political decisions about fossil fuel extraction in Norway (Østerud, 2019). The conclusion in the Supreme court was controversial. The decision was not unanimous, and there where clear supporters for the plaintiff's case (Boyd, 2020; "HR-2020-2472-P," 2020; NIM, 2022).

4.3.1.1 Critiques of the Supreme court decision

Amongst the supporters was David R. Boyd, Special UN advisor on climate and human rights. He gave the plaintiffs clear support stating that "[The government should] Modify its position and adopt an interpretation of article 112 of the Constitution, supported by the decision of Oslo District Court [That §112 is an enforceable right], recognizing that it is a clear expression of the human right to live in a healthy and sustainable environment" (Boyd, 2020, p. 17). Other outspoken criticism came from the Norwegian Institution for Human rights (NIM). NIM was created by the parliament in 2015 to ensure that the government preserves human rights. NIM's governmental role is "Monitoring and reporting on the state of

human rights in Norway, including presenting recommendations to ensure that Norway's human rights obligations are fulfilled" ("NIM-loven," 2015. §3a. Translated from Norwegian). NIM clearly stated they find Article 112 to be an enforceable right, and that emissions from combustion of Norwegian petroleum is the government's responsibility (NIM, 2020).

One aspect that was criticised by the Norwegian institution for human rights and the climate movement is that the supreme court ruled in favour of the government's argument that combustion outside of Norwegian boarders is not the responsibility of Norway ("HR-2020-2472-P," 2020; NIM, 2022). NIM found that the government must assess all aspects of combustion abroad, and if there is no room for new licencing within the 1.5°C target, it should be unlawful to extract new deposits (NIM, 2022).

The decision to rule in favour of new exploration-licenses means that developing new oil and gas deposits on the Norwegian continental-shelf is not regarded as a threat to the right to a healthy environment. At the same time, multiple organisations argue it is necessary to restrict exploration for fossil fuels if the 1.5°C is to be reached (IEA, 2021; SEI et al., 2021). As global warming and fossil fuel exploitation is intertwined with long-term effects that spans out over the whole planet for multiple generations, the aspect of intergenerational justice in important. As was written in the preliminary documents for Article 112, the government must make assessments for future generations, but in the Supreme court decision there was no discussion of the rights future generations have ("HR-2020-2472-P," 2020). The problem is that there is no person or institution today that can make sure their rights as a future generation is guarded (Weiss, 1989).

As the discussion in chapter five will clarify, this thesis finds that in light of the theoretical frameworks in applied in this thesis, the government should be responsible for exported combustion to ensure intergenerational justice in a larger degree than today. Supply-side climate policies are reasonable policy options to re-merge climate and petroleum policies (Green & Denniss, 2018; Lazarus et al., 2015; Le Billon & Kristoffersen, 2020). That is in correspondence with the newly published white paper from _____ stating that the government must immediately stop all exploration for new petroleum deposits until an end-date for Norwegian petroleum have been set out of climate concerns. Even still, there as the following section will elaborate, the government seem to have taken little concern for the critique from NIM and Boyd.

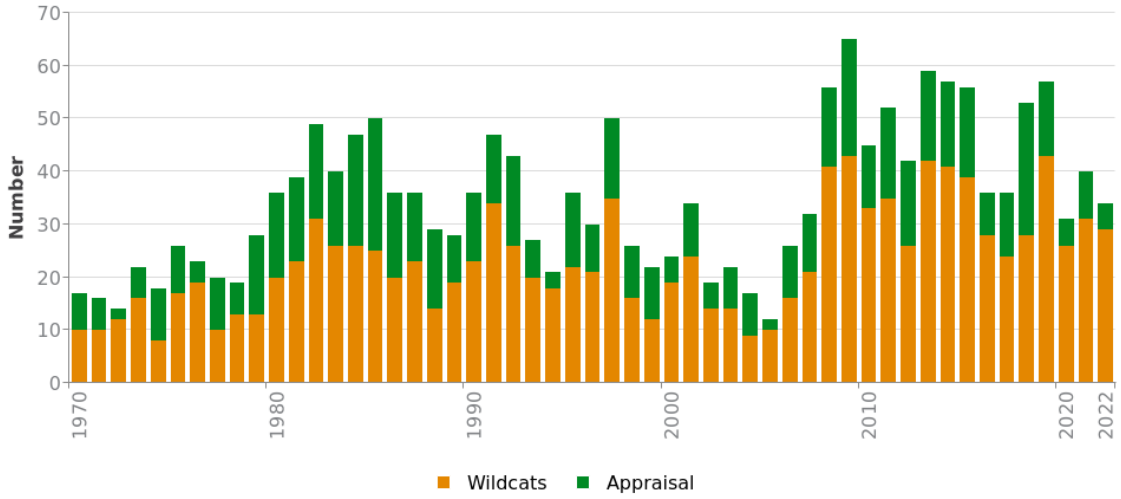
4.3.2 Stance of Norwegian petroleum after the climate lawsuit

Whereas oil production has been declining since 2001, there has also been a large increase in the production of gas. Resultingly Norway became the 3rd largest *exporter* of natural gas in 2021, primarily exporting to the EU and Great Britain (Ministry of Petroleum and Energy, 2023a).

While the Norwegian government does produce renewable energy, gas production delivered 34 times more energy than what was generated through renewables in 2021. To put it in a historical perspective, in 2021, oil production was twice as high compared to 1987, when Brundtland published Our Common Future. Gas production was approximately five times as high (BP, 2023).

The labour party government that came to power in 2021 have clearly stated that it has no intention to limit exploration or production of Norwegian petroleum "the government will pursue policies to develop, not wind down the petroleum industry" (Ministry of Petroleum and Energy, 2022a, p. 5). That is despite stronger voices, even within the government stating that the current petroleum policies are insufficient to meet the climate goals in the Paris agreement (The Ministry of Climate and Environment, 2023).

The government claims that "We need new findings to continue develop the infrastructure on the Norwegian continental shelf" (Ministry of Petroleum and Energy, 2021). This statement was made when announcing the next round of concessions to explore for new oil and gas deposits. And in 2023 the government opened 19 new search- and extraction projects with an investment value of 200 billion NOK. The governments focus when approving the new licenses is that "These projects will facilitate for high and stable production from the Norwegian continental shelf, […] we are developing the petroleum industry to generate jobs and revenue for the Norwegian society" (Ministry of Petroleum and Energy, 2023b. Translated from Norwegian). This reflects how the government has operated during the last decade. There has been a steady increase in the amount of exploration licences awarded, with the most aggressive exploration period being 2010-2020 (Ministry of Petroleum and Energy, 2023c).



Graph borrowed from the Ministry of Petroleum and Energy. “Wildcat” illustrates wells drilled in search for new deposits. (Ministry of Petroleum and Energy, 2023c)

The government does plan for a long-term decline in in production and exports, but this decline is not based upon supply side constraints. The governmental future projections “reflect the expected resource depletion rates rather than a planned transition” (SEI et al., 2021, p. 49). The current policies rely on marked mechanisms to decide the pace of a transition away from petroleum production (Funnemark & Beaumont, 2022).

Norway is not the only country that does not attempt to lower petroleum production. In general, all climate policies are based on demand side emissions. There can be many reasons, but one is most likely that international climate cooperation only focuses on demand side emissions (Lazarus et al., 2015). While the Kyoto protocol was important, the Paris agreement laid a new foundation for climate cooperation in 2015. The following sub-section will briefly elaborate on the Paris agreement.

4.3.2.1.1 The Paris agreement

As clarified in chapter 1, the Paris agreement’s main goal is to limit global warming to 1.5°C (UNFCCC, 2015). The Paris agreement is based on a bottom-up logic (Falkner, 2016). The bottom-up logic means action is supposed to be formulated in separate NDCs. NDC’s are non-binding, meaning that one country cannot enforce another countries NDC. There are also no formal sanctions if NDC are not met. Therefore, the only enforcement mechanism is “naming and shaming” (Falkner, 2016; Hunter et al., 2021; UNFCCC, 2015). One can see

such a structure as a weakness, but as bottom-up initiatives is a decentralized style of cooperation, it gives states the possibility to construct policies based on local knowledge.

In global climate negotiations, such as the Paris agreement, the only accounting of emission is emissions as consumption. Meaning that in current climate change cooperation, an exporter of fossil fuels is not responsible for how those fuels are used by the importer (Moss, 2016). For Norway, that means Norway is not responsible for how importers of Norwegian fossil fuels utilize these resources, Norway is only responsible for emissions from extraction (Szulecki, 2023, p. 156).

The Paris agreement emphasises that countries can set higher pledges than what is formulated in the Paris agreement. That means Norway and other producers are free to voluntarily cooperate to cut emissions (UNFCCC, 2015, p. 7). One example is the Beyond Oil and Gas Alliance (BOGA, 2021).

During COP26, the BOGA-alliance was launched as a voluntary cooperation between states, "seeking to deliver a managed and just transition away from fossil fuels" (BOGA, 2021). The BOGA alliance is a step towards supply-side policies. As the agreement is based on cooperation between producers to phase out production within the 1.5°C framework (BOGA, 2021). Another pledge from oil and gas producers is the "Net-Zero producers forum".

5 Discussion

The following chapter will discuss the government's responsibility for future generations and exported combustion. Both intergenerational justice and responsibility for exported emissions is discussed deductively from the normative perspectives introduced in chapter 2. The discussion will also introduce how the government could take further responsibility for a just transition based on the supply-side literature.

The discussion is divided into three sub-chapters. Chapter 5.1 discusses intergenerational justice. The preparatory work for article 112 states that future generations must be safeguarded ("HR-2020-2472-P," 2020). The law states that "Natural Resources shall be managed based on a long-term and versatile perspective that safeguards this right also for future generations" ("Grunnlova – Grl. – nynorsk," 1814). The discussion in this sub-chapter will focus why the government does not take sufficient responsibility for future generations.

Chapter 5.2 discusses responsibility for exported combustion. The Supreme court found that principally, the government could be responsible for exported combustion. However, it finds that the government is not so according to Norwegian law. The decision was criticised from NIM, and the UN special advisor on human rights. Thus, it is unclear whenever the government should take responsibility for petroleum exports. This discussion will clarify two views on this subject, a Utilitarian and Rawlsian view.

Chapter 5.3 discusses how supply-side climate policies could be addressed in order to ensure both inter- and intragenerational justice. This section discusses supply-side climate policies as an alternative set of policies introduced in chapter 2.4 in light of the normative discussions in chapter 5.1 and 5.2.

5.1 Intergenerational justice

The following chapter will discuss intergenerational justice. The structure of this sub-chapter is based on theoretical categorization. Chapter 5.1.1 will focus on Rawlsian justice, applying principles from both Justice as Fairness, and Weiss. Chapter 5.1.2 applies Utilitarian theory.

5.1.1 Rawlsian Intergenerational justice

Chapter 2.2.2.1 established that future generations have rights in light of Rawlsian theory. In justice as fairness, behind the veil of ignorance, one does not know where or when one is born. In that respect, rational individuals cannot agree on a concept of justice that does not

ensure justice between generations. Geographical and temporal limitations to fairness therefore becomes arbitrary. But the problem is not the acknowledgement of intergenerational justice. The Norwegian constitution, and the Norwegian government has acknowledged these rights for decades. In the white paper from 1974, the government concluded that even though the petroleum industry might last for a long time, the government must always ensure it does not negatively affect generations that will live afterwards (Ministry of Finance, 1974).

Thus, the problem is not the existence of future generation's rights. The problem is that there is no formulation of these rights and how it should affect policy decisions or how it is supposed to be upheld. These rights are simply taken for granted (Haugen, 2019). It can negatively affect future generations when their rights are nothing more than the formulation of these rights' existence, especially when future generations have no gatekeepers. That is why the following discussion will showcase how the definitions of these rights from theoretical perspectives should affect policy decisions for Norwegian petroleum.

5.1.1.1 Just savings for future generations

As stated in the theory chapter, Rawls finds weakness in his just savings principle. Some guiding principles is that the just savings principle should be one each generation would wish the previous generations followed, and that a just savings principle should not lead to remorse amongst generations. As argued in the theory chapter, in this thesis Weiss' principles are considered to uphold the principles from justice as fairness. As her principles are better articulated and suited for a discussion on intergenerational justice, the following discussion will mainly entail Weiss' principles.

5.1.1.2 The first principle: Conservation of diversity

The first basic principle presented by Weiss is conservation of diversity, the principle mean to ensure that future generations have access to a similar range of natural resources. Weiss clarifies especially two reasons why conservation of natural resources is important for intergenerational justice. The first is that as access to natural resources shrinks, prices will rise. Then, conserving resources could lower the burdens of limited resources for coming generations. The second argument in favour of conserving resources is that often exploitation happens without concern of economic importance (Weiss, 1989).

One example is how gas flaring was widespread because the resource used to be worthless (Weiss, 1989). However, as the value of gas has increased, so has the production of gas as an

energy source. Gas has developed from a small percentage of Norwegian exported goods to becoming one of the main incomes for the Norwegian economy (Ministry of Petroleum and Energy, 2023a). And while gas is still flared, it is also one of the most important sources of energy today (Emam, 2015; IEA, 2023).

A similar argument could be made about the current petroleum policies. Fossil fuels comes with a high cost in terms of global climate change. However, it is impossible to predict how future generations might utilize natural resources in the future. Resources do not have an inherent moral value, how we utilize resources is what affects the planet. Some future generation may be able to utilize fossil fuels without the negative climate effect it brings today. The argument is that future generations should have the same access to natural resources according to Weiss' theory. With equal limitations to their action, future generations should also have the choice to produce- or not produce fossil energy.

The current government aims to develop the fossil fuel industry at the rate of depletion of the continental-shelf (Ministry of Petroleum and Energy, 2022a; SEI et al., 2021). If living generations deplete the Norwegian seabed, that would leave future generations without the same diversity of natural resources.

The argument presented in this section is therefore that in order to ensure Weiss' first principle, the government must address petroleum production levels. The government does save for future generations in the oil fund, but keeping monetary savings does not ensure accesses to natural resources.

In order to ensure access to natural resources, the government could re-implement similar policies as was used early in the petroleum production. Meaning that the government can limit or stop exploring for new deposits as a mechanism to ensure the potential of unknown petroleum resources to future generations (Ministry of Finance, 1974). What should be noted is that ensuring Weiss' first principle can only be done by addressing petroleum production, even if it comes at the expense of monetary savings. As the current government incentivises for rapid extraction and aggressive exploration, the government violates Weiss' first principle (Ministry of Petroleum and Energy, 2022a, 2023c).

5.1.1.3 The second principle: The right to equal planetary quality

Ensuring the right to equal planetary quality is more complex. The reason why ensuring the second principle becomes more complex is that a small country such as Norway cannot solve

the climate crisis. However, no country alone can solve the climate crisis. Since no country can curb global warming alone, and all governments are separate agents, the second principle is best discussed as a general principle. As such, it is best discussed from the original position.

The first argument presented in this sub-section is that equal planetary quality cannot be ensured without both importers and exporters addressing fossil fuels. Thus, the discussion presented in sub-chapters 5.1 and 5.2 are in many regards interrelated. The second argument presented in this section will address the current savings for future generations, being the oil fund, and why it is insufficient to address Rawlsian intergenerational justice.

5.1.1.3.1 Why address fossil fuel exports?

Behind the veil of ignorance, the individuals do not know if they are born in a country exporting or importing fossil fuels. That is why, there is a need for principles that ensures both ends of a supply-chain apply policies that ensures the planetary quality. Since one has no knowledge about the societal order or individual preferences, these principles must address fossil fuels regardless of how international agreements are formulated and how other exporters, or importers, might respond to an action.

Avoiding global warming would mean solving a commons-problems. As no producer nor consumer can sufficiently mitigate global warming when regarded as an isolated agent, no production or consumption can remain unaddressed as it could inevitably lead to the tragedy. The government seeked international cooperation to address climate change, as Brundtland government argued “No country can shield itself from climate change, and no one can solve it alone” (Ministry of Environment, 1989).

From behind the veil, no country can be responsible for actions out of their control, but on the other hand, a government must take responsibility for their own actions and the following consequences. That is why the government should do what is possible to ensure that future generations have access to an equal quality planet. That means exporting countries should address exports, and importing countries should address imports. In a world where both imports and exports are addressed it would be possible to ensure a more efficient and just phase out of fossil fuels according to the supply side literature (Asheim et al., 2019; Green & Denniss, 2018; Lazarus et al., 2015; Le Billon & Kristoffersen, 2020; Pellegrini & Arsel, 2022).

What it would mean for Norwegian petroleum is not discussed here. However, it would mean that the supreme court decision stating the government is not responsible for petroleum exports is a violation of Weiss' second principle. Meaning that the government must address exported petroleum emissions to ensure Weiss' second principle.

5.1.1.3.2 The second principle and weak sustainability

The argument in favour of equal planetary quality is an argument against weak sustainability practices. The argument is simple: If monetary savings are high at the expense of the planet being in a worse state, the planet is still in a worse state. From behind the veil of ignorance, not knowing where one is born, the probability of accessing the Norwegian Pension Fund is microscopic. Norway is approximately 0.07 percent of the world's population (The world bank, 2023). And it is impossible to know the future value of the oil Fund, meaning that it is not a guaranteed monetary fund for all future generations.

One could argue that a global pension fund would ensure intergenerational justice as it would be a benefit for a large amount of living, and future generations. But it would not change the fact that fossil fuels put the planet in a worse state. Therefore, the act of accepting monetary gains for a lower planetary quality does not fulfil the second principle.

As showcased in the historical development chapter, how justice is perceived changes over time. It is impossible to predict future values. When Stoltenberg stated in 1993 that it is in the interest of future generations to extract large amounts of fossil fuels in order to ensure high profits, he might be right according to his values (Mathiassen, 1993). The problem is that there is no guarantee that a depletion of the continental-shelf is in accordance with future values. Future generations might prefer that current generations focus on cutting the production and consumption of petroleum.

As values change, future generations might not share Stoltenberg's perception of justice between generations. As such, saving in the oil fund for future generations risks being biased towards current generations perception of justice. Thus, not only violating Weiss' principle, but also Rawls' notion of justice as fairness. As Rawls (1999, p. 369) notion of deliberative rationality finds it, values should "not be affected by the contingencies of our present perspective".

It is therefore troublesome to accept the weak sustainability practises to safeguard future generations according to Rawlsian theory. That means the government must address

petroleum savings by limiting production and exploration in order to ensure both principles discussed in this section.

Section 5.1.2 has provided a Rawlsian discussion on intergenerational justice. The discussion enlightens how the government fails to ensure Weiss' principles of intergenerational justice. Summarized, the argument is that the current policies where the government develops the petroleum industry without limits to extraction levels violates both of Weiss' principles. Even though the government provides savings for future generations in the oil fund. These savings are not sufficient, and therefore saving in the oil fund violates Weiss' second principle. Both these principles can be ensured through supply-side policies. The next section will discuss intergenerational justice but applying principles of justice based on utilitarian theory.

5.1.2 Utilitarian intergenerational justice

The difference between the utilitarian and Rawlsian perception of justice is how utilitarian theory emphasizes the consequences rather than structures as the main contributor to justice. Because consequences are emphasized, it is not clear whenever strong- or weak sustainability should be the main safeguard for future generations. If monetary savings contribute to future generations utility in a higher degree than savings as saving natural resources, the utilitarian argument is that the government should continue saving in the oil fund. That is why the following discussion is focused on the oil fund as a intergenerational savings mechanism.

5.1.2.1 The oil fund

Since the establishment of the oil fund, Norway has seen a rise in production and development of petroleum resources for monetary savings. The problem with the government's current weak sustainability is that petroleum income only produces income that Norwegians benefit from. Just as the main argument since the discovery of petroleum has been to create a better Norwegian society, only Norwegians can access the oil fund. The combustion of fossil fuels harms all humans for the foreseeable future while the income only affects a small amount of those people. This makes saving in the oil fund problematic as welfare is usually easiest increased where it is lowest according to utilitarian theory.

Whether the fund would produce most utility by only being spent in Norway, or as a global fund is irrelevant. For the fund to ensure intergenerational utilitarian justice, it must be spent where the total benefit is the highest. As petroleum emissions, from both production and combustion, leads to *global* warming, the savings should be global as well. The utilitarian

argument of weak sustainability with production of petroleum for future generations might therefore be valid, but the savings should not be kept for Norwegians. The fund should be spent globally, at the locations both temporal and geographical it is most likely to produce the most amount of utility.

There are two problems with the argument above. Firstly, it is a difficult task to ensure that the oil fund is spent where and when it is optimal. The second problem is that it is highly unlikely that the Norwegian citizens would allow it to become a global fund.

Another problem with the oil fund as a Utilitarian insurance for welfare maximization is that it can only be a valid welfare maximization if one presumes future generations values monetary savings over planetary savings, but utility can take many forms. Mitigating global warming at the expense of monetary gains might be in the interest of future generations. What future generations prefer is impossible to predict, but chapter four proved how perceptions of justice change over time.

The Norwegian government has ensured intergenerational justice over the course of decades. Whereas future generations rights were ensured by self-constraining supplies in the 1970's, from the 1980's future generations interests have been ensured by maximizing production for monetary gain. It should be noted that the shift from intergenerational savings as limiting production rates towards savings as increasing production levels happened simultaneously as the government found it in its contemporary interest to increase production. There seems to be little difference between what the government perceives as just for themselves and what is just for future generations. If current generations conclude that future generations interest lies in monetary savings, some distant generation risks living with a drastically harsher climate than necessary.

Since global warming is a permanent damage, and monetary savings risk being temporal, the safest option to ensure future generations rights would therefore be to ensure strong sustainability practices. Limiting production of fossil fuels is a permanent solution with permanent consequences. That is contrary to monetary savings and petroleum production, which is temporary savings with permanent consequences.

While section 5.2 has provided some utilitarian arguments for future generations, it is also clear that the Utilitarian framework lacks clear principles of intergenerational justice. The following section will clarify the weaknesses of the theoretical frameworks for intergenerational justice.

5.1.3 The problem with intergenerational justice

The main problem with intergenerational justice within the frameworks chosen for this thesis is that both theories acknowledge intergenerational justice, but there is no clear solution to the problem of intergenerational justice and global warming. Global warming is a new problem, considering that the history of political theory dates back to the ancient Greeks. For Utilitarian theorists, arguing in favour of intergenerational justice has been easy until modern times, as the general tendency throughout history have been an increase of welfare (Mulgan, 2019).

The lack of discussion on inter- intragenerational justice is especially clear within the utilitarian framework. Parfit acknowledges the problem of intergenerational justice in the discussion on the non-identity problem. He does not find a solution, but the solution is what Parfit calls Theory X. He predicted that Theory X would "not take a person-affecting form. The best theory about beneficence will not appeal to what is good or bad for those people whom our acts affect" (Parfit, 1984, pp. 378-379).

The Rawlsian theory applied in this thesis is a more sophisticated framework when discussing intergenerational justice, but it also holds clear theoretical weaknesses. For example, what is "equal planetary quality"? If one presumes equal planetary quality means mitigating global warming, that would risk violating the first principle of conservating diversity, as renewable energy sources would mean building wind and solar farms.

While there is a need for more normative discussions on intergenerational justice, some clear pinpoints have been made. Specifically, intergenerational justice cannot be ensured without re-emerging petroleum and climate politics. There are also arguments presented that finds that the government must be responsible for exported petroleum emissions in order to ensure intergenerational justice. The following sub-chapter will delve into the government's responsibility for exported petroleum emissions.

5.2 Responsibility for exported petroleum

In the climate lawsuit the government is not held responsible for exported petroleum emissions. The argument is that the consequences are too complex to be certain that Norwegian petroleum leads to a significant amount of global warming negatively affecting Norway ("HR-2020-2472-P," 2020). The argument for the supreme court decision have strong similarities to the findings by Rystad (2023), arguing that cutting Norwegian petroleum production leads to higher global emissions. The decision is not without controverse, as NIM, the governmental control institution for human rights argue "Assumptions about future market behaviour by entities outside of Norwegian jurisdiction, in our view, are unlikely to hold legal significance" (NIM, 2022. Translated from Norwegian).

The upcoming sub-chapter will delve into the ethical justification of exported petroleum within the contexts of both Rawlsian and Utilitarian theories. The discussion is divided into three sections. As both Utilitarians and Rawls argues, ethical systemizations mean similar situations should be treated similarly. That is why the first section will discuss whether agents situated in similar situations are generally not held responsible for the products they produce.

5.2.1 Similar circumstances

A premise for this section is that petroleum is a hazardous product. As the utilization of the product leads to global warming, the product is hazardous. In many other economic circumstances where hazardous goods are exported, exporters do take responsibility to limit supplies (Green & Denniss, 2018; Muttitt & Kartha, 2020). As Jeremy Moss (2016, p. 498) writes; "Should one country knowingly export uranium to another country where safety is lax, we could rightly accuse it of being irresponsible and having a share in the blame if accident where to happen".

Norway does acknowledge responsibility for some exports. For example, Norway has laws in place to hinder weapons exports to certain countries (Hansen, 2022). When Norway limits exports of weapons it is to stop actions deemed illegitimate or ethically unjustifiable outside the government's own jurisdiction. The government is most likely aware that when Norway exports oil and gas, the importers intention is to combust the product in some way that leads to global emissions. These long-term effects are not taken into account as climate concerns in Norway ("HR-2020-2472-P," 2020; Riekeles, 2023; Rystad, 2023). There is a clear difference in how the consequences of weapons exports and fossil fuels plays themselves out. The consequences of the weapons are much clearer as death is a direct consequence of weapon

usage. But as climate change will lead to more catastrophic and extreme weather conditions, one can argue that contribution to global warming also has death as a consequence which would make the situations comparable.

Another, more similar example to petroleum production is the Montreal protocol. The protocol is one of few successful large-scale climate cooperations, and it was centred around cutting production of ozone depleting substances (ODS). The protocol is an example of how "a large group of actors with divergent interests and limited knowledge were able to agree upon and subsequently implement a set of rules to resolve a complex commons-problem" (Epstein, Pérez, Schoon, & Meek, 2014, p. 338). After the ratification of the Montreal protocol there was a general decrease in demand and supply of ODS (Epstein et al., 2014; Velders, Andersen, Daniel, Fahey, & McFarland, 2007).

The Montreal protocol focuses on both demand- and supply side policies. As article three states, production, and consumption of ODS should be measured. Additionally, article 4.5 states that "Each Party shall discourage the export, to any State not party to this Protocol, of technology for producing and for utilizing controlled substances" (UN, 1987, p. 34). This clearly shows that in the Montreal protocol, producers were responsible for their exports.

The move away from recognizing fossil fuel suppliers as responsible started in Kyoto and has become increasingly more prevalent since (Piggot et al., 2018). After the Montreal protocol, the establishment of the United Nations Framework Convention On Climate Change in 1992 stated that economies that are especially dependent on fossil fuel income or combustion should consider special provisions (UNFCCC, 1992). It is difficult to know why international climate negotiations moved away from addressing production. But as producers of other hazardous goods often are held responsible, and as the Montreal protocol, a successful, international, climate agreement held both importers and exporters responsible, it is not clear why Norway should not be responsible for exported petroleum emissions as the Supreme court argues.

If similar situations are to be treated similarly, the Norwegian government should be held responsible for exported combustion, as it is not a general conception that producers of a good is not responsible for the consequences of its usage. However, the following sections will revisit the concept of responsibility for exports of petroleum in light of normative theories.

Section 5.2.2 will discuss Rawlsian theory. This section attempts to revisit producers' responsibility from the original position. Section 5.2.3 focuses on utilitarian theory. This section will focus on the government's argument in favour of developing the continental-shelf, being that Norwegian petroleum leads lower global emissions, and present an argument in favour of collective utilitarianism when discussing ethical responsibility for emissions.

5.2.2 Exported combustion – Rawlsian theory

As the premise for Rawls' reflective equilibrium is that similar situations should conclude with similar actions, the argument presented in the previous section is applicable for Rawlsian theory as well. However, the following section will discuss whether rational individuals behind the veil of ignorance would accept that petroleum producers should not be responsible for the combustion of their product.

5.2.2.1 The original position

"The social system is to be designed so that the resulting distribution is just however things turn out" (Rawls, 1999, p. 242). The fundamental idea of the original position is that inequalities that exist because of luck should be redistributed. That includes social and economic inequalities. The argument made in this section is that responsibility for the usage of a product that needs to be produced in order to be consumed, one agent cannot alone be ethically responsible for the existence of the supply chain. Firstly, the argument corresponds well with similar cases (i.e., the Montreal protocol). Secondly, if only one agent, either supplier or consumer, is alone responsible for the existence of the product, it becomes a decision of luck whenever a country is responsible to induce change of an existent system or not. The argument will be clarified in the following section.

A fundamental part of fossil energy is to combust it. Therefore, when the government exports fossil fuels there is knowledge about how it will be used. In essence, the government could burn the fuels in Norway and export the energy. In that case, the Norwegian government would be responsible for the combustion. But when the government exports the fossil fuels that are combusted abroad it is no longer the government's responsibility according to the idea of *not* holding fossil fuel producers responsible.

From behind the veil of ignorance, a rational individual unaware of its generational or geographical belonging will not accept those terms as luck decides if individuals will highly benefit from petroleum as an exporter or not. A rational individual would agree to terms

similar to how responsibility is divided between producers and importers of other goods, where both parties are held responsible for their part of the action. The existence of fossil energy needs both producers and consumers.

5.2.3 Exported combustion – Utilitarian argument.

The following two sections will present a Utilitarian discussion on the government's reason to not be responsible for exported emissions, and an argument in favour of collective utilitarianism. It should also be noted that the discussion on similar circumstances in chapter 5.2.1 is also applicable to Utilitarianism.

5.2.3.1 International agreements and producers' responsibility

An international agreement is nothing more than an agreement. It does not have to take in all ethical considerations, it does not automatically reflect the optimal solution to a problem, as the parties of an agreement might advocate solutions in order to ensure their self-interest rather than a common goal (Moss, 2016). The perfect example is how the Norwegian government took a leadership role in climate negotiations advocating policies that would ensure a high rate of petroleum profits and production.

Even though international agreements might not reflect the optimal solution, the Utilitarian discussion on responsibility for exported petroleum is not a discussion on welfare-maximization. The discussion should rather be focused on how far-reaching an agent's responsibility is. In the literature applied in this thesis, there is little information on this subject. Thus, how far reaching an agent can be responsible should be further discussed in order to ensure clarification. The argument presented below is therefore not presented as a part of Utilitarian theory, but it is influenced by especially Parfit.

The argument presented here is one that clarifies the difference between a consequence and reaction to an action. Utilitarian theory holds that an agent is responsible for consequences from an action. Therefore, the following argument clarifies why the combustion of fossil fuels is a consequence of fossil fuel extraction, and therefore something exporters should consider as a consequence of fossil fuel exports. Additionally, the argument clarifies why the government cannot be held responsible for how other exporters choose to react to changes in production levels. First, a brief comment on why this discussion matters.

If Norway must assess how other might react in order to decide for an action, it could mean the government's argument to continue producing petroleum might be sufficient as there are

arguments stating there is a risk that carbon leakage might lead to higher global emissions (Rystad, 2023). If the government should be responsible for other agents' respond, the debate should rather focus on the differences in the Rystad and Vista reports. Where Rystad found that a decrease in Norwegian petroleum exports leads to higher global emissions, Vista found the opposite (Riekeles, 2023; Rystad, 2023). However, if other agents' reaction is not the ethical responsibility of the Norwegian government, it is a clear argument in favour of implementing supply-side policies.

There is no clear conclusion to this dilemma. But there is a difference between what is a consequence, and what is a reaction. A consequence follows an action, it is simply a part of the action's nature. For example, to utilize fossil fuels, it must be combusted to create fossil energy. That combustion leads to emissions.

A reaction is a separate action. Other producers might *choose* to produce more oil and gas if Norway lowers petroleum production, but since other exporters also has the choice to not produce more fossil energy, it is not a consequence. It is a reaction. Norway cannot be responsible for how others choose to react as there is no certain knowledge of how other producers would respond (Parfit, 1984, pp. 62-66). Based on the argument presented in this section, it is not sufficient for the government to argue that because of how other producers might respond, the government should not decrease petroleum production. The argument is therefore that a reduction in petroleum emissions is a climate measure. It also lays a foundation for the next section, that will clarify why collective utilitarianism is better suited as an ethical framework for acts with complex consequences.

5.2.3.2 An argument for collective utilitarianism

The following section is an argument in favour of collective utilitarianism. To start off, the collective utilitarian argument will be presented, followed by a reasoning on why collective utilitarianism is a superior ethical framework when considering actions such as and similar to petroleum production.

5.2.3.2.1 The collective assessment of Norwegian petroleum

In this section, the principle for welfare maximization is "Will my act be one of a set of acts that will together harm other people?" (Parfit, 1984). From a collective perspective one can argue that Norwegian petroleum production *is* one of a set of actions that will together harm other people. If we are to structure ethical considerations similar regardless of the actor

committing to the action. In this case, the argument is that if Norway can legitimize production of oil and gas on the premise of low production-emissions, all producers with comparable emissions per production unit is equally able to justify developing their oil and gas sector.

The problem is that if all producers with similar emissions per produced unit of fossil fuels are to legitimize production, there is a high risk to produce more fossil fuels than what is possible within the 1.5°C scenario. According to a study from Stanford, Norway does have relatively low emission per produced units. However, there are countries with lower emissions per-production unit. For example, according to the same study, Saudi-Arabia has lower emissions per production unit (Masnadi et al., 2018). This would mean that if it is ethically just that Norway can develop the oil and gas industry because of low production-emissions, so can Saudi-Arabia and other countries with lower production-emissions. Such a scenario is not compatible with the Paris agreement. As it would most likely not mitigate global warming to 1.5°C, as "No fossil fuel exploration is required in the NZE [Net-zero emissions target] as no new oil and natural gas fields are required beyond those that have already been approved for development" (IEA, 2021, p. 160).

From the perspective of collective considerations, if all countries with similar or lower emissions legitimately can develop, extract, and export their deposits, those actions would be part of a set of actions that bring more global warming than the government is committed to in the Paris agreement. It is therefore possible to argue in favour of supply side climate policies.

What makes the collective argument different from the arguments presented earlier in this sub-chapter is the clearness and simplicity of the argumentation. The following sub-section will present why collective utilitarianism is more suited for the case of exported petroleum emissions than individual utilitarianism.

5.2.3.2.2 Why collective Utilitarianism?

The following arguments presents why, in situations where many agents contribute to a consequence, each agent can cause imperceptible harm or benefit. For example, if Norway cuts petroleum emissions and all other agents continue, Norway have caused an imperceptible benefit to the world.

The argument is that in larger societies, such as the society of all governments, the individualistic framework fails. Whereas in smaller societies, our act may cause much harm or benefit to a small amount of people. In modern societies, our act may case a small, call it imperceptible harm to many. That is why, asking the question “Will my act be one of a set of acts that together harm people?” is more functional in larger societies (Parfit, 1984). If all ethical reasoning in modern societies would follow such a rule, it would be a solution to the commons problem, as the commons problem is only ethically defensible if one does not believe in imperceptible harm and benefit.

It should be noted that this is one argument. There are arguments for why imperceptible harm does not exist, and these arguments are not presented here (Parfit, 1984, pp. 78-82). Arguing against imperceptible harm would mean most fossil fuel exporters are not responsible for reducing their production, and most fossil fuel importers will not be responsible for reducing their emissions, as each individual importer as well only make minimal impact on the global total emissions. As such, an argument against the existence of imperceptible harm is an argument against all climate action.

The arguments presented in the previous two sub-chapters present various arguments against the Supreme court decision. The argument on intergenerational justice presents how the government does not fulfil Rawlsian and Utilitarian theorems on intergenerational justice. The sub-chapter on responsibility for exported petroleum emissions finds that the government should be responsible for exported petroleum. It also finds that the argument presented by the government, arguing that because other producers might increase their production Norway is rightful to continue covering the existing demand is faulty. As such, this sub-chapter presents another critique to the Supreme court decision, as the court ruled in favour of the government ("HR-2020-2472-P," 2020). A solution that could ensure both intergenerational justice, and responsibility for exported petroleum emissions is an implementation of supply-side climate policies.

5.3 Supply-side climate policies

The arguments presented in the previous two sub-chapters state that to ensure future generations rights, the government must acknowledge responsibility for exported petroleum emissions. That is why supply-side policies of some form should be discussed. There are many pathways that can be chosen in order to address supply-side climate policies. Domestically, it could mean the government should take an active role to ensure a planned phase out of petroleum while moving investments towards renewable industries (Randers, 2019; The Ministry of Climate and Environment, 2023). However, supply-side climate policies can only be implemented by acknowledging the interrelation between petroleum and climate change. The following sub-chapter focuses on how the government can re-merge petroleum and climate policies in two sections. One about domestic policy options, and one about international supply-side climate measures.

5.3.1 Domestic policy options

If the government's prognosis is that the world will limit global warming to 1.5°C, there are economic incentives that should motivate the government for a planned phase out (Fæhn et al., 2017). If the government does not believe the world will limit global warming to the Paris target, the arguments presented in this thesis shows why it should strive towards a more efficient energy transition.

The government could emphasise a long-term plan to phase out production. For such a plan, balance between the current production levels and the phase out pace is important. A too fast phase-out risks having highly negative impact on the Norwegian economy, but having the market decide the pace of a phase out is also an economic risk (Funnemark & Beaumont, 2022). What mechanisms a phase out would include is outside the scope of this thesis, but the government knows from experience that regulating the exploration rate is the easiest mechanism to apply on the supply side (Ministry of Finance, 1974). However, that might not be sufficient regulation in order to ensure a rapid phase out as some deposits must be left unexploited to have any chance of limiting global warming to the 1.5°C target (IEA, 2021; Welsby et al., 2021).

Additionally, a long-term phase out over a thirty-year period is something the Norwegian economy can handle (Randers, 2019). Not only is the economy strong enough to manage such a transition, other arguments for implementing supply-side climate policies is that the government is in a "race to diversify their economy in time to avoid a severe market shock

and long-term damage to their international political reputation" (Funnemark & Beaumont, 2022, p. 218. Translated from Norwegian).

Thus, there are strong arguments in favour of Norwegian supply-side policies. However, there are reasons to be concerned about carbon leakage. The effect of limiting the production of Norwegian petroleum will most likely be affected by carbon leakage (Fæhn et al., 2018; Fæhn et al., 2017).

As chapter 2.4 on supply-side theory clarified one can develop international structures to counteract carbon leakage from both supply- and demand side policies. Carbon leakage is a negative element with both types of policies. Thus, a mix between supply- and demand side policies is the ideal option (Fæhn et al., 2017; Green & Denniss, 2018; Lazarus et al., 2015). When used in a combination, supply-side policies will counteract demand-side leakage, and demand-side policies will counteract supply-side leakage (Asheim et al., 2019). Cumulating to a cost and time effective energy transition.

The next sub-section will clarify how the Norwegian government could call for supply-side climate policies through international mechanisms, and why the Norwegian government is particularly suited to be a forerunner for international supply-side cooperation.

5.3.2 A governmental call for international supply-side cooperation

Since carbon leakage is an inherent effect of climate action, a coalition that focuses on the supply-side, in addition to the existing demand-side focus, could ensure fair prices and minimal leakage (Asheim et al., 2019). The ideal solution is a supply-side regime that cooperates to ensure an internationally just phase out of fossil fuels, however, it is unlikely to be the first step (Pellegrini & Arsel, 2022). That is why this section will not focus on the international structures that could ensure a phase out. This section will enlighten why the Norwegian government is particularly suited to be a forerunner for supply-side climate policies, and how the government could enlighten the need for international supply-side regulation of fossil fuels.

As Obama stated about Norway, the country manages to "punch above its weight" (Korte, 2023). Compared to its size, Norway have had a large influence on international cooperation. Norway have especially influenced climate cooperation, as the country does have ambitious climate targets and a history of seeking leadership as an international climate contributor

(Funnemark & Beaumont, 2022; Ministry of Environment, 1989; Ministry of Petroleum and Energy, 2022a).

Additionally, the government is in a particularly well-suited position to enlighten supply-side climate policies through international bodies. The country is a large exporter of fossil fuels, but not as dependent on the income as comparable fossil fuel exporters. Meaning that a diversification of the economy is less impactful than in comparable fossil fuel exporting countries (Muttitt & Kartha, 2020). Summarized, the Norwegian government is well suited to be a forerunner for supply-side climate policies.

> "As a first step, rich, well-organized fossil fuel–producing countries with ambitions for effective climate change policies could announce moratoria on fossil fuel exploration in areas under their jurisdiction. For example, countries that control the Arctic could stop exploration in this sensitive region" (Asheim et al., 2019, p. 327)

As described in chapter 2.4, in order to call for international supply-side policies the government can utilize existing bodies. One option is to join BOGA. Norway would by far be the largest producer to join the alliance (Farand, 2021; Ministry of Petroleum and Energy, 2023a). If a large producer joined an international agreement to end fossil fuel production, it would potential be a large step towards stronger anti-fossil fuel norms (Green, 2018).

Another option is to ratify a strategy and goal for a phase out of petroleum production in the NDC presented as COP gatherings. There is a growing focus on the supply side, as reflected by the publishment of BOGA and first mention of fossil fuel production at a COP gathering during COP26 (Funnemark & Beaumont, 2022). Enlightening the need for supply side policies through the COP mechanism is not unlawful, it is fully within the scope of the Paris agreement (Piggot et al., 2018; UNFCCC, 2015). As almost all countries have ratified the Paris agreement, it is a large arena with many petroleum producing countries participating.

If the Norwegian government used the role as a climate leader to develop supply-side climate cooperation, the government could use that arena to shed light to its own interest and important principles for a just transition such as ensuring developmental needs while taking responsibility for the governments fair share of developmental efforts by addressing the supply-side as a rich, large-scale petroleum producer with ambitious climate targets.

6 Conclusion

This thesis has sought to answer the question:

> How can normative political theory clarify the government's ethical considerations of future generations? Additionally, can political theory enlighten whether it is possible to safeguard the rights of future generations without addressing exported petroleum emissions?

In order to answer the research question, chapter four focuses on how changing perspectives on intergenerational justice have been central to Norwegian petroleum policies since before the first commercial deposit was found on the Norwegian continental-shelf. Chapter five discussed whether the government is able to safeguard the rights of future generations without addressing exported petroleum emissions.

The following conclusion is divided into two sub-chapters. Chapter 6.1 will address the government's ethical considerations when safeguarding the interests of future generations in a supply-side historical context. Chapter 6.2 will conclude whether it is possible to safeguard the rights of future generations without addressing exported petroleum emissions.

6.1 Historical perspectives on intergenerational justice

The following sub-chapter gives concluding remarks on the Norwegian government's ethical considerations of intergenerational justice, focusing on answering the first part of the research question. As chapter four clarified, the perception of intergenerational justice has changed throughout history. This sub-chapter will clarify three main findings from chapter four.

6.1.1.1 First finding: Structural justice through supply-side policies

The first finding is that during the first decade of commercial petroleum production, the government argued for the insurance of future generations rights by implementing self-constraining supply side policies. Specifically, the government had a low rate of exploration licences awarded, and a clearly defined goal of keeping annual petroleum production under 90 million tons of oil.

During the 1970's, petroleum policies had resemblance to Justice as fairness. Specifically, the second principle$_{(b)}$, and the original position. Firstly, as Rawls argues, inequalities must be arranged so that they are "[…] attached to offices and positions open to all under conditions of fair equality of opportunity" (Rawls, 1999). The white paper from 1974 strongly emphasises democratic control of all aspects of the petroleum industry. Secondly, the

government found that petroleum resources, a non-renewable resource, could not be exploited at the expense of renewable resources. The argument was that a non-renewable resource can only benefit a limited number of generations, as such, when the resource is spent, it should not have affected society negatively. Additionally, the government found that a goal in itself should be that as many generations as possible can gain access to non-renewable resources. The latter policies are reasonable from the original position. Behind the veil of ignorance, as long as it does not harm renewable industries it is reasonable to allow for non-renewable industries. It is also reasonable from the original position to find it fair to distribute non-renewable resources such that it benefits as many generations as possible.

The interest of self-restraint for future generations was also aligned with the government's temporal interest to limit production. In the 1970's, the government knew that highly valuable natural resources could negatively impact the economy if the industries grew too large. For example, the Dutch economy had been negatively impacted by its own gas industry. Therefore, self-constraint was also a mechanism to ensure intragenerational justice.

As such, the first decade of Norwegian petroleum policies was based on strong sustainability policies. Meaning that the government measured the value of the resource, in its own existence. The resource could not be interchanged with monetary savings. Therefore, the government used supply-side constraint to ensure inter- and intragenerational justice. The 1980's marks a change in how intergenerational justice was perceived.

6.1.1.2 Second finding: A changing perception of intergenerational justice

The 1980's marks a shift in the perception of just petroleum policies. That meant the government did not perceive the idea of petroleum savings for future generations as the main interest of future generations. Rather, maximizing petroleum profits and monetary gains became the main goal.

The perception of justice changed from strong sustainability, towards weak sustainability. That meant the ideal level of petroleum production was not measured in the amount produced, it was measured as monetary profits. With a growing fear of lower petroleum prices in the long term that meant an increase in production.

While the move towards weak sustainability was a move away from Rawlsian principles, it corresponds well with the utilitarian ideal of welfare maximization. The tempo plan argued that if petroleum is likely to benefit more in the future, it should be saved. If it is likely to

benefit more through a rapid extraction, it should be rapidly extracted. As the government became increasingly concerned about falling petroleum prices that meant an increase in production levels. Still, only to a degree that did not overheat the economy.

That also meant that when the government decided to establish the oil fund in 1990, a further increase in petroleum production was made possible as it allowed for higher governmental investments. During the 1990's there was also a growing focus on climate change and global warming. Brundtland had high ambitions for Norway as a leader in climate change cooperation internationally.

6.1.1.3 Third finding: Decoupling petroleum and climate politics

The government took initiative for international cooperation and the Kyoto protocol made it possible to decouple petroleum and climate policies. In order to ensure flexible mechanisms Norway sided with the United States to influence the Kyoto protocol. These mechanisms made it possible for Norway as an exporter of petroleum to maintain a growing petroleum industry and take a role as an international climate policy forerunner.

Since these happenings, little has changed in Norwegian climate and petroleum policies. The government still aims at developing the petroleum industry, while simultaneously aiming to be an international climate leader. However, the dismantlement of petroleum and climate policies was tested again in the climate lawsuit, which is the foundation for the discussion in this thesis.

6.2 Future generations and exported petroleum emissions

The discussion is grounded encompasses central aspects from the climate lawsuit. The discussion is based on two prepositions from the lawsuit. The first was whether the government's current policies are a sufficient consideration of intergenerational justice. The second discussion was based on the arguments against the government being responsible for exported petroleum emissions.

The court never discussed the rights for future generations explicitly in the climate lawsuit. That is problematic, as future generations have rights safeguarded by the constitution. However, the government has never clarified what rights future generations have. Thus, this thesis has discussed the rights future generations should have according to Rawlsian, and Utilitarian perspectives.

The Supreme court found that states are only responsible for combustion that happens within its borders. Because Norway exports petroleum, the government cannot be held responsible for the emissions from the combustion of Norwegian petroleum. The main argument presented by the government, that the Supreme court ruled in favour of, was that the government cannot be found responsible for these emissions because of how international agreements count emissions ("HR-2020-2472-P," 2020).

6.2.1.1 Intergenerational justice

The Rawlsian discussion found that the current savings for future generations, being monetary savings in the oil fund, is insufficient to ensure Rawlsian intergenerational. That means, in order to ensure Rawlsian intergenerational justice, the government must acknowledge responsibility for the combustion of Norwegian petroleum and ensure strong sustainability savings.

The arguments from both the Rawlsian and Utilitarian perspectives conclude similarly, weak sustainability as a fundament for intergenerational justice comes with a range of difficulties. From the Rawlsian perspective, savings must be done with strong sustainability. That means the government must re-merge petroleum and climate policies to ensure planetary savings. This is the only possible way to ensure sustainable diversification of natural resources for future generations. Equally, Norway must cut emissions in accordance with the principle of equal planetary savings. Even without accounting for exported petroleum emissions, there are strong arguments for why the government should cut production and explorations levels. The petroleum sector is one of the largest contributors to Norwegian emissions, and the government is not close to limiting emissions in accordance with the Paris agreement (DNV, 2022).

Similar findings were done from the Utilitarian perspective. While there is nothing inherently wrong with weak sustainability from a utilitarian perspective. The concept of saving in the oil fund to ensure intergenerational justice is problematic. Firstly, Utilitarianism builds on welfare maximization for all humans. Fossil energy is a problem that leads to global warming, thus negatively affecting all people and has a permanent effect. However, savings in the oil fund gives a benefit to a relatively small portion of the human population, in addition it is not ensured savings for future generations as the fund can lose its value.

Additionally, saving in the oil fund means concluding that future generations have the same self-interest as current generations. Namely, developing the petroleum industry for monetary gains. It is problematic to assume what future generations will perceive as their interest. As this thesis found, the prevailing perception of intergenerational justice seems to adjust to the perception of intragenerational justice. The prevailing perception of intergenerational justice is co-constitutive with contemporary society. That makes finding principles of justice with no temporal interest difficult. It is also the reason why it is important to discuss how society can ensure justice between generations without assuming future generations' self-interest.

6.2.1.2 Responsibility for exported emissions

The discussions on responsibility for exported petroleum emissions also found it difficult for the government to not be responsible in light of the theoretical frameworks applied. Firstly, both Rawls, and Utilitarian theorists argues that ethical analysis is a systemization of reason. As such, similar circumstances should lead to similar conclusions. This thesis finds multiple examples of similar products where producers are considered responsible for their product. Norway has rules on where it can export weapons, and the Montreal Protocol, a large-scale successful climate cooperation found producers responsible for the utilization of their products.

While the argument of similar circumstances can be applied from both perspectives, each theory also enlightened how the lack of responsibility for exported petroleum can be criticised. From the original position, rational individuals are likely to find the importers and exporters of fossil energy responsible for their share of the supply-chain. As the combustion of fossil fuels is a fundamental part of the process of creating fossil energy, the government cannot rule out the effect of the combustion of Norwegian petroleum.

Similarly, the Utilitarian discussion found that the arguments for not being responsible for petroleum emissions were insufficient. The government argues it is not responsible for exported petroleum emissions because international agreements do not find producers responsible for combustion of petroleum outside the country's borders. This thesis perceives the combustion of fossil fuels a consequence of fossil fuel production. As such, the government is responsible for consequences from exporting petroleum.

Equally, the government's argument that because of how other exporters might react to a phase-out of Norwegian petroleum the best act is to develop the petroleum industry is also

argued as insufficient argumentation. This thesis rejects that argument because the Norwegian government cannot be responsible for how other producers *choose* to *react* to a reduction in Norwegian petroleum exports. This is a conclusion that supports NIM's critique of the Supreme court decision (NIM, 2022).

6.2.2 The argument for supply-side policies

The thesis finds that the government must take exported petroleum emissions into consideration in order to ensure intergenerational justice. Thus, the government fails to acknowledge responsibility as a petroleum exporter.

A viable policy option for the government to ensure intergenerational justice from the premises in this thesis is to ratify supply-side policies. If the global community limits global warming to the 1.5°C target, there are clear economic incentives for Norway to ensure a planned phase out of fossil fuels. However, if the government does not believe the global community will limit global warming to the limit agreed upon in the Paris agreement the government should take ethical responsibility to ensure a phase out of fossil fuels in accordance with the Paris agreement.

The Norwegian government is particularly well suited to take a leadership role to advocate international supply-side policies. Relative to the country's size and as the government has been a vocal contributor to international climate cooperation since the 1990's, the Norwegian government has a lot of influence on international climate negotiations. Additionally, Norway is one of the wealthiest and largest exporters of fossil fuels. These aspects make Norway a particularly suited fossil fuel exporting country to make an international call for supply side policies. Summarized, if Norway, one of the wealthiest governments with a history as a large-scale petroleum exporter and ambitious leader of international climate-cooperation is not willing to commit to supply-side climate policies in order to avoid a global commons tragedy, why would someone else?

> "According to a survey among energy leaders from governments, industry, think tanks, and academia, it is primarily a lack of political will which could interfere with reaching the goal of a net-zero society by 2050" (Sattich, 2022, p. 73).

6.3 End notes

The theoretical frameworks presented in this thesis have found and highlighted several ethical aspects of Norwegian petroleum. Amongst them, how the perceptions of intergenerational justice have changed, and how it often corresponds with the government's self-interest. This thesis have highlighted several weaknesses in the intergenerational frameworks.

There is a complex interrelation between a generation's possibility to act in its self-interest and need for self-restraint for future generations rights to act in its own self-interest. Neither the Rawlsian nor Utilitarian frameworks have provided clear remarks on how these interests should be balanced in a society. How these counter-interests should be balanced is simply not discussed in this thesis, but there is a need for ethical discussion that addresses it. It is considered a weakness in the discussion that these aspects are left out.

Future research should therefore focus on how a society can balance the interest for future generations and current generations in an ethically defendable manner. Additionally, the Norwegian government must address what rights future generations have, and how these rights can be formally ensured.

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