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ABSTRACT

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Abstract

The Arctic region has several unique characteristics. Due to its young age as a region and the remote location, the amount of academic research on the Arctic is still very limited. The Arctic region has recently been in the headlines for its environmental aspects, especially for the impacts of the climate change. The region is also believed to offer great opportunities for various business like marine transportation and natural resource extraction. The objective of the study was to examine how to develop the Arctic region in a way that it supports the arctic business. This was done by identifying the arctic stakeholders and by investigating how the different stakeholders perceive business opportunities and challenges in the region and what kind of expectations are set for the Arctic region's development from these different stakeholders' perspectives.

The study follows an empirical research approach. It was realised as a qualitative research and the data were collected in semi-structured theme interviews. Altogether nine representatives of different arctic stakeholder groups were interviewed for the study. Based on the results, the most important arctic stakeholders are local and indigenous peoples, arctic governments, arctic business, the Arctic Council, environmental organisations & other NGOs and non-arctic governments & other non-arctic parties. The results also indicate that the most prominent business opportunities are concentrated on tourism, infrastructure, maritime business, environmental business and extractive industry. The biggest challenges for business in the region are related to complex legislation, physical environment and lack of cooperation and knowledge.

The results show that the stakeholders' expectations for the arctic development are not in line. The balance between the economical and environmental aspects poses the main difficulty for achieving a common vision. The findings of the study suggest the Arctic region to have a sustainable development approach, which will take into account both economical and environmental aspects. In the long run the sustainable approach is the only way to guarantee continuous business opportunities also in the future. For arctic business the chosen approach would mean either transforming into more sustainable form or creating new sustainable business models. Successful implementation of the sustainable development in to the Arctic region requires above all support for the arctic companies and increased cooperation among the arctic stakeholders.

Key words	The Arctic region, arctic business, regional development, stakeholder theory
Further information	

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Tiivistelmä

Arktisella alueella on useita erityispiirteitä. Alueen nuoren iän ja sen kaukaisen lokaation vuoksi aluetta on tutkittu akateemisesti vain vähän. Alue on saanut huomiota viime aikoina erityisesti ilmastonmuutoksesta ja sen ympäristövaikutuksista johtuen. Myös arktiset liiketoimintamahdollisuudet, kuten merikuljetukset ja luonnonvarat tekevät alueesta mielenkiinnon kohteen. Tutkimuksen tarkoituksena oli tutkia Arktisen alueen kehittämistä erityisesti liiketoimintaa silmällä pitäen. Tutkimuksessa tunnistettiin arktiset sidosryhmät, joiden näkökulmat liiketoimintamahdollisuuksiin ja -haasteisiin olivat tutkimuksen keskiössä. Arktisen alueen kehitystarpeita tutkittiin kyseisten sidosryhmien lähtökohdista.

Tutkimus toteutettiin empiirisenä kvalitatiivisena tutkimuksena. Tutkimuksen empiria koottiin puolistrukturoiduilla teemahaastatteluilla. Yhdeksässä haastattelussa tunnistettiin kuusi arktista sidosryhmää. Tutkimuksen perusteella tärkeimmiksi arktisiksi sidosryhmiksi valikoituivat alkuperäiskansat, arktiset valtiot, arktinen liiketoiminta, Arktinen neuvosto, ympäristö- ja kansalaisjärjestöt, sekä ei-arktiset valtiot ja muut ei-arktiset toimijat. Tulokset osoittavat lupaavimpien liiketoimintamahdollisuuksien olevan turismin, infrastruktuurin, meriliiketoiminnan, ympäristöliiketoiminnan ja kaivannaisliiketoiminnan aloilla. Suurimmat haasteet liiketoiminnassa nähdään monimutkaisessa lainsäädännössä, ympäristön erityishaasteissa sekä yhteistyön- ja tiedon puutteissa.

Tulokset osoittavat, että sidosryhmien odotukset arktista kehitystä koskien eivät ole yhtäpitävät. Tasapaino taloudellisen ja ympäristönäkökulman välillä on haaste yhteistä visiota muodostettaessa. Tutkimus esittää kestävän kehityksen lähestymistä, missä talousnäkökulma ja ympäristönäkökulma ovat tasapainossa. Pitkällä tähtäimellä kestävä kehitys on ainoa mahdollisuus liiketoiminnan mahdollisuuksien varmistamiseksi arktisella alueella. Arktisen liiketoiminnan näkökulmasta tämä tarkoittaa joko kestävämpää nykyliiketoimintaa tai uusien kestävämpien liiketoimintamuotojen kehittämistä. Kestävän kehityksen onnistuminen edellyttää arktisten yritysten tukemista ja yhteistyötä sidosryhmien välillä.

Asiasanat	Arktinen alue, arktinen liiketoiminta, alueellinen kehittyminen, sidosryhmäteoria
Muita tietoja	

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THE DEVELOPMENT OF THE ARCTIC AS A BUSINESS REGION

A stakeholder perspective

Master´s Thesis
in International Business

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The originality of this thesis has been checked in accordance with the University of Turku quality assurance system using the Turnitin OriginalityCheck service.

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1 INTRODUCTION

1.1 Background to the study

The Arctic is a special region, which is not comparable with any other region in the world. It has unique characteristics including the nature, the people and the geography that includes the territories of eight different countries and the waters that are both internal and international. The uniqueness of the region has not gone unnoticed as states are creating arctic strategies and news media around the world is reporting about the region on a daily basis.

The Arctic region is often associated with two rather negative topics. Most recently the climate change has been dominating the news about the Arctic. The climate change is affecting the Arctic region more severely than the other parts of the world. According to many studies, the warming of the environment is two to three times faster in the Arctic region when compared to the global average (see, for example, Strahlendorff et al. 2014, 4). The climate change is shaping the region in many ways and most of the effects are believed to have a negative impact on the nature and the people of the region. The other topic, which has guaranteed the Arctic to make the headlines, has been the hydrocarbon deposits. It has been known for a long time that the Arctic region conceals large amounts of hydrocarbon deposits, mostly oil and gas. According to the newest information, about 13% of the world's undiscovered and technically recoverable oil and up to 30% of global gas reserves are estimated to be located in the Arctic region (Luszczuk et al. 2014, 4). In the media the hydrocarbon resources have been often linked to political conflicts and natural disasters.

In the meantime one interesting observation has received much less attention: between years 2000 and 2010 the economic growth in the arctic areas has been faster when compared to the non-arctic areas of the eight arctic states (e.g. Huskey et al. 2015, 154). This fast economic growth in the region indicates business opportunities and a favorable environment for business operations. The economic potential attracts not only arctic stakeholders but also non-arctic states and other parties around the world. The Arctic region has and is going to have even greater amount of stakeholders with differing interest. Countries like Germany, China and South Korea have already shown their interest towards the region.

The Arctic region has come to a crossroads. The world around the Arctic region is developing and at the age of globalism the Arctic too is tied to the global changes. Due to the various political, economic, military and ecological interests towards the region it is time to carefully examine which parties are entitled to have a stake in the region's policy-making. These parties are to decide to which direction the region is to be

developed and what kind of the future Arctic will look like. In order to be able to choose the right direction, which takes into account also the arctic business, the Arctic region needs to be thoroughly investigated.

1.2 Defining the Arctic region

In order to be able to study the Arctic region, it first needs to be defined. A region can be defined as a geographic area with shared characteristics like economic activities, identity, social history or administrational purposes (Beer et al., 2003, 41–56). In the Arctic region the unifying characteristics historically relate to the arctic identity and to the special northern environment. The idea of a single Arctic region emerged only during the post-war period. Before this the Arctic was seen as a periphery of interest or as a remote natural area from the perspective of research and exploration. (Keskitalo 2007, 193–194.) Only lately has the region started to have an identity that has also economic and political aspects. This has been made possible thanks to the increased involvement of the arctic states in the arctic affairs through common objectives and cooperation.

Nowadays we are talking about an area, which consists of territorial lands and waters of eight countries and international waters. In the heart of the area, 400 nautical miles from the nearest territories is situated the North Pole surrounded by the Arctic Ocean (Byers 2013, 93). The Arctic Ocean, mostly covered by thick ice throughout the year, is the smallest of the world's oceans. The Arctic Ocean is almost completely surrounded by Eurasia and North America, more specially the territories of Russia, Norway, Iceland, Canada and the United States. The only links to other external waters are the Bering Strait to the Pacific Ocean and the Greenland Sea and the Labrador Sea to the Atlantic Ocean.

Due to the region's special geographical characteristics the area can not be described by one unique and generally accepted definition (Lausala & Jumppanen 2002, 9; Arktisen alueen määritelmät). Instead, the definition can be approached via different scientific, technical and political perspectives. One of the most commonly used definition yet, not the only official one, defines the Arctic region as everything up north of the Arctic Circle, 66 32" N (see Figure 1).

Figure 1 Definitions of the Arctic (Nordregio 2013)

The Arctic Circle and other popular definitions are presented in the Figure 1. From scientific point of view the borders of the region can be defined for example by vegetation. The Treeline is the transition area between the forest and the northern treeless tundra and the meeting point of the cold and the warm air masses (Arktisen alueen määritelmät). The border of continuous permafrost (Lausala & Jumppanen 2002, 9) and the average projection of the sea ice (Arktisen alueen määritelmät) are also ways to define the borders of the Arctic region. Another definition is based on temperature. Different isotherms can be used to define the area, for example the isotherm +10 combines the areas where the average temperature in July does not exceed +10 Celsius degrees (see Figure 1). Definitions can also vary after country, organization or whoever is defining the area. For example, the CAFF (Conservation of Arctic flora and Fauna – program) defines the region according to several nature conservation aspects (Lausala & Jumppanen 2002, 9). In Finland the Arctic Circle plays the role of the border in the

region (Arktisen alueen määritelmät), whereas Canada defines its Arctic areas as those comprising pure tundra and continuous permafrost (Lausala & Jumppanen 2002, 9).

When defining the Arctic region it is not sufficient to only define the external borders of the region but also to understand the internal borders and boundaries. The eight Arctic states, Canada, the United States, Russia, Finland, Sweden, Norway, Denmark and Iceland, share the land and the waters of the region, except for international waters. According to the International law, the North Pole and the Arctic Ocean surrounding it cannot be owned by any country The Arctic coastal states (Canada, USA, Russia, Norway and Denmark) make the exception as they have limited rights in extending their sea boundaries. (Byers 2010, 16.) These exceptions are presented below in Figure 2.

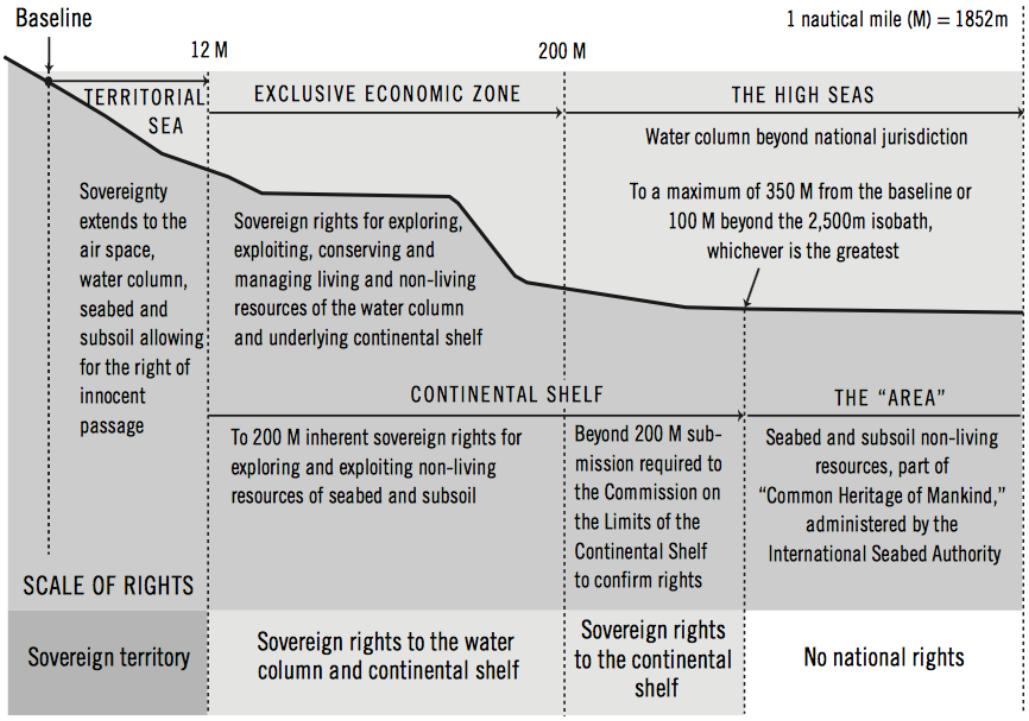

Figure 2 Jurisdictional zones under the Law of the Sea (Byers 2010, 90)

Like all coastal states in the world, the arctic states are entitled to 12 nautical mile extension to their territorial sea boundaries. As presented in Figure 2, this 12-mile zone guarantees rights for fish and seabed recourses and gives extensive regulatory right over foreign shipping. After these 12 miles the states have the right for the exclusive economic zone (EEZ), which justifies the extension of the sea boundaries up to 200 nautical miles. In this area the states are titled to fish and seabed resources but have limited rights over shipping. The international waters, also known as the high seas, begin at the end of the EEZ giving the rights for free exploitation by any country. The coastal countries still have an option for the seabed resources in the high seas if they are

able to prove scientifically that their continental shelf continues for more than 200 nautical miles from the baseline. (Byers 2013, 6.)

The right for continental shelf is based on the United Nations Conference on the Law of the Sea (UNCLOS) article 76 (1) from the year 1982, which specifies that: "The continental shelf of a coastal state comprises the seabed and subsoil of submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin." These extended continental shelves can reach even the North Pole but in that case the state is only entitled to exploit the resources of the seabed leaving the waters international (Byers 2010, 16). Without ratification a country cannot apply for an extension of the continental shelf. By the year 2018 all the other arctic states besides the United States have ratified the treaty (United Nations: Chronological list of ratifications 2018).

In this study a decision was made not to use any single definition as a framework for the Arctic. Instead, the study concentrates on the area in the northern hemisphere surrounded by the eight arctic states. This was decided due to the large number of different existing definitions and the diversity of the participants involving in this study. As the interviewees in the study are representatives of different stakeholder groups it is expected that they have different views on the matter of defining the Arctic. Without a set definition the participants are able to speak freely without restrictions. Also, as this study aims to reveal stakeholders' perceptions it is interesting and important to hear their own definitions of the Arctic region.

It is acknowledged that the decision not to set predetermined definition for the Arctic region may result in issues from research scope perspective. Well-defined entities are generally easier to handle and by using them the risk of losing the scope of the research decreases. To avoid any issues, two things have been taken into account in the study. First, the author has the main responsibility of analyzing and making decisions at the critical point of view. Second, the question of defining the Arctic region was added to the interview framework to help the author to better understand the contexts and connections of the respondents' answers.

1.3 Objectives of the study

The purposes for the study are diverse. The first purpose for conducting the study is the topicality of the subject. The Arctic region has recently made the headlines due to various reasons e.g. the climate change scenarios, the actions of environmental activists and the race to the arctic oil and gas deposits. Also from Finnish point of view the Arctic region is considered a very important topic at this time as Finland holds the presidency of the Arctic Council between years 2017 and 2019. During the presidency

Finland has announced to emphasize arctic cooperation, sustainable development and the enforcement of the Paris Agreement on climate change. (Finland's chairmanship of the Arctic Council in 2017–2019.)

However, the news coverage of the Arctic region has not been very diverse. The fast economic growth in the 21st century suggests that there are other topics worth of mentioning. Instead of communicating only about the negative topics and threats, the opportunities too should be investigated and developed further. The climate change is believed to offer new kind of possibilities especially for arctic business. For example, due to the melting sea ice the passages in the Arctic Sea are becoming more accessible, which again has positive impacts on many transportation based business models. Also, if we are to forget oil and gas for a while we can see that the Arctic region holds a large amount of other natural resource deposits. The opportunities mentioned are just few examples. In order to get a comprehensive picture of the arctic business, the rest of the opportunities and the conditions the region offers for business need to be studied.

In addition to the topicality of the subject, the author suggests that the subject has not been studied enough. There is an overall gap in the arctic literature meaning that there are many aspects that are in need of further investigation. More data is needed for example in the field of natural sciences e.g. how to preserve the arctic nature and what are the impacts of the climate change. The lack of research seems to result from the young age of the Arctic as a region. Most of the research has been conducted during the last decades of the 20th century and at the beginning of the 21st century.

According to the theory of regional development, economic growth is traditionally believed to have positive impact on the development of a region (Eversole 2017, 305–308.) Still, information about how exactly business is affecting the Arctic region and vice versa is hard to find. As brought up in the introduction chapter, the arctic opportunities are drawing the attention of many external actors. Globalization is inevitably becoming part of the arctic agenda and it is creating new questions concerning the development of the region. This study aims to provide more insights into arctic business, a topic that has not received the appropriate attention. What are the special characteristics of arctic business and what are the ways to enhance it. How business and regional development in the Arctic are connected to each other and how can they benefit from each other.

As the study investigates business in the Arctic, one of the obvious approaches would be to use arctic companies as a source of data. However, as the previous chapter reveals, already the defining of the region creates challenges, as there are as many definitions as there are stakeholders. In order to achieve accurate and comprehensive insights into the Arctic and its business the author sees essential to gather data from all arctic stakeholders, not only from the business representatives. In addition to having comprehensive data, this approach also creates a possibility to compare the opinions of

different stakeholders. The aim is to find out how much the opinions vary and which are the topics that unite and separate the stakeholders the most. This knowledge is believed to be of great help when planning the future of the region. The chosen approach is also believed to give insights to the arctic stakeholder literature, which currently is rather nonexistent.

Thus, the objective of this study is to review from stakeholder perspective *how to develop the Arctic region in a way that it supports business.* In order to achieve the objective, the following sub-questions have been set:

- Who are the arctic stakeholders?
- How do different stakeholders perceive business opportunities and challenges in the Arctic region?
- What kinds of expectations are set for the Arctic region's development from the different stakeholder perspectives?

The first sub-question concentrates on finding the relevant stakeholders for the Arctic region and for this study. The second sub-question focuses on describing business in the Arctic region by investigating both business opportunities and challenges. The third sub-question investigates the stakeholders' expectations on the regional development in the Arctic region. The goal of the second and third sub-questions is also to find out whether the opinions of different stakeholders differ from each other. The study aims answering to these research questions by combining existing research with the results of the interviews gathered from the arctic stakeholders. This will be done by the following structure.

Chapter 1 introduces the topic and the objectives of the study and provides a definition for the Arctic region. Chapter 2 gives insights into the current state of the Arctic from business perspective by presenting the business opportunities and challenges the region offers. The goal is to investigate the business potentiality the region has but also to understand the impact business has on the development of the region. To better understand the possible impacts, a short introduction to the history of the region and a review on the theory of regional development are included in Chapter 2. In Chapter 3 the stakeholder approach to the study is taken. The stakeholder theory and different identification methods are reviewed. A new framework to identify arctic stakeholders is built and the relevant stakeholders for the Arctic region and for this study are presented. The chapter ends with a theoretical framework, which works as a roadmap for the second part of the study.

After having presented the overview of the previous research in Chapters 1, 2 and 3, the study takes a shift from theoretical to empirical perspective. Following the theory chapters, the research design is reviewed in Chapter 4. The chapter justifies the empirical research approach used in the study, describes data collection and analysis methods, and discusses the trustworthiness of the study. The interviewees and their

backgrounds are also presented in this chapter. The results of the stakeholder interviews are presented in Chapter 5. The structure of the chapter reflects the research questions and the topics of Chapters 2 and 3. First, the Arctic region is defined and the arctic stakeholders are identified. Second, the business in the Arctic is described by identifying business opportunities and challenges. Third, the future development of the Arctic region is discussed. Chapter 5 is purely based on the answers given by the interviewed arctic stakeholders while Chapter 6 presents conclusions based on both the results from previous research and the stakeholder interviews. Chapter 6 summarizes the whole study, provides answers to the research questions and makes suggestions for future research.

2 THE ARCTIC AS A BUSINESS ENVIRONMENT

In order to be able to develop the Arctic region into the right direction from business perspective it's vital to first understand the past and present state of the region and its business. Chapter 2 begins by presenting the evolvement of the Arctic region during the past century and forces shaping the region today. Next, the current state of business is studied through the business opportunities and challenges the region offers today. At the end of the chapter the theory of regional development is shortly discussed in order to be able to understand the arctic development process from the theoretical point of view and to predict future development.

2.1 The evolving Arctic

The Arctic region as we know it today has developed through three major historical phases: pre 1920s, post-war and turn of the 21st century. The first images of the Arctic were put together by scientists and researchers during the age of exploration. This long lasting period ended in the 1920s when the whole northern area finally was mapped thanks to long-range flights. For the public audience the Arctic was presented as the polar desert, a remote natural area defined mainly in scientific terms. (Keskitalo 2007, 191–192.) The second phase of the development into a region took place during the cold war. During the 20th century the Arctic was long left out from the governance of international affairs (Rothwell 2008, 241) as the region had not been defined as a unique politico-legal area (Koivurova 2012, 131). This was mostly due to the fact that there had not been any remarkable cooperation among the arctic states (Rothwell 2008, 242), which would have required more detailed definition of the region. Ironically, the onset of the Cold War guaranteed the Arctic a spotlight and a new agenda based on security issues. The region was under a military tension with the Soviet Union on the other side and the other Arctic coastal states with NATO on the other side. (Young 2012, 166.) The Arctic was no more a periphery of scientific interest but an area that would soon be seen as a region of its own (Keskitalo 2007, 193).

After the collapse of the Soviet Union the Arctic region got separated from the global concerns and was ready for new agenda (Young 2012, 166). With the memory of the Cold War still clearly in their minds the eight arctic states took the first step in the arctic cooperation and launched the Arctic Environmental Protection Strategy (AEPS) in 1991 (Young 2005, 10). A new era of military-free and unitary Arctic had begun (Pedersen 2012, 147). At the same time the Arctic started to gain recognition also in the research world as scholars started to use the word "region" when writing about the Arctic (Keskitalo 2007, 194). The AEPS was further developed and in 1996 it served as the

basis in the creation of the Arctic Council (Pedersen 2012, 147), which nowadays is the main intergovernmental forum and instrument of cooperation in the Arctic region.

In addition, a great set of various collaborative agreements was initiated in the 1990's. Thus today the collaboration in the Arctic can be defined as a mosaic, which consists of several issue-specific arrangements (Young 2005, 10). The governance system is multifaceted in a way that the agreements exist on various different levels (Koivurova 2012. 131). The Arctic Council and AEPS are examples of straightforward intergovernmental agreements between the Arctic states (Young 2005, 9). Arrangements like the Northern Forum (launched in 1991) and the Barents Euro-Arctic Region (1993) exist at subregional and subnational levels (Young 2012, 166–167). The Inuit Circumpolar Conference (1977), the International Arctic Science Committee (1990) and the University of the Arctic (2001) are examples of nongovernmental arrangements in the area. (Young 2005, 9.) In addition, the arctic states like any other nations have bilateral agreements and many issues are in fact resolved within these bilateral agreements.

One of the most controversial issues in the literature concerning arctic cooperation and governance is the adequacy and sufficiency of the current agreements. For example, Young (2005, 10–11) argues that although many cooperative arrangements are making important work in the region they still remain legally weak, as they are not entitled to make binding decisions on matters of significance. Koivurova (2012, 136) again wants to break the illusion of the Arctic being a "Wild West" without governing rules. He argues that especially many environmental agreements have been able to bind their parties (Koivurova 2012, 136). Despite many valuable studies, the regional dynamics in the Arctic is still a topic in need for more detailed research (Sørensen 2013, 158). The need for a totally new arctic treaty has been raised but at least for now without results.

Environmental issues among others are forces shaping the Arctic region in the 21st century. The climate change is currently affecting the entire world, and it seems to have the most powerful impact on the arctic region. At the moment the Arctic is warming two times faster than the global average (Richter-Menge et al. 2017). A 2°C degrees rise in the global mean temperature is regarded as the crucial point of the climate warming and it's believed to have enormous effects on the Arctic climate and on the whole Arctic region (Strahlendorff et al. 2014, 4–9). The warming has already caused melting of the sea ice, making the sea-ice cover thinner and smaller (Byers 2010, 39). The ice cover naturally diminishes during the summer months and expands back to its "normal" size in the winter. However, due to the global warming the first totally ice-free summer is estimated to happen between years 2020 and 2100 (Byers 2010, 39; Borgerson 2013, 76). Due to the melting, the arctic landscape will change and those waters and lands, which used to be inaccessible, will become free for navigation.

During the first decade of the 21st century, the economic growth in the Arctic region has been faster than the growth of the national economies of the eight arctic states (e.g. Huskey et al. 2015, 154). As already learned, the opening passages in the Arctic Ocean are one of those changes, which are believed to accelerate arctic business even more. Although arctic business has not received as much attention as the environmental aspects, its importance is constantly increasing. Closer examination of arctic business will be provided in the following chapters as the opportunities and challenges are discussed.

2.2 Business opportunities in the region

This chapter discusses the arctic business opportunities based on the existing research. At the moment, the business opportunities in the Arctic region seem to be strongly associated with the advantages that the melting sea ice creates. New sea routes and better access in the Arctic Ocean will benefit e.g. arctic transportation business, tourism and exploitation of natural resources (Koivurova 2012, 137; Wolf & Salov 2014, 60). This chapter gives insights into the business opportunities in the Arctic region.

Transportation in the Arctic region is centralized in two main passages: Northern Sea Route (NSR; also called as Northeast Passage) and Northwest Passage (NWP). These passages function as internal routes between the Arctic ports and as a Trans-Arctic transport corridor from the Pacific Ocean to the Atlantic. (Sander et al. 2014, 4.) The NSR runs along the coasts of Norway, Russia and Alaska. The Russian part of the route used to be under heavy use as it belonged to a Soviet time industrialization project in 1980's. After the collapse of the Soviet Union the activity alongside the route decreased significantly. (Sander et al. 2014, 4–5.) Nowadays the terms Northern Sea Route and Northeast Passage are used as synonyms. The NWP follows the northern coast of North America passing through Canada's archipelago. Ships can choose their course among many different routes in the Canadian archipelago, which consists of about nineteen thousand islands. (Buyers 2011, 38.) The arctic sea routes are presented in the following Figure 3.

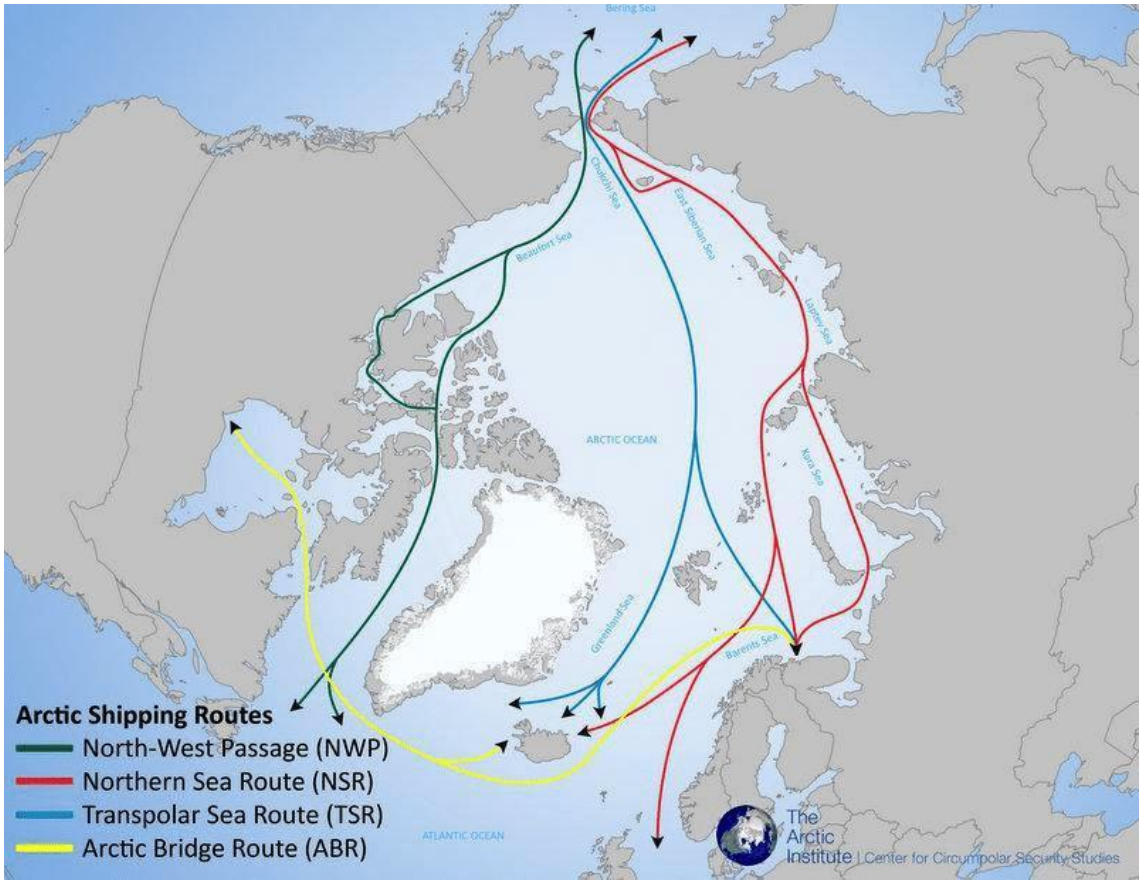

Figure 3 The arctic shipping routes (The Arctic Institute 2014)

At the moment Northern Sea Route is the most potential route through the Arctic. Compared to the western route it has more advanced capacity to serve ships and the natural resource deposits there are larger. (Lasserre & Pelletier 2011, 1469.) The shortcut between the two oceans saves considerably transit time and costs (Wolf & Salov 2014, 60). For example, the Northwest Passage from Japan to England is about 5,500 km shorter than the route through the Panama Canal (Lasserre & Pelletier 2011, 1465) and the Northern Sea Route from Japan to Norway saves twenty-one days in comparison with the route through the Suez Canal (Wolf & Salov 2014, 60).

Estimations of the profitability of the Northern passages compared to the southern ones vary. Some believe that the NSR could be suitable especially for bulk ships and reduce lead-time as well as energy consumption. Additional benefits are seen in increased supply chain agility and adaptability (Shøyen & Bråthen 2011, 982–983). Although the new sea routes are generally believed to increase transport activity in the region some researchers find the hype around it exaggerated. Lasserre and Pelletier (2011, 1466) question the reliability and quality of the calculations of the potential cost advantages and criticize that the additional investments in special equipment and insurance will after all reduce the expected cost advantages. Also, the risks related to miss-scheduling and just-in-time planning are seen too big. They interviewed 98 ship-

owners and found out that although the transportation in the Arctic is increasing most of the ship-owners are not interested in doing business in the region. Those companies showing interest would rather prefer destination traffic in the area than transit traffic between the Pacific Ocean and the Atlantic. (Lasserre & Pelletier 2011, 1472.)

The arctic passages have received a lot of media attention and there have been discussions about exponential growth in traffic. However, the statistics tell a completely different story. The number of vessels transiting the Northern Sea Route in 2013 was 71 while in 2015 the number had already declined to 18 (Northern Sea Route Information Office). Thus, it is believed that marine transportation in the Arctic will rather concentrate on internal than trans-arctic activities (Ellis & Brigham 2009, 5). The biggest growth is predicted to be seen in the number of vessels serving local communities and natural resource exploitation activities while opportunities for bulk services remain unattractive. This leads to a conclusion that the arctic routes won't exceed the success of the Panama and Suez canals in the foreseeable future. (Lasserre & Pelletier 2011, 1466.)

One of the business opportunities dependent on the transportation in the region is the *exploitation of the natural resources* (Sander et al. 2014, 6). Although it's been known for a long time that the Arctic region offers extensive natural resources only now, due to the melt of the sea ice, the exploitation of these resources has become more possible (Koivurova 2012, 137). It is estimated that a significant amount of the world's undiscovered and technically recoverable hydrocarbon reserves are located in the Arctic region. This estimation includes about 30% of the gas reserves and 13% of the oil reserves. (Luszczuk et al. 2014, 4.) More accurate exploration may reveal even greater quantities (Borgerson 2013; Wolf & Salov 2014, 60). Better access and extended summer drilling season, both results of the climate change, have made the oil and gas resources attractive. Current development in exploration technologies has also increased interest towards the energy resources. (Borgerson 2013; Luszczuk et al. 2014, 1.) However, the production and delivery of oil and gas is extremely expensive making the operations dependent on world market prices (Young 2012, 167). Energy companies like Shell, Cairn Energy, Gazprom and Rosneft have shown interest towards arctic oil and gas (Borgerson 2013). Shell was one of the pioneers of arctic drilling with its 7bn investment in the Alaskan Arctic. In 2015 the company had to abandon its operations in the Arctic due to the opposition it faced and the marginal amount of oil found. (Macalister 2015.) However, the drilling now continues by Russian oil company Gazprom Neft, which has opened several offshore oilfields during the past few years (e.g. Daiss 2016 and Dillow 2018). In addition other countries like the Unites States and China have expressed their willingness to be strongly involved in the arctic oil business (Dillow 2018).

In addition to oil and gas, there are other renewable and non-renewable resources available in the Arctic. The region has waste deposits of minerals like zinc, nickel, palladium, diamonds, platinum and cobalt (Borgerson 2013). Over ten percent of the world's total *fishing* catch comes from the Arctic region (Finland's strategy for the Arctic region 2013, 36) and eight percent of world's *forest reserves* are located in the Arctic (Borgerson 2013). Opportunities for hydropower and geothermal energy have also been noticed (Borgerson 2013). However, these opportunities seem to have received less attention in the arctic literature than other natural resources, especially oil and gas. Due to the low oil price and the difficulties in drilling these renewable resources could arouse more interest in the near future.

Tourism is yet another business opportunity that is at least partly dependent on the arctic transportation. The cruise tourism has grown especially in the Canadian archipelago (Dawson et al. 2016, 1425). In August 2016 the first huge cruise liner sailed through the Northwest Passage (e.g. The Guardian 2016). In addition to cruise tourism, all arctic states receive hundreds of thousands of tourists yearly on mainland (Hall & Saarinen 2010, 456–457). The region attracts also eco-tourists, those interested in sustainability and the impacts of the climate change. Ironically, these travellers have their own impact on the area as travelling by car, plane and train is one of the accelerators of the warming of the planet. (Gautam 2007.) Tourism business is said to benefit local and indigenous people but it also needs mobile workers especially during the high seasons (Tuulentie & Heimtun 2014). Naturally, the advantages and disadvantages of arctic tourism is a controversial topic.

The increased activity in the Arctic region highlights the question of suitable *infrastructure*. The region will need more ports and hubs for maritime cargo (Sander et al. 2014, 9) as well as roads, airports, telecommunications, water, sewerage, and power generation (Wolf & Salov 2014). Developing infrastructure and transportation will naturally create need for many kinds of expertise and know-how (Sander et al. 2014, 7–8). Different projects are expected to attract construction companies, engineers, architects and environmental specialists (Wolf & Salov 2014, 60). The difficult weather conditions require new multifunctional ships with high quality equipment for example for navigation, communication and weather forecasting. In addition, qualified and competent crew is needed to handle the modern technology (Sander et al. 2014, 7–8).

The region's undeveloped *IT infrastructure* also offers various possibilities. For example, the temperature in the region is suitable for many kinds of storing; plant seed preservation in Svalbard and Facebook's data-storage center in Sweden are just few examples of these possibilities (Borgerson 2013). From an economic point of view the Arctic is conveniently surrounded by eight productive and financially stable states. These favorable conditions have already initiated international projects like underwater telecommunications cables and direct flights between arctic cities. (Borgerson 2013.)

These kind of large projects require major investments but at the same time create opportunities for various sources of capital e.g. banks, firms and funds. However, it's good to bear in mind that these kind of large projects require time and can take up to several decades. (Wolf & Salov 2014, 60.)

Based on the above, the business opportunities in the Arctic region are mostly related to transportation, infrastructure, tourism, and to renewable and non-renewable natural resources. These resources are for example hydrocarbons, minerals, and fish and forest reserves. In the next chapter the arctic business challenges are examined at a more precise level.

2.3 Business challenges in the region

At first, it is important to explain what a business challenge stands for in this context. In many cases challenges refer to a company's internal challenges like systems integration, creativity, management and investments. However, in this study the Arctic region itself is the environment under investigation, not the arctic companies. Hence, the focus is on finding challenges that the Arctic region poses for companies operating there. In other words, the challenges exist in companies' external environment. Therefore, it is important to understand on what basis companies consider their external environment.

Environmental analysis generally refers to strategic management and to managers' ability to understand the environment in which they operate. Environmental scanning can be used for example for analyzing competitiveness, auditing environmental influences that affect the company and predicting future. (Johnson & Scholes 1997, 89–93; Bowman 1998, 70–97; Haberberg & Rieple 2001, 129–177.) The strategic management literature offers various tools for companies to analyze their external environments. For example, frameworks as SWOT-analysis and Porter's five forces have traditionally been used for analyzing the state of competitiveness.

The framework that was chosen to be used in this study is called PEST-analysis. PEST was developed to help understanding the macro environmental influences affecting organizations (Johnson & Scholes 1997, 93). In the analysis the external environment is observed through four different dimensions: political, economic, sociocultural and technological to give an insight into what kinds of macro-economical factors a company should take into consideration (Haberberg & Rieple 2001, 133–139). PEST-analysis is used in this study as a starting point in identifying business challenges in the Arctic region.

Due to the nature of this research it has been considered important to make some adjustments to PEST prior to its implementation. Firstly, as nature and the environment play an important role in the arctic matters a new dimension, the environmental

dimension has been added. Secondly, the political and legal dimension is added as well. This has been seen already in some PEST-variations. The addition has been made, since the political and legal aspects go very much hand in hand. Thirdly, an infrastructural aspect was added to the technological dimension, as it seems to have an important role in the Arctic based on the pre-studies. Hence, due to these modifications the PEST-analysis in this study is called PESTE-analysis (political-legal, economic, sociocultural, technological and environmental). Next, each of these five dimensions is shortly introduced followed by an overview of literature-based suggestions. When going through them it is important to understand that challenges vary among industries and geographical locations and that the general conclusions in this research do not necessarily apply in all cases.

2.3.1 Political and legal challenges

Political and legal macro-environmental influences are outcomes of the actions of local and national administrations, political parties and international bodies. Both political and legal factors usually involve costs for companies. (Haberberg & Rieple 1998, 133–135.) The arctic governance model, regulatory environment and political atmosphere are discussed next.

The Arctic governance structure is manifold. The multi-level model includes governmental and non-governmental actors in local, regional, national and international levels. The most prominent intergovernmental forum is the Arctic Council, but it is not entitled to make any legally binding decisions. (Poelzer & Wilson 2015, 186; 210.) The complicated nature of the governance model can be seen also in the legal systems. The arctic legal system includes the legal systems of the eight arctic states. In addition, norms of the European Union and other global international laws bind the arctic states. (Bankes & Koivurova 2015, 223.) For example, the territories and waters are under the sovereignty and jurisdiction of the eight Arctic states (Koivurova 2012, 132), which are regulated by the Law of the sea (UNCLOS, 1982, Article 76). These complicated political and legal models could indeed pose challenges for companies and make the region less attractive.

A study dealing with the ease of doing business made by the World Bank gives an overview on the regulatory basis in the region from a business perspective. In this study 189 countries were studied based on ten topics (Starting a business, Dealing with construction permits, Getting electricity, Registering property, Getting credit, Protecting minority investors, Paying taxes, Trading across borders, Enforcing contract, Resolving insolvency). According to performance in these ten topics seven out of the eight arctic states rank among the 19 best countries. Only Russia has a slightly lower position, 51

out of 189 countries, which nonetheless is above the average. (Doing business 2015.) Based on the World Bank's study it could be argued that the ease of doing business and the regulatory atmosphere in the Arctic states are tolerable. However, the World Bank's study does not separate different regions within a country so the validity of the results in the arctic parts of the eight countries is not sure. Also, business operations in the Arctic don't always concentrate geographically on one area and companies may need to simultaneously operate under the jurisdiction of several countries. Therefore, research concentrating solely on the particularities of the Arctic region is needed.

The political atmosphere in the Arctic is currently stable compared to the period of the Cold war. The future, however, divides researchers' opinions. Based on current literature and newspaper articles the arctic policies are expected to develop in either of the following directions. The first vision predicts possible conflicts in the foreseeable future. Especially the media has recently brought out possible conflicts based on e.g. sovereignty disputes, remilitarization and the race to exploit natural resources (see e.g. The Economist 2014; Mandel 2016; Sonne 2016). One of the most quoted spokesman for this scenario is Borgerson (2008) who believes that arctic natural wealth together with inadequate legal framework will in worst case cause violent confrontation (Kriz & Chrastansky 2012, 131–134). Many researchers (e.g. Young 2012; Kriz & Chrastansky 2012) have criticized this pessimistic future vision by replying that there are no real threats of conflicts in the region and that the arctic states together have agreed on common rules and modes of operation. These researchers and observes support the vision of a peaceful future with minimum geopolitical risks.

The uncertainty about the development of arctic policies could indeed be seen as a challenge from companies' point of view. Based on existing literature it's hard to evaluate in which direction the policy develops. Karlsson and Smith (2013) remind of the unresolved sovereignty disagreements between the arctic states, which slow down the economic development in the region. A good example is the Ukrainian crisis, which triggered economic sanctions between Russia and the west. Also, as the traffic around the North Pole increases and attracts non-arctic states and other parties the political and legal issues easily become part of the arctic agenda (Lasserre & Pelletier 2011, 1465).

2.3.2 Economic challenges

Economic factors have considerable influence on companies' operations and decision-making. Economic environment can be measured for example by the interest rates, inflation, disposable income and money supply. Furthermore, availability of key inputs like energy, raw materials and labor force have a great effect on economic performance. (Johnson & Scholes 1997, 96; Haberberg & Rieple 2001, 135–136.) However, as the

Arctic region includes territories of multiple states, also the results for these economic indicators vary between the states. The amount of available combined arctic data about the above-mentioned indicators is limited. Regarding the scope and the resources in the study it's not seen reasonable to collect this data country by country in order to get arctic-specific results. Thus, the data about arctic economic related business challenges is very limited.

The Arctic region is a resource-based economy that is strongly linked to the world economy (Huskey et al. 2001, 154). In the beginning of the 21st century the annual economic growth among the arctic states has been higher in the arctic regions than in the non-arctic regions (Mäenpää 2009, 31). Based on this information and the fact that the world economy has suffered from a long recession, one could deduce that the economic environment in the Arctic region must have been rather favorable lately. The purchasing power in the region indicates for inflation, which again is linked to economic growth. The total average disposable income of households per capita in 2005 was remarkably smaller in the arctic than non-arctic regions (Mäenpää 2009, 30). Although the arctic economy is growing, the availability of key inputs may be challenging. The region is sparsely populated except for the bigger cities and residential zones. Therefore, it is possible that finding suitable labor force creates challenges for companies. Due to the distant locations the raw material and energy availability might prove difficult for certain locations (Huskey et al. 2001, 158–159, 162.) Based on the information the current literature offers, there doesn't seem to be any major challenges in the Arctic region caused by local economical factors. The most probable challenges would be related to the availability of key inputs. It has been acknowledged by the author of the study that more research about the arctic economical factors is needed.

2.3.3 Sociocultural challenges

Social and cultural environment refers to the factors describing the purchasing power. The factors influencing company's decision-making are for example population demographics and levels of education. (Johnson & Scholes 1997, 96.)

Depending on the defined geographical area, the population of the Arctic region can vary between 4 and 13 million (Arctic indigenous peoples; Heleniak 2015, 53). Although the total number of people living in the Arctic region has declined in the 21st century, there are areas like Alaska, Iceland and Canadian Arctic where the population has increased. The growth is due to high fertility and in-migration, whereas countries like Finland, Sweden and Russia suffer from out-migration. In general, fertility and mortality are both high in the Arctic region meaning that most of the population is young and in working age. (Heleniak 2015, 53–57.) The population of the Arctic is

estimated to grow 4% between years 2010 and 2030, while the global population growth has an estimation of 29%. It has been also projected the Arctic will soon face a demographic transition where both the fertility and mortality will decrease shaping the population to look more like the one in developed countries. However, the indigenous population is an exception as it has been estimated to have a significant growth due to high fertility. (Heleniak 2015, 100–102.)

Human capital is considered as an important asset for a region's economic development. The most typical indicator to measure human capital is the level of education. The higher the level of education the more developed the human capital is considered to be. There is a clear gap between the arctic and non-arctic regions in post-secondary education. In most parts of the Arctic region approximately 50-65% of the population has a post-secondary education. The share is lowest in Greenland and northern Canada and highest in Finland and Sweden where over 65% has the post-secondary education. On average in the Arctic region, women have higher and the indigenous people have a lower level of education. These differences can be partly explained by different historical legacies of post-secondary education. The availability of schools also varies within the arctic states. One should not either forget that the formal western school system does not include the traditional teaching and learning of the indigenous cultures. (Hirshberg & Petrov 2015, 370–380.)

To conclude, the Arctic will have a growing population with a lot of people in working age at least in the near future. It is possible that the Arctic will face even higher growth in population due to a possible in-migration if the world population keeps on increasing as estimated. However, it is good to bear in mind that the demographic transition is estimated to reach the Arctic sometime in the future. Another thing that companies should take into account when planning operations in the Arctic is the current level of education and its effects on business.

2.3.4 Technological and infrastructural challenges

Technological factors, like information and communications technology, greatly affect companies' competitiveness and entry decisions. The amount of money spent on research and development and the focus on technological effort by governments defines in large extent the state of technology in a certain environment. Important technological factories could be for example new discoveries, speed of technology transfer and rates of obsolescence. (Johnson & Scholes 1997, 96; Haberberg & Rieple 2001, 137–139.) As mentioned in the previous chapter, the increasing operations in the region call also for better infrastructure. Thus, the main points of arctic infrastructure are also discussed in this chapter.

As commonly known, the infrastructure in the Arctic like in other peripheral areas remains underdeveloped when compared to the non-arctic regions. The traditional infrastructure in the Arctic consists mainly of roads, railways, airports and ports. The existing research seems to concentrate mainly on the marine infrastructure making it difficult to find information regarding other forms of infrastructure. The Arctic Ocean is very dominant in the region and due to the new sea routes the importance of marine infrastructure is further increasing. The key elements in the sea are ports and harbors. However, the quality and quantity of the ports in the region vary making marine transportation challenging. In North America the only deep-water port Churchill was closed in 2016 leaving behind only few smaller ports to serve the traffic along the Northwest Passage (Bennet 2016). Alongside the Northeast Passage Russia has several ports on its northern coast (Arctic ports, CHNL Information Office) but they have been accused for having very different standards in technology e.g. communication, emergency preparedness and safe and rescue (Keil et al 2014, 12).

In addition to the traditional infrastructure, telecommunications is regarded as important part of infrastructure. Broadband connection, for example, affects economic, governmental, educational, scientific, health and public safety sectors and represents one of the basic rights in many countries (Arctic Broadband: Recommendations for an Interconnected Arctic 2016, 9–11). In the Arctic region the share of households with broadband access varies a lot within the arctic countries. In the Scandinavian countries, Alaska, Northeast Russia and Northwest Canada where over 80% of the population have access to broadband the situation is good. The most developable areas are Northeast Canada, Greenland and the rest of arctic Russia where the share is between 50% and 70%. (Nordregio 2012.) However, the nationwide number of households with broadband access in the arctic countries is much higher. On average, 98% of the people in arctic countries have the access, except in Russia where the share is approximately 56% (Arctic Broadband: Recommendations for an Interconnected Arctic 2016, 14–16). Based on these numbers the state of broadband access in the arctic regions lacks behind the one of the non-arctic regions. This would mean that the conditions from the business perspective are not as favorable in the Arctic region as they are in the non-arctic regions. Also, the results clearly show that investments in technology in the Arctic region are lacking behind of those in non-arctic regions.

Lack of investment indeed seems to be one of the biggest challenges in the development of arctic infrastructure. It's been argued that without multinational companies' interest towards the region there is no need for better infrastructure (Karlsson & Smith 2013). If the arctic governments are not willing to invest in the infrastructure the responsibility is given over to companies. In Canada, for example, the companies wishing to operate in the region are often forced to build the necessary infrastructure by themselves although many infrastructural services are believed to be

under government's responsibility (Moore 2015, 7–9.) Such responsibilities for companies do not presumably attract business in the region. Although business in the Arctic would not increase, it is good to remember that the infrastructure is there to serve also the local people.

Based on the current literature it is hard to predict how much the possible lack of investment affects research and what kind of challenges this exactly creates for arctic business. Naturally, the quality and quantity of scientific research has a direct impact on the arctic data that companies can use in their research and development. There are several high-level research institutes and universities both in the Arctic and non-arctic regions, which all belong to the network of the University of the Arctic. Through cooperation these institutions endeavor to enhance education and research in the arctic region. (UArctic: About UArctic.) This network of institutions shows that arctic research is of interest not only for the eight arctic countries but also for the non-arctic states and other actors. It further indicates that in the future the possible challenges related to research and technical know-how could be solved in cooperation with non-arctic actors.

2.3.5 Environmental challenges

The arctic environment is challenging in many ways. The distances are long and as mentioned in the previous chapter, the infrastructure is lacking. The conditions are harsh including darkness, cold, frost, wind and snow. The arctic environment causes also possible safety issues for companies operating there. The climate change is warming up the Arctic and melting the ice. Contrary to what is commonly thought, less ice does not automatically mean fewer problems. Unpredictable ice-movements e.g. drifting ice and ice ridges, and changing weather conditions create challenges and risks especially for sea transportation. (Buyers 2011, 39–40; Keil et al. 2014, 11.) Unsuitable vessels without the assistance of an icebreaker can get stuck in the ice and in the worst case even get damaged resulting in personal injuries and environmental damage (Karlsson & Smith 2013).

The physical conditions are not the only challenges companies face in the region. The attempt to combine business with the fragility of the environment poses many environmental issues and conflicts of interest. Business activities like mining, constructions, forest harvest, overfishing, tourism, and the extraction of other natural resources have effects on the arctic nature and wildlife (Nowlan 2001, 49). The greatest risks for arctic marine flora and fauna are ship emissions, oil spills, release of hazardous cargo, invasive species and all kind of disruptions of the marine mammals' living conditions (Ellis & Brigham 2009, 134–153). For example, an oil spill in the arctic

waters would mean a dramatic shock of which the recovery would take a long time due to harsh weather conditions, remote location, lack of infrastructure and better persistence of hydrocarbons in cold waters (Keil et al. 2014, 13).

The fact that the Arctic has no legally binding comprehensive legal structure presents challenges also from the environmental perspective and asks for an agreement, which would concentrate on sustainability and environmental protection in the region (Nowlan 2001, 2). In addition, the lack of information about the arctic environment is notable. There is a need for scientific research for example about the region's ecosystems, natural resources and the effects of the climate change. In addition to the scientific data, there also seems to be a need for a research concentrating on the economical aspects of the region e.g. how to develop business and acquire economic growth in a sustainable manner.

Based on the above sub-chapters, the business challenges in the Arctic region are manifold. The most obvious challenge is the fragile environment, which creates risks for both the companies and the nature. The local economic factors most probably have less negative impact on the arctic business than the fluctuations of the world economy. While the legal system in the Arctic seems challenging, the political atmosphere is not believed to cause challenges at the moment. The lack of investment in infrastructural and technological development can affect the region's attractiveness from business perspective. Many of the challenges are linked to each other causing a snowball effect. For example, increased business activities in the region create need for developed infrastructure. Infrastructure projects again have effects on the environmental and sociocultural matters as the nature and the people will have to adapt to the new changes. It is therefore important that the connections between the challenges are seen and understood.

2.4 Regional development

Traditionally, development has been strongly linked to national economic growth. This means that national key economic indicators like productivity, investment and employment have defined the development of a nation. Later on it was realized that various regions within one nation could perform differently based on the key indicators. Thus, measuring the indicators only on national level would not tell the whole truth about development. Regions were finally seen as potentially powerful economic actors and the approaches of regional economics started to gain attention. The theory of regional development concentrates on regional economics and seeks answers to the following questions: 1) Why some regions are more prosperous than others? and 2) What the less prosperous regions can do in order to improve? (Eversole 2017, 305–

308.) The goal of this study is not to compare the Arctic with other regions but to understand how the region itself should be developed. Therefore, the study concentrates on finding answers to the question number two.

At first, the regional development theories followed the guidelines of the exogenous growth theories. In the exogenous models the growth is defined by factors that are given from outside of the model. For example, a certain level of infrastructure or investment would indicate how well the region is able to grow economically. (Eversole 2017, 308.) In the 80's the regional development theories began taking influence from the endogenous growth theories (Bogdański 2012, 27). In the endogenous models the development is seen as a cross-sector process where knowledge and relationships are at the center. This means that every region is able to create unique sources of economic growth by its special economic, physical, social and cultural attributes. (Eversole 2017, 312.)

The endogenous models of regional development are believed to help especially rural and resource based regions to respond to the challenges of economic restructuring (Eversole 2017, 312). These models could answer also to the needs of the Arctic region. As defined earlier, the Arctic mostly consists of the peripherals of the eight arctic states so development from the national perspective would be very difficult. The uniqueness of the Arctic region also speaks for a development model, which doesn't try to compare the Arctic with other regions but rather defines the development by pure region-based indicators.

Since the birth of the theory of regional development, various models and adaptations have been created to serve the shifting world. The regional development has been explained for example by the theories of Industrial districts (Marshall 1920) and Clusters (Porter 1990), which are based on the different advantages of centralized production. A unifying factor in the models of regional development is the cooperation between companies, which is seen to have an important role as a regional development stimulant. (Bogdański 2012, 28–32; 38–39.) High-level cooperation between companies could indeed be important for the Arctic region's development, as the peripheries might not be the arctic governments' priorities. However, these so called traditional models of regional development might not be the best options for the Arctic due to the region's special characteristics. Next are presented two modern models, which are believed to offer better fit for the Arctic than the traditional ones.

The model of post-developmentalism fights against the traditional idea that the right kind of development can be achieved only by copying the cultural, institutional and economical elements of the well-developed regions (Bogdański 2012, 37). The model explains that it is impossible to have universal theories of regional development, as every region is unique and there will always remain a gap between developed and less-developed regions due to the different characteristics between peripheral and core

regions (Cavalcanti 2007, 89–90). The post-developmentalism differs from the more traditional models like Cluster and Industrial district theories in a way that it believes that too heavy reliance on capital approach should be avoided. The level of development can be measured based on the thoughts of the local people so elements like material wealth might not indicate development at all. (Bogdański 2012, 38.)

The ideas of post-developmentalism can be seen to have several connections to the Arctic region. As known, the region has very special characteristics, which make it unique in the world. Also, the region consists of the peripheries of the arctic countries, which generally are less developed than the core areas. This would mean that comparison between other regions and within the arctic countries would be difficult. Therefore, it can be assumed that the universal models would not fit for the Arctic concept. The strong presence of nature in the Arctic could also predict less weight on economic values if the development was to be defined by the local people.

The importance of the nature in the Arctic region could go as far as to sustainable development. In the sustainable model the regional development is seen as a holistic concept, which includes economical but also social, cultural and ecological dimensions (Bogdański 2012, 35–36). The basic idea of sustainable development is to integrate environmental, economic and social goals in order to provide constantly improving living conditions for the current generation, while guaranteeing the same possibilities for the future generations (Pike et all 2006, 113–115). From arctic perspective these factors could be seen important especially among the indigenous and other local people, which have populated the region for a long time. Some recognized tools for improving the sustainable development are for example local trade networks and environmental-friendly tax system (Bogdański 2012, 36).

A short study put together in 2017 summarizes the arctic strategies of the eight arctic states (Schulze 2017). In this paper sixteen topics about the Arctic region are used to compose an overview of the strategies. The topics and the states are presented in Table 1, where x stands for the topic's high priority in the state's arctic strategy. Due to its scattered location, Denmark has arctic strategies also for Greenland and the Faroe Islands. The information in Table 1 is interesting in many ways. It shows the topics that are important for the Arctic states. It can also demonstrate the topics that are seen as important indicators from the arctic development perspective. The support that the so-called soft values (e.g. indigenous peoples, education, research environment) have received in the arctic strategies would in that case speak for a sustainable development approach.

Table 1 Overview of the arctic states' arctic strategies (Schulze 2017)

	CAN	DEN	Green-land	Faroe Islands	FIN	ICE	NOR	RUS	SWE	USA	Total count
Technology & Innovation	x	x	x	x	x	x	x	x	x		9
Transport	x	x	x	x	x		x		x	x	8
Research	x	x	x	x			x	x		x	7
Search & rescue	x		x	x		x	x		x	x	7
Indigenous peoples	x	x	x		x	x			x		6
Tourism			x	x	x	x	x		x		6
Environment	x	x	x		x				x		5
Education	x		x		x		x		x		5
Infrastructure	x		x		x		x	x			5
Fisheries			x	x		x	x	x			5
Oil & gas	x		x				x	x		x	5
Mining	x		x		x			x	x		5
Military presence	x	x					x	x			4
International law		x				x			x	x	4
Regional development	x		x		x						3
Shipping				x			x	x			3

Table 1 shows how regional development is regarded high priority in only three states' arctic strategies. These states are Canada, Finland and Greenland as part of Denmark. Naturally, each state has its special characteristics and the interests towards the Arctic region vary. It could also be that the definition used in the context, "Increasing social, cultural and political living standards in rural areas and strengthening local self-administration" (Schulze 2017), might not present each state's view on regional development. In fact, the definition could be seen as something that has a strong linkage to the wellbeing of the region's indigenous and other local people. This again is clearly more in line with the modern models of regional development than with the traditional ones.

Based on the strategy paper, the priority in the arctic strategies is given to technological development. In fact, all the top four topics can be somehow linked to technology and innovation. The unimportance of shipping in the current strategies is an interesting observation from the study's point of view. (see Table 1.) Although shipping is believed to offer large business opportunities especially now that the sea ice is vanishing, it was the least important topic alongside with regional development. This

finding indicates that the hype around the new shipping routes looks good only in paper and that the opportunities have not yet been realized. Most probably technology offers at the moment better economical prospects than shipping industry.

Based on the above, it is becoming clear that the regional development in the Arctic should take place according to the guidelines of the modern models. Due to the uniqueness of the region, the development should be measured by arctic-specific indicators and not by comparing to other regions. The region has also many characteristics that speak for a sustainable development model. However, not all the arctic states value environment as a top priority in their strategies (see Table 1). In order to better understand the perspectives of different states and other arctic parties, the next chapter concentrates on identifying the arctic stakeholders and investigating their perceptions on arctic matters.

3 STAKEHOLDER APPROACH TO THE STUDY

The goal of this chapter is to define the preliminary stakeholders essential for the Arctic region. At first, the word stakeholder is defined following by a short introduction into the stakeholder theory. Next, different ways of identifying stakeholders are discussed. At the end of this chapter the arctic stakeholders are defined by using a new framework created for the purposes of the study.

3.1 Stakeholder theory

The idea of a stakeholder originates from the year 1963 at the Stanford Research Institute. The word "stakeholder" was first introduced in the institute's internal memorandum defining it as "those groups without whose support the organization would cease to exist". (Freeman 1984, 31–32.) This was a turning point in understanding that not only stockholding groups were important in a company's decision-making but also those groups having different kind of stakes (Goodpaster 1991, 54; Kumar et al. 2016, 36). In addition to shareholders, also employees, customers, suppliers, lenders and society were regarded as stakeholders (Freeman 1984, 31–32).

Stakeholder theory, as we know it today, was born few decades after the debut of the word "stakeholder" by Edward Freeman. Freeman developed further the idea of stakeholder and introduced his theory in a book *Strategic Management: A Stakeholder Approach* in 1984. His theory originated from the need to respond to the challenges of the complex and turbulent external environment. Due to companies' poorly managed external and internal relationships many managers at that time had problems practicing "effective management". Freeman thought that the current management theories did not meet the manager's needs and that a new concept should be introduced. He created stakeholder theory, a method for managers to better understand and manage the external environment. According to his theory the challenges of the external environment were to be solved by redrawing a new picture of the firm that would include the changes of the environment. In order to better observe and understand the external environment he defined stakeholder as "any group or individual who can effect, or is affected by, the achievements of the organization". (Freeman 1984, 8-25.)

The basic idea of stakeholder theory is to invest in the important relationships of the company in order to create value (Freeman 2004, 234). Although the different stakeholder groups may not always share common values and goals with the company (Kujala & Kuvaja 2002, 62) all parties of the relationship should at least share some kind of core principles in order to have a successful relationship (Freeman 2004, 234).

By taking into account all stakeholders when planning its business a company is able to deliver value to itself and to shareholders and stakeholders (Kujala & Kuvaja 2002, 62–63).

Since Freeman's groundbreaking work from 1984 the stakeholder concept has continued gaining popularity both in the academic and business world (Friedman & Miles 2002, 1; Agle & al. 2008, 153, 182; Littau et al. 2010, 17) becoming one of the most researched theories of our time. The continuously evolving stakeholder literature is filled with definitions and concepts by various authors. Anyone looking into the literature can discover terms like stakeholder model, stakeholder management, stakeholder theory, stakeholder approach and stakeholder concept. (Donaldson & Preston 1995, 66, 70.) The large number of different definitions and variations has raised concerns about the stakeholder theory becoming diffused and confused (Stoney & Winstanley 2001, 604; Friedman & Miles 2002, 1) retaining the true nature and purpose of stakeholder theory manifold (Donaldson & Preston 1995, 69).

Donaldson and Preston (1995) introduce three different aspects of stakeholder theory to help understand why and how to use the theory. These three aspects are descriptive, instrumental and normative. The descriptive approach describes corporate behavior and characteristics e.g. what is the nature of a firm and how a corporation is managed. It also explains the past, current and future state of relationships between an organization and its stakeholders. This helps in predicting the development of these relationships. The instrumental approach endeavors to explain the connection between stakeholder management and successful performance in a specific corporation. Those companies practicing stakeholder management are expected to better achieve traditional corporate objectives like growth and profitability than those not involving their stakeholders. (Donaldson & Preston 1995, 67; 70–71.)

The descriptive and instrumental elements of the stakeholder theory can be clearly seen in this study. The study is descriptive in a way that it aims to describe the characteristics of the arctic stakeholder framework and to identify the arctic stakeholders. The study describes only the current status. In order to understand the development of the stakeholder relationships, the past and the future relationships should be investigated separately. The stakeholder approach is also used as an instrument in the study. It is believed that by involving stakeholders to the research, both the results and the Arctic itself are going to receive added value. However, the connection between the action and the result might be hard to prove without a comparable item.

The third aspect, normative, highlights the moral guidelines of a corporation and presents stakeholder theory as the rightful concept to be used in corporate management Donaldson & Preston 1995, 67; 70–71). The normative element is strongly linked to ethics and a corporation's obligations towards its society. Social responsibilities have

been corporate executives' struggle for several decades (Carrol 1991, 39) and the theory of corporate social responsibility (CSR) has gained popularity among business and scholars. CSR refers to the concept of "stakeholder democracy" (Royle 2005, 42), which means that corporations should treat all stakeholders in a responsible way (Hopkins 2003, 1). In other words, corporations' responsibilities shouldn't be limited to economic and legal aspects but should also include ethic and philanthropic aspects. This means being obligated to do what is right: being a good corporate citizen and investing in human capital and environment. (Carrol 1991, 40–42.)

The normative element of the stakeholder theory is not as visible in this study as the two other elements. Above all, the normative aspect strives for equity among the stakeholders. The author sees that it is the rightful thing to include stakeholders in the region's decision-making. To apply this vision, representatives from different stakeholder groups were involved in the interviews. In the arctic context where legal, political and business aspects get mixed together with the region's nature and people, the act of "doing what is right" gets highlighted. Thus, social responsibility should be something that each stakeholder in the Arctic region engages towards others. The moral foundation of the stakeholder theory serves as a guideline also for the study's author.

3.2 Identifying stakeholders

The identification of stakeholders has been a controversial topic in the stakeholder theory. The disagreement has naturally produced a confusing variety of different concepts (Stoney & Winstanley 2001, 623), none of which has gained the role of a leading practice in identifying stakeholders (Mitchell et al. 1997, 854). In addition to disagreement the vagueness of the concepts has also caused criticism among many researchers (Orts & Strudler 2009, 606) and a need for a clear concept that separates true stakeholders from non-stakeholders has been demonstrated (Mitchell et all. 1997, 854). Due to the countless amount of concepts, theories and definitions the word stakeholder can nowadays signify almost every group the author desires (Mitchell et al. 1997, 856; Stoney & Winstanley 2001, 605). For example, Freeman's (1984) definition of stakeholder as "any group or individual who can affect, or is affected by, the achievement of a corporation's objectives" easily makes everybody a stakeholder. Thus, the number of groups that can be identified as stakeholders has grown remarkably.

One way to ease the identification process would be to make a clear difference between those people or groups that are only able to influence and those that in addition have a real stake meaning that they can gain benefits from firm's successful operations. In this sense, for example, media would be seen as an influencer without a stake and a job applicant as a stakeholder without any influence on the firm. Stakeholders like large

investors would then have both stake and influence. (Donaldson & Preston 1995, 85–86.) In the end, each individual identification process is based on the researcher's decision on whether to use narrow or broad definition (Mitchell et al. 1997, 856; Orts & Strudler 2009, 606).

Another arguable issue in stakeholder theory is the relation between identification and classification. It is generally agreed that stakeholder classification is intrinsically linked to stakeholder identification but the true nature of the relationship between these two concepts has remained unclear (Kumar et al. 2016, 37) and even nowadays the mixed literature confuses the audience. Although some scholars consider identification and classification as two clearly separate concepts (Kumar et al. 2016, 37) it's not unusual to see them mixed together or overlapping (see for example Wang et al. 2015, 564). However, identification is usually introduced as a method to recognize the important stakeholders and classification as a way to divide stakeholders into different categories by their interest and influence. Vos & Achterkamp (2006, 163) argue that an identification process should always start with a classification but in the literature they can be often seen used as interlocked. From this study's point of view the issue between identification and classification is not relevant. However, it is seen important to understand the terminology behind the theory in order to be able to come up with a right solution for identifying the arctic stakeholders. In addition, if the arctic stakeholders are further studied in the future, the two terms could be separated to achieve even more detailed results.

The stakeholder literature includes several different stakeholder identification and classification schemes (Vos & Achterkamp 2006, 163; Wang et al. 2015, 563). Generally, the models can be either generic or relative. Generic models follow earlier stakeholder studies assuming that one model works universally in all situations. In contrast, relative models are based on the idea that stakeholders vary in different situations due to which the model should be adaptable. (Kumar et al. 2016, 37.) The models of Freeman (1984) and Clarkson (1995) are examples of a classic generic identification model. Freeman divided stakeholders into those responsible for internal changes and those responsible for external changes. Clarkson (1995) in turn thought that the significance of stakeholders should be taken into account and divided them into primary and secondary stakeholders. Primary stakeholders represent those critical to the survival of the corporation while secondary stakeholders, in spite of their influence, are not essential to the corporation's survival. Shareholders, investors, employees, customers and suppliers represent primary stakeholders whereas media and different special interest groups represent the secondary stakeholders. Waddock et al. (2002, 132) further divided secondary stakeholders into non-governmental organizations (NGOs), activists, communities and governments. In addition to Freeman and Clarkson, the literature offers several other examples for identification and classification e.g. those

potential for threat and those potential for cooperation (Blair 1988, 157–159), fiduciary and non-fiduciary (Goodpaster 1991, 67), actively and passively involved (Vos & Achterkamp 2006, 162), real stakeholders, stakewatchers and stakekeepers (Fassin 2009, 120–122) and the saliency model (Mitchell et al. 1997, 854), which prioritizes stakeholders in four different groups depending on three different attributes.

Although the stakeholder literature offers various different identification schemes it might be hard to find a suitable one, especially among the traditional generic models. As relationships between an organization and its stakeholders vary during different organizational stages (Fassin 2011, 44) one model couldn't possibly fit for every stage of the organization. Indeed, the generic models have been criticized for their argued universality. Also, all the existing models are strongly firm-centered meaning that they are created for the needs of corporations and managers (Wang et al. 2015, 562–563). This obviously creates challenges for non-corporate projects that want to make use of the existing models. The above facts have resulted in a decision to create a new identification process for the purposes of this study. The created framework follows roughly the structure of the method by Vos and Achterkamp (2006), which will be presented next.

Vos and Achterkamp (2006, 165) argue that the traditional classification models are only good if you already have an existing list of stakeholders, which can be divided further on. Based on this argument they created their own role-based identification method, which starts with a preliminary identification procedure. In addition to identification and classification, the method designates roles to the stakeholders and assists in understanding at what phase of the project the stakeholders should be involved in. The method is divided in four steps: the first two concentrate on preliminary identification and the last two on classification (see figure 4).

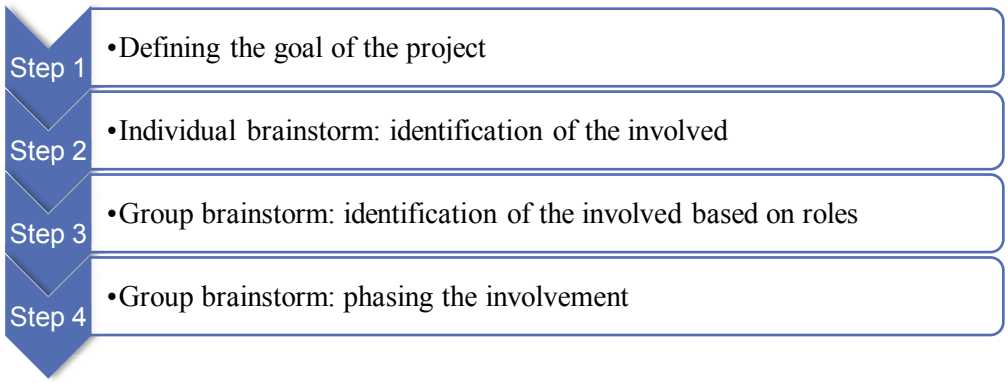

Figure 4 Four-step stakeholder identification procedure (retrieved from Vos & Achterkamp 2006, 169)

The first step begins with defining the project and giving it boundaries. The second step includes individual brainstorming of all possible stakeholders within the given boundaries. After these two steps a preliminary list of stakeholders suitable for the given concept is created. The classification starts with step three, collective brainstorming. The participants divide stakeholders on the basis of previously defined roles. Each project has different kind of roles, which need to be defined. For example, in the model by Vos and Achterkamp (2006) the roles are: those being served (clients), those having the decision making power (decision makers), those contributing expertise (designers) and those involving passively. In the fourth and final step the participants collectively decide whether or not the stakeholders should be involved in the current phase of the project. (Vos & Achterkamp 2006, 168–171.)

The stakeholder identification process has now been defined and different identification processes have been introduced. Next, the theory is taken into practice in order to define the important stakeholders in the Arctic region.

3.3 Arctic stakeholder identification process

As discussed in the introductory chapter, the existing research about the Arctic region does not include much data about arctic stakeholders. It was therefore clear, that in order to be able to identify the stakeholders of the Arctic region, some sort of a framework should be used as a reference. Due to the firm-centric emphasis of the existing identification processes and the lack of an appropriate one it was decided to create own identification framework. This was done in order to guarantee the best quality in the process.

The model by Vos and Achterkamp with additions from other researchers' models was used as a starting point for the new framework, which is presented below in Figure 5. Originally, Vos and Achterkamp created their method to be used in innovation projects. However, the fist half of the process, stages one and two, can be easily applied in various different contexts (Vos & Achterkamp 2006, 175) making it suitable also for this study. Stages three and four have gone through a modification, for example the roles in stage three have been left out because the author doesn't see role sharing important at the moment considering the aim of this study. The most important thing is to identify the arctic stakeholders, not to study them based on roles. However, taking into account the limited amount of research on arctic stakeholders a more detailed role-based examination of the arctic stakeholders is recommended in the future.

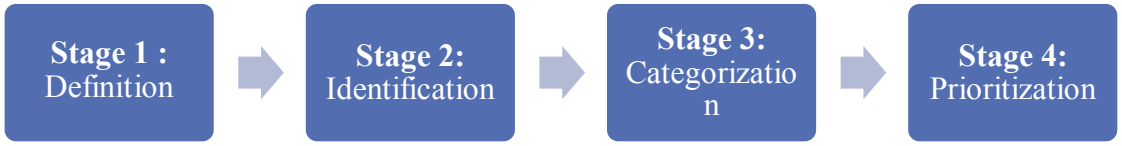

Figure 5 The identification process of arctic stakeholders

In order to identify all relevant stakeholders the goal of the study was first defined. This study aims to examine the state of business and the future development of the Arctic region based on the perceptions of different arctic stakeholders. More precisely, the goal is to discover the business opportunities and challenges and to understand how to best develop the region in the future. Also, the boundaries of this study were defined. First, it has to be stressed that the stakeholders in this study are not sought from a firm-based perspective. This means that when drawing a picture of stakeholders the center focus is not on a firm or organization but on the Arctic region. Hence, this study is conducted from the perspective of a developer of the Arctic region. Second, the Arctic region should be defined in order to find the relevant stakeholders. As already written in Chapter 1.2, the region is loosely defined as the area between the eight arctic states. Third, a suitable definition of the word stakeholder for this context must be created. The definition in this study is built on the one by Freeman with a modification, which replaces the word firm with the word project. Thus, stakeholders are "those who can affect or are affected by the outcome of the project which aims in developing the Arctic region from a business perspective".

After having defined the goal and the boundaries of the project, the stage two, identification was conducted in accordance with the model by Vos and Achterkamp (2006). A Stakeholder view by Freeman (1984) was used as a starting point in order to list all stakeholders essential within the goal of this study. In Figure 6 Freeman (1984) introduces "all of those groups and individuals that can affect, or are affected by, the accomplishments of organizational purpose". Based on the Stakeholder view a preliminary list of arctic stakeholders was created.

Figure 6 Stakeholder view of firm (Freeman 1984)

Freeman created stakeholder theory for senior management's needs (Freeman 2004, 229). As this study examines the Arctic from a regional developer's point of view Freeman's theory cannot be directly applied in this context. Therefore, some modifications had to be done in order to draw a new stakeholder map. First of all the focus of the map was shifted from a firm to the Arctic region. After this, stages three and four of the identification process were conducted and the stakeholders on the preliminary list were categorized and prioritized. For example, as the focus of the new map wasn't anymore firm-oriented all stakeholders related to business were categorized under group called arctic business. A group of non-governmental organizations (NGOs) was created and environmentalists were transferred into that group. This was done, as the Arctic is believed to host other NGOs than just environmental organizations. Concerning the large amount of indigenous peoples living in the Arctic region it was essential to name a stakeholder group also after them. In addition, although the arctic states and many organizations are represented in the Arctic Council, the Council could not be left without a stakeholder status. This was justified by the Arctic Council's significant role in the region based on the existing literature. Also, some stakeholder categories from Freeman's map were left out due to their irrelevancy in this case. The preliminary stakeholder view of the Arctic region is represented below in Figure 7.

Figure 7 Preliminary stakeholder view of the Arctic region

Prioritization of stakeholders was continued when selecting suitable interviewees for the empirical part of this study. Due to the nature of the study the author was able to conduct only a limited amount of interviews. Therefore, the stakeholders were prioritized and nine representatives from different stakeholder groups were chosen to take part in the study. These representatives are presented in the Chapter 4.2. The identified arctic stakeholder groups, as presented in Figure 7, are introduced in more detail in the following chapter 3.4.

3.4 The arctic stakeholders

3.4.1 Arctic and non-arctic governments

As the Arctic region is not run by a common body, a single nation's role is significant in many matters concerning the region. Governments can influence substantially the development of the Arctic as many of states' official tasks have a link to the region. For example, legal and regulatory changes can affect the status of the indigenous peoples and the ease of doing business in the region. One of a state's main tasks is to protect citizens against an external threat. Thus, safety related issues in the Arctic could have political effects. Governments should indeed be regarded as crucial stakeholders as their role in deciding about the significance of the Arctic region in a state level is remarkable.

As mentioned before, the Arctic region consists of the territories and waters of the following eight official arctic states: Canada, the United States, Russia, Finland, Sweden, Norway, Denmark and Iceland. Due to their territorial link to the region their role as an arctic stakeholder should not be unclear. In addition to these official arctic states, the following non-arctic countries have been approved as observers to the Arctic Council: France, Germany, the Netherlands, Poland, Spain, United Kingdom, People's Republic of China, Italian Republic, Japan, Republic of Korea, Republic of Singapore and Republic of India (The Arctic Council: Observers 2015). Considering the vast amount of possibilities the region offers it is expected that interest from non-arctic states is going to increase in abundance in the near future. While natural resources and shorter shipping routes are probably the greatest attractions in the region, the non-arctic states influence the region also by participating in the scientific research (Interests and roles of non-arctic states in the Arctic 2011, 2–4).

It is clear that the Arctic region attracts non-arctic states but the question remains whether or not a mere interest in the Arctic is a sufficient reason to get to participate in the governance of the region (Interests and roles of non-arctic states in the Arctic 2011, 6–7). In other words, should non-arctic states be considered as arctic stakeholders? As explained in Chapter 1.2, according to the Law of the Sea the arctic waters are free areas giving no legal reason to exclude non-arctic states from the region. Still, the status quo of the non-arctic states remains unclear. For example, the Nordic arctic states have expressed their willingness to expand the number of observer states in the Arctic Council while Russia's position is twofold: increased foreign presence would serve the economic needs but at the same time it can be seen as a threat from the military perspective (Interests and roles of non-arctic states in the Arctic 2011, 5–6). No matter what kind of status the non arctic-states have, it seems that these countries cannot be completely left out of the discourse.

3.4.2 The Arctic Council

Founded in 1996, The Arctic Council's mission is to promote "cooperation, coordination and interaction among the Arctic states, Arctic Indigenous communities and other Arctic inhabitants on common Arctic issues, in particular on issues of sustainable development and environmental protection in the Arctic" (Declaration on the Establishment of the Arctic Council 1996). The Arctic Council consists of three actors: member countries, permanent participants and observers. The member countries are the eight arctic states: Canada, the United States, Russia, Finland, Sweden, Norway, Denmark and Iceland. The permanent participants to the council include six indigenous groups. Although the permanent participants are expected to actively participate the

meetings and activities of the council they are not entitled to vote. The observer status may be pointed to intergovernmental and non-governmental organizations and non-arctic countries. Unlike permanent participants the observers may be suspended from the council. In addition, six working groups take care of the council's operational tasks. (The Arctic Council: A backgrounder 2015.)

The Arctic Council as well as arctic cooperation in general has been subject to numerous studies since the 1980's. Especially the role of the council in arctic affairs has shared opinions. (Pedersen 2012, 146.) Officially the Arctic Council works as an intergovernmental forum (The Arctic Council: A backgrounder 2015), which can not make any legally binding decisions (Pedersen 2012, 148). In other words, the Arctic Council is a permanent soft law organization (Koivurova 2012, 140) without the authority to govern the actions of its members or to make binding decisions about significant issues of governance (Young 2005, 11). In addition, military security matters should not be dealt in the Arctic Council (Declaration on the Establishment of the Arctic Council 1996).

The arctic states have had dissenting opinions about whether the Arctic Council should solve environmental, economic or marine issues. Also, the legal status of the council has stimulated discussion. (Bloom 1999, 174.) Although the Arctic Council cannot make any legally binding decisions it has a strong influential role in the Arctic context. A large amount of information concerning pollution, climate change, flora and fauna and human and social capital in the region is spread around through the council's assessments. (Young 2005, 11.) The existing literature leaves a strong impression that the council is regarded as an important actor in the region.

3.4.3 Non-governmental organizations (NGOs)

Non-governmental organizations (NGOs) are non-profit groups independent of governmental influence. They operate either on local, national or international level and are mostly run by volunteers. The role of NGOs nowadays is manifold. They are active for example in emergencies and conflicts, social, cultural and environmental issues, research and information provision and policy analysis. (Lewis & Kanji 2009, 1–2.) Over the last few decades NGOs have emerged as important global actors and the business sector has started to include them in their stakeholder dialogue. Still, not all companies see NGOs as those who should have a stake in a company's decision-making. (Arenas & al. 2009, 180.) In fact, it has been argued that some NGOs should be called "stakeseekers" as they occasionally tend to declare themselves as stakeholders despite companies' reluctance to grant them this status (Holzer 2008, 50–67).

There has been a high interest towards the arctic governance on behalf of non-governmental organizations since the early 1990's. The Arctic Environmental Protection Strategy (AEPS), launched in 1991, initiated arctic cooperation and created favorable conditions for NGOs. (Koivurova 2013, 444.) Today over twenty years later, the NGOs concerned with Arctic issues are able to get together, exchange ideas and cooperate via Arctic NGO Forum. This platform was launched in 2011 to strengthen the position of Arctic NGOs and to offer better access to policy makers. (Arctic NGO Forum website.)

By examining existing literature and Arctic issues it seems that NGOs with environmental concerns represent the majority of the non-governmental organizations in the Arctic region. Other topics like human rights, demographic change and economic and politic issues are also represented. It is difficult to make accurate estimations about NGOs' real power in the Arctic region. It has been studied that globalization together with the developed electronic communication has given NGOs better tools to influence decision makers (Clement 2005, 256). In addition, the arctic context offers NGOs a possibility to influence via the Arctic Council. Six organizations representing indigenous peoples have a permanent participant –status in the Arctic Council (The Arctic Council: Permanent participants 2015) and eleven other NGOs are observes in the council (The Arctic Council: Observers 2015). However, these organizations do not get to vote in the Arctic Council due to the council's rules. Thus, they are not considered as the most important actors at least in the Arctic Council.

3.4.4 Indigenous peoples

The United Nation's International Labour Organization (ILO) defines indigenous peoples in the convent No. 169 as "people in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonization or the establishment of present State boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions". About 10 percent of the people living in the Arctic are indigenous comprising over 40 different ethnics groups (Arctic indigenous peoples), including for example the Inuit, the Saami, the Athabaskans, the Gwich'in and the Aleut (Byers 2013, 216). Although these groups share the northern region as their living environment, they all have different cultural, economical and historical backgrounds (Arctic indigenous peoples). It is worth of mentioning that the term "indigenous people" is not a common term in the Arctic states as every state has its own established term for their native

inhabitants (Young & Einarsson 2004, 21). Nonetheless, for the sake of clarity this study uses only the term "indigenous peoples".

The arctic indigenous peoples have populated the territories of the seven arctic countries (excluding Iceland) over thousands of years adapting to the changes of the environment. The land has always been the main source of livelihood for these people. Reindeer herding, fishing, harvesting and hunting represent important parts of the local culture and tradition. As the climate warms and becomes more unpredictable these traditional ways of getting livelihood are in danger. The effects of the climate change can be seen in the economy, culture, society and health of these people as well as in the infrastructure, housing and transport connections of the region. In the worst case these problems might lead to the relocation of the arctic people. (Arctic indigenous peoples.)

Although the arctic communities including the indigenous peoples are living in the remote areas they are still strongly linked to the outside world and are exposed to the changes of globalization. The impacts of globalization can be seen for example in the cultural erosion as the Western popular culture spreads out to the world. Globalization causes also demographic distortion as better-educated people migrate to the Arctic. The land and the nature as sources of livelihood divide opinions causing boycotts and bans on arctic-originated products for example products related to whale hunting. (Young 2005, 13.)

The rights of the indigenous peoples around the world have been the subject of conversation lately. It has been argued that their rights are lagging behind the ones of other groups' of the same nation. While making the economical, political and environmental decisions concerning the Arctic region, the governments tend to see the nation as a one entity, not as a group of different regions. Although the indigenous groups have their own political systems like the Inuit Circumpolar Council (ICC) and the Sami Parliament, they have little power against the national governments. Another example of the lack of power is the Arctic Council where indigenous groups, as permanent participants, are not entitled to vote. (Forgeron 2015, 64–65.)

However, it has also been argued that many non-powerful stakeholders like the indigenous peoples have more power in today's business world due to the globalization and the expansion of the Internet (Hart & Sharma 2004, 8). One must not either forget that the indigenous peoples' conditions vary across the arctic countries (Interests and roles of non-arctic states in the Arctic 2011, 4), thus there are small nuances in the peoples' roles. Based on the existing literature the indigenous peoples should be considered as important arctic stakeholders, after all they are the very people living in the region. However, the role of an influencer seems to be unavailable for them at least for now.

3.4.5 Media

Media is one of the original stakeholders in Freeman's stakeholder view of a company. It is also often regarded as one of the main stakeholders in the current stakeholder literature (e.g. Kujala & Kuvaja 2002, 62–63). Media as global actor does not have any special bond to the Arctic region unlike the rest of the stakeholders presented in this chapter. Nonetheless, the role of media in the arctic context should be investigated. It would also be interesting to know how do the roles and goals between local and international medias differ. It is commonly known that the main duties of media are to inform citizens, guard authorities and to comment social phenomena. Due to the lack of information and research, the role of media as an informer is emphasized in the Artic region. New technologies and ways of communication have shortened the reaction time and improved transparency as even the smallest issues can be brought instantly to daylight. In this light media can be seen as an important actor in the Arctic region.

Freeman (1984) introduces media as an external stakeholder which executives should take into account when setting business strategies. According to him the power of media lies in the ability to attack any corporation not prepared, sometimes even in an unfair way. Due to the limited amount of information available about the region, this power should be used responsibly. There have been discussions in the literature about whether or not media should be regarded as a stakeholder. Donaldson and Preston (1995, 86) for example argue that media alongside with competitors is an actor that doesn't particularly benefit from the company's successful operations. Therefore, they call media an influencer that is only able to influence but does not have any stakes. This model could fit also to the arctic context, as media presumably will not benefit from the success of the Arctic region.

3.4.6 Arctic Business

Many things speak for the importance of business in the Arctic region. First, the scope of the study suggests business to have an important role in the Arctic. Second, economic growth and cooperation between companies have a positive impact on development of a region (Bogdański 2012, 28–32; 38–39; Eversole 2017, 305–308), which indicates that arctic business has an important role in arctic development. Third, the business stakeholders are also believed to benefit from the changes in the region. The fact that the study does not concentrate on a specific company or a field of business, demands for special actions when identifying the arctic business stakeholders. As the focus is on the Arctic as a region it is rather difficult to identify direct employees, suppliers, customers,

owners or competitors. However, business related stakeholders can not be left out completely as the goal is to study the Arctic from business perspective.

A group called *Arctic Business* represents all business-related stakeholders in the study. It includes for instance different industries, companies and organizations that are present in the region. Based on the business opportunities in Chapter 2.2 the most powerful industries are dealing with transportation, infrastructure, tourism and natural resources. From media attention perspective the oil and gas companies seem to the most powerful actors in the group. In addition to the companies, the arctic business organizations can also have an important role among the region's stakeholders. For example, the role and influence of the Arctic Economic Council should be further investigated. It is believed that other actors will emerge from the empirical data as the stakeholder interviews have been conducted. Although this study handles business stakeholders as a one general group, it is suggested that in the future more emphasis is put on research about the arctic business, business actors and their roles within the group.

3.5 Theoretical framework of the study

The following three facts have become clear in the study: 1) The Arctic has special characteristics which make it a unique region, 2) Due to the remote location and young age of the region, the arctic research is still rather limited, and 3) The Arctic is currently experiencing major changes, which will have impacts on the regions' future. The baseline for understanding the Arctic region was built in Chapter 1 which gave an introduction to the study's subject and in Chapter 2.1 which handled the evolvement of the region. These chapters are vital for the study as they helped in defining the region and the scope of the study. The chapters also serve all of the study's research objectives as they offer general information about the region's current situation and history.

The theoretical framework of the study is presented below in Figure 8. It explains how the study's research questions are processed thorugh the theoretical and empirical parts of the study. The final outcome of the framework is to answer to the main research question of the study: *How to develop the Arctic region in a way that it supports business?* Answers to the study's research questions are provided by the means of stakeholder perspective. The stakeholder perspective has an important role as it follows throughout the study. In order to fully understand the perspective, the first sub-objective of the study was set to identify the arctic stakeholders. In the theoretical part of the study, the stakeholder theory provided the tools for creating a new identification process for the arctic context. Six arctic stakeholder groups were identified: arctic and non-arctic governments, the Arctic Council, NGOs, Indigenous peoples, media and arctic

business. The preliminary stakeholder framework in Chapter 3.3 provided the base for choosing the study's interviewees. In the empirical part of the study the stakeholder perspective produces content for the second and third sub-objectives as well as for the main objective.

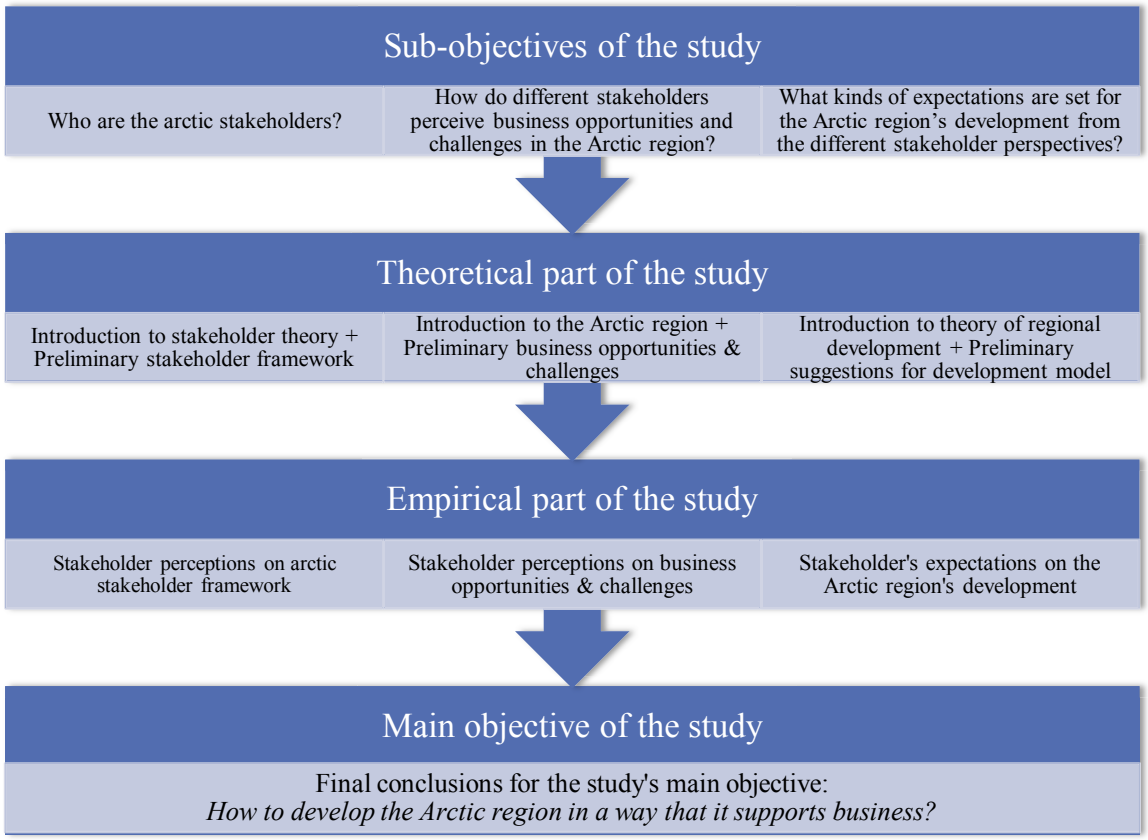

Figure 8 Theoretical framework of the study

The second sub-objective was set up to understand how the different stakeholders perceive business opportunities and challenges in the Arctic region. After a short introduction to the Arctic region, the preliminary business opportunities and challenges based on existing research about the Arctic were introduced in the Chapters 2.2 and 2.3. Transportation, infrastructure, tourism, and natural resources represent the most prominent opportunities while fragile environment, legal system, lack of investment and global economic changes are causing challenges the most. As the arctic literature does not offer detailed information about different stakeholders' perceptions on opportunities and challenges, the stakeholder perspective on the matter will be investigated in the empirical part of the study. This will be done through interviews with the selected arctic stakeholders. The interview results will be then compared to the preliminary ones in order to achieve the final results. In the third sub-objective the goal was to examine the expectations that are set for the Arctic region's development from the different stakeholder perspectives. The theoretical part provided a baseline for understanding the

nature of regional development and introduced some models of development. The model of sustainable development was seen to offer the best value for the Arctic region based on the available research. The stakeholder interviews in the empirical part of the study will give insights into the stakeholders' expectations on the matter. The outcome of the theoretical framework is an answer to the study's main objective (see Figure 8). In the final chapter of the study the results of both theoretical and empirical parts of the study are put together for final conclusions.

The significance of the theory is above all to lay foundation for the empirical evidence. The theory in this study has given an opportunity to examine the accuracy and trustworthiness of the data by showing contradictions between the theoretical and empirical data. Furthermore, the theory has enabled the study to be combined with the existing research. In addition, the theory has been the baseline for the study's interview themes and framework, which will be further discussed in Chapter 4 together with other aspects of the research design.

4 RESEARCH DESIGN

After constructing the theoretical framework of the study in Figure 8 (Chapter 3.5) the focus is now shifted to the research design of the empirical study. In this chapter the research approach is first introduced. This is followed by an overview of the data collection and analysis methods. Also, the interviewees of the study are presented. Finally, the trustworthiness and limitations of the study are evaluated.

4.1 Research approach

Research strategies have traditionally been divided into two: qualitative and quantitative. These strategies have different epistemological and ontological foundations as well as different approach to the connection between theory and research (Bryman & Bell 2015, 37–38). In addition, the methods differ in terms of the collection and analysis of data (Eriksson & Kovalainen 2008, 5). Quantitative research strategy sees social reality as external objective and follows practices and norms of the natural scientific model and positivism. Research evolves from theory with deductive thinking and testing of hypothesis. Qualitative research strategy sees social reality more as a creation of individuals and trusts on constructivism instead of the models of the natural science. With an inductive rationalization, theory can be derived from research. Whereas quantitative research strategy uses quantification in data collection and analysis, qualitative strategy uses mainly words. (Bryman & Bell 2015, 37–38, 415–417.)

Although qualitative and quantitative research methods seem distinctive they should not be seen as mutually exclusive approaches (Alasuutari 1995, 32). A combination of these two methods can help researchers to acquire more extensive empirical data and to better understand the phenomenon under study. Mixed methods is a viable option especially when the phenomenon under study is new and without existing theory or when sufficient empirical data cannot be collected through one method. The use of mixed research methods is justified especially in international business research by its multi-disciplinary nature. (Hurmerinta-Peltomäki & Nummela 2004, 177.)

However, it is clear that the special characteristics of the study call for a qualitative approach. The most obvious reason for choosing qualitative approach is the nature of the research objective. The answers for *how to develop the Arctic region in a way that is supports business* and for the sub-questions cannot be easily quantified in numbers. Moreover, the stakeholder perceptions are qualitative in nature. Because the phenomenon under study is new and only little existing data can be found, the capabilities to create hypothesis were also limited. Instead, data-driven analysis was

used meaning that the theory was built on empirical evidence. In addition, the number of suitable participants was rather small. Measuring and comparing the opinions of such a group with quantitative methods would not have been successful. The author wanted to use interview as a data collection method in order to gather deep and extensive empirical data. Last, the research aims in contextual understanding, which means that the author doesn't want to generalize the results to cover other regions but to only understand the special characteristics of the arctic environment. Qualitative approach indeed aims to understand and describe certain events and actions (Eskola & Suoranta 1998, 61; Bryman & Bell 2015, 417).

4.2 Data collection

The research question is the starting point that defines the research approach. The chosen approach then creates the foundation for data collection. In a qualitative research approach, like the one chosen for this study, the collected empirical data can be either primary or secondary. Primary data is new data collected by a researcher, for example by interviews, observation, diaries or stories. Secondary data is something that exists irrespective of the researcher's actions. (Eriksson & Kovalainen 2008, 77–78.) In this study, the need for primary data is evident as the existing research of the topic is limited. The goal to explore the perspectives of different stakeholders highlights the need, as it seems that these opinions have not been jointly studied at all.

The empirical data was collected through semi-structured theme interviews. Daniels and Cannice (2004, 186–187) offer three reasons for using interview as a data collection method for international business research. First, interview is recommended when studying issues with little or no pre-existing theory. Second, interview is a good option when the number of possible respondents is small. Third, interview enables trust creation between the researcher and the interviewee and allows a deeper rapport. Under these circumstances interview is a recommendable method for this study. Arctic business isn't a widely studied topic and the number of suitable respondents is rather small. Although this research doesn't involve delicate issues in a sense of trust and interpersonal relations the researcher believes that a face-to-face interview has a positive impact on the content of the interviews. Hirsjärvi & Hurme (2008, 34) add to the advantages the possibility to clarify answers and deepen knowledge. In this way the motives behind the answers can be more easily found. As in this study different stakeholders and their interests are in a focus the need for supplementary questions and reasoning to find the motives behind the answers is well grounded.

Despite of the benefits interview offers the method also has some disadvantages. Interviews take time and for that reason may affect the size of the sample (Daniels &

Cannice 2004, 189–191). Transcribing and analyzing of the data can be time consuming as interviews provide a lot of material and ready-made models to analyze the data don't exist (Hirsjärvi & Hurme 2008, 35). Conducting an interview also requires special skills and experience (Hirsjärvi & Hurme 2008, 35) and one must keep in mind that not everyone is comfortable to conduct face-to-face interviews (Daniels & Cannice 2004, 189–191). Moreover, external factors can sometimes affect the attractiveness of interview as a data collection technique. For example, due to the competitive academic environment the researchers may feel pressured to use existing databases instead of interviews to be able to publish more and faster (Daniels & Cannice 2004, 189–191).

A semi-structured interview technique was chosen because it offers the most suitable aspects of the two main techniques: structured and unstructured (Ghauri & Gronhaug 2010, 126). In a structured interview pre-prepared questions are presented in a certain order. At the other extreme is an unstructured technique, which resembles more like a conversation. A semi-structured interview has several advantages in comparison to structured and unstructured techniques. The researcher is able to change the order and wording of the questions between different interviews. This helps in creating less official interview situation without making the conversation too informal. Another advantage is the ability to acquire somewhat systematic data, which helps in analyzing afterwards. In addition, semi-structured interviews work well with how and what research questions, which regarding to the research questions in this study justify the use of the technique. (Eriksson & Kovalainen 2008, 81–83).

Semi-structured interview generally refers to theme interview. The idea of theme interview is to create interview framework by using specific key themes instead of detailed questions. (Hirsjärvi & Hurme 2008, 47–48.) The basic assumptions of theme interview are the following: 1) researcher knows that the respondents have experienced a particular situation, 2) researcher has studied in advance the content and important characteristics of the phenomenon under study, 3) based on his/her analysis the researcher creates an interview framework and, 4) researcher directs the interview to respondents' subjective experiences about the situation recognized in the first assumption (Merton et al. 1956, 3–4).

Theme interview was chosen to be used in this study as the research phenomenon hasn't yet been widely studied and as for this reason the author was seeking for respondents with special experiences about the Arctic region. After carefully studying the phenomenon the author decided upon the interview themes. The themes were to be in line with the research objectives, hence the following three themes were chosen: 1) Special characteristic of the Arctic region 2) Business in the Arctic region and, 3) Stakeholders in the Arctic region. The author prepared an interview framework, which consisted of questions relating to the three main themes. In addition, few personal questions were prepared in order to understand background and connections to the

Arctic region. As the author did not have prior knowledge about the Arctic, the general information about the region (Chapter 1 and 2) and the study's research questions guided in choosing the right themes and questions. The interview framework is fully presented in Appendix 1.

The goal in the study is to seek for the answers to the research questions by examining different stakeholder perceptions. The respondents of the study should therefore represent different stakeholder groups. As presented in the Chapter 3.3, the chosen preliminary stakeholder groups were: governments, media, NGO's, companies and indigenous and local people. The criteria to choose respondents were a solid knowledge and experience in arctic matters and suitability to one of the stakeholder groups. Two to four companies from the main arctic business industries were to be chosen. Also, one arctic state was to be chosen to represent the government opinion. The author didn't have any existing contacts related to the Arctic in order to help in screening and contacting suitable respondents. A list of different arctic stakeholders was neither available. On the basis of current knowledge, two possible respondents had come to the author's mind. After these two interviews the rest of the respondents were chosen using a snowball sampling. This method seeks to identify the key persons of the research problem. The researcher first chooses few key informants that are well acquainted with the phenomenon under study. They are then asked to propose new possible respondents. This goes on until no more names appear or the researcher runs out of resources. (Hirsjärvi & Hurme 2008, 59–60.)

In this case the researcher asked for other possible interviewees from every respondent. After a short background research the most suitable ones were chosen. The selected participants were to represent different preliminary chosen stakeholder groups and to have different backgrounds. The nationality of the participants did not matter in the beginning and it was in fact intended to have at least two different nationalities but all the respondents turned out to be Finnish and currently working in Finland. This was mostly due to the fact that when sampling the possible participants all the respondents gave only Finnish names. The circuits in the matters of the Arctic region are rather small due to which some names appeared more than once. Naturally, these names received considerably more attention.

The characteristics of the participants are presented in Table 2 below. Each participant is introduced according to their name, organization they work for, position in that organization and the stakeholder group they represent. The date, length and form of the interviews are indicated in the three last columns. The background information of the participants is based on the current information at the time of interviews in spring 2016. All preliminary selected participants, except one, agreed to interview. After nine interviews the author run out of resources but at the same time felt that the collected data had become saturated as all preliminary stakeholder groups had been interviewed.

One of the participants, Veli-Pekka Tynkkynen, does not directly represent any of the intended stakeholder groups. However, this person was selected to be interviewed as it was seen important to have at least one participant who would have knowledge of arctic energy policy. Science & research and Business were chosen as the two stakeholder groups for this participant. The decision was made based on the participant's background in research but also by relying to the fact that the participant would have special information about oil and gas which have recently played a big role in arctic business.

Table 2 The interviewees of the study

Name	Stakeholder group	Organization	Position	Date	Length (min)	Form
Aleksi Härkönen	Government / Arctic Council	Ministry for foreign affairs in Finland; Arctic Council	Arctic ambassador	1.2.2016	61	Face-to-face
Heikki Haapavaara	Media	Kauppalehti Optio	Journalist specialized in NEP and NWP	4.2.2016	79	Face-to-face
Tero Vauraste	Business: maritime	Arctia Oy; Arctic Economic Council	CEO; Vice Chair	12.2.2016	54	Face-to-face
Sampsa Vilhunen	NGO: Environmental organization	WWF Finland	Head of the Marine Programme	18.2.2016	91	Face-to-face
Tapio Laakso	NGO: Environmental organization	GreenPeace Finland	Coordinator of the Arktis campaing	14.3.2016	66	Face-to-face
Veli-Pekka Tynkkynen	Science & research / Business: energy	Aleksanteri Institute	Professor in Russian energy policy	18.3.2016	85	Skype
Ingmar Haga	Business: mining	Agnico Eagle Finland Oy; Arctic Economic Council	CEO; Business representative	24.3.2016	69	Skype
Rauno Posio	Business: tourism	Visit Arctic Europe; Arctic Eonomic Council; Lapland Safaris (former)	Project manager; Business representative; Owner and marketing director (former)	29.3.2016	54	Skype
Tiina Sanila-Aikio	Indigenous peoples	Sámi Parliament	Chair	21.4.2016	73	Skype

An invitation to participate to the study was sent to each of the respondents via email. The topic of the research was briefly introduced in the email but the interview outlines were not shown beforehand. The interviews took place between February and April 2016. Five of them were held face-to-face and four via Skype due to geographical

location. The durations of the interviews varied between 54 and 91 minutes. All of the respondents gave their permission to record the interview and two different tape recorders were used to avoid possible technical issues. No remarkable technical problems occurred during the Skype connections. All interviews took place either in the interviewees' offices or homes, which guaranteed calm and quiet environment without any distractions.

It is worth mentioning that some of the respondents had a limited time reserved for the interview and this might have affected the content and impartiality of the interviews. However, the author was well aware of the different schedules and could prepare by making modifications to the structure of the interview. In addition, the author had a permission to contact the interviewees afterwards in case of unclear or missing answers. All of the respondents spoke openly and gave their permissions for publishing their names. This lead to an impression that the respondents were honest in their answers and that nothing was left unsaid. Also, the respondents' attitudes towards the topics, sometimes even passionate, brought certainty to the fact that they were giving their truthful opinions. However, people tend to give socially acceptable answers when discussing about sensitive subjects (Puusa 2011, 78). Taking into account the themes of this study (e.g. climate change, indigenous peoples, sustainable business) some of the participants might have given, intentionally or unintentionally, generally acceptance-seeking answers. This fact must be taken into account when evaluating the trustworthiness of the research data.

4.3 Data analysis

The purpose of data analysis in a qualitative research is to produce new information by clarifying and summarizing dispersed data (Eskola & Suoranta 1998, 138, 151; Puusa 2011, 115). In this study the data analysis started by preparing the gathered unprocessed data. After completing the stakeholder interviews, they were transcribed into text format between March and April 2016. A total of 70 pages were generated. The transcription gave an opportunity to listen to the interviews for the second time and to start simultaneously analyzing the data. The texts were first divided according to the interview questions in order to get the most relevant data of each question gathered together. Each respondent's answers per question were summarized. The data that was concerned less important was classified irrelevant. According to Eskola and Suoranta (1998, 151), data classification can be done either coding the data or by trusting to intuition. In this study the classification as done by the means of intuition with the study's research questions as objectives. Crosscheck between the questions was also done in order to find supporting data from other answers. After having the data

classified by the interview questions, each of the questions was analyzed. Comparison between the respondents' answers was also done to better understand the different stakeholder perceptions for arctic matters. The chosen classification proved to be good as it ensured that nothing important was left unnoticed.

In order to be able to make interpretations, the different categories of data must be combined as larger entities (Hirsjärvi & Hurme 2008, 147–150). The data was next reorganized according to the three sub-questions of the research objective. All the data related to the sub-objectives was gathered together from the prepared material creating bigger entities as suggested by Hirsjärvi and Hurme. As mentioned earlier in the study, the interview themes are based on the research questions. Theme 3 provides information for identifying the arctic stakeholders, theme 2 for identifying business opportunities and challenges and theme 1 for understanding the stakeholder expectations for the future Arctic. The personal questions asked from the respondents acted as supporting data. This data was used to detect the relations between the respondents' answers and their backgrounds. As the interview questions were already preliminary grouped by the themes, it helped in finding the relevant information for each research question. The three entities were then separately analyzed.

As a final round of analysis, the data was once more combined. All the relevant data for the main research objective was gathered together and analyzed. At this point the analysis concentrated more on the big picture and on understanding the characteristics behind the future development of the Arctic region. According to Puusa, (2011, 115–117) the different steps on analysis usually happen simultaneously. In this study too the analysis process was loose enabling the author to work flexibly. The results of the data analysis are presented in Chapter 5.

4.4 Trustworthiness of the study

The trustworthiness of this research is based on the framework created by Mäkelä (1990, 47–59). According to him, qualitative analysis needs specified tools for evaluating trustworthiness, as the tools used in quantitative analysis cannot be applied to qualitative research. Mäkelä's framework consists of the following criteria:

- Significance of the research data
- Sufficiency of the data
- Scope of the analysis
- Evaluability of the analysis
- Repeatability of the analysis.

The *significance* of the research data can be difficult to assess, but the researcher should still be able to argue for the importance of its cultural and social position

(Mäkelä 1990, 48–49). The following criteria justify calling the research data of this study significance. First, to the author's acknowledgement, the research data in the study combines together the opinions of various different arctic stakeholders for the first time. Second, the large number and the different backgrounds of the interviewees guarantee comprehensive data about the Arctic region. Third, the data derived from the interviews gives insights into several socially significant topics e.g. the rights of the indigenous peoples and the impacts of the climate change.

There doesn't exist any clear measurements for *sufficiency* of the research data in the qualitative research approach. Data can be said to be sufficient when new data doesn't introduce any new features, is saturated, or when the data is diverse enough. *Scope* of the analysis refers to the researcher's ability to make interpretations based on the whole data, not just on random samples. One must understand that although it's advisable to strive for wide and sufficient data, the interpretation of the data can simultaneously become more difficult. When there is too much data the researcher can easily end up browsing through the material and making observations based on random samples. (Mäkelä 1990, 52–53.) Choosing the interviewees from various different stakeholder groups ensured the diversity of the data in this study. However, the fact that all the respondents are Finnish reduces the diversity of the research data. To better manage the data the researcher aimed in keeping the durations of the interviews within a maximum of one hour and a half and classified the data in manageable format. These actions helped in increasing the scope of the analysis, as the researcher was able to carefully examine the research data and pay attention also to the contradictory findings.

Evaluability of the analysis means that the reader is able to either accept or challenge the study results by following the researcher's deduction. *Repeatability* proves that the researcher has presented the classification and interpretation used in the research so clearly that other researcher is able to come to the same results. Both evaluability and repeatability increase when the analysis process is done carefully step by step. (Mäkelä 1990, 53–55, 57–59.) Lincoln and Guba (1985, 209–299) refer to the same criteria in their framework but add that repeatability can only be proven if two or more similar studies can be conducted with same kind of results. In this study, efforts have been made to influence these criteria. The researcher has endeavored to carefully report all steps relating to analysis, interpretation and deduction. First, preparation, classification and analysis of empirical data are described in detail in Chapter 4.3. Also, the interview questions are presented in the Appendix 1. Second, the findings of the research and inferences are presented in Chapter 5. Third, the conclusions are made with firm arguments in Chapter 6. Based on these steps the reader should be able to take a decision to either accept or challenge the results.

In addition to Mäkelä's (1990, 47–59) framework the author feels important to examine more specifically the research data. According to Hirsjärvi and Hurme (2008,

185), the quality of the research data should be continuously monitored especially when collecting data through interviews. Before conducting an interview the quality can be pursued with good preparation. This can be done by preparing viable frames for the interview and considering possible additional questions. Also, if interview is conducted by more than one researcher, it's important that everyone understands the process in the same way. During the interview phase it's advisable to take care of the technical equipment, in other words, check that spare batteries are available and that tape recorder is working, also during the interview. An interview diary helps in recording observations of the interviewees and developing further questions. After conducting the interview it should be transcribed into text format as soon as possible. (Hirsjärvi & Hurme 2008, 185.)

In order to ensure quality of the study the author carefully prepared an interview outline with supplementary questions. All interviews were recorded with two tape recorders to avoid technical issues. A special diary was not used but the author noticed opportunities for improvement in some questions and put them into practice in the following interviews. The interviews were not transcribed into text format right after they had been conducted. According to Hirsjärvi & Hurme (2008, 185) this might have some negative effects on the quality of the data. However, as the conducting of the interviews took over two months the author felt that transcribing interviews all at once would then work as a preliminary analysis. One more factor, which to some extent could have impacts on the quality of the data, is translation. As all the participants of the study are Finnish the interviews were naturally conducted in Finnish. The data derived from the interviews was then translated into English in the analysis process. In order to avoid mistranslation the author familiarized herself well with the words and definitions of the topic and used dictionary when needed.

A researcher's lack of personal connections towards the chosen topic can be seen as an asset against subjectivity. Although many researchers have accepted that complete objectivity is practically impossible it is still seen to have a central role when assessing reliability. (Aaltio & Puusa 2011, 153, 159.) On the other hand, it's been argued that without any pre-knowledge it can be difficult to create e.g. an interview framework (Aaltio & Puusa 2011, 159) and trust and mutual understanding in the interviews (King 1994, 31). Before starting to study the Arctic region, the author did not have any personal interests or connections to the topic or the participants. Also, the researcher has acknowledged objectivity and its paradoxality, which is the key to avoid subjectivity (Eskola & Suoranta 1998, 17–18).

One more point to be taken into consideration when assessing the trustworthiness of the study is the lack of triangulation. Triangulation means using multiple theoretical perspectives, methodologies and sources of data when conducting a study (Bryman & Bell 2015, 402). Also, involving multiple viewpoints when interpreting research data is

a good technique to affect triangulation and to ensure validity (King 1994, 32). The lack of triangulation in the study can been seen as a credibility lowering factor. Like master theses usually, the study also is a result of a single researcher, which leads to a lack of triangulation and a weaker validity. Hence, critical evaluation is needed from the reader as well as from the author itself. It's also good to understand that in order to achieve triangulation the researcher needs time and resources. Sometimes triangulation even creates problems if two different methods generate contradictory results. (Tynjälä 1991, 393.)

5 STAKEHOLDERS' PERSPECTIVE INTO ARCTIC AFFAIRS

At the very beginning of the study a decision was made not to use any single definition for the Arctic region. The decision was made due to the large number of existing definitions and due to the author's assumption that the quality of the interview results would be better without restrictions. As a result of the decision, the following findings were driven from the interviews. The interviews reveal that the stakeholders perceive the region's definition in different ways, which confirms that the Arctic region indeed does not have an established definition among its stakeholders. There's a clear consensus among the respondents about the fact that the Arctic region cannot be defined by one single correct definition. Instead, they see that the Arctic region should always be defined according to the current context. It is also believed that the chosen approach enabled to receive more versatile data; the respondents could have left unsaid something essential if the topic would have been predefined. The author sees that the lack of definition did not affect negatively the scope of the study and the definition nuances would not have changed the end result of the study.

Although the distribution of respondents' answers was high, few common characteristics like the "Arctic Circle" and "the territories of the eight arctic states" emerged from the responses. However, it must be understood that the arctic states differ much in terms of climate and vegetation and therefore definitions like the Arctic Circle don't always tell the whole truth. In Russia the permafrost extends much further south than in Finland. In Canada too, the arctic border should be further south when compared to the climate in Finland. Defining the Arctic from Finnish perspective is difficult as well. From the economic perspective the whole country of Finland is regarded arctic as the arctic know-how extends all the way to the southern Finland. Addition, organizations like WWF Finland also see whole Finland as arctic territory in their national strategy.

In general the definitions were regarded to be of little importance for the respondents and their work. Also, none of the respondents mentioned that the lack of a common definition would some how be problematic. It could be that the different definitions have not yet caused issues for cooperation between arctic stakeholders. In addition, it is believed that the challenges in the region are similar regardless of the geographical definitions. Although the various definitions don't cause issues at the moment, they might however create misunderstandings in the future, for example when development of the region becomes more unifying by nature.

5.1 The arctic stakeholder framework

The classification of stakeholders based on literature seemed to the interviewees to describe the situation well. Therefore, all the six preliminary stakeholders can be said to have some kind of a status in the Arctic. In addition, a variety of other actors emerged from the interviews. Most of them can be placed directly under the preliminary groups but two new groups, the EU and science & research, were added to the list due to their significance. Three groups, indigenous peoples, arctic business and government, clearly dominated the respondent's answers while the others received less support.

Table 3 shows the support that the preliminary stakeholders and the new actors received from the respondents. As the table shows, local population including the indigenous peoples and their organizations were seen as the most important stakeholder group in the Arctic. Every respondent mentioned them and almost everyone started their answer with them when asked about who are the arctic stakeholders. Indigenous peoples were the only group, which received a solid consensus among the respondents. Still, the interviews reveal the same truth than the existing literature; these peoples are being influenced rather than being the influencers.

Table 3 The status of possible stakeholders based on interviews (++ = arctic stakeholder, + = not an arctic stakeholder but has got some kind of a role, – = not an arctic stakeholder, blank = not mentioned during the interview)

Respondent	Local and indigenous people	Government	Business	Environ-mental organi-zations	Arctic Council	Non-arctic states	The EU	Media	Science and research
Aleksi Härkönen	++	++	++	++			++	++	
Heikki Haapavaara	++	++	++	++	++	++	+	++	++
Tero Vauraste	++	++	++	–		+	+	+	+
Sampsa Vilhunen	++			++	++	++	+	–	
Tapio Laakso	++	++	++	++	++		+	+	++
Rauno Posio	++	++	++	+		++	++	++	
Ingmar Haga	++	++	++	+		+	++	–	
Veli-Pekka Tynkkynen	++	++	++	+	+	+	++	+	
Tiina Sanila-Aikio	++	++	++	+	++				

Another important stakeholder in the Arctic based on the respondents' answers was the government. The answers included e.g. ministries, legislators, governments, authorities and states. In addition, the act of government was also seen in the Finnish

Institute of International Affairs and in the states' energy companies. The respondents referred in their answers clearly to the eight arctic states and their governments. The status of the non-arctic states however remains unclear, as most of the respondents were uncertain about their status. As mentioned in Chapter 3.3.1, the involvement of the non-arctic states is opposed by Canada, Russia and the Unites States and supported by the smaller arctic states. Tero Vauraste from Arctia Oy says that there are non-arctic countries like Germany, China and South Korea, which have very good and worthy research about the Arctic region. However, producing quality research is not the only interest these countries have, as there is always also the economic perspective. Based on the stakeholder interviews the non-arctic governments cannot be left out from the arctic stakeholder listing but their role is yet to be defined.

In addition to the indigenous peoples and government, business was one of the three groups that received clear consensus among the respondents. All but one of the respondents mentioned business in some way. This may have been influenced by the business-orientation of this study, of which the respondents were aware. The answers included for example companies in general, energy companies, Finnish shipbuilding industry, clients, business forums and the business operations of the states' that are interested in the Arctic. Companies are seen to have a lot of power in the arctic dialogue, especially those with arctic know-how.

Two of the most controversial groups were media and the NGOs. The role of media seems to vary greatly among the interviewees. There is no clear pattern in the respondent's answers but it could be so that those who see media as an arctic stakeholder have had more positive relationship with media than those who don't see media as a stakeholder. For example, news articles about tourism on average are probably more positive and beneficial than the ones about extractive business. Based on the interviews media doesn't seem to have a special role in the arctic context but is rather seen as a basic actor that is present everywhere.

When asked about NGOs the environmental organizations dominated the respondents' answers. Therefore, from now on the focus will be on environmental NGOs. In addition to the two representatives of environmental organizations only two other respondents, government and media representatives clearly impressed that environmental organizations should be regarded as important arctic stakeholders. When looking at the Table 3 one can see that those respondents that are not so sure about NGOs' role as a stakeholder are mainly representatives of business stakeholders. Tero Vauraste from Arctia Oy is the only one of them who states that all environmental organizations are not necessarily arctic stakeholders. This view could be partly explained by the incidents between Arctia Oy and Greenpeace (see e.g. Kauppalehti 2012, MTV Uutiset 2016). Without taking a direct stand on the relationship between Arctia Oy and GreenPeace, the business and environment representatives' differing

opinions must be directly linked to the various interests the different stakeholders have towards the region.

The Arctic Council and its role as a stakeholder were also brought up in the conversations. Based on the existing literature one could have considered the role of the Council more important but among the respondents only four regarded the Arctic Council directly as an arctic stakeholder. These four respondents represent the two environmental organizations, media and indigenous peoples. Veli-Pekka Tynkkynen from Aleksanteri Insitute thinks that for environmental organizations the Arctic Council may be one of the few effective ways to get their voice heard. It might be that NGOs operating in the Arctic region or working with arctic issues feel that the channels through which they can promote their agendas are limited. This would indeed explain why all the NGOs mentioned the Arctic Council. Another interesting fact is that none of the business representatives mentioned the Arctic Council as a stakeholder. The Council itself could provide an explanation for both of these findings. As mentioned earlier, the Council has always concentrated on sustainable development and environmental protection in the Arctic but it has never been a business forum. Also, WWF has an observer status and the Sámi Parliament a permanent status in the Arctic Council. Based on this evidence it seems that the Arctic Council's agenda is more valuable for NGOs than business. When analyzing the answers one has to remember that it is possible that those respondents who didn't mention the Arctic Council may have perceived is as part of government as for example in Finland the arctic ambassador works under the Finnish Foreign Ministry.

The EU and science & research, which were not included in the preliminary framework, came up in the interviews. The general opinion about the EU seems very clear as majority of the respondents would like the EU to have a more remarkable role in the Arctic. Currently this unfortunately seems impossible, as the EU doesn't even have an observer status in the Arctic Council. The EU should primarily support its arctic member countries but the respondents also hope to get funding for the arctic development projects. Sampsa Vilhunen from WWF suggests that by giving precise criteria for the funds and supervising the use of them, the EU could be able to some extent influence the arctic matters. Science & research is a challenging actor due to its abstract nature. The importance of arctic research came up in the discussions with all respondents and two of them defined science & research as arctic stakeholder. Although the Arctic has a wide network of universities and institutions, the data in this study is not sufficient to make further conclusions about the role of science & research.

Figure 9 The arctic stakeholder framework based on the interviews

Figure 9 presents an updated version of the arctic stakeholder framework. Three stakeholder groups have been added to the original framework (Figure 7, page 41) and their relative power towards others has been changed in line with the interviews. These three groups are science & research, the EU and the non-arctic governments. In the beginning of the study, all the stakeholder groups were assumed to have equally important position in the region. After the interviews it was clear that the importance of the groups varies among the interviewees. In Figure 9, the importance of a stakeholder is defined by the size of the circle. The bigger the circle the more important role the stakeholder has in the region based on the respondents' answers.

After the arctic stakeholders have been identified, next the arctic business is examined based on the respondents' answers. The business opportunities are first introduced followed by the business challenges.

5.2 Identified business opportunities in the Arctic

In this chapter are presented the various business opportunities based on the stakeholder interviews. The newly gathered empirical data about business opportunities in the Arctic strongly aligns with the existing research presented in Chapter 2.2. Hot topics at the moment based on the interviews as well as on the existing research data are for example natural resources, tourism, new sea passages, infrastructure etc. In addition, the interviews raised other interesting topics, which do not seem to have yet received the same attention as the other topics.

The different business opportunities mentioned by the respondents are gathered in the Table 4 below. Three the most cited opportunities based on the interviews were tourism, IT infrastructure and environmental business. Tourism was the only opportunity mentioned by every respondent. The biggest opportunities in the arctic tourism are seen to been in the Finnish Lapland and in the Arctic Ocean. In IT infrastructure the biggest potential can be seen in weather monitoring, location technology and in the improvement of telecommunications. Finland is again mentioned as a pioneer with lots of growth opportunities. Environmental business opportunities are presented later in this chapter.

Table 4 Arctic business opportunities mentioned by the respondents

Most mentioned	**Average mentioned**	**Least mentioned**
Tourism	Maritime business	SME opportunities
Environmental business	Infrastructure & logistics	Security business
IT infrastructure	Extractive business	Cold expertise
	Fish business	

The interviews confirm the suggestion, that most of the opportunities are related to the newly opening passages. In fact, some kind of a snowball effect can be seen. Sea routes enable shipping and transportation in the region. This calls for example for better infrastructure, cold expertise and security services. These needs create opportunities for various companies. Although the Arctic region is often thought to be the playground of big multinational companies, it's delightful to also see the potentiality that the stakeholders see in SME's and in local companies. Tapio Laakso highlights that the opportunities don't always have to be new ideas as plenty of existing business models could be brought up to the next level for example with cold expertise.

The fish business was considered important but most of the respondents didn't specify their answers about it. Fishing is not a new opportunity in the region and the environmental organization representatives see that the future potentiality of fishing depends on the sustainability of the business. Based on the existing literature and the media publications one could have easily got the impression that extractive business (includes here mostly hydrocarbon and mining resources) would be the most potential business opportunity in the Arctic region. Despite this, the stakeholders didn't rank the extractive business to the top three opportunities. It seems that mining industry is regarded to have bigger potentiality than oil and gas business. The stakeholders do not understate the potentiality of the arctic hydrocarbon deposits but due to the global economy they see it's not affordable business at the moment.

Environmental business alongside with tourism and IT infrastructure was one of the most valuable opportunities. The interviews included several different environment-related business opportunities, which are gathered below in Figure 10. The idea of these opportunities is that they both benefit and respect the arctic environment. The results show that environmental business is regarded as a much more potential opportunity than the theoretical framework had suggested. It could be that the environmental aspect in business is more advanced in Finland than elsewhere in the region, which could explain the respondents' answers. Another reason for this finding could be that the ideas about environmental business in the arctic have just recently been initiated.

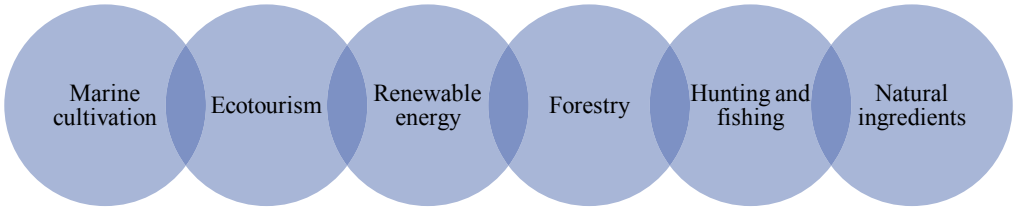

Figure 10 Environment-related business opportunities in the Arctic region based on interviews

According to the interviews there are multiple ways to sustainably exploit arctic nature. Sanila-Aikio highlights the importance of natural ingredients for the indigenous and other local people. Besides the fact that the natural ingredients are an important part of the traditional livelihood of the indigenous people, the nature offers many other possibilities. She for example sees that the food business could easily take an advantage of plants and fish in the region and use them more extensively for example in restaurants. Posio talks about the potentiality that berries, mushrooms and herbs have in the natural health product business. According to him, the arctic lifestyle and the health

business around natural ingredients has a huge potentiality. Vilhunen estimates that the arctic ecosystem services probably hold many opportunities, which are not yet known to us. He suggests that these ecosystems should be first thoroughly investigated in order to find out the opportunities that can be sustainably exploited. He gives examples like clean air and water and silence, which for many are taken for granted. In addition, he believes that new environmental friendly laws and restrictions could initiate new opportunities and gives the sulphur directive as an example. Other environment-related opportunities are marine cultivation, ecotourism, renewable energy, forestry and hunting. These were all mentioned only by few respondents but together they show the growing importance of business that both benefits and respects the environment.

The interviews reveal that the dispersion of answers is low, which suggests, that the different stakeholder groups are relatively unanimous about the business opportunities in the Arctic. It could be therefore concluded that different stakeholders groups perceive the opportunities mostly in the same way. It is also noteworthy, that the opportunities are not seen limited but rather wide. Figure 10 and Table 4 show the large number of different fields and areas of business that are related to the Arctic region. As the energy representative Tynkkynen said: “The Arctic region has similar business opportunities than elsewhere in the world”.

5.3 Turbulent operating environment

As a counterpart to the opportunities the challenges findings are discussed next. Due to the non-existing literature about business challenges in the Arctic, the theory section of this study discussed the challenges through PESTE-analysis. The interviews support the theory as challenges from all the five PESTE-sections were mentioned. However, it became clear that the fit of the PESTE-framework was not suitable for discussing all the findings from the interviews. Hence, the findings from the interviews are divided into five topics, which represent the main challenges for business in the Arctic region. These topics are: World politics & economics, Legislation, Environment & infrastructure, Research & knowledge and Arctic cooperation.

What’s interesting is that although the stakeholder groups have differing interests in the Arctic they still seem to be on common ground about the challenges that the Arctic poses as an operating environment. Business and non-business stakeholders had approximately same kind of ideas about the challenges and there weren’t any major disagreements. All in all, the five topics were easily derived from the interviews. Like the opportunities, also the challenges seem to be perceived similarly by the different stakeholder groups.

5.3.1 World politics and economics

Generally, the respondents consider the current political situation in the region stable. However, there is some uncertainty about the future, just like the theory section suggested. Most of the stakeholders agree that commonly agreed rules should be enough to prevent the arctic states from getting into sovereignty-based geopolitical conflicts. In other words, they see that the current talks about a possible new cold war are unnecessary. However, there is little uncertainty among the respondents about Russia and its objectives and this seems to make predicting future difficult. Tynkkynen, who has specialized in Russian energy policy, explains how Russia has two different arctic roles: it strongly speaks on behalf of arctic cooperation and soft values, but on the other hand it wants to show power with growing military actions. He also believes that the Russian habit of demonizing west could cause troubles for companies planning on making business in Russia. Other respondents also clearly admitted that the insufficient cooperation between Russia and other arctic states is a challenge for business.

Although a geopolitical conflict is not considered to be a threat for the arctic business at the moment, there are other political factors that may negatively affect the area's business development. The interviews reveal that confrontation exists in many ways due to overlapping interests. Although the stakeholders seem to perceive business challenges and opportunities in the same way they still have their own interests and goals regarding the region. The most obvious example is business concentrating on natural resources versus environmental organizations. These overlapping interests are visible in the interviews and although they might not cause major challenges at the moment there is always a risk that the disagreements develop into bigger conflicts.

The respondents didn't highlight any economic challenges, which would be directly arctic-based. They for example did not bring up issues like lack of labor or raw materials, which were speculated in the theory section of this study. Instead, the respondents were more worried about the global economic situation and its effects to the Arctic and to the business there. Things like the oil market price and the current situation with Russia were seen as the most actual topics. The effects appear for example in lack of investments and many of the stakeholders see that the best and perhaps the only way to tackle the issue is to have joint investments. The lack of money could be easily seen as a challenge, which makes the Arctic region less attractive for business.

5.3.2 Challenges in legislation

Based on the interviews the legislation in the Arctic region poses different kind of challenges, which are due to the complexity and inefficiency of the legislation. Next, the nature of legislation and the challenges are explained in more detail.

If we are to look at the legislation in the Arctic in a big picture it looks quite clear by the rules of the Law of the Sea. However, from business perspective the legislation is found to be complex as there isn't one common law which would apply everywhere in the Arctic region. At the moment business stakeholders need to operate between the Law of the Sea and the arctic countries' own legislations including also the EU articles. Many of the stakeholders highlight also that there is inconsistency in the Arctic states' legislation. For example Russia's legislation can be very complicated and unfair in many ways making the operating in the region even more difficult. In addition, there are several sectors operating in the region and they all have their own logics and networks. This increases complexity, as the sectors do not have fully established systems for operating in the region (e.g. insurance companies).

Besides business, the lack of common arctic legislation has negative impact also on the indigenous peoples. At the moment all peoples are under the legislation of the country in which they are geographically located. This means that their rights vary drastically. According to Tiina Sanila-Aikio from the Sami Parliament the indigenous peoples in Russia seem to have the least influence on their rights. Indigenous peoples are not the only ones struggling with the legislation. Also Rauno Posio from tourism business says that the chances to influence to the development of legislation are generally quite negligible, no matter what field.

In addition to the complexity, the arctic legislation seems to be also inefficient as mentioned in the beginning of this chapter. One reason for that is the fact that the Arctic Council's recommendations are not binding. Although the countries together in the Council decide about new recommendations there isn't any way to control that every state puts the recommendations into practice. Sampsa Vilhunen from WWF underlines that sanctions are rare for those not willing to cooperate. He continues that if the arctic states would start controlling each other that could put pressure on the matter. The inefficiency has other effects too. Tiina Sanila-Aikio who represents the indigenous peoples sees the legislation as too loose making it too easy for various kinds of unwanted businesses to enter the region. This could indicate that the legislation isn't always seen as a barrier and that operating in the Arctic would be easier for some companies than others.

The stakeholders do not have clear suggestions for improving the legislation. Tapio Laakso from GreenPeace speaks for a holistic framework that would take into account also the special features that the region has. He continues that things like marine

protection and the use of hydrocarbons should be considered when planning on a comprehensive legislation. It is believed among the stakeholders that new bodies are not needed as long as the current ones including the EU, United Nations and the Arctic Council perform efficiently.

The size of the company probably also has an impact on how much legislation effects negatively on business activities. Rauno Posio who comes from the tourism business suggests, that due to the complex legislation the cross-border activities may be challenging especially for small and medium sized companies. Ingmar Haga who represents a rather big mining company says that for his company it doesn't matter where they operate geographically, but he agrees that small companies have fewer resources for facing bureaucracy. Though, from these comments it could be reasoned that bigger companies have better capabilities confronting the complex legislation in the Arctic region than smaller companies. Naturally, this topic needs more research, as the sample here is very small. Nonetheless, this indicates that support provided especially for small and medium sized companies could help in facing the challenges the legislation causes.

Ingmar Haga offers in interesting example to sum up how both the legislation and politics are able to obstruct projects in the Arctic region. In 2013 the mining company he represents promised to donate 5 million dollars in order to establish a university in Nunavut, Canada. However, by the time of interviewing Haga in 2016 the decision about starting the project had not yet been taken due to politics and bureaucracy.

5.3.3 Environment and infrastructure

The operating environment in the Arctic region is challenging in nature. This was the assumption based on the existing research and the same can be analyzed from the interviews unanimously. The environment and infrastructure in general are business challenges, since they make it more difficult to operate in the environment. These can be divided down to the physical environment, the infrastructure, safety and the risk of losing one's reputation.

The physical environment seems to be the root cause for many environment-related challenges. Nearly all the respondents mentioned the physical environment as a challenge. As theory suggested, also the stakeholders think that the location and the accessibility of the region combined with the fragile nature and challenging climate make operating in the region challenging.

One way to overcome the challenges that the physical environment causes is to improve the infrastructure. As written in the theory section, the infrastructure is less developed in the Arctic region when compared to the non-arctic regions. However, the

stakeholders do not agree on the future development of the infrastructure. Based on the answers, most of the stakeholders see that the infrastructure is insufficient and affects business negatively. These stakeholders are clearly connected to the arctic business. Stakeholders that represent human and nature, like indigenous peoples and environmental organizations, feel that the current level is sufficient. They see that the need for infrastructural development depends mostly on the economical growth. If the Arctic is to remain the same then also the level of physical infrastructure should be sufficient. The egg- and chicken issue could also be related down to the stakeholders' intrinsic goals.

Developing infrastructure isn't that unambiguous task, as it would see. The interviews reveal that different stakeholders appreciate different kind of infrastructure. Depending on the business the wishes vary from better harbor facilities to wider road and airport networks. The indigenous peoples again see improvement of the current telecommunications connections more important than the start of new physical infrastructure projects. This could state the importance of different parts of infrastructure to the different stakeholders. Telecommunications could be a common nominator to all, but not seen equally important or a top priority to all stakeholders.

Difficult operating environment without sufficient infrastructure and necessary safety precautions create a totally new challenge. If the Arctic region were to have some sort of business also in the future, one important reason to develop the infrastructure would be safety. Representatives from both business and environmental stakeholder groups underline the risk of possible environmental accidents. Hand in hand with safety and accidents comes also the risk of loosing one's reputation. As Tapio Laakso and Sampsa Vilhunen from the environmental organizations remind, environmental awareness has increased both among consumers and investors.

5.3.4 Research and knowledge

The lack of research in the arctic matters is proved to be true in many ways in this study. The study alone is a proof that there isn't enough research about the Arctic. Also, the literature review showed that there is a need for new or updated data in many different fields of arctic research. Finally, the empiric data supports the view as many of the stakeholders acknowledge the lack of sufficient research and knowledge. Although the respondents clearly express that there is demand for arctic research, it's not entirely clear which are the main areas that need research the most.

Tynkkynen who is specialized in Russian energy policy thinks that missing data isn't always the issue. He for example believes that information about the operating environment in Russia is available, but the problem is that this information has not been

collected and stored in one place. Vilhunen from WWF recognizes the same issue. He says that there are many topics that have been well studied but have not been gathered together in order to create a holistic view on the arctic matters. Haga who works for a Canadian mining company tells how difficult it has been for the company to find business information about the Canadian arctic. He emphasizes the importance of knowing the right people from whom to buy the required knowledge and estimates that many of the smaller companies probably don't have the resources for the same.

In addition to these findings, the results have already shown that the complex arctic legislation calls also for simpler ways to acquire the required information. Based on all the data in the study it is obvious that there are still topics, both business and non-business related, which need closer research in the future. In addition, the results indicate that existing data isn't always a synonym for data that is available for use anywhere and anytime. In order to develop information about the Arctic region better, the quality and location of the data need to be revised.

5.3.5 Arctic cooperation

Perhaps one of the biggest issues that challenge business and many other activities in the Arctic is the lack of cooperation. The stakeholders agree that the level of cooperation in the Arctic area isn't sufficient. All stakeholders either directly or indirectly link the lacking cooperation with business challenges.

The interviewees are very unanimous about the reasons for the insufficient cooperation. Their responses clearly show that the lack of common objectives and common interests cause most of the difficulties in cooperation. Laakso from GreenPeace says that interdisciplinary discussion does exist but without clear goals it's hard to get anything done. Vilhunen from WWF continues that if there would be a common vision about what the Arctic looks like in thirty years, it would be much easier to decide what shouldn't be included in the vision. According to indigenous peoples representative Sanila-Aikio, cooperation is strongly influenced by the complexity of the matter: the more dissenting opinions the more difficult it is to cooperate.

The arctic cooperation may not be at the desired level but the stakeholders see great possibilities in it. According to the respondents, the arctic cooperation exists or at least should exist on multiple levels. As the theory also assumed, the respondents see that the Arctic Council represents the main level of cooperation as the main inter-governmental forum. However, the council's rather limited themes that mostly concentrate on human and nature are seen as a showstopper for developing the cooperation. The business stakeholders see that business should be one of the drivers in the region's decision-making. One option could be that the Arctic Council would take a bigger stance on new

topics like business and safety. Another option that emerged from the interviews was that the newly established Arctic Business Council would grow to be the business counterpart for the Artic Council.

Other inter-governmental ways of cooperation are the bilateral and regional agreements of which Nordic cooperation seems to be the most controversial topic. Different kinds of trade barriers and poor workforce mobility are seen to be obstacles for Nordic cooperation. At the same time Posio from tourism business praises the cooperation among Nordic countries in tourism business. He believes that the same concept of cooperation could work outside the Nordic countries, especially in the tourism business in Canada and North America. The key to cooperation according to him is the common interest. Vauraste from maritime business takes the concept of the arctic cooperation to the next level and estimates that it could serve as a facilitator for facilitating international tensions. The interviews also reveal an interesting challenge related to the cooperation between the indigenous peoples and business. The business stakeholders see the involvement of the indigenous peoples as an important part of the cooperation around business but the successful accomplishment of the cooperation is found challenging as the tools for achieving it are not easy to find.

Political conditions are reflected in the Arctic cooperation as well. As discussed earlier in this chapter, the political conditions at the moment are rather stable in the Arctic region. However, some of the respondents bring out the current situation with Russia. Not knowing the exact objectives of the Russian government makes it hard to decide about the common arctic goals. In addition, the sanctions between the West and Russia have had negative effects on cooperation in many areas, especially in business. Tynkkynen from the Aleksanteri Institute adds that Russia is strongly against the deepening of the cooperation between the EU and the Arctic region. By contrast, many of the interviewed stakeholders think that the EU should be more involved in the Arctic matters.

To conclude, cooperation does exist in the Arctic region but not in the most efficient manner. The interviewed stakeholders are eager to develop arctic cooperation and believe that sufficient cooperation is needed in order to establish common vision about the future Arctic. Cooperation works best when the counterparts have common goals and objects of interest. Tourism in the arctic Scandinavia is a good example of well-established and productive cooperation. Based on the interviews' findings, cooperative atmosphere could help to solve many of the challenges presented in Chapter 5.3. For example, joint investments and information sharing could create synergies and help companies to overcome the challenges created by insufficient infrastructure and complex legislation.

5.4 Stakeholder expectations for the future Arctic

In this chapter the stakeholders' opinions about the future Arctic are examined. The expectations about the next arctic megatrends and the role of arctic business in the future are presented and briefly discussed. In addition the chapter seeks to understand which parties are expected to take part in the arctic development. These topics were chosen to be discussed as they emerged from the interviews as the most important ones.

The business around the arctic oil and gas deposits has been the number one megatrend in the Arctic at least for the beginning of the 21st century. However, the business never really kicked off and now the groundbreaking question is whether or not there will be a need to use the Arctic hydrocarbon resources in the future. There is a wish among most of the stakeholders that it wouldn't after all be necessary to drill oil and gas in the Arctic. The low oil price in the 2010s has obviously made the arctic oil less attractive and there are other factors that support the view of the oil-free Arctic. Vilhunen says that there is a trend going on in the finance industry and investment industries, according to which the drilling of arctic oil is seen risky and expensive (see e.g. Fixsen 2017). Posio and Härkönen add that the current break in oil drilling could have positive effects on the development of alternative energy resources. Tynkkynen who teaches Russian energy policy in Aleksanteri Institute agrees with them. He believes that due to the forthcoming global technological breakthrough in energy technology the need for fossil energy diminishes remarkably during the next 20 years.

The stakeholders clearly support the future model where the arctic oil and gas deposits will not be used. However, they simultaneously acknowledge that the future might look different than what they wish for. Haapavaara predicts that although alternative energy sources would be invented, the arctic fossil fuels would still be used at the time of right global price. Tynkkynen also predicts that the time of fossil energy won't be completely over after twenty years from now. If the stakeholders' estimations about the hydrocarbons are fulfilled it would mean that at least the economical growth in the region would need another driver.

Based on the answers given by the business stakeholders *there seem to be two alternative options to replace hydrocarbons as the next arctic megatrend*. These options are *infrastructure* and *year-round open and safe maritime transport connections*. In fact, these two are closely linked together and they are believed to boost each other. As theoretical and empirical data has shown, the prerequisites for increased and developed infrastructure are sufficient investment and guarantee for increasing future operations in the Arctic. Especially the opportunities that the new marine routes offer are believed to create need for new and better infrastructure. Haga predicts that new cities, villages and harbors are going to be built alongside the passages. He sees that mining industry too can benefit from the sea routes. In addition to the infrastructure alongside the sea routes,

the new megatrend would include the development of IT infrastructure. Härkönen emphasizes that good telecommunication connections are a prerequisite for any kind of development in the region. Sanila-Aikio agrees and says that better telecommunication connections would be highly appreciated also among the indigenous peoples.

Although all stakeholders have been able to suggest business opportunities and challenges, *they each have different interests towards the Artic region and different relationship with arctic business.* The given options for the next arctic megatrend are all business driven, but the interviews reveal that the goal of increasing arctic business is not on every respondent's agenda. The environmental organizations' and indigenous peoples' representatives expect the future to be more environmental driven. For environmental organizations the ultimate goals are to protect the artic nature and to diminish the impacts of the climate change. They favor protected areas and reserves, which should be set to protect the nature before other operations in the region begin. Sanila-Aikio's message is that the arctic indigenous peoples' wish is to be able to continue the practice of the traditional way of life and livelihoods. The local way of living should in the future too include producing pure food, cherishing traditional values and maintaining traditional skills. Her opinion about arctic business is very clear; it should concentrate serving the local market instead of the international market.

Although overlapping interests exists among the arctic stakeholders, it is great to see that the opinions aren't that black and white. For example, those who have invested in arctic business would obviously like to see development and growth but none of them are denying the climate change or being against protecting the nature. Also, the environmentalists are not completely against of arctic business and they see many new sustainable opportunities and believe that for example shipping industry could be sustainable with proper common rules.

The importance of sustainable operations indeed is something that all the stakeholders can agree on. Based on the theory and the interviews *sustainable development* seems *to be the right model for regional development in the Arctic.* However, the stakeholders are not unanimous about how the sustainability is developing in the Arctic. According to Härkönen, the contradiction between business and environment interests is diminishing and sustainability is becoming the new norm that companies will follow. Sanila-Aikio highlights that although there is a lot of talk about green values and sustainable business, she sees it's impossible to for example have green and sustainable extractive business. Vilhunen says that nowadays companies unfortunately are not capable of ensuring a sufficient level of sustainable responsibility while operating in the Arctic region. Instead, he thinks that due to the limited resources companies tend to have, the governments should be responsible for offering information and instructions about sustainable business and for assisting in achieving the jointly set objectives.

There's at least one thing that the stakeholders can agree on and that is the fact that the temperature in the Arctic is rising due to the climate change and is causing negative impacts in the region. The respondents don't really give answers on how to diminish the impacts of the climate change, but that again was not the scope of the study either. Like Vilhunen reminds, the Paris Agreement includes the common goal of reducing the warming but not yet the instruction and tools on how to do it. Naturally, everyone should be included in the actions against the climate change. Next, the involvement of arctic stakeholders in the future is discussed in more detail.

In this study the interviewed respondents have identified the most important arctic actors who should have a stake in the region's decision making. Still, the expectations regarding the roles of the different stakeholders are not completely clear. From arctic development point of view it is difficult to say what kind of responsibilities the different stakeholders are expected to have e.g. who should be involved in the development process, what is the right forum and who should have a leading role. The results of the interviews indicate that the combination of the new sea routes and infrastructural development is going to have a big role in the future Arctic. Thus, *business is expected to be present in the region also in the future and should be taken into consideration when planning the development of the region.* As already learned, the respondents value the work of Arctic Council but don't see that it is able to server all arctic needs in the future. Hence, the Arctic Business Council is expected to take bigger role in arctic business matters. Vauraste and Tynkkynen suggest that it would be important for the region's future that the United Nations would also be included in the arctic agenda. They believe that the presence of the UN could help to solve disagreement and to stabilize the atmosphere. Whether the Arctic Council, the Arctic Economic Council, the UN or some other forum will be the integrator in arctic development discussions is definitely a matter that needs closer future research.

According to Vauraste, the way the Arctic region is going to develop is a derivative of the changes happening in the world economy. He estimates that arctic-based development will be limited. Instead, the natural resource prices and the development of the relations between China and the Western powers are things to keep eye on. Nonetheless, the respondents see that at least *Finland and Russia would now have a great opportunity to take leadership in arctic matters.* First of all, the respondents see that Finland should seize the opportunity and profile itself as forerunner in arctic matters. The presidency in the Arctic Council is expected to offer important visibility in creating the profile. Second, Russia too could improve its arctic reputation by investing in the development of the Northeast Passage. Tynkkynen believes that Russia would have a great opportunity to benefit economically from the increasing traffic in the Northeast Passage. Investing in the passage would also help Russia to reduce its

dependency on the hydrocarbons. Naturally, this would strengthen the respondents' vision of the oil and gas free Arctic.

The stakeholders' expectations for the future Arctic have now been discussed. The expectations did not achieve such agreement among the respondents as the earlier topics about opportunities and challenges did. As expected, the stakeholders have overlapping interests towards the development of the Arctic region. Still, signs of the possible start of common vision can be seen in the respondents' answers. Next, the final chapter summarizes the research and presents the conclusions drawn from the results of both theoretical and empirical studies.

6 SUMMARY AND CONCLUSIONS

In this study, the Arctic region and the arctic business have been assessed. The Arctic was chosen as the subject of the study due to its timely relevancy and the lack of relevant research. The climate change and its effects on the region have recently been the most popular topic related to the region. In addition to the environmental aspects, the Arctic is best known for oil drilling, arctic sea routes and indigenous peoples' rights. From Finnish point of view the Arctic region is topical as Finland holds the presidency of the Arctic Council 2017-2019. As the region is still quite young, the amount of scientific research is limited. Moreover, the research is focused more on the environmental than economic aspects leaving arctic business in a minor role. In the light of this initial information, the study was set up to better understand arctic business and the different ways to develop it.

Thus, the objective of the study has been to evaluate *how the Arctic region should be developed so that it supports the arctic business.* The following sub-questions were set in order to achieve the main objective of the study: 1) Who are the arctic stakeholders, 2) How do these different stakeholders perceive business opportunities and challenges in the region and 3) What kind of expectations are set for the Arctic region's development from these different stakeholders' perspectives. Stakeholder perspective was decided to be used to achieve the most comprehensive results for the study's objectives. For this, nine arctic stakeholders from various stakeholder groups were interviewed. The study was conducted according to the norms of qualitative research approach. Semi-structured theme interviews were used to collect empirical research data. The theoretical framework was built based on the existing literature about the Arctic region and the theories used in the study. The arctic stakeholders were identified based on the guidelines of the stakeholder theory. The theories of regional development helped in understanding the characteristics of different development models and in choosing the best approach for the Arctic region.

Both theoretical and empiric findings have now been presented and in this final chapter the conclusive remarks as well as the future suggestions are given. Based on the findings the author suggests that as part of the arctic development the arctic identity and agenda should be redefined. When considering the future development for the Arctic region the model of sustainable development should be applied.

6.1 Redefining the Arctic

The current arctic agenda was initiated after the World Wars as a result of the newly started cooperation among the eight arctic states. For decades the Arctic has been the

background of the arctic states. During this time the world around the Arctic has developed and due to globalization these changes have had impacts also in the Arctic region. In addition, arctic-based development has also occurred. Based on the information gathered from existing literature and the interviews it seems that the Arctic region has reached a point of redefining itself. In order to be able to make suggestions on how to develop the region into the right direction, the arctic identity and agenda are first discussed in the following two chapters. The discussion is led by the results of the three sub-objectives set for the study.

6.1.1 Arctic identity

In this study the arctic identity has been assessed by examining arctic definition and arctic stakeholders. The author acknowledges that identity can include other factors too but due to the limited resources in the study the conclusions concentrate only to these two factors. After short discussion about the importance of a valid arctic definition this chapter concentrates on understanding who are the arctic stakeholders that together form the arctic identity.

Both the literature and the interviews show that the lack of a common definition for the Arctic region is evident. Still, none of the interviewees, nor the existing literature sees this problematic. It well might be that it has not yet caused any issues for the joint actions in the region but as the data in this study suggests, the Arctic is to be the host for multiple stakeholders in the near future. A clear definition of the region could help in setting common rules and prevent ambiguities and even possible conflicts. As the data in this study is not sufficient for creating such definition, the author suggests that the arctic definition should be closer investigated in the future research. Although the study cannot provide solution for the missing definition, the identity can be strengthened by presenting the arctic stakeholders.

The first sub-objective of the thesis was to *identify the appropriate arctic stakeholders for the study*. Due to the lack of existing literature about arctic stakeholders it soon became clear that successful identification would need closer examination of the stakeholder theory. A process of identifying arctic stakeholders was created based on stakeholder theory literature. The preliminary stakeholders for the study were identified. The second version of the arctic stakeholders was created based on the interviews. The differences between the two frameworks were discussed in Chapter 5.1. The following conclusions can be drawn based on the results.

Although Freeman's stakeholder framework was created over thirty years ago, it still has many valid points. It's however clear that a model, which has been designed for identifying the stakeholders of a company can not be directly applied in a whole another

concept. Based on the results of this study, Freeman's framework can be used as a preliminary list of stakeholders in situations where no other data exists. It is however clear that editing of the model is required in order to achieve compatibility with the context of the research.

All in all, the preliminary stakeholder framework in this study matches well with the one created based on the interviews. All preliminary stakeholders were mentioned in the interviews and they represent the main arctic stakeholders, as the three additional groups did not receive wide support. Perhaps the most interesting finding was the fact that the different stakeholder groups were not equally important from the interviewed stakeholders' point of views. This is a great finding from arctic development point of view as it may help to understand what kind of roles the different arctic stakeholders should have in the future. As the stakeholder theory suggests, there are various ways of categorizing and prioritizing stakeholders. Grouping stakeholders based on their importance to the respondents could help to understand the level of involvement each stakeholder should have in the arctic matters.

In Figure 11 are presented the three groups into which the stakeholders in this study are divided as a result of the findings. The author suggests the following. The primary group should have the main power in arctic decision-making and these actors should definitely be called arctic stakeholders. The stakeholders in the secondary group should also be included in the region's decision-making but with limited rights. As the stakeholders in the tertiary group did not receive as much support from the interviewees as the two other groups, they either have a minor role or are not regarded as arctic stakeholders. How the stake in the artic matters should actually be divided between the primary and secondary groups is hard to say based on the information in this study. Thus, the author suggests that more detailed research about the primary and secondary stakeholders and about the concepts of influence in the Arctic region should be conducted.

Figure 11 Categorizing the arctic stakeholders

The stakeholders in *the primary group* were selected purely based on their popularity among the interviewees. According to the results, there is one group that can be called an arctic stakeholder with certainty. Indigenous and local people were the only group that received support from all respondents. Two other groups, government and business, as well can very likely be called arctic stakeholders as eight out of the nine respondents thought so. The arctic states and the people living in the region are the most concrete actors in the Arctic, which probably explains their role as primary stakeholders. In addition, the visibility the indigenous peoples have received in media could also have affected the result. The reason why business is regarded as one of the main stakeholders could of course be explained by its increased importance in the region. Still, one cannot completely exclude the fact that the business perspective of this study would not have affected the respondents' answers.

The results for the next three stakeholder groups were ambiguous, thus they belong to *the secondary group.* One of the most interesting findings regarding the stakeholders was the role of the Arctic Council. Based on the existing literature the role was expected to be more important. The interviews however reveal that only the non-business stakeholders see the council as an arctic stakeholder. This indicates that the scope of the council is more favorable for the non-business actors. In addition, frustration concerning the council's inability to have an influence on region's decision making was observed among the non-business stakeholders. As the Arctic Council cannot make any binding decisions and no official body ensures whether the council's suggestions have been implemented or not, the real role of the council, especially from the future perspective remains unclear. Could it be that the Arctic Council, which for a long time has been the main intergovernmental forum and the symbol of arctic cooperation has reached the point of redefining itself? Or do these findings speak for a new regime, which would be able to better meet the future challenges like for example the impacts of the climate change? These are definitely good questions and the study shows that some action needs to be taken.

As theory and the interviews suggested, there is not an existing guideline nor common opinion about whether or not the non-arctic parties should be involved in the arctic matters and what should be the level of involvement. Based on the current knowledge it seems that at least some kind of a role will be inevitable in the foreseeable future as the Arctic Sea, which is legally open for everyone, gains accessibility. The level of involvement is hard to set as arctic stakeholders have different views on the matter. It has become clear that those arctic states that benefit most from the natural resources, especially hydrocarbons, are reluctant to share the profits, naturally. For smaller countries like Finland, the bigger market would create better opportunities for arctic know-how. It is good to also bear in mind that free competition is usually seen to have positive impacts on economic development. If we are to look at the situation

purely from business perspective, it is very difficult to say which approach should be chosen. From larger perspective it is obvious that the non-arctic states and other parties should have at least a minor role.

In the case of *the tertiary group* it is good to carefully examine whether or not these groups have any impact on the development of the Arctic region and do they benefit from the development. Media was chosen as one of the preliminary stakeholders as it was part of Freeman's stakeholder view of a firm. The results have shown that media is not as relevant for the Arctic as it is believed to be for companies in Freeman's model. Companies are liable for reporting, the Arctic region is not. Although media has an important role as an informer in the Arctic region, the author suggests that media should not be regarded as an arctic stakeholder at the moment.

It has become very clear that arctic research is highly valued and that the need for new research is great. However, science & research seems not to be seen as a prominent stakeholder in the Arctic. One reason for this could be that research is not considered as one of the traditional stakeholders and for that reason the respondents do not perceive it as a stakeholder in the first place. Science & research as an arctic actor could for example have an advisory role through arctic universities, but at least for now the status is not important enough to be an arctic stakeholder.

The last actor that has come up while searching for the stakeholders is the EU, which has got itself a rather difficult role. The union is expected to participate in the arctic discourse and its role is desired to be more important. However, the EU has not even received the observer status in the Arctic Council, which indicates that the arctic stakeholders, other than those in this study, do not agree on involving the EU. Instead for now, the EU seems to have some kind of a supporting role: not to have a stake in the arctic matters but to offer leverage for EU countries when needed. Based on all the information the conclusion is that the EU is an actor, which cannot be called an arctic stakeholder at the moment but which at the same time is hoped to increase presence in the region.

To conclude, the following actors are the most important arctic stakeholders based on the information obtained from the existing arctic literature and the interviews conducted for this study: *indigenous & local people, arctic governments, arctic business, the Arctic Council, environmental organizations and non-arctic states & other parties.* The author suggests that these actors should be involved in the region's decision-making. For clarity, the author also suggests that the stakeholder group arctic business should be further explored in order to find out the right actors within the group to represent others. Based on the results, the Arctic Economic Council could be one option but more evidence is needed before suggestions can be made in this regard.

6.1.2 Arctic agenda

The findings for the second and third sub-objectives of this thesis help to understand how the arctic region's common agenda has changed over the years. The second sub-objective examined *how the different stakeholders perceive business opportunities and challenges in the Arctic region.* The third sub-objective's aim was to understand *what kind of expectations the stakeholders have towards the arctic development and the future Arctic.* By combining the results of the stakeholder interviews with the existing arctic research it's clear that the focus of the stakeholders' agenda is not anymore solely on environmental aspects. The Arctic has become an economic region and a powerful economic actor that is now linked to the world economy. The environment and the arctic nature are still regarded as very important parts of the agenda, but the fact is that economical aspects have come to stay. The arctic business is not yet that visible in the existing literature or news but based on the interviews findings the role of business is believed to grow due to the Arctic potentiality from business perspective.

Arctic business is at a crossroads: to invest in the exploitation of the hydrocarbons or to choose other path. Due to the global economical situation it very much seems that the exploitation of oil and gas is on break and possibly for a long time. Although the group of respondents in this study supports this possibly result, there might be other actors who disagree. In order to get more comprehensive image of the situation it would be interesting to hear the disagreeing opinions too. As literature and the interviews already suggested, the newly opening sea routes are believed to be the next megatrend in the Arctic replacing the hype oil and gas used to have. The other option for megatrend would be infrastructural development, for which the need for increases as the marine transportation business grows. Many other business opportunities like cold and security expertise seem to focus around the marine business, which strengthens the idea of the next megatrend.

Although the stakeholders voted tourism as the most prominent business opportunity in the region, they still do not see it as a possible next megatrend. This is an interesting finding and probably indicates the following two things. First, from Finnish perspective tourism is already well developed, as Finland is the forerunner in arctic tourism. Second, marine transportation and infrastructure business are believed to offer better profits than tourism. Thus, tourism is a very important business opportunity in the Arctic region, but the biggest new opportunities for tourism seem to be outside Finland and require investments.

It is obvious that the new agenda does not please all arctic stakeholders. Especially the environmental organizations and the indigenous peoples would like business to have a smaller impact on the region's future. Sustainable business has emerged from the results as a possible integrator between business and environmental objectives. This

trend can be seen both in the number of environment related business opportunities and in the comments made on how to convert existing business to meet the sustainability requirements. The environment-related and sustainable business opportunities were not as popular topic in the current arctic literature as they were among the interviewed stakeholders. Although sustainable business is not a completely new business model, it seems that it is an area of research in the arctic literature that has not received much attention. The author predicts that arctic sustainable business will attract attention in the near future, both in research and business operations.

As business has become part of the arctic agenda, the challenges too should be discussed to better understand which are the areas that need support the most. The challenges that companies face when operating in the Arctic region turned out to be the least studied topic. Because existing data about arctic business challenges was limited, the theoretical framework was set up by using PESTE-analysis. However, the empirical findings did not fully match with the theoretical framework and PESTE-analysis was not further developed. The results of the interviews were divided into five groups of challenges, which are World politics & economics, Legislation, Environment & infrastructure, Research & knowledge and Arctic cooperation.

The political atmosphere in the Arctic region seems to be very stable and the possible issues are believed to originate outside the region. The stakeholders' biggest concern has to do with the political and economic relations between Russia and the West. The economic challenges too are mostly seen to be impacts of the shifts in the world economy. *Complex legislation*, on the other hand, is believed to have negative impacts on business. The fact that legislation is not harmonized in the region affects especially those companies operating in more than one country. In addition to the higher-level complex regulation, the different business sectors operating in the region have their own logics and the fully established systems are often missing.

The physical environment is considered to be challenging for arctic business. The problems lie for example in harsh weather conditions, darkness and long distances. Better infrastructure, safe systems and rescue services are believed to offer help. However, the *level of infrastructure* in the Arctic is low compared to non-arctic regions and is lacking investments from governments and other high level organizations. The stakeholders don't seem to agree whether infrastructure should be developed or not as business and environment objectives are against each other.

The problem of *the arctic research* is that it is scattered. The stakeholders would like to have data that is holistic and can be found in one place. In the making of the study the author has also noticed how most of the arctic data and research is country-specific. This is of course understandable as the Artic is such a large region and wide topic. However, in the light of this information, arctic research in the future should be more comprehensive combining data from different scientific and geographical areas.

The better resources a company has the better it is estimated to handle the challenges. The author believes that this could affect smaller companies willingness to enter the Arctic region. In situations like this, the importance of networks is emphasized. Therefore it is essential to invest in *arctic cooperation*, which is the last of the five challenges the stakeholders stated.

6.2 Sustainably towards the future Arctic

The main objective of this thesis has been to understand how to develop the Arctic region in a way that is supports arctic business. Stakeholder perspective was decided to be used in order to have comprehensive view of arctic matters. The arctic business has been evaluated and the arctic stakeholders have been identified. Stakeholders' expectations for the future Arctic have as well been investigated. The findings have been presented and discussed. The answers to the main research objective are given in this chapter.

In the theoretical framework different models of the regional development were presented. The theory suggested that endogenous models would be better fit for the arctic context than the exogenous ones. In the endogenous models the development of a region would not be measured by universal economic indicators and the region would not be automatically compared to other regions. Instead, every region could create unique attributes to measure economic, physical, social and cultural development. In addition, endogenous models could assist rural and resource based regions to overcome the challenges of economic restructuring. The findings of the study confirm the suggestion. First of all, it would be difficult to have truthful data for indicators as the region consists of the territories of eight states and the conditions within the states vary. Second, due the uniqueness of the Arctic region it would be impossible to compare the region with any other region or country in the world. Third, the economical restructuring might well be current topic in the Arctic if the natural resource exploitation decreases and service sector increases. Thus, the author suggests that the development in the Arctic region should be based on endogenous models of regional development.

Considering the significant role that environmental aspects have in the arctic context, the author sees that the best endogenous model to be applied in the Arctic region is the model of sustainable development. It has been clear already from the beginning of the study that the impacts of the climate change are going to be dramatic in the Arctic region. Both the nature and the people of the region will have to adapt to the changes. Unlike the other models of regional development, the approach of sustainable

development includes ecological dimension meaning that environmental, economic, social and cultural goals should be all integrated in order to achieve the best outcome.

As sustainable development is an endogenous approach, the development in the Arctic is advised to be measured with unique region-based attributes. This topic definitely requires further research and it is important that the attributes are set up jointly by the arctic stakeholders. In addition to measuring economic growth by traditional indicators like gross domestic product, there could be another indicator, which would measure the growth of sustainable business in proportion/relation to non-sustainable business. If possible, some indicators could be used to make comparison between the arctic states. This could accelerate environmental decision-making on national level.

It has become clear in the study that the environmental and economical aspects in the Arctic region have opposing interest towards the region and that the perfect balance between them is difficult to find. If we were to answer to the main research question purely from business perspective the chosen model would not probably be sustainable development. In that case all the other factors including arctic nature and environment would be secondary to business. However, decisions about the future of the Arctic region should not be made based on the fast and big profits or at the expense of the environment. What's best for the Arctic now might not be the same in the long run. The various climate reports and other studies indicate that if we are to continue living and doing business as we have done by far, some day there simply is not possibility to practice business in the region. This is the groundbreaking thought that should be understood before starting to plan any kind of development.

How is it possible to develop the Arctic region in a sustainable manner and at the same time support the arctic business to grow? First of all, economical growth and sustainable development should not be seen as mutually exclusive. Instead, sustainability should be implemented in the arctic business. There seem to be two prominent ways to accomplish it. The first is to help current business to transform into more sustainable form. The second way is to promote new sustainable business opportunities. These new opportunities can be existing models, which for some reason have not yet gained popularity in the region. They could also be totally new business ideas inspired by the impacts of the climate change. As mentioned before, the sulphur directive is a good example of an action that has created new kind of business.

Regardless of the way of implementing sustainable values, the goal should be to make it easy for companies to get involved. The challenges that have been identified in the study are valuable information about how companies should be supported in the Arctic and it is suggested that challenges are further studied on a larger scale. The author suggests that infrastructural development should take place in such a way that it benefits primarily the local people and the sustainable business. The sustainable

approach to develop the Arctic region would probably result in changes also for the legislation. Hence, harmonizing the arctic legislation seems necessary. Knowledge sharing proves to be the single most important way to overcome challenges that the arctic operating environment causes. The possibility for some kind of data bank should be investigated. In order to have more holistic data about the region it is also suggested that research collaboration between universities and different stakeholders should be increased.

According to the information shared in the theoretical framework, environmental-friendly tax system is one of the tools to improve sustainable development. The author suggests that in addition to having heavy taxation for business that does not support sustainable business, the Arctic region should offer lighter taxation for environmental-friendly business. This could help to regulate the business the region is to have in the future. In addition to making sustainable business more profitable, this kind of taxation would give clear signals to companies about the sectors worth investing in. The possibility of using other economic incentives should be further examined. For example, the governments' possibility to financially support companies in the transition from non-sustainable business operations to sustainable ones should be investigated.

Sustainable development is a holistic model, which means that all the arctic stakeholders should be involved in planning and executing the future Arctic. The author sees that cooperation has an important role in this. The Arctic as we know it today has its roots in the post World War period when the region's new era was initiated through arctic cooperation. The author suggests that it is now time for a new wave of arctic cooperation, which commences the era of the sustainable Arctic. The insufficient cooperation has been identified as a challenge for arctic business but it is also a challenge for arctic development in general. The lack of common objectives was seen as the biggest obstacle for cooperation. In addition, the author would like to highlight the importance of having the right people to cooperate in the right forums. The interviews showed that the stakeholders are a bit frustrated with the bureaucratic and slow communication and decision-making in the region. The stakeholders also value cooperation highly and are in favor of increasing it. It is therefore suggested that in order to achieve more productive cooperation, the arctic stakeholders should together try to modify the current forums and come up with new ways of practicing cooperation. As Freeman explained, the stakeholders should share core principles in order to have successful relationship. Hence, the importance of a common arctic vision cannot be overstated.

Finally, the study and the participated stakeholders have offered valuable information about the Arctic region and arctic business. Nevertheless, in order to successfully implement sustainable development into the arctic context more information is needed about the different arctic stakeholders and their objectives. In this study Finnish

perspective has had a dominant influence. Although the study and the questions have concerned the whole Arctic region it is presumed that the participant's backgrounds have affected the results. In order to obtain more comprehensive data it is suggested that the scope of the participants should be expanded to different countries and business activities. Furthermore, research around business stakeholder group should be deepened. The important role of business in the Arctic has been confirmed in this study but the different roles within that group are to be evaluated. Last, the opportunities and challenges of sustainable arctic business are the key elements that need to be thoroughly investigated in order to guarantee successful future for the Arctic region.

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APPENDICES

Appendix 1 Interview questions

Personal questions

1. Name, organization and role in the organization.
2. In which way is the organization connected to the Arctic region?
3. Describe your relation to the Arctic region.

Theme 1: Special features of the Arctic region

4. How would you define the Arctic region?
5. How do you see that the climate change is affecting the region?
6. What is your opinion about the arctic legislation?
7. What is your opinion about the arctic cooperation?
8. What is your opinion about conflicts in the Arctic?
9. What is your opinion about the competition in the Arctic?
10. How would you see the development of the Arctic region?

Theme 2: Business in the Arctic region

11. Which kind of business opportunities does the Arctic offers?
12. Which kind of business challenges do companies face when operating in the region?
13. How can the challenges be managed and reduced?

Theme 3: Arctic stakeholders

14. Which kind of different stakeholder groups are there in the Arctic region?
15. Which of them are the most important ones and why?
16. Which kind of interests do these stakeholders have towards the Arctic region and what are their impacts?

Bonus

17. Would you like to add something?
18. Are there any other people the author should get in contact with?