UNIVERSITETET I NORDLAND

HANDELSHØGSKOLEN I BODØ • HHB

MASTEROPPGAVE

Competitive strategies of contractors in a prospective area

"Being global, but behave like a local?"

EN310E - Master of Science in Energy Management

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Preface

This master thesis represents the final product of Master of Science in Energy Management at Bodø Graduate School of Business and MGIMO University in Moscow. The topic of my thesis is based on my analytical interest in strategy as well as it is an important topic for the oil and gas industry, especially these days due to the recession. Also, several industrial actors and informants have confirmed the relevance of the research topic. Additionally, I find the oil field service industry very interesting and in particular the contractors, as they are central actors situated in the middle of the supply chain, between major oil companies and smaller suppliers.

I would like to give a sincere thank you to my supervisor, Andrei Mineev, for constructive criticism and guidelines along the way. He has been an incredibly important resource and provided me useful knowledge through interesting discussions and relevant literature.

In addition, I would like to thank all of my interview candidates. You provided me with valuable insight into an important industry of Norway.

Bodø, 26th May 2015

Marthe Fagerlund Asla

Abstract

The suddenly drop in oil price mid-2014 in combination with increased cost levels resulted in cost and efficiency pressure as well as decreased activity on the Norwegian continental shelf. Subsequently, this affects the oil field service sector, which delivers a wide range of products and services to oil and gas installations. This thesis seeks to describe and analyze the strategy of oil field service suppliers in the prospective area of Northern Norway in light of efficiency pressure. Whereas the research is based on qualitative interviews with Statoil (oil company), two leading contractors, a potential sub-supplier and Petro Arctic (independent organization), the focus was on contractors. The problem statement of this thesis is:

How do companies strategically engage in their prospective areas in light of increased pressure of efficiency?

The prospective area of Northern Norway has been among the most important strategic area in recent years, as a result of increased access to major resource areas. Besides political stimuli to keep a stable petroleum activity, regional ripple effects are prioritized. Global contractors are now following the oil and gas industry and establishing offices in the north.

Theories applied in this research are classical strategy, institutional theory and network theory. Main findings are: Firstly, contractors strategic behavior indicates that they tend to maintain their powerful global position, which give them high bargaining power in the prospective area of Northern Norway. Secondly, the contractors are adapting to norms and rules set by the Government and the Northern Norwegian society. Thus, their behavior is rather symbolic. Lastly, according to contractors, there is little need for networking in Northern Norway, which refers to building horizontal relationships. However, there are some examples of successful symbolic networking between contractors and local business, which provides contractors legitimacy and goodwill by being perceived as local contributors.

Will leading contractors adjust to their new prospective area and *behave like a local* or are they *staying global*. The world changes continuously, however the contractors' strategies seem to stay the same as in the beginning of the Norwegian oil age, 45 years ago. Economical short-term profits are prioritized above developing new and sustainable long-term solutions. Will "the good old fashioned way" be an appropriate approach in the current period with efficiency pressures in a new and different geographical location, or is there a need for a modern long-term oriented strategy with local involvement?

Sammendrag

Det overraskende oljeprisfallet i 2014, i kombinasjon med et stadig økt kostnadsnivå, førte til et intensivt effektivitetspress som videre resulterte i redusert aktivitet på norsk sokkel. Dette påvirker oljeserviceindustrien, ettersom leverandørene leverer et bredt spekter av produkter og tjenester til olje- og gassprosjekt. Denne masteroppgaven har som mål å beskrive og analysere kontraktørenes strategi i Nord-Norge i lys av effektivitetspresset. Avhandlingen er basert på kvalitative intervjuer med Statoil (oljeselskap), to kontraktører, en potensiell underleverandør og Petro Arctic (uavhengig organisasjon), men med hovedfokus på kontraktørene. Denne masteroppgavens problemstilling er som følgende:

Hvordan engasjerer selskaper seg i sine strategiske prospektive områder i lys av økt effektiviseringspress?

Det prospektive området, Nord-Norge, har vært blant regjeringens viktigste strategiske satsingsområde de siste årene som følge av økt tilgang til ressursområder i Arktis. Foruten politiske stimuli for å holde en stabil petroleumsaktivitet, er regionale ringvirkninger høyt prioritert. Globale kontraktører følger nå etter oljeindustrien og etablerer kontorer i nord.

Anvendte teorier i denne avhandlingen er klassisk strategi, institusjonell teori og nettverksteori. Hovedfunnene er: For det første viser kontraktørenes atferd at de ønsker å opprettholde sin globale posisjon, da den gir høy forhandlingsmakt i det prospektive området i Nord-Norge. Dernest tilpasser kontraktørene seg normer og reglement fastsatt av regjeringen og det nord norske samfunnet. Oppførselen deres kan derfor beskrives som symbolsk. Til slutt, er det ifølge kontraktørene lite behov for nettverksbygging i Nord-Norge, noe som refererer til å bygge horisontale relasjoner. Likevel er det noen eksempler på vellykket symbolsk nettverksbygging mellom kontraktører og lokale virksomheter. Dette gir kontraktørene legitimitet og ”goodwill” da de blir oppfattet som lokale bidragsytere.

Vil ledende kontraktører tilpasse seg sitt nye prospektive område ved å opptre som en lokal eller foretrekker de å være globale. Verden endrer seg kontinuerlig, men kontraktørenes strategier ser ut til å forbli lik som i begynnelsen av det norske oljeeventyret, for 45 år siden. Dette kan forklares ved at økonomisk kortsiktig profitt prioriteres fremfor å utvikle nye, bærekraftige og langsiktige løsninger. Vil "den gode gamle måten" være en hensiktsmessig tilnærming i nåværende tidsperiode med effektivitetspress i et nytt og annerledes geografisk område? Eller er det behov for en moderne langsiktig orientert strategi med lokalt engasjement?

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Abbreviations

CAPEX – Capital expenses

CSR – Corporate Social Responsibility

EPC – Engineering, Procurement and Construction

E&P – Exploration and production

FPSO – Floating Production, Storage and Offloading

HSE – Health, Safety and Environment

LNG – Liquefied Natural Gas

M&M – Maintenance and modifications

NCS – Norwegian Continental Shelf

NGO – Non-Governmental Organizations

NPD – Norwegian Petroleum Directorate

OFS – Oilfield Service

OPEX – Operating expenses

SDFI – Norwegian State's Direct Financial Interest

SURF – Subsea, Umbilical, Riser and Flowlines

USGS – United States Geological Survey

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1. Introduction

This master thesis will assess the competitiveness of the Oil Field Service (OFS) industry in Northern Norway and the challenges they face. The OFS sector consists of contractors and suppliers to the oil and gas sector and further represents Norway's second largest industry in terms of turnover, after oil and gas production. Thus, it is of great significance for Norwegian economy. The industry is present in every region and it has experienced a continuously and significant growth in recent years. There is however reasons to believe that exploration and production (E&P) spending firms peaked in 2014, both on the Norwegian Continental Shelf (NCS) and globally. This is a result of increased costs over the past few years and the fall in oil price starting mid-2014, which both have reduced the profitability of new developments. Consequently, an investment decline on the NCS is expected in 2015. Statistics Norway and the Norwegian Petroleum Directorate (NPD) have estimated a total reduction of around 15% on the NCS in 2015 (EY, 2014).

The price drop in 2014 came as a big surprise since oil price forecasts are extremely difficult to predict. Subsequently, the oil and gas industry is experiencing efficiency pressure and strive to streamline processes and cut costs. This also affects OFS companies, which delivers a wide range of products and services for E&P activities to oil and gas fields. Norwegian OFS companies have noticed the recession remarkable, which have resulted in restructuring personnel and equipment, collaboration across segments and downsizing. Several Norwegian OFS companies get a significant share of its revenues from export. Export in relation to a weakening Norwegian krone may be beneficial and shelter export oriented companies to some extent in 2015. However, North of Norway consists of mostly small size companies, who are not in an international competitive position. 2016 outlooks are still highly uncertain and essentially it depends on how long oil prices remain low (EY, 2014).

The global need for energy in combination with climate changes has made previous unattractive areas increasingly more interesting during the last years, such as the Arctic. Arctic is believed by some to be the last resourceful area left on earth that is not well developed, thereby - the last energy frontier. The area is also highly essential for Norway because the production of oil and gas in the North Sea has matured and gradually declines. Statistics shows that the production volume in the North Sea is currently half compared to its

peak in 2001, which means that the nation is dependent on new exploration areas to continue being part of the future energy hub. In contradiction, large amounts of natural resources are discovered on the north shelf and increased production is expected in years to come. According to United States Geological Survey (USGS), a 2008 study of global oil and gas resource potential, estimates that 13 percent of global oil resources (90 billion barrels of oil) and more than a third of the natural gas resources (1670 trillion cubic feet) are to be found in the Arctic. The Norwegian economy is vulnerable without oil and gas activity due to both employment and extraordinary income. Consequently, the Barents Sea has been one of the country's top political matters for some years trying to stimulate E&P activities through political efforts and incentives (regjeringen.no). At present time there are not many developed fields extracting oil and gas above the polar circle because the high latitude leads to several challenges and uncertainties compared to other places. Consequently, production costs are much higher here compared to other places in the world and also more dependent on a relatively high price to balance the budget with present technology. Even if the oil price is assumed to be cyclically and several companies have experienced a downfall before, all actors within the petroleum industry including the large and experienced ones are influenced.

Northern Norway is a relatively new geographical area within petroleum related activities, but still a strategically important one for Norway. Developing a young region situated in the start up phase is challenging by itself and low prices make it no easier.

1.1 Research background

Throughout the two-year long master degree program at Bodø Graduate School of Business, I have attended several seminars and conferences with participants from different institutions in Northern Norway. My impression is that local businesses and communities are optimistic and ambitious of utilizing the ripple effects arising from the growing petroleum industry. The report Levert (2014) shows that the OFS industry in Northern Norway has experienced a steadily growth during the last years. Nordland has the largest activity due to supplies and exports of oil and gas related products and services. This is highly related to the Helgeland region in connection with FPSOs on Skarv and Norne (Levert, 2014). Harstad and Hammerfest are both cities that also generate a high level of petroleum activities due to the Snøhvit field, and soon Goliat. Additionally, the Northern region has already experienced

several positive outcomes from the oil and gas activities. Population growth, business development and increased economy are some of the ripple effects they have benefited from. However, the activity level and the share of local participants in total lag behind expectations even though revenues have increased. Consequently, the counties show frustration as they recognize the importance of utilizing from the industry. According to Rystad Energy (2013), Northern Norway is the second smallest region in Norway regarding employment in the OFS sector.

1.1.1 Why contractors?

This thesis is a strategic research of the OFS industry in the context of cost and efficiency pressure within a prospective area containing great political involvement. It is written in a challenging period of time for the whole petroleum industry. The increased cost level in combination with a suddenly low oil price resulted in a decline in activity levels on the NCS and projects are put on hold. Hence, it requires a long-term commitment to the region, which is dependent on technological development and innovative solutions to become commercial. National media has been widely discussing the critical situation for the industry and the following consequences. The pressured situation has led to cost cutting regimes of E&P companies that heavily affects the Norwegian OFS sector. Restructuring and labor downsizing further influence the whole nation and especially the societies, companies and employees that are directly involved. Not to mention the financial implications, since the two sectors constitute a large portion of the Norwegian GDP, and is by far the largest contributors to value creation and prosperity in the country.

The topic of my thesis is based on my analytical interest in strategy as well as it is an important topic for the oil and gas industry, especially these days. Additionally, I find the OFS industry very interesting and in particular the contractors, as they are central actors situated in the middle of the supply chain, between major oil companies and smaller sub-suppliers. Thus, contractor companies are often a key player and the link between local businesses and global oil companies. Due to this role, they have to collaborate and communicate with very different actors and handle various roles within the chain. They also have an important role in terms of local industry involvement, as they have the ability to include or exclude local industry in their projects. However, they must also handle different needs and consequently pressure from different companies, communities and institutions.

Suppliers, also the leading contractors, are highly affected by the efficiency pressure where oil companies increasingly demanding lower prices though the same high quality

By focusing on a limited number of companies within an area, I tried to assess contractor companies' strategic behavior in order to deal with the current situation of efficiency pressure. How do the contractors handle the high costs, increased global competition, political pressure and pressure from different actors and institutions within the prospective area? Do the contractors get enough attention and consideration or are they forgotten in the middle of the chain between the large multinational oil companies and the small local suppliers? In the following chapter, strategic management literature will be presented in order to further analyze contractors' strategies in their prospective area. The OFS sector is a highly interesting industry for further analysis due to the fact that it is crucial for the Norwegian economy. Moreover, Northern Norway is a central part of the country's future within petroleum. This is why I believe this specific subject is an important research topic to analyze.

Whereas this research is based on findings conducted from oil companies, contractors, and sub-suppliers established in Northern Norway, the main focus would be on contractor companies. By analyzing the OFS industry, this thesis will contribute with knowledge on how companies can become competitive through strategic behavior and efficient solutions. The knowledge of competitive strategies gained through my research can be transferable to other companies operating in a young region within oil and gas that also find them selves in a developing phase with strong political influence. Other industries with similar structure can also benefit from this study.

1.2 Problem statement

The situation of low oil price, high costs and increased competition in the oil and gas industry makes it important for both oil companies and their suppliers to improve their competitiveness. This thesis will try to explain the consequences for exposed mainland industries in Northern Norway. Moreover it is aimed to create knowledge for OFS companies on how they may use competitive strategies to become more efficient and adaptable. I will try to achieve this by assessing contractors' perceptions of strategy and strategic behavior, as well as analyzing their interaction with other actors in the prospective area in light of efficiency pressure. My problem statement is as following:

How do companies strategically engage in their prospective areas in light of increased pressure of efficiency?

-A case of contractor companies in the Oil Field Service industry in Northern Norway.

The case of this thesis will be focusing on the contractors and their strategies in the northern counties; Nordland, Troms and Finnmark, referred to as Northern Norway. By doing a case study on this prospective area, I limit my research and sample options. Hence, this reduces the number of companies within the OFS industry significantly, which helped me reach the aim of assessing their strategies in order to deal with the current situation of cost pressure. Whereas 1300 companies are identified as companies within the OFS industry in Norway, Northern Norway has 77. Only 6 firms have more than 100 employees, which indicates a region characterized by many small companies (Rystad Energy 2014).

Before continuing, I will introduce the OFS industry to provide a better understanding of the sector and further present the activity development on the Norwegian Continental Shelf (NCS) in Northern Norway.

1.3 The Oil Field Service industry

The OFS sector has been developed since the first discovery of oil on the NCS in the late 1969. Western Norway, more specifically Stavanger, was chosen as the center for the new industry by the Norwegian government. This is also the location for governmental petroleum agencies, such as the Norwegian Petroleum Directorate (NPD) and Petoro (the licensee of the Norwegian State's Direct Financial Interest (SDFI) on the NCS). The petroleum industry has been developed and supported by the Norwegian government since late 1960's, which have resulted in large dominant clusters in Western Norway. OFS companies were included from the beginning, such as Aker and Kværner, with the aim of professionalizing them. The sector experienced a remarkable growth, especially from 2002 to 2012. In this period prices were high and investments on the NCS increased by 220 per cent (SSB.no). Thus, the Norwegian OFS industry has developed knowledge from experience, mainly based on offshore technologies, and national resources through decades. Even though OFS is one of the biggest industries in the world, both in terms of employment and revenues, Norwegian supplier companies are among the best. Hence, Norwegian contractor companies have personnel and technological development all over the world and are further leading actors on the global market within certain areas. The Norwegian OFS sector encompassed the entire value chain, which is one of their competitive strengths. Both international contractors and operators have recently become very interested in Northern Norway and the Arctic, also called "the last energy frontier". This name states the fact that it is the last area on earth with resources that is not yet explored. Moreover it is where the market is heading and several industry actors believe a positioning here is a long-term investment in the future.

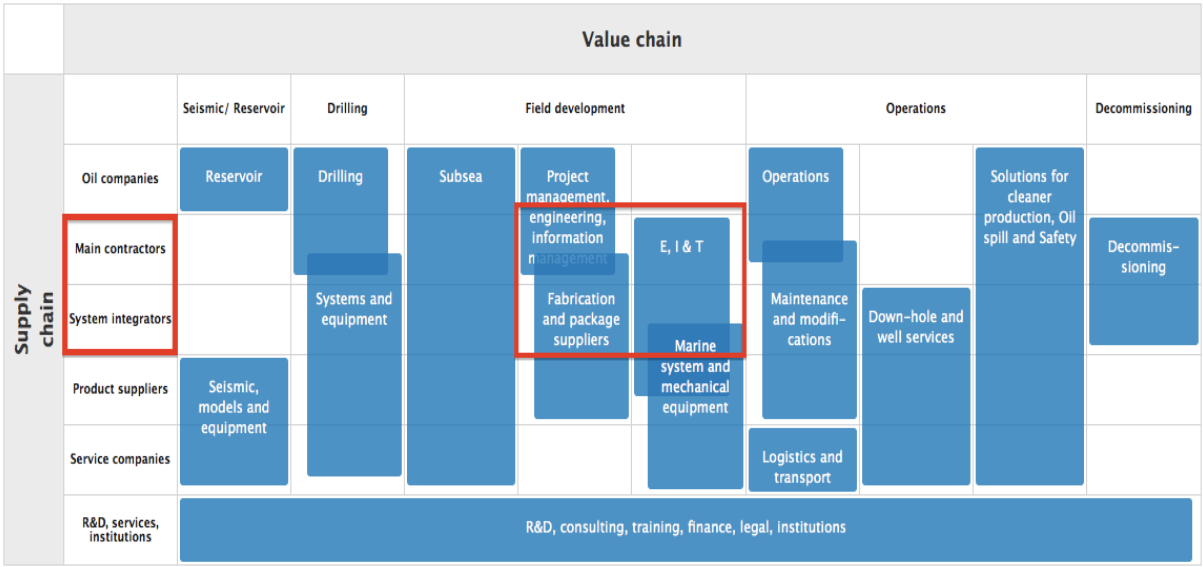
Rystad Energy (2014) defines an actor in the Norwegian oilfield service (OFS) industry as a company that delivers products or services to the upstream oil and gas industry, both directly to oil companies and indirectly to other suppliers. OFS companies that deliver directly to oil companies are called contractors, which are often reliant on deliveries from sub-suppliers to become efficient. Oil and gas companies that respectively operate within exploration and production (E&P), such as Statoil, are referred to as E&P companies or operators. They are dependent on contractors and suppliers to operate their fields and platforms. There is an extensive diversity in supplier companies across the supply chain referring to number of employees, revenue and segment focus, see figure 1. Whereas small companies most often are specialized within a niche in a specific segment, large companies provide products and

services often across several segments in the value chain and within different geographical areas. Ernst & Young (2014) characterizes a company's size by:

- Large size: above NOK 1 billion in revenues
- Medium size: between NOK 100 million and NOK 1b in revenues
- Small size: below NOK 100 million in revenues (EY, 2014)

The OFS sector is a global and highly complex industry. Moreover, it is acknowledged as eminently innovative, surrounded by a high-tech environment and companies that delivers a wide range of products and services throughout the lifespan of an oil and gas project. Supplier companies provides product and service support activities performed in oil and gas projects all over the world. A value chain model, as shown above, explains activities throughout a generic oilfield project, while the supply chain shows different supplier companies. Since the value chain ranges from exploring new fields (seismic/reservoir) until decommissioning of fields, cost cutting regimes of E&P companies influence the OFS sector largely. Statoil, as one of the largest E&P companies on the NCS and also in the world, has steadily tightened their cost cutting regime during the last year, which affects the Norwegian OFS companies.

Figure 1: OFS supply chain and value chain

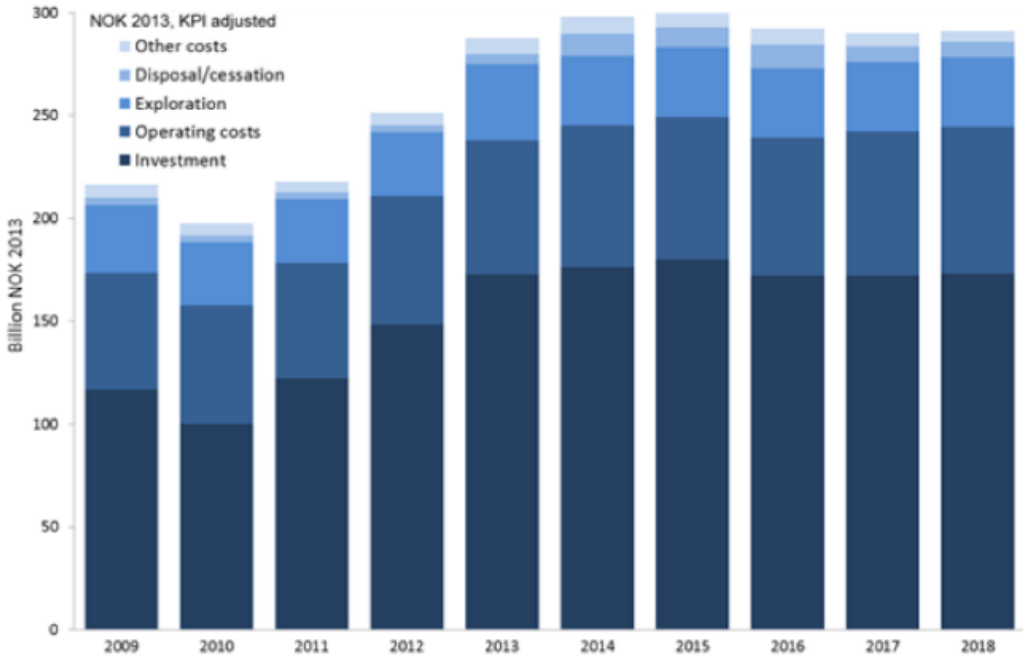


Source: Intsok.com

1.3.1 Increased cost levels

The costs of an oilfield project on the NCS are major. In general, the costs occurring before, during and after a project's lifetime can be divided into two categories: the operating expenses (OPEX) and the capital expenses (CAPEX). OPEX include all costs that relate to operating a field, such as pipelines, onshore terminals, salaries, taxes and fees. CAPEX consist of all necessary investments that need to be done in order to produce oil and gas, such as exploration, offshore field development, building pipelines and onshore terminals, and offices. Much of the CAPEX and some of the OPEX are payments to OFS companies for their products and services delivered throughout the value chain. Below, a breakdown of the overall costs for oil and gas activities on the NCS is presented, showing various costs affiliated with operations on the NCS, both OPEX and CAPEX. The graph below illustrates a significant increase of costs from 2010 (from just below 200 BLN NOK) until today (approximately 300 BLN NOK). The investment cost that has to be made in order to operate an oil field is the factor with highest growth. As shown in the NPD forecast a flattening of the cost levels around approximately 270 BLN NOK moving towards 2018.

Figure 2: Costs, historical figures for 2009-2012, forecast for 2013-2018 (NCS)

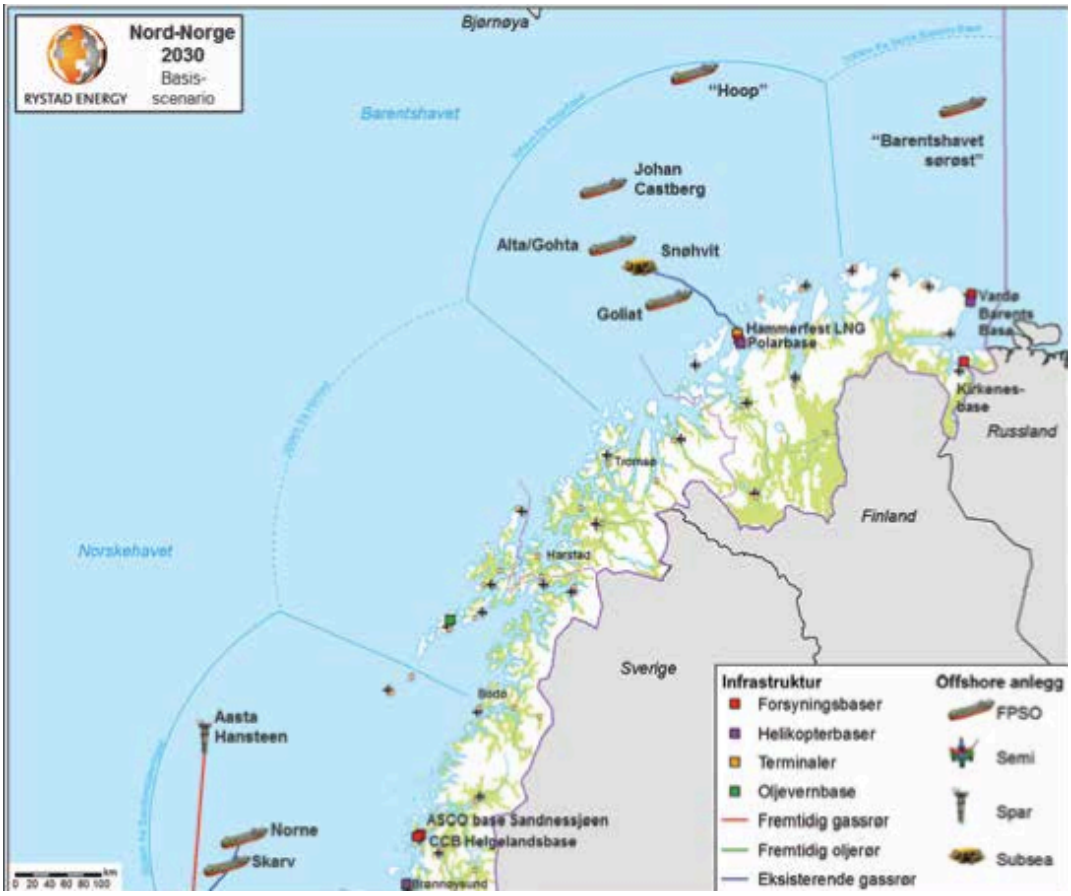


Source: NPD.no

1.3.2 The prospective area

At present time existing portfolio of oil and gas fields in production above the Polar Circle consists of Snøhvit, Norne and Skarv. Norne was the first field north in the Norwegian Sea that became on stream in 1997, which is quite late compared to the first discovery on the NCS in 1969. Snøhvit liquefied natural gas (LNG) field, was the first offshore development in the Barents Sea. It is situated outside Hammerfest and started producing in 2007 (statoil.com). There are also several fields planned for the future. Goliat is estimated to commence in 2015 and will be the first FPSO in the Barents Sea (eninorge.com). Additionally, Aasta Hansteen is under construction and is planned to start producing in 2017, while Johan Castberg is under development. Alta/Gohta and Wisting are relatively new discoveries in the Barents Sea. Petro Foresight – 2030, an analysis made by Rystad Energy, forecasts nine fields to be operative by 2030 in their base case scenario, see figure 3 below. If this projection takes place, more than 50% of Norway's oil and gas production will take place at the northern continental shelf (petroarctic.no).

Figure 3: Base case scenario of Northern Norway in 2030



Source: Rystad, 2014

Because of the increased interest for Northern areas due to current and expected discoveries of resources, the presence of global operators in Northern Norway has increased significantly during the pas years, such as Statoil, BP, Eni, Total, Lundin, and Det Norske. They have all established an office in Northern Norway, due to future expectations and prospects. These operators own the licenses and manage the oilfields. Hence, they are reliant on OFS companies to deliver products and services for their fields and platforms. As a result, several global OFS companies have also established business premises in the north as well, such as Aibel, Aker Solutions, Apply Sørco and Subsea 7. These contractors and their strategies in the north will be the main focus and subject of this thesis.

1.4 Limitations

There are some limitations referred to my research that needs to be mentioned and considered.

My selection of theoretical literature will affect the baseline and outcome of my research, as this study will mainly focus on competitive strategies. Limitations of my study are caused by time, resource and capacity constraints. Thus, I have made a choice to focus on assessing top management articulation of strategy, their strategic behavior as well as their interaction with other actors in the supply chain in order to deal with the pressured situation of cost efficiency. Accordingly, I needed to make an assumption that top management has a good view of the company as whole and understand well its behavior, limitations and resources, which is rather likely in companies that are competitive worldwide, such as OFS contractors.

This research is based on seven interviews in total, consisting of highly knowledgeable actors within the OFS industry, whereas two of them represent leading contractor companies. Due to the main focus of contractors in the thesis, two contractor firms were interviewed in order to compare similarities and differences of their strategic behavior and ability of adjusting to new ideas or issues that emerge. However, more interviews could have possible provided data affecting the analysis towards a different conclusion.

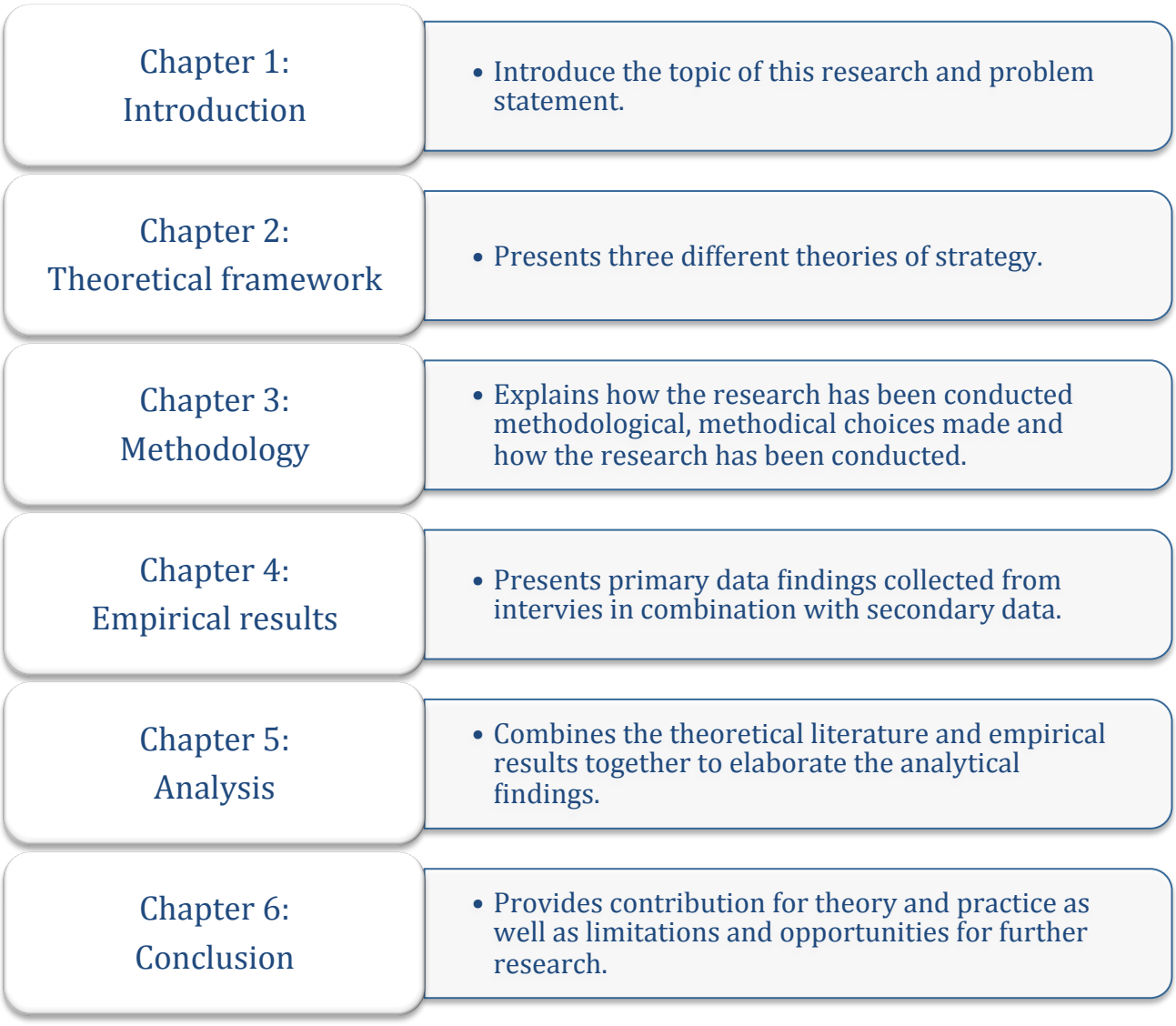
Another issue stems from the choice of data collection through interviews due to the possibility of bias amongst my interviewees. The interviews consist of a broad variety of actors within the sector, each with different aspects and opinions, which could be biased in

order to appear better or worse to highlight their company. One must acknowledge that the same limitation of bias applies to me as researcher during the analysis.

1.5 Thesis outline

The master thesis consists of six chapters:

Figure 4: Thesis structure



2. Theoretical framework

This chapter will present relevant literatures, which are useful in my research study in order to understand and explain the problem statement. Furthermore, the different perspectives related to strategy will give a theoretical background to help me design empirical and analytical results. Firstly, I will introduce the classical approach of competitive strategy by Michael E. Porter where a company's performance is considered good if the business out-performs other competitors in the market while striving against the five forces. Thereafter, I will move on to institutional theory that focuses on the relationship between business and society. It explains how organizations behavior is directed to reach needs and expectations defined by society. Consequently, performance is related to how well the organization adapts to the institutional surroundings. At last the perspective of network theory will be presented, which in contrast of traditional point of view, performance relies on interactions and building relationships with the other actors in the environment, even with competitors and third parties. Thus, the competition is considered to be between networks and not among individual organizations.

The theoretical frameworks have each their own assumptions and definitions of a business and its environment. Moreover, they represent different perspectives of how organizations interface with their environment in order to perform well. This is characterized as an anthological and epistemological challenge. The three theoretical frameworks are chosen and applied in order to understand the contradictions and tensions in this study's prospective area in light of increased efficiency pressure. Each one of the theories provides a different perspective with strengths and weaknesses and it will therefore be interesting to see which strategies that relate the most and explain contractors' behavior in Northern Norway. Thus, classical competitive strategy, institutional theory and network theory are chosen to be the fundamental literature for my master thesis. Before presenting each theory, the concept of strategy will be outlined.

2.1 The concept of strategy

There are numbers of definitions for strategy, however the essence is about how the organization's pattern of activities affects the achievement of a company's goals in relation to its environment (Mintzberg & McHugh, 1985). This pattern "characterizes the match an

organization achieves with its environment" in which is "determinant for the attainment of its goals…" (Hofer, Schendel, 1978: p. 25) Thus, strategy can be explained as a plan that describes a company's long-term direction in a market, its competitive advantages in its prospective area and how it can utilize these advantages in order to improve its position in the market and thereby perform better.

The concept of strategy in the context of business studies got its wide acceptance around 1960. It has been certified as a theoretical approach and frequently been a popular research topic since that time. According to Håkansson, Snehotta (2006), two major trends within business organization have emerged during the last 20 years. Firstly, it has been a growing interest for how business strategy is managed. Secondly, there has been a shift from focusing on the internal process towards the organization-environment interface. This thesis will be focusing on the second trend. There are contrasting views regarding organizational theory whether an organization is independent and has influence over its own destiny or if it is constrained by its environment (Hall & Saias, 1980; Miles & Snow, 1984; Mintzberg, 1988; Pfeffer, 1987).

2.2 Classical competitive strategy

Michael E. Porter (1998) argues that every firm competing in an industry has a competitive strategy guiding how the organization is going to compete to reach its specified goals. Strategic management is essential in order to achieve these goals. Pearce and Robinson (1985) describe strategic management as a set of decisions and actions that results in a process of formulating and implementing strategies, which needs to be revised continuously in order to achieve the objectives of the organization. Moreover, it can be explained as the process of choosing strategies that can be favorable for a company's position in the operating environment. However, size and available resources limit the possible strategic choices. Thus it is necessary for an organization to be aware of its capabilities, consisting of resources and competencies, during the process of choosing strategies. Johnson et al. (2013) define strategic capabilities as "*the capabilities of an organization that contributes to its long term survival or competitive advantage.*" (Johnson et al. 2013: p. 84) Whereas resources are "assets that organizations have or can call upon", and competence is "how those assets are used or deployed effectively". A company's capabilities is crucial for being able to find a competitive position in the market as well as respond to environmental changes. Hence, it needs to

understand how to utilize its capabilities efficiently to exploit the value of the resources, which can be financial, physical and human resources. The company's competitive advantage depends on its skills or necessary competence in terms of utilizing its existent resources.
"Competitive advantage is increasingly a function not of factors but the ability to create and apply knowledge and technology to industry competition." (Porter, 1990: p. 165)

According to Porter (1998), the industry structure exists of social and economic forces, which collectively determine the potential of profit in the industry, measured in terms of long term return on invested capital. Hence "the five forces" is made to understand the underlying forces of competition in an industry. The potential in each industry depends on each industry's different potential for profitability. Oil-field equipment and services is ranged as mild, according to Porter, because of the prospects of high returns are quite common.
"*The goal of competitive strategy for a business unit in an industry is to find a position in the industry where the company can best defend itself against these competitive forces or can influence them in its favor.*" (Porter, 1998: p. 4) The figure below illustrates the five forces framework including the government as a sixth force.

Figure 5: The five forces

Source: Porter, 1998: p. 4

2.2.1 Threat of entry

Reduction of profitability is often the consequence of new entrants for existing companies. Intruders with prominent resources and a desire to get a market position increase the competition in the market and make a serious threat for incumbents. However, the threat varies depending on industry among with the reaction from existing competitors. Porter (1998) classifies six barriers to enter a market: economies of scale, product differentiation, capital requirements, switching costs, access to distribution channels, cost disadvantages independent of scale and government policy.

2.2.2 Intensity of rivalry among existing competitors

Rivalry among existing competitors occurs when a company has an opportunity to improve its position in the market or because of pressure from the environment. Different tactics, like price, advertisement and product differentiation, are used to outperform competitors in the market. However, countermoves from rivalries are likely and especially price competitions often result in lower profitability for the whole industry.

2.2.3 Pressure from substitute products

Substitute products are alternative products or services that fulfills the same need as the original product of the industry. Substitutes reduce potential profits in the market by limiting the price the companies can charge. Collective industry actions like advertising and improving quality of products can give a favorable position compared to substitutes in the market.

2.2.4 Bargaining power of buyers

Buyers affect industry profitability by bargaining for lower prices and higher quality or more services. Power depends on the portion on sales purchased by a buyer compared to the industry's overall business.

2.2.5 Bargaining power of suppliers

Suppliers are in control of the price, quality and terms of products and services acquired in an industry. As a result, powerful suppliers can bargain away a significant fraction of profitability in an industry. It is possible for a company to improve its position with regard to suppliers through strategy even though the conditions that determine the power of suppliers

are often out of the firm's control.

2.2.6 Government as a sixth force in industry competition

Governmental de/regulation, taxation and degree of substitution can influence a company's competitiveness and future growth prospects directly or indirectly through its policies. "For purposes of strategic analysis it is usually more illuminating to consider how government affects competition through the five forces than to consider it as a force and of itself. However, strategy may well involve treating government as an actor to be influenced." (Porter, 1998: p. 29) In several industries government can operate as a buyer or supplier. The government is therefore identified as an important piece in structural analysis.

Summary and critical assessment of market forces

The traditional view of competitive strategy claims that a business is competing on its own. Porter argues that an organization can become powerful if it get in a competitive position and further manages to outcompete its competitors in the market, referred to as environment. In order for a company to become powerful, it needs critical resources and competence to exist and be accessible within the organization. Less important capabilities does not need to be accessible internally, as it can be exchanged or bought from the other actors in the environment. To attain a competitive position in the market it is important for the company to have an effective strategy and be aware of the five underlying forces. In addition, regulations of the government should also be identified, as they may have a great influence in some industries, such as oil and gas. Information about the company's position is achievable by finding its unique strengths and weaknesses, which helps it to find possible new strategies and diversification areas. "*An effective competitive strategy takes offensive or defensive action in order to create a defendable position against the five competitive forces*" (Porter, 1980: p. 29).

A criticism related to Porter's framework, is the tough requirement of internal resources and competencies in order to be powerful. This can be challenging and time consuming to develop, especially for smaller companies. Contrastingly, in a network perspective of strategy, power exists in the whole network and thus, do not require a company to have enormous of financial, physical and human resources to be competitive. Also, this means that a company does not need to outcompete the other actors to be successful, but is able of being

happy positioned in the middle. Another limitation of this theory is the simplicity of the market forces, its actors and the competition, as the OFS industry is very complex. In comparison to institutional theory, it does not consider the power of society and socially constructed rules and regulations. Nevertheless, it does neither consider whats best for the industry, society or nation.

2.3 Institutional theory and strategy

There is no traditional established field of study called institutional theory of strategy, so an objective for the section is to find out how the institutional environment can be included in the strategy. Though the outcome of many institutional studies, have been relevant for understanding strategic organizations.

During the mid-1970's organizations became gradually perceived as social and cultural systems instead as just production systems. At the same time, the institutional environment was recognized to have a significant effect on organizations. There is no universal definition of an institution, however Scott (2008) explains that the conceptions consists of regulative, normative and cultural-cognitive elements that, along with activities and resources, provide stability and meaning to social life. In other words, Menard and Shirley (2005) describe institutions as rules, norms, routines and constraints made by humans to reduce uncertainty and control the surrounding environment. Furthermore, they assume institutions to be a vital part of the society established to act as a guideline in which partly predicts and controls the behavior for both businesses and individuals. Institutional theory explains how these guidelines are established, adopted and adapted. Also how it can lead to inefficiency and become restrictive for a company. Due to Dillard et al. (2004) all organizations are institutionalized at some extent and the theory is therefore especially relevant and suitable.

Institutional theory of organizations is composed of two different approaches, the sociological and the economical. The economical perspective describes how legal norms and regulations determined by the institutional environment affect economical activities in the organization. The sociological perspective, also called Neo-institutional sociology, explains institutions effect on society including organizations. Neo-institutional theory will be the main theoretical approach for my thesis, however the economical approach is also important due to great political influence in the petroleum industry. In addition, the sociological perspective has a

dominant approach to understand organizations by focusing on interactions, social processes and development of institutions, which is highly relevant for my problem statement. Additionally, the sociological direction emphasizes isomorphism and legitimacy, which will be explained in more detail below. Whereas early neo-institutional work shed light on how organizations are constrained by institutional mechanisms (Meyer and Rowan, 1977; DiMaggio and Powell, 1983), recent scholars focuses on how individuals and organizations innovate and thus contribute to institutional change (DiMaggio, 1988, 1991; Powell, 1991; Scott et al, 2000; Fligstein, 1997, 2001; Battilana, 2006; Leca et al, 2008; Seo and Creed, 2002). I will discuss both these neo-institutional directions in more detail in the following subsections.

2.3.1 The sociological perspective

Organizations may end up having common patterns of behavior, create predictability, and facilitate interaction among people, like institutions do. However, they still differ radically from each other. While institution's interaction is based on *emergent orders*, such as routines and habituate interactions, organizations actions are *decided orders* – a result of intervention of individuals or other organizations (Ahrne and Brunsson, 2010). Neo-institutional theory intends to explain organizational behavior, especially why and how organizations change or do not change. In addition, authors of the sociological perspective analyze why companies with different strategies are becoming more homogenous with a similar organizational structure, culture, and output without necessarily becoming more efficient. This process of change is highly influenced by the state and professions (DiMaggio and Powell, 1983). DiMaggio and Powell classifies this perspective as the new institutionalism in which they have identified three mechanisms where homogenous change occurs:

- C*oercive* authority originates from political influence and the problem of legitimacy. Pressure by other organizations and cultural expectations in the society encourage imitation. Such pressure exert from common legal environment and technical requirements forcing organizations to organize around control and rituals of conformity.
- The second mechanism, *mimetic,* results from standard responses to uncertainty. Organizations often respond to uncertainty by imitate similar firms with a perceived legitimate or successful profile.

- The last and third source of organizational change, *normative,* is an analytic typology, which generates from professionalization. Formal education and legitimation as well as the increase of professional networks are two aspects of professionalization (DiMaggio and Powell, 1983).

Nowadays, these mechanisms can be associated with three pillars of institutional pressures constructed by Scott (2008): regulative, normative and cognitive, which he explains shape organizational behavior (Scott, 2008; Lounsbury, 2008).

DiMaggio and Powell (1983) separate organizational isomorphism in two directions: competitive and institutional. Legitimacy was the aim of institutional isomorphism, and included coercive, normative and mimetic forces. Moreover, it explains that following the norms and rules in the environment will gain the organization legitimacy. Competitive isomorphism, on the other hand, was characterized by the achievement of technical and economic efficiency (Powell, 1991). It is however suggested that institutional and competitive approaches influence one another and have impacts on organizational change processes, since the organizations technical and economic goals are socially constructed by people (Lounsbury, 2008; Scott, 2008; Meyer and Rowan, 1977). Thus, they should be considered in combination.

In order to be successful in an industry, a company must understand the society it operates in and further understand and conform to the systems made by institutions. Moreover, it is necessary to utilize them in a best possible way, as institutions are established to reduce risks and costs (North, 2005). Existent up to date knowledge about the society and market is essential to understand the local institutions, which requires resources and cooperation expertise. Institutional environments face isomorphic pressures where some of these are made to influence on competitive strategy (Porter, 1990). Consequences that may arise if a business does not consider institutions are the risk of ending up as an outsider in the society; being perceived as distrustful, unpredictable and experience difficulties regarding social exchange and supply of resources (Meyer and Rowan, 1977). Suchman (1995) claims however that the ability to manage legitimacy through institutions is limited.

Institutional theory must consider legitimacy for being able to access available resources in the environment. Palazzo and Scherer insist that the institutional perspective "*describes organizational legitimacy as a continuous and often unconscious adaption process in which*

the organization reacts to external expectations." (Palazzo, Scherer, 2006: p.73) There exist multiple definitions of legitimacy. In general it is associated with social norms, values, and expectations (Oliver, 1996) and further argued that it is essential for an organization's survival as loss of legitimacy can lead difficulties regarding social exchange and distrust (Parsons, 1960; Pfeffer and Salancik, 1978; Weber, 1978). Corporate legitimacy is understood as the appropriate character of a business in a society. Financial scandals, repressive collaboration, environmental side effects and human repression are some conflicts related to damaged legitimacy that is often exposed by Non-Governmental Organizations (NGOs) and activists (Palazzo and Scherer, 2006).

Legitimacy arise a problem as the concept is based on a regulatory environment where compliance to national legislation and values of societal expectations from communities determine proper business behavior. These rules and expectations can be perceived as economic restrictions by businesses. According to Palazzo and Scherer (2006) "*Modern society is challenged by a loss of efficiency in national governance systems values, and lifestyles."*(Palazzo and Scherer, 2006: p. 71) Additionally, Palazzo and Scherer suggest a shift from a power-oriented perspective to discursive legitimacy. This requires a change towards a process of active justification vis-à-vis society instead of just act in accordance to powerful demanding persons or institutions.

2.3.2 Organizational field

The concept of industrial organizational field relates to the central unit of analysis and evolved in order to understand to the impact of rationalization and organizations. The notion can be described as a community of organizations, not necessarily bound by geography or goals, but operating in the same domains producing similar services and/or products. However, the population and different organizations that critically influence their performance, such as exchange partners, competitors, funding sources, and regulators are added (Scott, 2008; Scott and Meyer, 1983; Hirsch, 1985). Guidelines established by institutions determined the behavior of organizations within the field. The value of Neo-institutional sociology is about seeing an organization as a part of a field of interconnected others, where they are aware of each other and take decisions looking at each other.

2.3.3 Institutional entrepreneurship

Institutional entrepreneurship differs from isomorphic pressure of environmental adaptation, and is one of the most controversial issues of institutional theory. The entrepreneurship perspective of institutional theory refers to an actor's ability to influence the social world by altering the rules, the relational ties, or the distribution of resources (Scott, 2008). Moreover, it is corresponded with the ability of institutional actors to influence their development by creating new institutions (DiMaggio, 1988; Fligstein, 2001; Leca et al., 2008).

Environmental changes, creates both opportunities for entrepreneurs and affect their ability and desire to pursue opportunities. Entrepreneurial activities can lead to the creation of new institutions, such as new organizational structure and practices that has become taken for granted within a society. "*Thus, entrepreneurs not only respond to opportunities created by institutional change, they also create organizational institutions that provide seemingly "objective" and dispassionate information, further entrenching new beliefs and assumptions."* Tolbert et al., 2011: p. 1339) Recent studies of institutional entrepreneurship focuses on entrepreneurs who negotiates and cooperates with other actors aiming to navigate specific social contexts (Lounsbury and Crumley, 2007). In addition, social capital and social skills is of importance for institutional entrepreneurs (Coleman, 1988; Fligstein, 1997, 2001). In order to reproduce or contest systems of power and privilege, according to Fligstein (1997, 2001), one must be a socially skilled actor. Socially skills reflect on the ability to create common identities with the other actors through negotiating with them. However, there are limitations associated with the assumptions of social capital and skills when entrepreneurs are trying to change a context. Edwards and Jones (2008) argue that it is possible to navigate to a certain extent; but one is simultaneously exposed to unintended consequences and tensions where the result is contradictory to their own means and goals.

Summary and critical assessment of institutional theory

Changes happening in organizations can be explained by institutional theory to some extent under some conditions. The institutional theory focuses on the relationships between business and society and further assumes that a business consists of a socially constructed set of activities directed to reach needs defined by society. The environment is described as an organizational field where a business can only be understood in combination with other similar businesses sharing similar identities and imitating each other. The strategy must

consider legitimacy, which is necessary for being able to access resources available in the field. Whereas the strategy for traditional institutional theory consists of adapting to environmental changes in a most efficient way, the perspective of institutional entrepreneurship tries to change the institutions in the environment.

In contrast to isomorphism, several authors argue that it is possible to influence the social context through institutional entrepreneurship. The ironic part, however, is that organizational institutions created by entrepreneurs often end up as constraining forces for subsequent entrepreneurs (Tolbert et al., 2011).

2.4 The network perspective of strategy

The network perspective criticizes traditional strategic theory. The approach assumes that business organizations operate in a context with a limited number of actors. Moreover it is mostly suitable for industrial markets and supply chains, which is why the theory is very relevant for this thesis. The actors interact with each other continuously and exchange relationships by either competition or by being linked in the same activity chain. Interactions in the relationships within the network develop the organization's capabilities and further create the identity of the business organization. According to Håkansson and Snehota (2006) this situation is mostly encountered by industrial companies operating in business markets with limited numbers of suppliers, competitors and customers. Additionally, an organization's effectiveness and performance when operating in a network is dependent on its own interactive achievements with its direct counterparts, as well as the relationships between these counterparts and the third parties. Thus, the performance of a company is primarily dependent on whom it interacts with, as the competition is considered to be between networks and not among individual organizations. Contrastingly, in a traditional view of strategy management, a company's performance is considered good if the business out-performs other organizations in the environment competing for resources.

For an organization to adapt the network view it requires changes in three areas of the business strategy model, which are: the problems of defining the boundaries, assessing organizational effectiveness and managing organizational effectiveness (Håkansson, Snehotta, 2006). These changes will be outlined further in the following sub sections.

2.4.1 Defining organizational boundaries

In order for an organization to adapt and relate effectively to the environment it has to be in control over the organization's boundaries. Meaning that the company needs to know which resources and activities it can be in control over that influence the business, and which variables it cannot manage. Boundaries are given by the hierarchical control of resources and divides between the organizations internal factors and its environment, the external factors. However, in a network perspective, there is a problem of capturing all boundaries that have a significant impact on the organization. Through relationships in a network, other participating organizations resources are made available, which can be a valuable asset to the company and further enhance its own performance, according to Fiocca and Snehota (1986). A more extreme view claims that invisible assets, consisting of knowledge and abilities, are a central role of a business' effectiveness and performance, as well as its identity (Itami, 1987; Vicari, 1988). Another problem is the possible impact of inter-relatedness to relationships to third parties. The magnitude and importance of these external activities and resources have been documented in researches of technology development and some on growth patterns in new-venture organizations. As a result, companies' boundaries should be defined broadly so it includes activities and resources from the on-going network relationships (Håkansson, Snehota 2006).

2.4.2 Assessing organizational effectiveness

The effectiveness of a business organization is determined by its bargaining position. Moreover it is described as "*the ability of the organization to exploit its environment in the acquisition of scarce and valuable resources*" (Yuchtman & Seashore, 1967: p.898). Thus, the capacity of exchange with other companies in the environment is essential for the business effectiveness where the outcome is individual and subjective as each organization has its own objectives. The network model determines two concepts. Both concepts, "network position" and "strategic identity", have been used to stress some characteristics of the exchange process. The network position argues that the performance is based on previous experience and that present expectations is perceived and evaluated by other participants in the environment. Thus, this requires a shift in focus away from the internal structure of activities and resources and towards building relations and exchange of activities and resources to other companies within the environment. Consequently, this determines the business organization's effectiveness and ability to achieve its goals (Håkansson, Snehota 2006).

2.4.3 Managing the effectiveness of an organization

The traditional view of effectiveness is according to the network approach related to *"the allocation of the organization's resources and its efficiency in transforming inputs into outputs."* (Håkansson, Snehota 2006: p. 266) Methods carried out to achieve a fit with the environment are assumed to be adaptation of output and internal efficiency. Managing effectiveness is a continuously process, which implies that environmental changes need to be analyzed before decisions are made. In order to manage this process, a plan of action is formulated and thereafter implemented. Many authors with different point of view have criticized the traditional view of strategy management processes. The main critic and objection is regarding the reality of complex organizations in a dynamic and continuously changing environment.

The network model focuses on another perspective of managing organizations effectiveness. A central issue of the strategy of effectiveness management in this context is related to creating a distinctive identity within the organizational field. Strategic identity can be achieved by individuals in relationships through a stream of events, referred to as interactive behavior, which is the baseline of an organization's strategy. Interaction appears between organizations within an environment that are assumed to act purposefully by following their own goals. In this situation reacting behavior to other business organizations actions can become more meaningful than acting itself. The management is accountable for the results achieved through interactional exchange, however the reactive behavior is difficult to plan. Values and norms of behavior within the business organization are therefore essential to guide behavior in the process of interaction. As a result, effectiveness is managed better by framing the context instead of designing or planning future activities. The context of an organization is a social process in which a company chooses to exist (Berg, 1985).

Summary and critical assessment of the network model

The network theory assumes that a business is an inseparable element of the environment, a node through which resources are transformed. In this thesis the environment will be the OFS supply chain. The environment considers the network as a whole, such as in a supply chain in which the organization is integrated. Building and establishing relationships are essential according to the network approach, even with competitors and third parties. Thus, the power exists in the whole network and not for a separate organization. In this framework the strategy

consists of an organization to find its right position in the network where it have to integrate with other participating actors in the network in order to seize resources possessed by other actors. In contrast to the classical approach, it is acceptable not to have own critical physical resources internally, as resources are shared within the network. Knowledge is seen as a more important resource than capital and labor. Thus, competition consists between networks rather than between individual organizations, as in classical theories.

2.5 Summary of theoretical framework

The main theories applied in my thesis have been introduced in this chapter with the objective of providing a theoretical understanding and background for further empirical and analytical research of the OFS sector in Northern Norway.

The frameworks define and present different perceptions of a business, an environment and strategy. Porter represent the classical approach of strategy management claiming that a business is competing on its own, trying to become powerful by out-perform other companies in the environment competing for resources while striving against the five forces. The network theory explains a business as inseparable from its environment, which in this case will be the supply chain. The aim of the strategy is about finding the right position in the network and how the business integrates with the other actors and their resources. These two theories, classical and network are both rational approaches with respect to strategy and it is easy to distinguish the different viewpoints in relation to resources and other actors in the environment. Institutional theory differs from the other theories, as it does not relate directly to strategic management. The institutional perspective does not have any general definition and is therefore presented from different authors' viewpoint. Different approaches of the theory often carry conflicting perspectives whether a company benefit or restrict itself by adjusting to institutions. In order to access available resources, the organization actions are often based on symbolic intentions of achieving legitimacy from its surroundings while institutional entrepreneurship intents to influence and change the rules in the social world instead of the opposite. This study, following the perspective of Brignall and Modell (2000), concentrates on the dynamic interaction of political and business actors, such as the Norwegian government and E&P companies operating on the NCS in the north, and organizational actors, such as contractors and supplier companies. Powerful political and business actors influence the development process of rules and regulations for the OFS

industry. Institutional theory is applied in this study, in order to understand the contradictions and tensions in the prospective area.

Figure 6 below summarizes the main findings and also shows differences between the three theoretical frameworks.

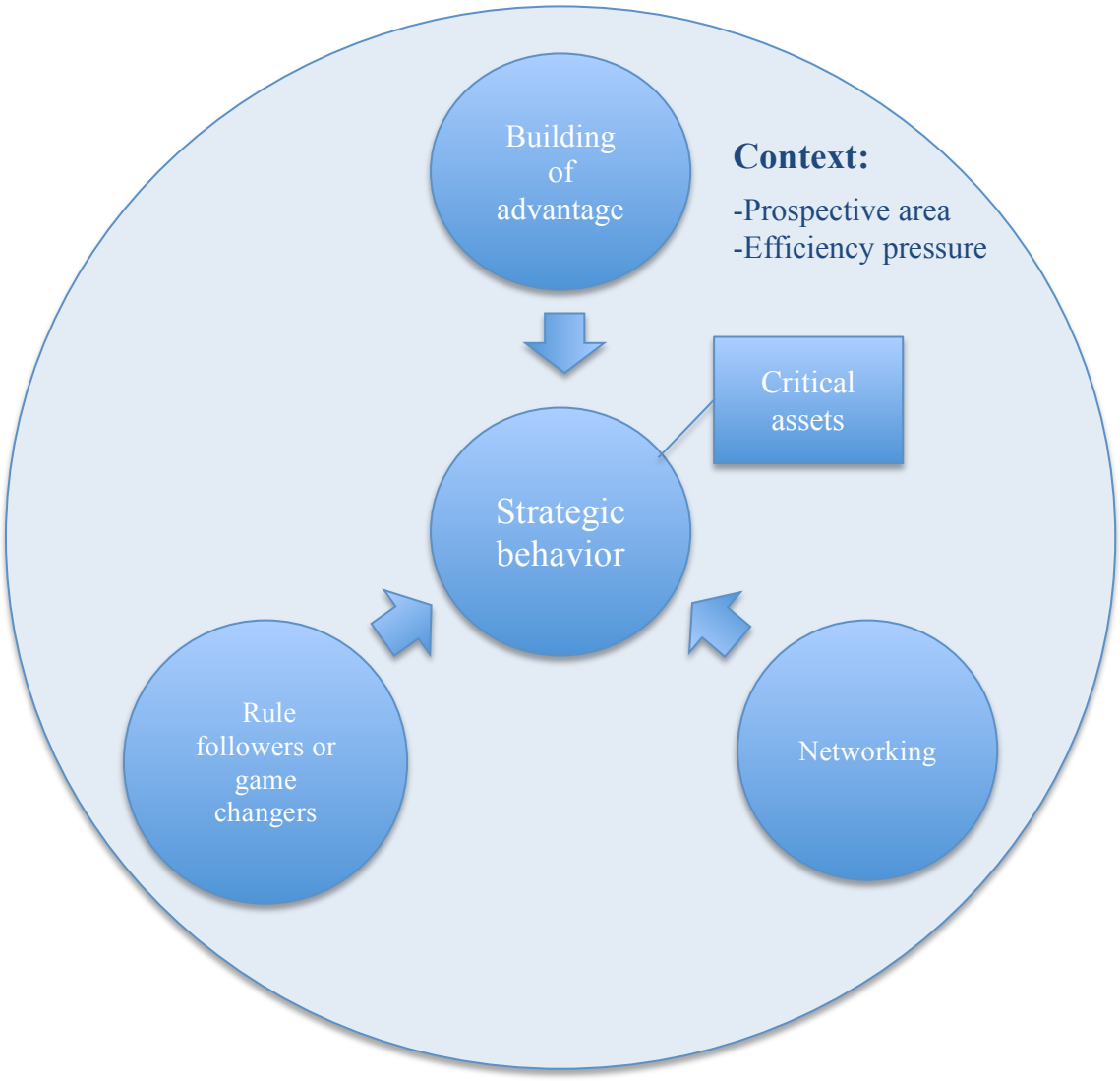
Figure 6: Summarizing the three theoretical frameworks

	Porter	**Institutional theory**	**Network theory**
What is an organization?	A business is seen as an isolated island that needs to exchange resources with the environment. **Critical asset:** Core competence (technical)	Socially constructed set of activities directed to reach collective needs defined in the society. **Critical asset:** Social competence and skills of interpretation	An organization is an inseparable element of the environment, a node through which resources are transformed. **Critical asset:** Relationships
Environment	Market: Social and economical forces, which collectively determine the potential of profit in the industry.	Organizational field: Other similar organizations, sharing similar identities and imitating each other, interacting.	Network as a whole: Technological structure in which the organization is integrated.
Strategy concerns	Competitive advantage Organizations strive to be powerful by finding a position where it can best defend itself against the competitive forces or influence them in its favor. Hence, outcompete other actors.	Legitimacy & change of rules Adapting to environmental changes in an efficient way is necessary for being able to access resources available in the field. Entrepreneurs try to change the institutions in the field by changing the rules of the game.	Building relationships Finding the right place in the right network, integration to the resources possessed by the others in the network. Building relationships, even with competitors.

In order to further structure my research study, I developed a research model to understand the theories in the context of a prospective area (figure 7). The model has three features:

- Building of advantage is a strategic behavior with the aim of getting a powerful position with internal access to technical resources and competence in order to defend itself against the market forces.
- Symbolic action is a strategic behavior adapting to rules and expectations set by the society in order to access available resources, thereby rule followers. On the opposite it is possible to access resources by influence and change the rules, norms and regulations created by the social world, thus game changers.
- Networking is a strategic behavior with the purpose of finding the right position to seize resources possessed by other actors in the network by cooperates as equal partners.

Figure 7: Research model: structure of theories in context of my research study



The model illustrates basic elements and connections between the different theories discussed in this chapter. Each theory has its own strengths and weaknesses in their perspectives of strategy. It will be interesting to see what theories that fit with contractors' perception of reality in the OFS industry. Do the three types co-exist in the life of organizations at the same time? Does organizations need all three perspectives to see the whole picture? If so, how do they interplay, and how is inconsistencies resolved? A central concept and a key issue determined by all theories are critical assets. The interpretation of a critical asset is different by each theory, but it relates to a specific capability or knowledge possessed by a company. This concept will be further examined in chapter 5: analysis.

The theoretical framework of this thesis has resulted in three research questions to supplement the problem statement:

RQ 1: *How do the companies address the bargaining power of the market forces?*
RQ 2: *How do the companies manage societal pressures?*
RQ 3: *How do the companies engage in horizontal relationships in the supply chain?*

The aim of the research questions is to understand contractors' strategic behavior in terms of market forces, societal pressures and networking in the OFS in Northern Norway due to the efficiency pressure. These research questions will be further presented in the section of methodology and empirical results.

3. Methodology

Throughout my research I have applied qualitative method of research consisting of theory triangulation, in-depth interviews as primary data and several sources of secondary data. This chapter will present the process of how the data has been conducted methodologically. There will be a description and explanation of research design, methods of data collection and data analysis. The chapter ends with an evaluation of the research process regarding validity, reliability and ethical considerations.

3.1 Research design

Researches involves solving a problem or answer a research question by finding necessary and correct information, analyze it and present it in an accurate way (Booth, 2008). The process of how data is collected, analyzed and interpreted is explained by the research design, which initially depends on the research object and problem (Easterby-Smith, 2012). The object of research for this thesis is strategic behavior of companies in a prospective area, which is observable through articulation of top management perception.

The philosophical paradigm is about how we choose to perceive the reality in which the philosophical position is the underlying component of research design. Methodology can be explained as a systematic way of exploring the reality according to Halvorsen (1993). Epistemology is a view that consists of different ways of exploring the reality of the physical and social worlds. Epistemology presents two contrasting views of reality, which impacts how the research is conducted and evaluated. Positivism and social constructionism represents the two different perspectives (Easterby-Smith 2012).

3.1.1 Social constructionism

A positivistic researcher perceives the world as external and conclusions are based on objective methods instead of sensations and intuitions. Social constructionism on the other hand, does not see the world as objective and exterior, but *given meaning by people and their experience*, *thoughts and feelings* (Easterby-Smith 2012). As a researcher I see the world as socially constructed. Additionally, this philosophical way of interpreting reality suits the aim of my thesis, which is to get a better understanding of competitive strategies in the oil and gas

industry. Social factors, such as the interviewees experience from the oil and gad industry will influence and determine the research. Social constructionism also underlines the importance of understanding peoples' meanings and the ability of adjusting to new ideas or issues that emerge.

The intention of this thesis is to highlight the strategic rationality of the top management in contractor companies in light of efficiency pressure in their prospective area. Social constructionism focuses on things as socially constructed through interactions and interpretations ascribed to them. Thus, a contractor's competitive strategy will be identified through top management articulation of strategy, their strategic behavior as well as their interaction with other actors in the supply chain in order to deal with the pressured situation of cost efficiency in Northern Norway. In order to capture and understand strategic interactions in the oil field service sector, I focused on the meanings the informants gave when they talked about their interactions, both verbally and non-verbally. The contractors and other companies possessed many similar conclusions about some concepts and topics, however it was usually seen from different perspectives. "*Human action arises from the sense that people make of different situations, rather than as a direct response to external stimuli"* (Easterby-Smith, 2012: p. 24)

Due to the main focus of contractors in the thesis, two contractor firms were interviewed in order to compare similarities and differences of their strategic behavior and ability of adjusting to new ideas or issues that emerge. As a social scientist, I appreciate the different meanings people place upon their experience rather than gather facts or measure how often patterns occur.

3.1.2 Triangulation of theories

Triangulation indicates that more than one approach is applied in order to enhance confidence through the credibility and validity in the findings and results of a research. Denzin (1978) classified four types of triangulation: data triangulation, investigator triangulation, theoretical triangulation and methodological triangulation. As all approaches have different types of limitations, triangulation can according to Modell (2005) extend these by applying another data, method, theory or application, which enhance the confidence. Hence, this thesis has combined multiple theoretical frameworks:

- Theoretical triangulation involves using more than one theoretical approach in the interpretation of the phenomenon. In this thesis, three theories are applied, consisting of traditional competitive strategy by Porter, institutional theory and network theory.

Triangulation of theories can derive hypotheses from multiple perspectives. Furthermore, it is also useful to improve the understanding of inductively inferred explanations. Where less conclusive, but crucial findings emerge, it is particularly useful to promote such integration between theory and empirical research (Denzin, 1978; Erzberger and Prein, 1997; Modell, 2005). My theoretical frameworks have not just different perspectives, but also consist of different assumptions. This makes it more complex, however it will further enhance the confidence through the credibility and validity in my research results as it covers a broader explanation. This is especially valuable for social constructionism, as it focuses on the meanings the informants give through interactions and articulation of strategy, which results in many different perceptions and conclusions that is not always consistent with theory. By applying theoretical triangulation it is possible to connect theories and thereby support empirical findings.

3.1.3 Explorative research

Explorative research method is often used if problems have not been clearly defined and it can be related to new solutions in new areas. Additionally, it is applied when a researcher try to develop some basic understanding of a topic. Explorative design most frequently relates to qualitative approach when conducting primary data and is therefore seen as a useful method when the amounts of available data are insufficient. Further on, the process of study is characterized as flexible and unstructured, which makes it easier for the researcher to handle unexpected situations and issues (Easterby- Smith, 2012).

The aim of my thesis was to provide insight into contractors' strategic behavior in order to become more competitive in light of cost and efficiency pressure in a prospective area. I started my research with a basic understanding of the topic and through the interviewees' perspectives and experience my understanding of the phenomena increased. I was not sure what I was looking for and little was predetermined. Thus, based on my problem statement as well as the choice of interpreting the reality through constructionism, an exploratory research approach was used to study this topic.

3.1.4 Case study

The OFS industry consists of a large numbers of companies. A case study limits my sample options, which is believed to be suitable because of time and capacity constraints. Case studies originate from the positivistic perspective. However, depending on the design, it may also be identified with the constructionist point of view (Easterby-Smith 2012). A qualitative case study is therefore in order and considered as a fit with my philosophical position.

Case is a widely used concept. According to Stake (1995) case studies are designed to provide details from different viewpoint of the participants by using multiple sources of data. In this research study a social constructionism case study is applied with qualitative data. A case study can inquire into one or a few number of companies, events or individuals. In this case, the study narrows into one area and thereby also limits the number of registered companies. Single cases usually fit best with constructionist epistemology, which correspond with the situation of my research project.

Issues regarding case studies vary from different positions and point of views. Constructionist epistemology are concerned *"with providing a rich picture of life and behavior in organizations and groups."* (Easterby-Smith, 2012: p. 55) Generalization is not possible to achieve when applying case method, however my intention is to go in the depth of my topic and understand and not necessarily to generalize.

3.2 Qualitative research method

Quantitative and qualitative designs are two different approaches of collecting data for a research' problem statement. In this master thesis I found it most appropriate to apply qualitative research method when conducting data for my study as it gives an opportunity to examine the opinions and experience among my interview candidates. Qualitative research is defined by Silverman (2004) as "*research that seek to provide understanding of human experience, perceptions, motivations and behaviors based on description and observation by utilizing a naturalistic interpretive approach to the subject and its contextual setting.*" (Silverman, 2004: p.17) The method strives to get a deeper insight into the research problem by using different types of unstructured or semi-structured techniques. Moreover, it is considered as a time consuming approach in which the results are difficult to generalize.

Primary data was collected through interviews while secondary data from academic papers, articles, analytical reports and books. By using a qualitative approach I got to explore the interview participants' opinions, experience and perspectives about their interpretation of the world in my chosen topic. Conducting data through in-depth interviews from companies within the OFS supply chain in Northern Norway made me understand and assess their perception of competitive strategies and plans of actions in a difficult period of time.

3.2.1 Data collection

Primary data is "*new information that is collected directly by the researcher.*" (Easterby-Smith, 2012: p.344) Hence, it is possible for the researcher to frame the data collection after the research topic in contradiction to secondary data, which does not always fit into the research. Moreover, primary data gives new insight and information. On the other hand, it can be expensive as well as time consuming for the researcher (Easterby-Smith, 2012).
I collected primary data through seven in-depth interviews with participants from five organizations within the oil and gas industry. Three interviews were performed face-to-face in the participant's locations. It was important that these interviews contained high quality and accurate information, as these candidates were vital informants for my research project. Thus, I recognized the value of visiting their offices in their daily environment.

Because collecting primary data is both time consuming and costly, especially since Northern Norway consists of long distances, I needed to do four interviews by phone, two of them were follow-up. The main disadvantage of doing a phone interview is the risk of poor sound quality. Some of the information from one of the interviews was unclear. However, this was mostly in the beginning, and it was possible for me to memorize what was said as I transcribed the interview immediately afterwards. Other disadvantages to be aware of when carrying out phone interviews are the lack of body language, facial expressions and other physical impressions that can have an influence on the interview.

Easterby-Smith (2012) defines secondary data as *"research information that already exists in the form of publications or other electronic media, which is collected by the researcher"* (Easterby-Smith, 2012: p.345). I have used several literature sources of secondary data for my research project, such as former research papers, reports from the petroleum and oilfield

service industry, company and government reports and statistics, journal articles, articles in newspapers, and books. Especially in the beginning of the research process I read numerous of articles and reports to gain an overview of the OFS industry and the current situation and development of cost pressure related to, among other things, low oil price. By using secondary sources, I saved time and effort since accessibility is very good. Moreover, secondary data often consists of high quality, although it is crucial to evaluate the source of information. Publications made by companies and governments are considered as high quality (Easterby-Smith, 2012).

3.2.2 Semi-structured interviews

The importance of in-depth interviews is *"the opportunity for the researcher to probe deeply to uncover new clues, open up new dimensions of a problem and to secure vivid, accurate inclusive accounts that are based on personal experience."* (Burgess, 1982: p. 107) There are different alternatives of collecting data from interviews. Easterby-Smith (2012) explain three levels of structuring interviews, shown in the figure below:

Figure 8: Types of interview structure

Level of structure	Type of interview
Highly structured	Market research interview
Semi-structured	Guided open interview
Unstructured	Ethnography

Source: Easterby-Smith, 2012: p.128

Whereas structured interview are highly standardized, semi-structured and unstructured interviews are more open and the answers received often gets more personal. Semi-structured interviews were chosen for my research. It allows a guide with the ability and flexibility of asking follow up questions, which gives the opportunity to discuss other relevant questions and topics that may occur during the interview or later. The topic of my research is highly sensitive for the participating companies, which makes it important for me, as a researcher, to

be flexible. The interview candidates' replies often get more personal by using an open interview structure (Easterby-Smith, 2012).

An interview guide was sent to all the interview candidates in advance. This was done so the interviewees could prepare themselves and provide necessary information. The interview guide was not an absolutely predetermined sequence, but a guideline through the interview where new follow-up questions and topics were added regularly throughout the interview. The interview guide differed from whom I interviewed based on their background and the company they represented. Questions from the interview guide are attached in appendix.

3.2.3 Interview participants

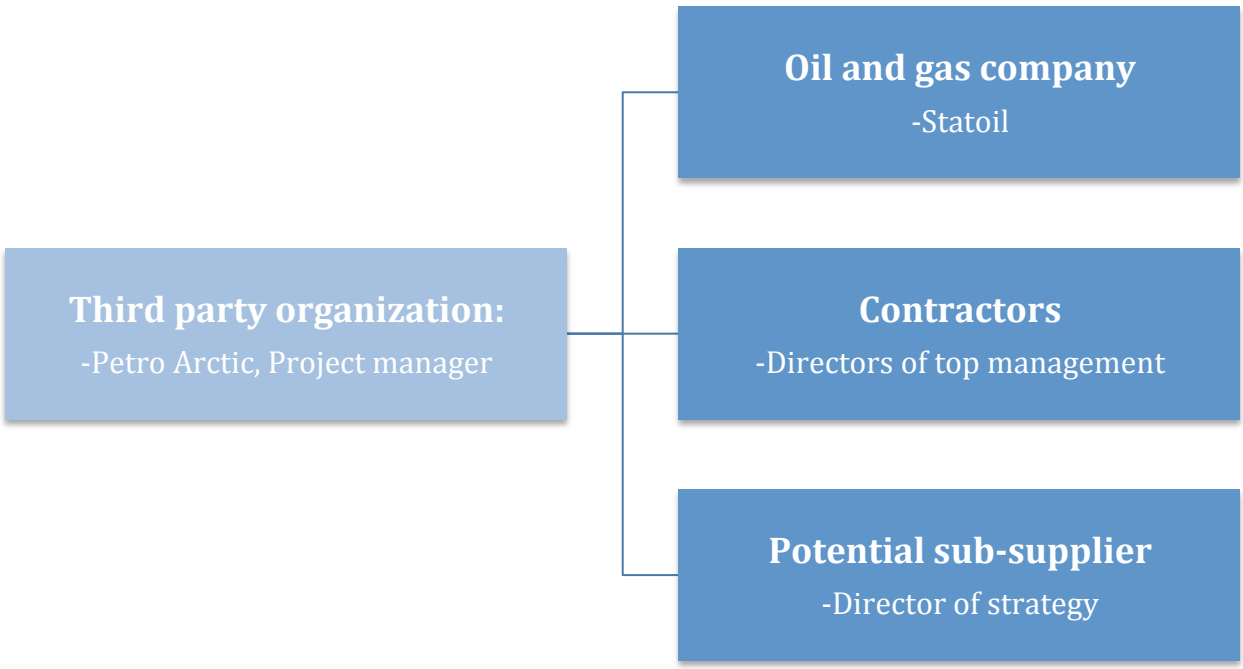
Sampling is an important and necessary aspect of a research process. Easterby-Smith (2012) explains a sample as a selection of the population to provide information and further make conclusions based on the whole. It would have been optimal to interview the whole population, however this requires a huge amount of available resources and enough time to both conduct and analyze the data, which is usually never the case. Because of time and resource constraints, I needed to focus on a selection of companies from the OFS sector in Northern Norway. It is essential to select and interview relevant companies and respondents to perceive valid primary data. Moreover, it is important to include enough time to compare, understand, and interpret the data materials correctly (Easterby-Smith 2012).

The OFS industry is complex, consisting of multiple actors as well as markets and segments. To understand the organizational relations within the OFS industry, I needed to make interviews with representatives with different roles in the supply chain. Thus, I started doing industry research in Northern Norway and ended up with a list of operators, contractors and sub supply companies. As most management leaders are busy, also having many inquiries from students and cannot necessarily prioritize and contribute in all assignment requests, I thought initially it could be challenging to schedule meetings. However, all of the companies I contacted responded optimistically and made time for a meeting. Some of them commented on the fact that the topic of my research was very relevant and interesting at the time being, which can explain the highly engaged informants.

Because of the sensitivity of my topic, especially for the contractor companies and the potential supplier, these companies will be anonymous, as I want to protect the interest of the participants and the organizations they represent. By doing so, I am sure that I will not harm any of the organizations even though they have validated and approved the transcription of the interviews. Hence, they will be called Contractor 1, Contractor 2 and Potential supplier later in this thesis.

This research is based on seven interviews from five informants and organizations (illustrated in the figure below) and consists of highly knowledgeable actors within the OFS industry. Two of the informants represent leading contractor firms, which delivers a wide range of products and services to oil and gas installations all over the world. The third informant, the potential supplier, has its main activity within supplying the maritime industry. The fourth informant, Statoil, is a major E&P company that holds the largest activity and production licenses on the NCS, and also on the Northern Norwegian shelf. At last, Petro Arctic is a supplier network and an expert within OFS in Northern Norway, which advice and helps potential suppliers toward the oil and gas sector. Petro Arctic could provide an overview of the industry from outside as an external actor.

Figure 9: Interview participant



3.3 Data Analysis

Content analysis and grounded analysis are two different approaches of analyzing natural language data where the choice of method depends on the researcher's aim for the study project. This master thesis is analyzed using grounded analysis method, which is a more open practice compared to content analysis, and relies on data findings conducted from interviews. Additionally, in this approach *"researchers tend to let the data speak for itself and although they are still employing a process, they allow for more intuition to guide them in the development of their understandings of the data."* (Easterby-Smith, 2012: p. 163)

The process of sampling and analyzing data can be very time consuming and chaotic. To help organizing the process of data collection Strauss and Corbin (1990, 1998) recommended to use a coding practice of three levels: open, axial and selective. In this paper, axial and selective are applied. Axial involve vibrational and relational sampling, collecting data from a focused sample of people, places and situations. Selective refers to discriminate sampling, which is a much focused and purposeful sample of people, places and situations. Axial method was used in the interviews with the different companies in the OFS sector while selective approach was used in the expert interview with the third party organization, Petro Arctic, as they provided an insight and overview about the OFS industry in Northern Norway. All interviews were recorded and transcribed into text material, which all together resulted in 76 numbers of transcribed pages from seven interviews. All the transcribed interviews were sent to the interview participants for approval afterwards.

In relation to grounded analysis, I followed a procedure of seven stages when analyzing transcripts from my in-depth interviews, advised by Easterby-Smith et al. (2012):

1. Familiarization
2. Reflection
3. Conceptualization
4. Cataloguing concepts
5. Re-coding
6. Linking
7. Re-evaluation

(Easterby-Smith et al. 2012: p.167)

Familiarization and reflection of the data was achieved by transcribing the interviews immediately after it was conducted and then evaluated in relation to my topic and problem statement. This made me aware of potential topics and knowledge that were not covered enough and should get more attention in the next interview. New data was collected until no new information appeared in accordance with the OFS companies' strategic planning and actions. By cataloguing the different concepts of the empirical findings, the different opinions got more noticeable and obvious, although many conclusions where similar. I therefore found it useful to re-code my data material into categories. Analysis, shown in chapter 6, will link the findings together with the theoretical concepts.

3.4 Reliability and validity

Easterby-Smith (2012) defines validity as *"the extent to which measures and research findings that provide accurate representation of the things they are supposed to be describing."* (Easterby-Smith, 2012: p.347) It is important to use the most appropriate methods when collecting and analyzing data for a research to be valid. To assure validity in of constructionism designs Locke (1993) identified three criteria: authenticity, plausibility and criticality. These criteria involves convincing readers about the researchers understanding of the organization and encourage questioning the assumptions and expect the research to relate into other ongoing relevant topics or concerns. Reliability is explained as "*the consistency of measurement in a composite variable formed by combining scores on a set of items."* (Easterby-Smith, 2012: p.345) Clarified from a constructionist position the same result will be found if the research is carried out by another researcher at similar circumstances and conditions (Easterby-Smith, 2012).

Reliability and validity is necessary to avoid errors such as human mistakes due to the selection of methods, samples and interpretation of data. In addition, honesty, presenting the data in a logical way and interpreting the data correctly is crucial for the research to be reliable. Critical questions covering internal and external validity are one way of evaluating and potentially reveal possible mistakes done in the research process. Internal validity will control questions asked in the interview, if the information given is trustworthy and if the respondent's chosen are relevant. External validity will show if the outcome or data changes if other methods, interview participants or interview process were done in a different way (Easterby-Smith, 2012).

The data conducted from my interview candidates' show no signs of doubt. Further, the research contains a large collection of secondary data and a diversity of roles with different perspectives. This results in confidant findings that I expect to be the same if any method or some of the interview candidates changed.

3.5 Ethical considerations

Ethical issues need to be considered during the process and later on when conducting a research study. Bell and Bryan (2007) have conducted a list of 10 ethical principles that I have followed:

Figure 10: Ethical principles in research

1	Ensuring that **no harm** comes to participants.
2	Respecting the **dignity** of research participants.
3	Ensuring a fully **informed consent** of research participants.
4	Protecting the **privacy** of research subjects.
5	Ensuring the **confidentiality** of research data.
6	Protecting the **anonymity** of individuals or organizations.
7	**Avoiding deception** about the nature or aims of the research.
8	Declaration of affiliations, funding sources and **conflicts of interest**.
9	**Honesty and transparency** in communicating about the research.
10	Avoidance of any **misleading** or false reporting of research findings.

Source: Easterby-Smith, 2012: p. 95

All of my interviews were recorded and transcribed to assure accuracy. This also gave me the opportunity to focus on the interview candidates. I have been open and honest concerning the reality of my study and protected the interest of the participants and organization. All interview candidates were informed and asked for permission before recording the interviews. In addition they got to validate and approve the transcription of the data conducted from the interviews before I used any of the findings in my thesis. By securing the interviewees about their opportunities of keeping comments confidential or anonymous, it secured a trusting atmosphere. All of my participants have agreed to publish the interviews, however some have clearly demanded to exclude certain sensitive information. Due to the sensitivity of my topic

some of the participants were unsure of how much of the information they could allow me to publish in terms of their own and the company's reputation and in relation to competitors and partners. Thus, it was decided to make these informants anonymous as I have respect and understanding of my informants' privacy. As a researcher I am in control of the results from the interviews, however I have no intentions of harming any of the organizations. Therefore, I will not publish any data that they wanted to remain confidential (Easterby-Smith, 2012).

Throughout my research study I have obtained a critical role to the process of my research where I have thought, reflected and asked critical questions related to ethics and politics. Further on, no institutions or companies fund my master thesis, which limits the concern about declaration of affiliations and conflict of interest.

Summary of methodology

This chapter have presented and explained the methodologically process of collecting and analyzing data for this master thesis. Throughout my study I have applied qualitative method of research in a social constructionist philosophical paradigm with an exploratory research design. Semi structured and in-depth interviews were performed to collect primary data from E&P companies (operators), large oilfield service companies (contractors), small oilfield service companies (sub-suppliers) and a third party organization. In addition, I also used secondary sources in accordance to my problem statement. The data collection have been transparently presented and evaluated according to validity, reliability and ethical considerations. To ensure similar findings and interpretations if a similar study was performed, all data collection and analysis related to the case study have followed recognized techniques. The empirical findings will now be presented in more detail in the following chapter before proceeding with analysis in the next.

4. Empirical results

Empirical data is facts based upon experiences that create theories. My findings are based on primary data collected from E&P companies (operators), large OFS companies (contractors) and small OFS companies (sub-suppliers). In addition, I also used secondary sources in accordance to my problem statement.

Firstly, this chapter will describe the macroeconomic context in the prospective area in light of efficiency pressure. It will present High North policy, activity levels, challenges and opportunities in Northern Norway. Afterwards, empirical data from the OFS sector will be introduced in accordance to the three topics identified throughout the process of my research. Finally, there will be a summary of the chapter. Thereby, the structure of this chapter will be as following:

- The context of the prospective area of Northern Norway
- Building of advantage
- Rule followers or game changers?
- Networking
- Summary

4.1 Context: The OFS sector in Northern Norway

In this chapter, the case study about Northern Norway will be presented with the intention of providing a context beyond what is mentioned in the introduction. It will describe and review the OFS sector in the context of efficiency pressure in Northern Norway.

4.1.1 High North policy

National resources are considered as belongings to the Norwegian people. It is therefore important that a large proportion of the value creation accrues to the Norwegian government, so it can benefit the entire nation. This is achieved partly through the tax system. Additionally, profits are managed in a long-term perspective for the benefit of the Norwegian society. However, there are also expectations from the regions and societies where the resources are situated.

As the oil and gas industry is heading towards north as well as new trade routes are opening up, northern areas are getting more attention, also internationally. This attention reflects upon greater access to Arctic resources and thereby an increased interest from the oil and gas industry, which began some years ago. Consequently, the Norwegian government developed a High North strategy for petroleum development and value creation in Northern Norway. It aims to take advantage of the opportunities in the High North and further states the region to be Norway's most important strategic priority area in following years. Hence, it is one of the Government's most prioritized strategies, according to the official political statement report signed by former Prime Minister Jens Stoltenberg in 2006. Following is a statement from the document of Norwegian Government's High North strategy:

"We will take advantage of the opportunities the Barents Sea presents as a new European energy province in accordance with the principles of sustainable development. The Government's policy is to take a broad approach to settlement, employment, value creation, education, culture and cross-border contact in the north."

In connection with a rapidly development and an increased level of petroleum related activities, the Government encourages operators of fields in the High North to establish qualification schemes for local and regional suppliers. Further, the authorities states in their strategy for the High North that they will "*play an active role in promoting local and regional spin-off effects of petroleum developments in the region."* (regjeringen.no)

4.1.2 The activity level

The activity level is the most essential factor concerning development of regional OFS industry. Without any operational fields or platforms there is no need for supplier companies. The activity level within petroleum is however consisting of complex components, as it is not just controlled by the industry itself or the actors within it. Supplementary, it is highly affected by other stakeholders, such as national government and also by international actors and organizations as well as by existing technologies for exploration of resources, infrastructure, and resources (oil) themselves. I will therefore begin discussing collected data material in regard to past, present and future activity levels in Northern Norway.

The increased level of petroleum activities during the last years in Northern Norway has provided new industrial opportunities within oil and gas in the region. The growth perspective

in oil and gas related industries in Northern Norway is illustrated in the Levert 2013 report: "*In 2013 the petroleum based supply industry in Northern Norway delivered supplies of NOK 4.7 billion, which is the highest level for five years. The turnover increased by 6.3% from 2012 to 2013."* However, according to Rystad Energy (2013), Northern Norway is the second smallest region in Norway regarding employment in the OFS sector (Rystad Energy, 2013).

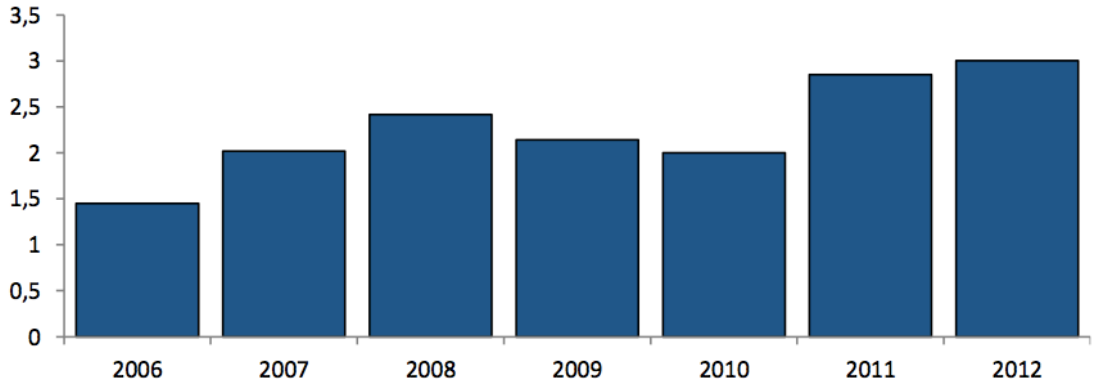
Figure 11: Deliveries from Northern Norway

Total deliveries from Northern Norway				
2010	2011	2012	2013	2014 (Forecast)
3.54	**3.66**	**4.43**	**4.7**	**5.3**

Source: Levert, 2014: p. 6

The graph below shows an average annual increase in revenue of 13% from 2006 to 2012 in Northern Norway. This represents a higher growth compared to the increase on a national level. The OFS industry has experienced a steadily growth during the last years. However, there is a strong competition for the few contracts that do exist and the activity level and the share of local participants in total lag behind expectations even though revenues have increased. Some of the interview participants explain this stating that only a part of the quantum supplied stems from companies with a real connection and address in Northern Norway. However, there is also a relevant selection of the supplies that consists of south Norwegian suppliers with just a mailbox address in Northern Norway. On the other hand, Statoil point out that this is a normal situation in the growth face, but is not a convenient strategy due to long term.

Figure 12: Revenues in billion NOK for OFS companies in Northern Norway



Source: Rystad Energy, 2014: p. 76

Fields on the Northern Norwegian Continental Shelf:

Snøhvit

Discovery: 1984, Production start: 2007, Operator: Statoil, M&M: Aibel

Snøhvit LNG is the first offshore field situated in the Barents Sea bringing natural gas to land for liquefaction and export. It is also the first major development on the NCS without surface installations. Barents is a frontier area, lacking infrastructure with preliminary just Snøhvit in production. However, Goliat will soon accompany (Statoil.com).

Norne

Discovery: 1992, Production start: 1997, Operator: Statoil, M&M: Aibel

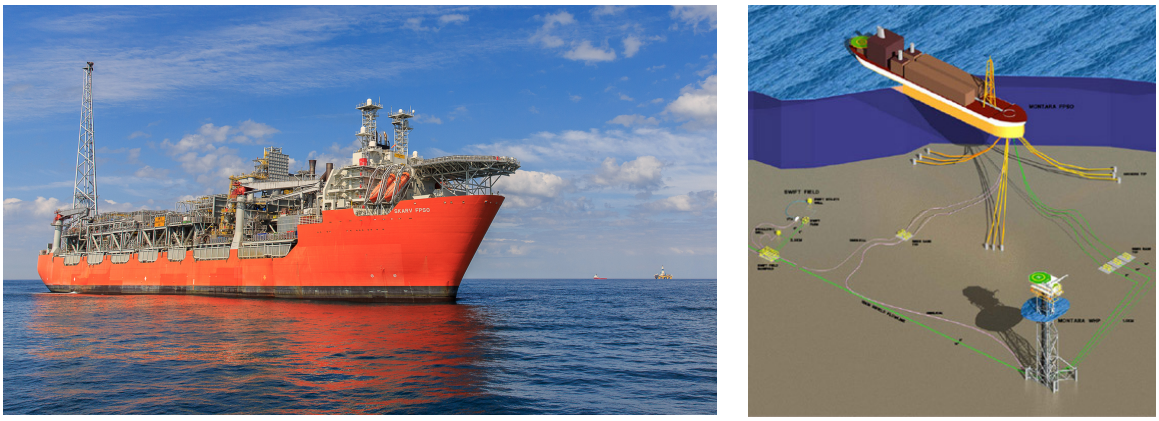
Norne is situated in the northern part of the Norwegian Sea outside Helgeland. The field produces oil and is constructed with a production and storage ship tied to subsea templates. The field also supplies Europe with gas through the Norne Gas Export Pipeline and the Åsgard Transport trunkline (Statoil.com).

Skarv

Discovery: 1998, Production start: 2013, Operator: BP, M&M: Aker Solutions

The Skarv floating production storage and offloading (FPSO) is a large and highly advanced vessel built for harsh waters. The field produces oil and serves the Skarv and Idun fields, located outside the coast of Helgeland. The Skarv development includes a number of innovations on previous concepts, both due to technology and HSE. (bp.com).

Figure 13: Skarv FPSO



Source: npd.no

Goliat

Discovery: 2000, Production start: 2015 (expected), Operator: Eni, M&M: Apply Sørco

Goliat is the first cylindrical floating production platform on the NCS was constructed in South Korea. The field will produce oil and gas, and will be the second field in production in the Barents Sea, however the first offshore floating production unit. The OFS activity around Hammerfest is expected to strengthen significantly due to Goliat and it made Apply Sørco establish an office in the city (eninorge.com).

Aasta Hansteen

Discovery: 1997, Production start: 2017 (expected), Operator: Statoil

Aasta Hansteen is under construction by Hyundai in South Korea. It will be the first deep-water development in the Norwegian Sea, and is further the largest Subsea, Umbilical, Riser and Flowlines (SURF) contract awarded by Statoil. Additionally, it is an important contributor to the activity development in Northern Norway. Subsea 7 has been awarded contracts worth an estimation of NOK 2.2 billion for the subsea lines and marine operations. This was a contributing factor for establishing a permanent presence for the contractor company in Northern Norway (Statoil.com)

Johan Castberg

Discovery: 2011, Production start: unknown, Operator: Statoil
The Johan Castberg field (previously Skrugard and Havis) is situated approximately 100 kilometers north of the Snøhvit field. It is decided to spend more time on selecting the concept for Johan Castberg in order to find robust and better technical cost reducing solutions.

Approximately 100 wells have been drilled in comparison with more than 1000 in the Norwegian Sea and the North Sea. Although many of the wells resulted in discoveries, they have not been commercial as it is an immature area. Statoil hope that they will be able to develop new fields that make it easier to build out smaller ones in the coming years, which is not profitable today.

Big construction fields, such as Snøhvit, require effective support and presence of local suppliers. Operators demands financial and technical background of contractor partners, while the contractors use sub-suppliers to provide equipment and other products. By using local

sub-suppliers, there is great potential for saving costs from transportation and toll tariffs. Consequently this is a factor why it is important to establish and develop a local supplying industry.

Opening of new blocks in the Arctic

Arctic climate is changing fast, the seas are warming and the ice is retreating. Thereupon, it opens up new areas for oil and gas among other possibilities such as trade and transport, which also benefits the oil and gas industry. This is of vital importance for Norway as 90 percent of the nation's export revenues are sea-based activity and resources. Moreover, 80 percent of the country's oceans are situated above the Arctic Circle (regjeringen.no). E&P companies get licenses to explore given geographical blocks for petroleum resources by the government. In the beginning of 2015 the Ministry of Petroleum and Energy announced Norway's 23rd licensing round. The round includes a total of 57 blocks: 34 of them in the southeastern Barents Sea (the formerly disputed area towards Russia), 20 blocks in other parts of the Barents Sea and three blocks in the Norwegian Sea. The new production licenses are planned issued to companies in the first half of 2016. The Minister of Petroleum and Energy, Tord Lien, explains the importance about the 23rd licensing round: "*For the first time since 1994, we will explore an entirely new area on the Norwegian Shelf. This will generate unique possibilities for value creation, growth and employment opportunities, particularly for Northern Norway."*(regjeringen.no) However, environmentalists are not happy with the prioritizing by the government and want the arctic area to be protected for petroleum activity.

Figure 14: Opening of new blocks due to the new ice edge

Source: ifinnmark.no

4.1.3 Challenges in the OFS sector

The Northern Norwegian continental shelf is concerned with several challenges compared to the North Sea, such as environmental differences of tougher climate conditions, long distances in combination with lack of infrastructure and so on. Resources are difficult and costly to extract, in particular when the infrastructure in the area is limited. Small fields with large distance between them are therefore challenging to commercialize in regard of defending extensive investments needed. Large fields needs to be developed at first, which will bring important infrastructure investments. Though, this brings high risks due to the enormous costs, however it will possibly help future developments of today's noncommercial fields.

There have been many statements in my interviews regarding concerns and challenges in Northern Norway. Environmental difficulties, lack of infrastructure, strong competitors situated in the south of Norway or abroad, strict requirements in terms of capabilities: competence and resources – financial, physical and human are some of the main factors absent in the region. It seems to be a gap between industrial and political expectations and what local companies have the ability to provide. There is a lack of experience in the region in accordance to supplying equipment and services towards the oil and gas industry.
According to the collected data material it is favorable for companies to have a certain size of activity and also to targeting a broader area than just in the north. As the OFS industry in Northern Norway is characterized to exist of many small companies, the size can become a problem. These companies, where the majority originally operate within another industry, struggles to have enough specialization due to the high requirements of management, documentation and contract law, to mention some areas.

4.1.4 Opportunities in the OFS sector

There are also great opportunities for companies in the Northern Norwegian OFS industry that can overcome the barriers. All interview participants were unanimous that by far the largest benefit for local industries is its geographical presence and proximity to the fields. The operators are dependent on reducing costs, as well as following political guidelines. Logistically, it is potentially much more economical to be present in the region compared to transporting equipment and other products from areas further south or from abroad. Thus, reduced transportation represents the main cost advantage. Contractor 1 explains: "*it is an*

elongated country we live in, so the immediate benefit is that we need local deliveries precisely because there are costs and time associated with transport from eastern, southern or western Norway and up to Northern Norway." If they manage to benefit from this clear economic advantage it can also contribute to lowering the contractors' expenses.

The development of Aasta Hansteen may generate substantial ripple effects in the north for the next 20 to 40 years. There has been estimated a value creation above 200 millions to companies located in Helgeland, based on contracts already allocated and future expected contracts. According to Statoil "most ripple effects will take place in the operations phase, when the field is on stream." (Statoil.com)

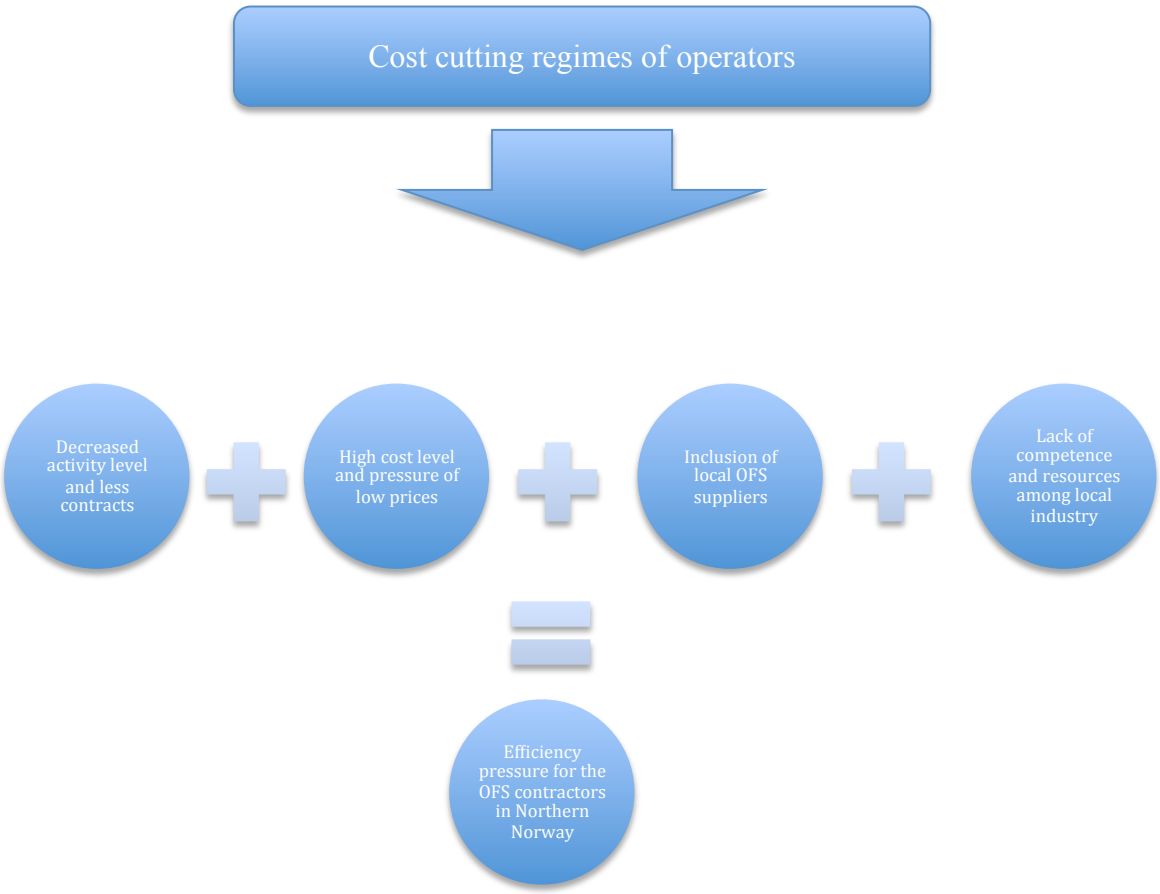
In terms of geographic presence, another advantage was also highlighted: competence and knowledge about local challenges such as climate and weather, in particular Arctic expertise on ice conditions. Northern Norway has always been a region of seafarers and fishermen. Experience from the maritime environment is highly relevant and should be utilized in relation to the oil and gas industry. Northern Norway is more exposed to the weather and local knowledge about environmental challenges have been developed by several generations, which can be of great benefit

"The Northern Norwegian oil service industry appears to have a bright future. There are considerable exploration activities outside the coastline, and several discoveries have been made (*such as the Johan Castberg field (previously Skrugard and Havis). New installations such as Goliat and Aasta Hansteen are to be commissioned, additionally there is the maintenance required at the existing installations; Snøhvit LNG, Skarv and Norne)*." (Levert 2014: p.3) However, it remains to see whether local suppliers will benefit from these upcoming projects. Offshore and seismic vessels have implemented the maritime industry in Tromsø, but only for smaller projects. When the rig, Polar Pioneer, was in Tromsø in 2011, it was a wakeup call for many, as the job was done by enterprises from the south, with local assistance. This is most often the reality. The major missions take place mainly on the South and West coast. The goal must be to invert the situation; where Northern Norwegian suppliers do the work with assistance from the south (nordlys.no).

One of the main incentive identified in order to develop the OFS sector in Northern Norway are the activity level. Pressure on margins for oil and gas companies because of low oil price

and high operation costs on the NCS have challenged and thereby postponed new investments in oil field projects as well as the possibility of operating on existing ones. As the operators have lower activity, this also has a significant affect for the contractors and suppliers in the OFS industry as it results in less contracts and tougher competition, which thereby leads to price-competition. I made a summary, shown in figure 15 below; of the main factors that increases efficiency pressure for contractors in the context of Northern Norway based on my empirical findings. Due to the situation, contractors explained that the buyers (E&P companies such as Statoil) affect the industry profitability by bargaining for lower prices and higher quality or more services from the contractors and suppliers. Simultaneously, E&P companies require contractors to include regional suppliers, however the contractors explain that inclusion of undeveloped suppliers is not the most profitable solution and can be difficult to prioritize right now as they need to choose the most economically alternative to be competitive. These elements will be further presented in the next sub sections.

Figure 15: Current scenario of the OFS sector



4.2 Building of advantage in the OFS industry

The OFS sector in Northern Norway consists of some large multinational suppliers and several small local ones. The leading contractor companies, such as Aibel, Aker Solutions, Apply Sørco, Subsea 7, and so on have developed a professional reputation through experience over a long period, which gives them bargaining power over smaller suppliers. However, due to the period of high pressures and decreasing activity, there is assumed to be a high competition among the large contractors in regard to the few contracts existing on the Northern shelf. Each field or platform has its main contractor for M&M that relies on sub-suppliers to provide equipment, products and services, as mentioned earlier in the thesis. The contractors are pressured by the operators on cost, quality as well as deliver on time, which is crucial for maintaining their earned reputation and position in future competition for new contracts. It is therefore essential to have a competitive supplying industry of subcontractors that deliver high quality equipment and services on schedule, but at the same time offering a competitive price.

4.2.1 Entry barriers in the OFS sector in Northern Norway

There are several strict requirements a potential supplier must understand and consider before entering the OFS sector. Additionally it is an extremely time and resource consuming process just to get approved as an OFS supplier among both contractors and operators. The precertification process is used to find qualified companies with proper standards to supply the operators' fields and platform projects with equipment and services. According to Contractor 1, it is obligatory to be registered in the database before a supplier gets any contracts. Contractors as well as operators have each their own supplier databases to register approved sub-suppliers, which provides insightful data and analytics about the companies. The systems informs about suppliers quality certificates, such as ISO and other required documentation that guarantee standards as well as past deliveries.

Before entering the petroleum sector, there are further several strict requirements a company must understand, such as specific insight and expertise within contract law, documentation and project management, which small companies usually do not have. Lack of necessary documentation regarding a delivery is enough to not get paid according to the requirements. Contractor 1 gives an example:

"There is an increasing focus on milestone payments in order to secure that suppliers fulfill all requirements. If the supplier has not delivered in accordance to the milestone, they will not be paid, which is a challenge for the liquidity of the company since one can undertake lots of costs."

The contractors know that the precertification process is very time and resource consuming for new actors who want to approach the OFS industry. This also applies to existing companies supplying similar industries but want to start targeting the oil and gas sector. However, in this industry it is necessary to have these capabilities. Therefore, contractors also use this process as a first step of motivation factor:
"*Achilles is a pre-qualification system that oil companies have joined forces to establish. We can use this database to search out which suppliers that offer a specific product or service. There are no special qualification requirements to be included in the Achilles, but you must however pay a membership fee. This gives us a signal regarding who wants to be a sub-supplier in oil and gas. If a company does not want to take this cost or spend time and resources to get approved, it indicates that there is not enough motivation and willingness. So why should we spend time to invest and pre-qualify them into our system? It serves as an additional check regarding motivation in a way*." (Contractor 1, 2015)

Contractor 2 also mentioned that they expect a certain proactive attitude.
"Contractor 2 proactively communicate with potential local suppliers to pertain a good dialogue and pre-qualify firms. It requires of course also a certain activity and interest from the sub-suppliers, as one does not get far with unidirectional communication."

As Northern Norway is a young region within oil and gas with restricted activity, the market is still limited and new entrants face high competition and challenging barriers to overcome. There are several examples of companies that tried to become an OFS supplier without having enough resources and thus do not manage to become competitive. A weak financial position is a common factor among Northern Norwegian entities, according to contractor 2, and they are therefore very vulnerable if everything does not work out according to the plan. Companies who want to enter the OFS industry need to prepare for high costs, demanding resource requirements and other barriers to defeat. *"I do not see quite how to manage it, especially now when we are and move towards such time of pressure as we are now. Thus, I do not think there is fertile ground for germination of new OFS companies right now. Then I*

believe more in our own strategy to be on hold until times changes." (Potential supplier)

Contractor 1 agrees:
"Many companies are doing well without supplying to the oil and gas industry. If you are doing it well today in your existing market without delivering supplies to oil and gas projects, then it may well be that you should continue with it. There is of course a choice that must be taken by the individual company, but I think that subcontractors shall not become an oilfield supplier at any cost."

However, the Levert 2013 report, suggest otherwise and argue that it is possible to establish as a supplier. Through their analysis they display a growth in number of local suppliers, especially in Nordland. Furthermore, the large suppliers, with a few exceptions, reports about decreased revenue in accordance to petroleum-related shipments in 2013 compared to 2012. Levert 2013 argues that this is a consequence of an increased number of smaller businesses that have strengthened their position, preferably as sub-suppliers to the industry. "*As the smaller companies build up expertise through subcontracting on small and medium-large projects, it can make them able to be better prepared for future work, and also to get them move upwards in the supply hierarchy*." (Levert, 2014: p. 6)

4.2.2 Bargaining power of actors in the OFS sector in Northern Norway

The buyers of equipment and services from OFS companies are the E&P companies (operators). Due to the sudden decreased oil price, they are now carrying out cost reducing regimes, which affect the contractors. "*We notice very well that operators are concerned with costs in which they naturally want to reduce. We therefore work closely with oil companies to find solutions that help us reduce costs. Furthermore, we have been affected due to the projects that we expected would take place, but which are not implemented anyway. New construction projects are either delayed or put on hold and stopped. As we plan to have the capacity to be able to take away the projects that are expected, but that does not come after all, then we have to adjust ourselves in relation to it."* (Contractor 1, 2015)

There seem to be a very big competence gap between the experienced companies and new entrants. The potential supplier highly agrees and further describes the situation as a dilemma about the chicken and the egg – and what comes first: Get awarded with a contract and then

improve competence, or competence then contracts? "*One cannot say to Aibel, Aker or anyone else that if we get this project, then we will educate people. It is not enough, as they understandably want someone who already has their organization in place. I believe the small size of Northern Norwegian organizations is a general problem; at least we have felt strongly about this. We have calculated it to be too risky increasing the organization just in case we will win a contract as it requires huge investments."*

Contractor 1 is also aware of the issue: *"I've talked to suppliers who say that in order to be able employing one extra person in the administration, they are bound to have seven more people in production. If it is a small company of 8-10 people, it is a significant investment if they are to satisfy all requirements and also have competent people who know how to manage projects and document solutions."* Contractor 1 mentions that the company is somewhat frustrated about few work opportunities these days as well: *"I think we all need to "learning by doing". The important thing is that we get projects, so we can practice, prepare and gain competence, something we have said directly to Statoil. Otherwise it becomes very difficult. We evolve by working "split locations", i.e. work on other projects within the company domestically or abroad, but it is nearby the same."*

The potential supplier explains why they stopped their petroleum related deliveries:
"The risk, how we have experienced it and thus decides not to target the oil and gas market at present time, is that we are situated too low in the supply chain hierarchy. It is expected that we will deliver hours and services at a cost that we are losing money at compared to deliveries within our main activity, supplying the maritime industry. So, if it should be interesting for us, we have to get into other business models. Maybe we can get parts and projects possibly in collaboration with others." (Potential supplier, 2015)

Contractor 2 believes that the region lack expertise and resources in terms of skilled labor and said: "*This is part of the reason for our presence and our partnerships with universities in Northern Norway, which will hopefully encourage more graduates to stay in the north and also that we can attract personnel with experience elsewhere in the country or internationally*." (Contractor 2, 2015)

Many businesses in Northern Norway are very small in size and the contractors are unanimous that a supplier's capacity depends on their size, which is an important factor in

order to get in a position to win contracts and being able to manage deliveries and shipments that are often of a certain size. It is also crucial in terms of withstand downturns. However, if the suppliers merge or grow in size, they will also be exposed to competition from larger actors, which is usually tougher. According to Statoil, there is also another issue in relation to regional industry development in Northern Norway:

"A big challenge and concern is that smaller suppliers that are able to succeed are being acquired by competitive enterprises. Industry elsewhere is so much stronger that they can just pick the ones that seem to succeed, build on those and thereby eliminate competition" (Statoil, 2015)

4.2.3 Bargaining power of competitors outside Northern Norway

Pressure on margins for E&P companies have resulted in a decreased activity level, less contracts and tougher competition in the OFS sector. Consequently, the price-competition has become more intense and contracts are won by companies situated in low-cost countries, such as China and South Korea, resulting in even fewer projects for national contractors.

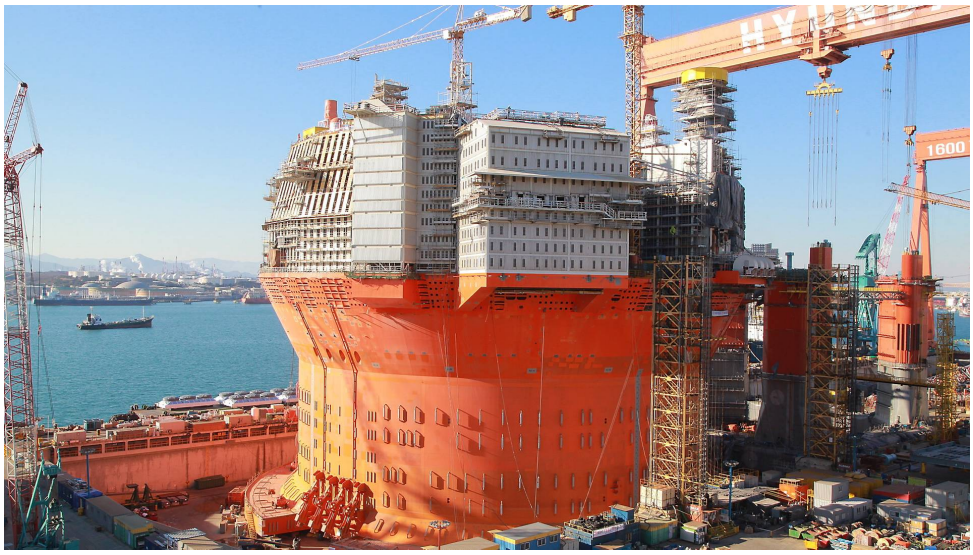
"I have worked on how we can increase the use of local suppliers, but in recent years we have seen that very many of the new development projects are being carried out in China, Korea, etc. Then it is not so easy for local suppliers to enter the stage. Then you have to wait until the installation is in place and one can actually begin with maintenance, modification and changes of the installation." (Contractor 1, 2015)

Petro Arctic underlines that it is a global industry and that a tough international competition force the Norwegian sector to improve their competitiveness: *"It is a global competition and it is therefore important that Norwegian suppliers are competitive in this market. There have been contracts that have "slipped" to foreign countries. I think cost savings, efficiency and sufficient capacity in Norway can contribute to the Norwegian shipyard wins more contracts in years to come."* (Petro Arctic, 2015)

Lately, pressure from foreign competitors on the NCS has increased. Goliat is an example of this, which was awarded to Hyundai Heavy Industries. Hyundai is the world's largest shipyard and is located in South Korea. The country is among the worst in the HSE and other labor rights. During the last year 11 workers died in 10 industrial accidents at the shipyard. Three workers lost their lives while working on the Norwegian FPSO Goliat (two of them last

year). According to general counsel Jeff Vogt in the global organization ITUC, International Trade Union Confederation, the working conditions at the yard is brutal. Still, Statoil has also awarded Hyundai to build the deep-water spar construction at the Aasta Hansteen field. The estimated value of the contract is NOK 6.5 billion. Petro Arctic comments: *"The stringent HSE requirements applicable in the industry shall also apply when contracts are awarded abroad. One should have a zero philosophy in relation to serious damage to health and environment - and this philosophy also applies for suppliers, both home and abroad."*

Figure 16: Goliat FPSO under construction at Hyundai in South Korea



Source: tu.no

According to Contractor 1, they have little ability to compete with low-cost countries. However, some cost enhancements Contractor 1 do in general is to use a proportion of the people working on projects from their office in Mumbai, India. There, they have lower wages due to salary levels in the country, and they can provide an equally good job. Thus, they get higher returns or the customer can pay less without compromising their profits. It is a way to reduce costs and it is perhaps something they also need to adopt eventually in Northern Norway, according to Contractor 1. However, it is not what they want: "*Contractor 1's strategy is clear. We desire a company where we can build expertise and capacity with a core of Northern Norwegian affiliation. We do not want to build it up with consultants from abroad or from the south or west in Norway without roots in Northern Norway. It is important for us to have a core of people with local identity."* (Contractor 1, 2015)

Since 2001, the value creation in the Norwegian oil and gas industry has experienced a

growth rate of 11.6%. This represents a 5.5% higher growth rate compared to the Norwegian economy overall (Zhovtobryukh et al. 2013). From 2008 to 2012, however, the growth was significantly lower (3%). The number of employees within the OFS sector increased from 114,000 to 147,500 in the same period. This combination displays a decrease in value creation per employee in Norway, which is especially negatively combined with an increased cost pressure. In order to be competitive and win contracts, international companies may find cost enhancements like using a proportion of the employment from their offices in countries with lower salary levels. As employees in foreign-owned companies have a significantly higher value creation per employee compared to Norwegian-owned companies (Zhovtobryukh et. al. 2013).

Intense price competitions, however, often result in lower profitability for the whole industry and Hyundai experienced the worst financial result ever in 2014. The reason is delays and a low pricing of a number of projects, such as Goliat (tu.no). As the Norwegian OFS sector has demonstrated its ability to deliver high quality and on time, which result in much less cost overruns than other countries, it is even possible to be competitive with the low-cost countries, according to Rystad Energy. The situation is not that tough in Northern Norway, as the segment of maintenance and modification (M&M) and other operations support is the most targeted one for both local suppliers and also the leading contractors situated by the coastline in the North. This segment is less likely to be transferred to other locations, especially long distances, and are therefore mostly controlled by the Norwegian OFS sector.

Summary of market forces in the OFS sector

Based on my finding, the contractors have a competitive position in Northern Norway. There are still not many contractors that have established in the region and the competition is not that intense as elsewhere on the NCS due to fewer competitors. Additionally, contractors contain a central position in the supply hierarchy, which makes both operators and local suppliers dependent on them. This gives the contractors high bargaining power and a favorable overview of the Northern Norwegian market. Further more, they have knowledge about how to utilize the opportunities within the industry, also globally. The global advantage gives contractors ability to choose low-cost equipment and employ cheap work forces from outside Northern Norway. Thus, contractors want to *maintain their global position with high bargaining power* rather than building local advantage in Northern Norway.

4.3 Rule followers or game changers?

The oil and gas industry gets much attention regardless of whether the market is having a boom or a recession. This is highly connected with the fact that the industry affects the entire nation in different ways, both positive and negative. Financial benefits have been mentioned earlier in the thesis as a contributor to the national welfare. On the other side, the consequences of mistakes are fatal for human lives and not to mention environment and living species. Thus, there are contrasting opinions of the petroleum industry in terms of environmental and socioeconomically dilemmas related to identity and values. Consequently, there are many different parties involved in the sector, especially the Norwegian government, but also NGO's and media. In order to control the industry, strict requirements and guidelines are determined and regulated by the authorities. According to Statoil this is absolutely necessary:

"It is an industry that is very regulated and a good relationship with the government is therefore crucial. There are great expectations as the consequences if something goes wrong, are monstrous. The industry is characterized by high standards and it is absolutely essential." Statoil further mention the involvement from NGO and media: *"There is also pressure from NGOs and media in regards to what kind of solutions that are planned and selected for different projects. Media are very concerned about it due to the large investments involved."* (Statoil, 2015)

4.3.1 Pressures on contractors

Contractors need to face several types of societal pressures in Northern Norway. There is a great political involvement in the region as well as cultural expectations from the society and other organizations. These pressures influence the contractors' behavior.

The oil and gas sector is to a high extent controlled by the Norwegian government through policies, rules and regulations. Government policy controls licensing, determines various requirements and limit access to raw materials that can limit or prevent entry into markets. In addition, the investment level on the NCS can be controlled by policies, both tightening and easing, which affects the activity level. In order to turn around the downfall of investments and encourage for new exploration and further expansion on the NCS, it is important to secure a stable environment. During the last years, the sector has experienced some political shifts with regards to tax regulations and recently opening new blocks in the Arctic.

Due to the current challenging situation in the industry, the government has prioritized to try maintaining a predictable and high level of petroleum activity by awarding new areas in the 23rd licensing round. The decision is justified by the sector's significance to the welfare society. The Minister of Petroleum and Energy, Tord Lien argues "*new and attractive exploration acreage is important to the long-term value creation from the Norwegian shelf and for the activity in the supplier industry over time*." (regjeringen.no)

According to Contractor 2 the results from the licensing round will benefit Northern Norway: *"Probably will the 23rd round provide new opportunities for the industry. Also on the Russian side, large areas will be explored in the next 10-20-30 years. Therefore, I think Northern Norwegian companies will serve well by positioning themselves with a long-term goal."* (Contractor 2)

Eight of the blocks are located north of the 74th parallel, not far from the area covered by ice during parts of the year. Minister Lien argues that all the new license blocks are well south of the ice-covered area and that oil exploration should be considered safe. However environmentalists are clearly not satisfied with the outcome of the licensing round in combination with the high latitudes:

"*Catastrophe for the environment*" -Bellona Foundation

"*Should be ashamed*" - Nature and Youth organization

"The ice edge is another example of how the government adjusts policy after the oil and gas industry's interests" – Nature conservation association

"The government overrides all environmental concerns" - Greenpeace

Greenpeace further alerts lawsuits and adds:
"*It is obvious that it has been cheated with numbers to meet the oil industry's demands for unlimited access to new acreage, regardless of climate, vulnerability or lack of profitability*"

The Norwegian government encourages E&P companies to include local and regional suppliers. Statoil confirms the initiatives by Norwegian authorities with regard to the High North policy: *"We have a natural dialogue with the authorities both in terms of where we invest (e.g. opening of Lofoten and Vesterålen) and type of solutions etc. The Government is also the largest shareholder in our company, so it goes a little hand in hand. It is expected from the government and also from local communities to get something in return in terms of local spin-off effects. We see this as a positive pressure since it is obvious that our industry has a very important role for local communities."* Statoil gives an example of the increased population growth in Hammerfest: "*Before the decision of Snøhvit was taken, there were around 9,000 inhabitants. The population has now passed above 10,000. This indicates that the decisions we make also has a major impact on local communities*." (Statoil, 2015)

Petro Arctic believes it is a great political will to create local spin-offs, however: *"On the other hand, I believe the authorities regularly fail to play their part to create maximum ripple effects. Examples of this are gearing up the infrastructure so that it meets the requirements and can exploit opportunities that larger developments provide, such as roads, ports, airports, industrial areas, power supply etc. Education in which business needs is also important to put in place in proximity to and in cooperation with the industry. My opinion is that public systems are still progressing much slower than the private and this may inhibit exploiting maximum growth potential."* (Petro Arctic, 2015)

The potential supplier emphasize that the societal pressure, especially from politicians is of significance for contractors: *"I think the contractors have a political pressure in relation to document regional affiliation and belonging. Moreover, they are encouraged to establish regional and local subcontractors and suppliers."*
Further on, he continues discussing the upside and downsides of this political influence: *"It is really a kind of strange relationship where politicians require contractors to establish business relationships that they might not really want. It pushes forward solutions that contribute to regional deliveries and development of some local companies. However, in our case, we were expected to deliver hours of work and services at a cost that we were losing money compared to our activities in the maritime industry, which is our main sector."* (Potential supplier, 2015)

4.3.2 Compliance

Once E&P companies have been awarded with licenses, they need contractors and suppliers to support their activities throughout the whole value chain, from exploration to production. As Statoil and other operators are strongly encouraged to create ripple effects, they must continue to provide these guidelines on to contractors. *"We try to the extent possible to facilitate the development of local suppliers. The development of Aasta Hansteen is a good example. The development has realized approximately 400 million in local spin-offs. Moreover, it resulted in Aker Solutions and other companies have established themselves in Helgeland. In terms of strategy, it was clear that they had to establish themselves in Northern Norway to be in a position to deliver."* (Statoil, 2015)

The contractors seem to be dedicated to contribute locally. The development of a field where Contractor 2 has a large contract will probably generate substantial ripple effects in Northern Norway: "*The project will focus on utilizing local suppliers where it is possible*." He adds: *"It is important for our industry to give back to society wherever possible. How much depends on whether there is an upturn or downturn."* (Contractor 2, 2015)

Contractor 1 also claims their interest and ambition of creating local ripple effects by using regional OFS companies. *"Approximately 60% of our deliveries, or the value we deliver to customers (operators) are coming from sub-suppliers, which is quite significant. It means namely that we have to have a set of subcontractors that can deliver the quality expected of us. The same will also eventually apply to Northern Norwegian supplying industry*" (Contractor 1, 2015).

According to contractor 1, they notice easily how important the OFS sector and themselves, as a recognized actor, are for the society in the north. Thus, they received much attention from the local media when they established their office in Northern Norway. During this period, they exploited the attention for everything it was worth whenever it was possible, such as getting a positive media coverage. Contractor 1 explained further that in the current period, it is more the opposite, where they rather want to keep a lower profile. When it comes to media and queries, their national communications department is handling these. Contractor 1 continued with an example of their valued reputation: "*A small company had advertised a vacancy and received approximately 8 applicants. A little later we acquired the supplier, renamed, and advertised the same position. We received hundreds of applicants, which*

underline our brand and reputation. Furthermore we rank very high on the lists of most popular jobs for engineering students, business students etc. As our industry is knowledge intensive, we appreciate this and believe it is in accordance to our ripple effects in the societies."

4.3.3 "Pressures" by contractors

Even though a High North policy is established in order to stimulate regional development and all actors' states commitment, the activity level and share of local participation is still not satisfactory due to expectations. Moreover, local involvement creates "goodwill" in the area where contractors have their activity, according to Petro Arctic (2015). However, the contractors appear not to be influenced by pressure:

"We do not experience any direct pressure from the government or influential companies like Statoil for that matter. However, they encourage us to use local businesses whenever possible if they are competitive. Though, not at any price of course. They must be competitive!"

Contractor 2 explains further: *"As a contractor you usually get positive attention in local media and newspapers if local companies in the region are awarded contracts. In the opposite case, if someone outside the region is awarded contracts, there is often a negative attention that comes along. Still we do not feel any pressure when we do our choices and it has no direct impact on the outcome of the contracts. We base our choices on the supplier who makes the strongest."* (Contractor 2, 2015)

"The intentions behind the pressure from operators such as Statoil is very good, but when it comes to implementation and especially in this time when we are all pressured on the capital side, the cost matters the most. Thus, I do not think the inclusion of local suppliers is highest on the agenda. The activity we make, just by employing people locally and work with the project locally, is a ripple effect by itself. Although we have our headquarters in another region, we are still local." (Contractor 1, 2015)

According to the local supplier, there is a lack of basic incentives: *"There has been considerable activity to promote regional activity at an overall level, but the gap between what is said and what is actually done concretely - that I think no one has managed to close yet. If there was an economic benefit or a reward for including local suppliers, then I think contractors would have increasingly included Northern Norwegian companies. Thereby also*

allow us to work with them on projects elsewhere to gain skills, competence and experience and thereby face the requirements necessary to work towards the oil industry." (Potential supplier, 2015)

The Norwegian government has supported the OFS sector since the discovery of oil in the North Sea in 1969. The potential supplier believes the lead of existing firms in the industry situated in south and west is a challenge:

"There was an enormous political pressure and subsidies so that the west and south Norwegian enterprises would be able to compete internationally. When the industry progresses northward, the existing suppliers do not want subsidies in order to build up the industry in Northern Norway. However, the northern community believes that as long as the resources are situated here, we must also get something out of it, and the best way to get something in return is to build a regional supplier industry. On the contrary, I have a great appreciation for contractors and operators, as they are measured by their deliveries. Thus, it is safe using supplier partners that they know deliver high quality on time. So it is composed." Contractor 1 suggest that this situation can be turned around in favor of potential Northern Norwegian oil suppliers: *"An advantage is that they actually have the opportunity to organize themselves in a smart way by looking at what has been best practice elsewhere. In that sense it can be an advantage of not having too much experience with industry."* (Contractor 1, 2015)

Summary of societal pressures in the OFS sector

Inclusion of local suppliers represents the most obvious pressures in Northern Norway, according to the findings in this thesis. Local participation are expected by the society as well as encouraged by the Government through their High North policy. The contractors' try to comply by claiming their interest of developing local industry through official statements and symbolic action, which give them beneficial attention in the media. However, the contracts are given to those suppliers that are most competitive and provide the best price, which are rarely local companies according to the potential supplier. Due to efficiency pressure, the contractors confirm that costs are what matters the most. Their behavior can thus be described as symbolic because they follow and adapt to norms, rules and expectations from authorities, operators and the Northern Norwegian society. The contractors perceive the societal pressure

of local inclusion as economic restrictions and therefore make little effort to change and develop the supplier network in Northern Norway.

4.4 Networking in the OFS supply chain

The oil and gas industry is well known for its high standards of quality assurance and documentation. Consequently, there are also a lot of resources and expenses in connection therewith. It is therefore obviously a huge potential to reduce costs by simplify or streamline these processes. Many engineers are currently used in administrative work, which one can say is both economically inefficient and a waste of resources. Efficiency and cost reductions are therefore argued to be rather good for the industry in many ways, even if it results in less need for labor. However, according to Contractor 2, some of the biggest challenges in Northern Norway are lack of expertise and resources in terms of skilled labor. It is also part of the reason for their presence and partnerships with universities in the north and states how important the relationships with local business are. *"Local participation and development of Northern Norwegian companies is essential to develop the oil industry within the region in a sustainable manner. We require good and reliable sub-suppliers who we can trust. They are a vital part of our deliveries, and if we are to succeed with our customers, we need our interaction to be optimal. We encourage local participation as this often creates great effects. Ultimately, it is however competitiveness, in terms of quality and price that make up the final outcome."* (Contractor 2)

4.4.1 Cooperation based on equal partnerships

There seem to be a very big competence gap between the experienced OFS suppliers and new potential actors. The potential supplier describes the problem by referring to the dilemma about the chicken and the egg, mentioned earlier. Several of the interviewees have mentioned cooperation as a solution, either through an alliance or clusters, where the participants can share competence and resources as equal partners with no hierarchical power or advantages. In total, they will grow in size, achieve better capacity and streamline processes. This is also preferred and mentioned by the contractors as a way to be more competitive:

"Clusters and cooperation is essential to be competitive and create trust. Through a collaboration solution, it makes suppliers stronger, such as for example in Sandnessjøen and Mo Industrial Park." (Contractor 2, 2015)

Contractor 1 believes a supplier's size is of significance in the OFS sector, unless the company offers a niche and is the best in the world at delivering exactly that specific product. He further points out that the challenge relates to the fact that the industry demand extremely large deliveries, which requires a certain size of both the organization and the ability of production. "*I think many suppliers need to professionalize, grow, merge, become larger and thus more solid. Additionally, we find that several clusters are formed, such as "Energiklyngen Nord" where there are approximately 30-40 company members. They look at a model of how they can organize themselves to be best equipped to supply either directly to oil companies or through a main contractor, such as us. I think that makes sense because we find it much easier to deal with one organization that can deliver a range of products rather than having contact with each of the suppliers. Thus, we work closely with Helgeland V&M as an example."* (Contractor 1, 2015)

Helgeland V&M is a strategic alliance consisting of several companies that do not have their traditional operations within OFS. The alliance was established in 2009, targeting maintenance and modification (M&M) segment contracts in the Norwegian Sea North. The strategic alliance has an agreement on cooperation with Aker Solutions, which extends their knowledge within the industry and document their delivery capability. The alliance, based in Sandnessjøen, secured a maintenance contract at Skarv FPSO.

On the other side, Petro Arctic do not believe the solution of increasing suppliers size necessarily need to be the recipe of success and gives a good example in regard to Goliat: "*Eni and their Goliat field is a good example of political goodwill due to strong local involvement through contract structure. They have split contracts into smaller pieces, so that it has been possible for smaller suppliers to take part in the competition. They have also set requirements of contractors that they need to establish themselves locally. Statoil has also "one-hour" rule, which means that contractors should be in place at the operating organization within an hour. This contributes to local establishments."* Another example of Goliat: "*To ensure training for Goliat, the contractors trained their sub-suppliers on another field at the NCS in order to gain experience and build skills."*

Petro Arctic further suggests other solutions to increase and share resources within the industry. "*One possibility is to send experienced personnel from south to north and thus train local staff. Other examples that seem successful is that apprentices from Northern Norway*

gets much of his apprenticeship on installation fields farther south to be trained for work in the north later." (Petro Arctic, 2015)

"I am pretty sure that the way we can succeed is through cooperation with other actors, but I am not sure it should necessarily be Northern Norwegian actors. I think we need to work with actors who can provide us with market share and expertise that we do not acquire right now. On the other side, someone who wants to use us because it gives them political goodwill, as we are being present and also have knowledge about northern and regional conditions. In addition, we know about this gray area between business, society and politics that is quite pervasive in Northern Norway." (Potential supplier, 2015)

4.4.2 Building relationships

All actors within the supply chain in Northern Norway are linked to each other in some way. Interactions between the companies are therefore necessary in order to supply the fields and platform installations. According to Statoil, the company prioritizes building relationships with both other actors in the supply chain and the society in Northern Norway:
"*We are completely dependent on Northern Norwegian suppliers to succeed for us to realize our projects in the north. It is a growing industry and I think that this is an important cornerstone for Northern Norway in the years ahead*." Statoil adds: *"We have a very good relationship with both contractors and suppliers. Statoil in collaboration with Innovation Norway, have since 2008 developed a project that assists supplier development in Northern Norway (LUNN). This is a program of competence where we establish networks from our purchasing departments, which communicates our needs. We also offer financing indirectly through "Kunnskapsparken" and Pro Barents, which is our tool in order to help the local industry forward, i.e. local incubators."* (Statoil, 2015)

On the other side, Contractor 1 is not so pleased with the interaction with operators these days: *"We have dialogue with customers and it relies largely on the network. There are some venues you have the opportunity to meet customers, but not enough or often enough to get a direct contact. I find customers, and perhaps in particular Statoil, very closed right now. It is difficult to get in touch and hard to get any information."*

Also the potential supplier believes the communication has room for improvement and gave an example of an analysis made by "Energiklyngen Nord" (Energy Cluster North) in cooperation with Statoil. They found a small field of study within offshore that was designated as a priority and thus they educated about 13-14 men within this expertise area in Northern Norway. When they graduated, it was sent a notice to Statoil, but they never heard anything. "*This indicates that there is some serious challenges that need to improve and a miscommunication either within Statoil, between organizations and/or in Northern Norway.*"

According to contractor 2, however, the relationships between actors within the supply chain are rather good. *"We have a good relationship with our competitors and also with our customers (oil companies), which I believe is important. The same applies for potential sub-suppliers. By proximity and presence where both oil companies and local suppliers are located, we are creating a good and close dialogue that is essential for development and wealth creation."*

He further believes the geographical establishment of their office in Northern Norway benefits the company and the relationship to the society. *"By being positioned in the north, we feel the heart rate of the region. It becomes difficult to get the same connection if dialing from an office in Oslo or Stavanger, which then could be located anywhere in the country or the world, and know what is happening and be able to achieve the same relations."* (Contractor 2, 2015)

Further more, the relationship between the two contractors indicates to be very good:

"We see Contractor 2 more as a partner than a competitor. We deliver equipment in which will remain on the seabed while they install it with their boats, which we do not offer. We supply only products. Meanwhile, we rarely cooperate because they offer their own contracts."

Contractor 1 explains further: "*Statoil can give Contractor 1 a contract for the production of bottom frame, Christmas tree and other equipment required for the oil to be pumped up, while another supplier gets a contract for the pipes that go from the bottom to the ship or the installation. Contractor 2, for example, will be responsible for installing all the equipment. So we are more complementary to each other*." (Contractor 1, 2015)

Summary of horizontal relationships in the OFS sector

Contractors seem to be little interested in relationships on a horizontal level and their intentions of establishing alliances or clusters are based on the economic benefit due to fewer partners and easier purchasing processes. Though, several companies claim the importance of networking with other actors in the supply chain. Thus, there are some examples of successful cooperation's with no hierarchical power in Northern Norway, such as the alliance Helgeland V&M, where resources are streamlined and shared within the network. In total, however, there is little horizontal networking in Northern Norway where companies with different positions in the supply hierarchy cooperate as equal partners with no advantages.

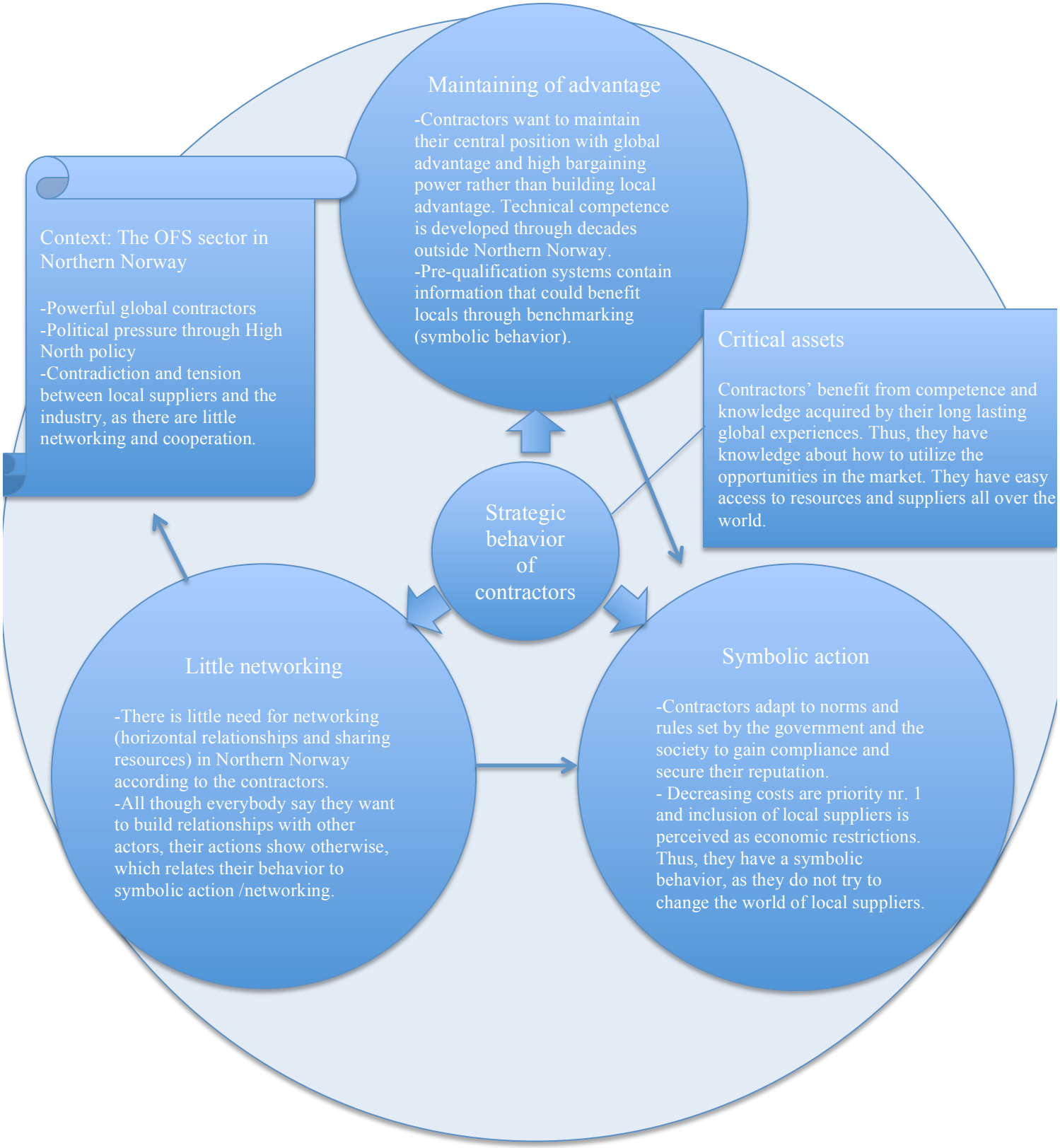
4.5 Summary of empirical results

Empirical main findings of the OFS sector in Northern Norway indicates following:

- Contractors would like to maintain their well positioning's and continue having a high bargaining power due to their central position in the supply hierarchy in the prospective area of Northern Norway. They do not see it necessary to build advantage as they already have a competitive strategic position globally.
- The contractors are rule followers, meaning they are adapting to norms and expectations constructed by the Government and the Northern Norwegian society. The contractors' claim their interest of developing local industry and try to get compliance through symbolic action and broadcast it through media.
- According to contractors, there is little need for networking and thereby horizontal relationships with equal partners in Northern Norway.

The findings are further illustrated in the figure below, focusing on the three research questions as well as the context of the OFS sector in Northern Norway. The key issue of critical assets is defined by each theory and given meaning in the empirical results, which will be further discussed in the next chapter.

Figure 17: Research model: structure of theories in context of my research study



5. Analysis of the OFS sector in Northern Norway

Findings collected in this research were presented in the empirical results. Additionally, this chapter will focus on analyzing and discussing these findings in accordance with the theory, before proceeding to the conclusions in the following chapter. In order to understand the contractors' strategic behavior in terms of market forces, the institutional environment and interactions in the OFS in Northern Norway, following research questions were presented:

RQ 1: *How do the companies address the bargaining power of the market forces?*
RQ 2: *How do the companies manage societal pressures?*
RQ 3: *How do the companies engage in horizontal relationships in the supply chain?*

These research questions have been answered in the empirics. In the following section these research questions will be further discussed. The outline of the analysis will be as following:

- Critical assets of the contractors
- Where do the theories and empirics collide and why?
- How does context matter?

5.1 Critical assets of the contractors

A central concept and a key issue determined by all three theories and also highlighted in empirical findings are the contractors critical assets, which relates to a specific capability or knowledge possessed by a company. Empirical findings highlighted that resources are fundamental factors in order to achieve competitive advantage.

In chapter two, following Johnson et al. (2013), resources were defined as "*assets that organizations have or can call upon*". While competence was explained as how "*those assets are used or deployed effectively*", which depends on knowledge and skills gained through experiences. Thus, assets consist of both competence and resources, which are divided in financial, human and physical. Traditional strategy aims to have technical core competence within the company, according to Porter (1998). As contractors are competence intensive organizations, human resources create the foundation of their organizations, consisting of managers, employees, partners, suppliers and customers. Thus, contractors are completely

dependent on access to resources with appropriate competence. Though, well-educated or long experience is highly appreciated of contractors, such as engineers. In combination with competence, they have the possibility to use experience, skills, knowledge, build relationships, motivate others and innovate. Institutional theory also focuses on the value of competence (North, 2005). As contractors are situated in the middle of the supply chain, between major oil companies and smaller suppliers, social competence is considered crucial. Due to this role, they have to collaborate and communicate with very different actors and handle various roles within the supply chain and the society. They also have an important role in terms of local industry involvement, as they have the ability to include or exclude local industry in their projects. This results in different pressures from several societal institutions. As to this study, contractors' dynamic interactions with political and other business actors are considered important, due to the approach of Brignall and Modell (2000).

Both contractor 1 and 2 explained that they work closely with universities in Northern Norway to ensure access to the most competent graduates as well as they contribute to education and research in the region. However, as powerful contractors are hunting the most educated and skilled students in the prospective area, it may be at the expense of developing local industries, as the shortage of highly educated in the region is a local issue according to the informants. Global contractors benefits from their reputation, which often make them more attractive for graduates than smaller unknown companies, as contractor 1 gave an example of. Thus, the contractors' status and respectability provides access and power to get the most gifted and skilled employees. A good reputation can be achieved by gaining legitimacy through symbolic actions according to institutional theory (Palazzo and Scherer, 2006). Employees with social competence and skills of interpretation secure that contractors achieves legitimacy, which is essential for contractors due to access resources in the environment and pertain their valuable reputation. Due to the empirics, Contractor 1 explained that local offices are not aloud to make statements to media, as the headquarters have their own department of employees with expertise within this specific field. The communication department secures that no one within the company say anything wrong that could potentially damage their legitimacy.

In contradiction, the network theory claim that competitiveness is not just gained from experience and knowledge, but also from close relationships in the market. Considering the framework of Håkansson and Snehota (2006), building and establishing relationships based

on trust, even with competitors and third parties, are essential for the positioning and being able to seize opportunities in the market. Per empirical findings, contractors see little need for networking in Northern Norway. However there are some examples of horizontally cooperation's, such as the network "LUNN", established by Statoil and the strategic alliance between Helgeland V&M and Aker Solutions, among some others. These networks illustrate collaborations without hierarchical power relations where resources are shared between the participants. Hence, the companies' performances are based on the ability of building relationships and thereby exchange of critical assets with other actors in the network. Petro Arctic did also mention some cooperation's with no boundaries in relation to Goliat, where activities and resources are shared between organizations. In contrast to the classical approach by Porter (1998), it is acceptable not to have own critical assets internally, as other participating organizations valuable resources are made available within the network (Fiocca and Snehota, 1986).

All of the alliances and relationships based on network philosophy that are established in Northern Norway is a positively contribution to the regional OFS development and the society. However from an institutional point of view, some of these partnerships could be questioned to be symbolic actions of the contractors in order to achieve a beneficial public image. Referring to the empirical data, several companies say they focus on building relationships with other actors in Northern Norway. On the other hand, the contractors do not seem to be interested in horizontal relationships and interactions as equal partners with no hierarchical power or advantages. Hence, the contractors' intentions are not consistent with network philosophy. Contractor 1 suggests alliances or clusters as a competitive advantage, because it will benefit themselves economically in terms of more streamlined communication with sub-suppliers. Furthermore, the empirical data show that contractors try to comply societal relationship pressures through establishing some success stories about cooperation with local suppliers. This symbolic behavior gives them favorable attention in the media, which demonstrate local commitment required by operators when tendering contracts are awarded. According to the potential supplier, this issue is related to unequally relationships between the small and inexperienced actors and the major experienced ones. This indicates that contractors are "walking the talk" in regard to network theory, which can be explained by the contractors need for legitimacy achieved through symbolic networking.

Another example of such expertise requirement in order to secure the contractors legitimacy relates to CSR, which is especially strict in the petroleum industry. The concept of CSR is crucial for the sector as it maintain its relation with society through a favorable appearance. Consequences of incidents in relation to oil and gas are extremely severe and will most often have a crucial impact on both humans and environment. In such cases, the society will question the companies and industry's social responsibility as well as reputation. Health, security and environment (HSE) requirements are thus especially strict. Consequently, heavy standards of requirement and bureaucratization are typical for the industry, which is seen as a constraint and largely contributes to increased costs and decreased productivity. However, it is also believed to be necessary as it is difficult to argue cost over safety. Because of the environmental and socioeconomically aspects related to the production of oil, especially operators need to have a good relationship with several actors, such as NGO's with opposing opinions on their business activity. Due to institutional theory, the risk of not consider institutions like NGO's, is the possibility of being perceived as distrustful, unpredictable and ending up as an outsider in the society (Meyer and Rowan, 1977).

All respondents agrees upon the institutionally influence of the OFS sector, though with different perspectives. Inclusion of local suppliers represents the most important socially constructed factor in Northern Norway, which are encouraged by the Government through the High North policy and expected by the society. A way for contractors to be institutional entrepreneurs is to contribute developing the regional supplying industry as an organizational field with direct interactions and common identity, which requires social capital and skills (Fligstein, 1997, 2001). However it seems that the contractors do not want to do this, even though they have available resources:

Both contractors confirm their high ambitions of creating spin-offs by developing local industry in Northern Norway considering the fact that the resources are located in their "neighborhoods". An interesting fact observed, however, is that even though the leading contractors state in the interviews and also to media, that they are eager to use local suppliers, a minimum share of the contracts are actually awarded to local companies. Moreover, Statoil and the local supplier claim that contractors have a political pressure, however the contractor companies themselves say that they do not experience any direct pressure from either authorities or operators. At least, it does not have any influence when awarding tender contracts. Additionally, the contractors explain that during the current period of time, in light

of cost and efficiency pressure, local participation is not the most prioritized subject, as costs are what matters the most. The contractors already have an extensive network in more mature areas where relations are more interdependent and interactions benefit the contractors economically. Thus, they obviously perceive the local inclusion as economic restrictions and because of their powerful position, according to Porter (1998); they can act in their own interest somewhat to a certain degree. The contractors' try to gain legitimacy by claiming their interest of developing local industry and act strategically, consciously or unconsciously, by for instance registering local suppliers in the their pre-qualification databases. By doing so, they prove their local commitment and fulfill the operators' requirements of local participation. Regional suppliers show frustration over the high entrance barriers in the industry. Both Petro Arctic and the potential supplier gave examples of how these barriers can be reduced by contractors. On the other hand, the potential supplier demonstrates a good insight into the situation and understanding of the contractors as they also have goals and commitments to meet like satisfying financial requirements.

Developing a competitive and competent local sub-supplying industry was argued in the empirics to be a competitive advantage due to cost efficiency for contractors since there are a huge potential for reduced transportation costs, which represents the main advantage for local suppliers. Nevertheless, it requires that the sub-suppliers manage to produce products to a lower cost than companies not being situated in Northern Norway. It could therefore be in the contractors' interest to help developing a local OFS industry, which they can influence in their favor against the market forces. However, considering Porter's theoretical framework regarding threat of entry, a potential threat can be if the local suppliers get powerful and increase their bargaining power over the contractors, which may also result in lowering market shares and decreasing profit for the contractors. The report Levert (2014) claimed that this was a fact in 2013 due to an increased number of smaller businesses that have strengthened their position. Another threat, according to Porter, can be the contractors' incentives to keep their large-scale suppliers from south and west in Norway due to costs of switching to another supplier or scale effects related to dividing contracts into smaller and multiple, which can provide transaction costs and administrative costs that should be considered (Porter, 1998).

Summary of contractors critical assets

Due to leading contractors' global position and extensive experience, they have developed their knowledge and technical competence through decades in areas outside Northern Norway. As contractors are competence intensive organizations, knowledge is invaluable because it helps them utilize the opportunities in the market. Additionally, they benefit from knowledge acquired by their long lasting global experiences, which they now benefit from in the prospective area of Northern Norway. In combination with a good reputation, they have easy access to resources and suppliers worldwide. Furthermore, contractors are situated in the middle of the supply chain, as in the middle of a sandwich, between major oil companies and smaller suppliers. Both local business and global operators are dependent on the contractors, as they are the link between these two "worlds". This position provides them the key role of the supply chain where they need to collaborate and communicate with actors of different range and size that have various focus and needs, which can be difficult to fulfill. However, the empirical results show that the contractors are able to utilize this "sandwich position" by getting goodwill through social competence and symbolic action. Due to efficiency pressures, contractors need to increasingly prioritize economic solutions. Skills of interaction secures that contractors achieve legitimacy and they can benefit from their global networks while still looking like a local actor. Contractors do not find network philosophy important in Northern Norway.

5.2 Where do the theories and empirics collide and why?

This section will highlight parts where the theory is not consistent with empirical results. As I am using triangulation, I will thus suggest possible connections for the theories.

Integration of institutional theory and Porter

Throughout my empirical findings, there were identified a threat in relation to the oil and gas industry on the basis of environmental and socioeconomically dilemmas, as the consequences of mistakes can be disastrous. Thus pressure from environmentalists and NGOs (Non-Governmental Organizations) can be intense even though strict requirements and guidelines are determined and regulated by the authorities in order to prevent pollution, spills and other accidents. The five forces by Porter's framework (1998) do not recognize this force since it is not a market force, however it can still act as a potential threat to several industries and

companies. Thus, institutional theory can help extend and strengthen these findings by integrating institutional framework to Porter's five forces. By applying the second mechanism, mimetic, which results from standard responses to uncertainty (DiMaggio and Powell, 1983) and institutional entrepreneurship, it will help explain this force. Recent studies of entrepreneurial philosophy focus on how it is possible to navigate such organizations through negotiating and cooperation. Having social capital and social skills is essential to achieve this (Lounsbury and Crumley, 2007; Coleman, 1988; Fligstein, 1997, 2001).

Consolidating Porter's five forces

According to the data collection, the contractors perceive each other more like partners than competitors in Northern Norway. The contractors explained in the interviews that those contractors that are established in the region complement each other due to their differentiation within different segments along the value chain. However, they rarely cooperate since they offer their own contracts. This does not correspond with Porter's traditional five forces strategy, as there is no "battlefield" or rivalry among the existing firms. Other statements in the empirics, however, closely relates to Porter's competitive advantage and five forces, which ensure the theory of Porter still is of high relevance in regard to contractors behavior in the OFS sector in Northern Norway. A suggestion is therefore to extend the five forces with cluster theory, which represents competition between supply chains, hence supply chain clusters or vertical cluster.

Porter's cluster theory from *The Competitive Advantage of Nations* (1990) is consolidated from his previous theories including five forces and competitive advantage where he argues that competition and cooperation can occur simultaneously. Moreover, Porter describes clusters as a geographic area of interconnected and related industries, companies, and suppliers. Increasing the productivity where companies compete is considered an advantage of clusters, as clusters are known to provide higher output compared to those companies that is not included (Porter, 1990).

A deliberately absent entrepreneurial behavior?

Institutional entrepreneurs try to influence the social world according to Scott (2008) by changing the rules, the relationships, or the distribution of resources. The empirical data in this research outlined that a competitive and competent local sub-supplying industry could be

profitable, cost efficient and thereby an advantage for contractors. Thus, entrepreneurial contractors would have been contributing to develop the supply industry in Northern Norway as an organizational field by creating a common identity and establish direct interactions. However the contractors' behavior is passive and it seems like they rather adapt to their surroundings. Consequently, they can be characterized as rule followers instead of game changers. As the contractors are resourceful leading actors of the supply chain, it is reasonable to assume that they are choosing consciously not to be entrepreneurs. Integrating the theoretical framework of Porter makes it possible to study the hypothesis of this being a conscious act theoretically. By doing so, the contractors' passive behavior and lack of wanting to change the rules of the game can be explained due to the fact that they are satisfied with their situation as it is and would like to maintain their competitive strategic position. They have a central role in Northern Norway with high bargaining power due to Porter (1998) and the empirical results. Their extensive network in more mature areas gives them a global advantage with a favorable overview of the market and an easy access to price competitive resources and suppliers.

Lack of networking

Networking is not widespread in Northern Norway and not considered important by the contractors according to the empirics. The reason for this could be that the contractors do not perceive Northern Norway as a context. In chapter two, the context of an organization was described as the social process where the company chooses to exist (Berg, 1985). Contractors already have extensive networks and relationships elsewhere in other contexts and it turns out in most cases to be more economical importing products and services from the experienced supplier hubs situated outside Northern Norway. However, it is argued not to be sustainable in a long-term perspective. The north Norwegian supply industry is underdeveloped and do not have much to offer in terms of competitive resources or other benefits that leading contractors aim for. Also the potential supplier believes partnerships should be based on financial incentives with a mutual dependency, which benefits all the participants.

In the contractors existing networks located in mature areas, the potential suppliers are experienced, they have a well-established organization and their histories ensure that they deliver high quality on time. Ergo, it is both more safe and economic, awarding them tender contracts, especially now in a time of cost pressures. Therefore, due to this period, Northern Norway is not considered to be the context of contractors.

5.3 How does context matter?

The price competition in the OFS industry is intense and the experienced industry situated elsewhere in Norway, mostly south and west, have a huge head start over the newborn region in Northern Norway. The clusters in south and west have developed their competence and knowledge for decades and are thereby more efficient with easier access to necessary resources. Moreover their organizations are in most cases larger with an expertise workforce and technical resources. Local maritime industry in Northern Norway has been built on shipping and maintenance of ships, which can benefit a supplier. However, they have another type of technical resources than what is required by the oil and gas industry.

The context of Northern Norway is argued to be different compared to south of Norway, but the empirical findings in this thesis shows that the same "old fashioned way"-approaches are applied in the "next or last energy frontier". The world is continuously changing and it is therefore logical to assume that strategies and approaches should do so as well. Not to forget that Northern Norway does not have the same history within petroleum as other experienced clusters situated further south. However, southern Norway did not possess any local knowledge either when the first fields were discovered in 1969. The country was forced to innovate and learn how it was done. Thus, Contractor 1 suggested that it could be an advantage if suppliers in Northern Norway copied best practice and others success strategies from the industry in south and west. Then, they have the ability to learn from the experienced suppliers and their mistakes and thus, not do the same.

Contractors are well positioned in the supply chain hierarchy in Northern Norway and have knowledge about how to utilize the opportunities in the market through their extensive global networks, which is a huge competitive advantage. The bargaining power over local suppliers seems to be easily controlled by the contractors with knowledge and a valuable overview through their pre-qualification databases. This gives them the opportunity to choose the best-suited supplier to their different projects. As the leading contractors have long experience and additionally have offices several places in Norway as well as all over the world, they possess large volumes of supplier information. Thus, it is easy to compare previous experiences, quality, and price of suppliers no matter where they are located in the world. The contractors' global position has developed their technical competence through decades in which has given successful results.

Another advantage due to the global positioning that can be exploited in terms of cost enhancements, was pointed out by Contractor 1 explaining that their company in general use a proportion of the people working on projects from their offices in countries with lower salary levels. As presented in empirics, wages in Norway is at a much higher level compared to other nations, especially in the low-cost countries. Moreover, employees in foreign companies have a much higher value creation per employee than Norwegian-owned companies. This was mentioned as a potential solution in Northern Norway because of the cost pressure from E&P companies. However, Contractor 1 is clear in his statement that he rather not sees this happening. Another concern regarding the situation of operators' prioritizing of low-cost countries is the ethical point of view. Is it legitimately of Norway, as a shareholder in Statoil to benefit from low cost companies that obviously exploit their employees in terms of low HSE requirements? Causing three deaths only under the construction of Eni's Goliat? As Petro Arctic pointed out, there should be a zero philosophy in relation to serious damage to health and environment and the stringent HSE requirements applicable in the industry should also apply when contracts are awarded abroad. Solutions like this could damage an organization's legitimacy and further the company could end up as an outsider in the society according to institutional theory (Meyer and Rowan, 1977).

6. Conclusion

In this last chapter, a summary of the thesis results will be presented related to contractors' strategic behavior in the prospective area of Northern Norway during recession. The conclusion is based on the thesis problem statement:

"*How do companies strategically engage in their prospective areas in light of increased pressure of efficiency?"*

The research' data findings is conducted from a major E&P company (Statoil), global leading contractors, a potential sub-supplier as well as a third party organization within oil field service in Northern Norway (Petro Arctic). Main theories applied in this research are classical competitive strategy, institutional theory and network theory. Additionally, theoretical triangulation was used as a method in order to extend and strengthen theories if needed due to

limitations in accordance to the empirical results. Thus, by combining or suggest other relevant theories, the confidence is enhanced through credibility and validity in the findings of the research.

In order to understand the contractors' strategic behavior in terms of market forces, societal pressures and networking in the OFS in Northern Norway, following research questions were analyzed:

RQ 1: *How do the companies address the bargaining power of the market forces?*
RQ 2: *How do the companies manage societal pressures?*
RQ 3: *How do the companies engage in horizontal relationships in the supply chain?*

Main finding from this research are:

Contractors' strategic behavior indicates that they tend to maintain their powerful global position in the prospective area of Northern Norway. They contain a central position in the supply hierarchy, which makes contractors the link between local actors and major oil companies. This key role gives them high bargaining power and a favorable overview of the Northern Norwegian market. Due to their global position and extensive experience, contractors have developed their knowledge and technical competence through decades in areas outside Northern Norway. Additionally, this global role gives contractors the advantage of choosing low-cost products and employ cheap work forces from abroad.

Inclusion of local suppliers represents the most important and obvious pressure in Northern Norway. The contractors' behavior indicates that they are rule followers rather than game changers. They try to gain compliance by claiming their interest of developing local industry through symbolic action, which gives them beneficial attention in the media. By doing so, they "prove" their local commitment and fulfill the operators' requirements of local participation. Thus, their behavior is rather symbolic. Due to efficiency pressure, the contractors confirm that costs are what matters the most. Additionally, the contractors perceive the societal pressure of local inclusion as economic restrictions and therefore make little effort to change and develop the supply industry as an organizational field like an institutional entrepreneur would have aimed to do.

According to contractors, there is little need for horizontal relationships in Northern Norway, which refers to companies with different positions in the supply hierarchy who cooperate as equal partners without benefits. Nevertheless, the contractors claim the importance of networking with other actors in the supply chain. Thus, there are some examples of successful cooperation's, or symbolic networking, where resources are shared within the network, such as the alliance Helgeland V&M.

Behave like a local or staying global?

E&P companies require contractors to include regional suppliers, however the contractors say they make their decisions based on the most competitive supplier. Additionally, the contractors explain that during the current period of time, in light of cost and efficiency pressure, local participation is not the most prioritized subject, as costs are what matters the most. New potential OFS actors are facing tough barriers in order to enter the OFS industry in Northern Norway. Amongst the most challenging barriers to bypass, seem to be the process of being accepted and approved as sub-suppliers by the contractors. On the other side, reduced transportation costs represents the main advantage for local suppliers. However, it turns out in most cases to be more economical importing equipment or work force from outside of Northern Norway, as the contractors already have an extensive network in more mature areas. In combination with a good reputation, they have easy access to resources and suppliers worldwide. Moreover, the contractors' benefit from knowledge acquired by their long lasting global experiences, which they now advance from in the prospective area of Northern Norway. The contractors' central position in the supply chain in combination with competence, knowledge and skills of interaction makes it possible for them to get goodwill through symbolic action and symbolic networking. Thereby, the contractors are being perceived as local actors while they still benefits from their global position.

As the contractors have a successful history, they seem to believe their old strategies are best suited in terms of making profit in today as well. The world changes continuously and it can therefore be questioned if the strategies developed in 1970's, 45 years ago, still can be characterized as best practice. Not to forget, that the context in Northern Norway is different from elsewhere, both in regard to climate and culture. Oil and gas fields in Northern Norway requires other solutions and standards compared to fields in the North Sea, which is underlined by the fact that all of the fields in Northern Norway have been delayed and thereby

resulted in cost overruns. Then, is it wise not to customize the strategy? Economical short-term profits are prioritized above developing new and sustainable long-term solutions for the new energy frontier. Will "the good old fashioned way" be an appropriate approach in the current period of time with efficiency pressures in a new geographical region, or is there a need for a modern long-term oriented strategic philosophy with local involvement?

6.1 Contribution and future research

This thesis analysis of the OFS sector contributes with knowledge on how companies can become competitive through strategic actions. Also by including institutional theory even though it is not an established field within strategic management. The knowledge gained through my research can be transferable to other companies and industries, especially Engineering, Procurement and Construction (EPC) companies with similar structure. The analysis is comprehensive, which can be utilized when conducting further research on the topic.

In future research it could yield good results by applying a quantitative research of the sector, and perhaps analyse the economical consequences for the Northern Norwegian OFS industry if the problems I have discovered are not sufficiently resolved.

One can also undertake comprehensive case studies of the local OFS industry solely focusing on regional problems like competence and for instance the dilemma: "What come first, the chicken or the egg?" Referring to the issue regarding local suppliers lack of competence, which thereby preventing them from getting awarded tender contracts. However, without contracts they will neither manage to increase their competence.

Additionally, it would be interesting to compare the context of Northern Norway with the industrial clusters in south. Additionally, it could be evolving to examine options for how north Norwegian suppliers can organize themselves by looking at the best practice when these clusters were developed.

Possible future research question could be:

-"*Can their "strong positions be someone's weakness?*" or

-"*Should contractors go local?"*

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Appendix

Appendix 1 - Interview with oil companies:

Spm.1 Hvordan har dere blitt påvirket av det økende kostnadspresset?

Spm.2 Kan du beskrive deres strategi for Nord-Norge?

Spm.3 Har deres strategi i Nord-Norge endret seg?

Spm.4 Hvilket ansvar har dere for å skape lokale ringvirkninger der dere opererer?

Spm.5 Hvilke føringer legger dere for lokal deltakelse i Nord-Norge?

Spm.6 Hvordan forhold har dere til kontraktører og leverandører i Nord-Norge?

Spm.7 Hvilke muligheter ser dere for utviklingen av nordnorsk industri?

Spm.8 Hvordan forhold har dere til lokale myndigheter?

Spm.9 I hvilken grad vektlegger og tilrettelegger dere beslutninger etter:

- Politiske føringer?
- Samfunnsansvar (CSR)?

Spm.10 Hva oppfatter dere som de største fordelene for leverandørindustrien i Nord-Norge?

Spm.11 Hva oppfatter dere som de største utfordringene for leverandørene i Nord-Norge?

Spm.12 Hvordan er det mulig og hvilke grep må til for å øke konkurranseevnen i nord-norsk oljeserviceindustri?

Appendix 2 - Interview with contractors:

Spm.1 Hvordan har dere blitt påvirket av det økende kostnadspresset i industrien?

Spm.2 Hvilke muligheter ser dere for utviklingen av nordnorsk industri?

- Vil økt effektiviseringspress få konsekvenser for NN industri?
- Små vs. Store selskaper
- Hva med de synkende investeringer i regionen?

Spm.3 Kan du beskrive deres strategi for Nord-Norge?

Spm.4 Har deres strategi i Nord-Norge endret seg siden dere etablerte kontor her?

Spm.5 Hvilket ansvar har dere for å skape lokale ringvirkninger der dere opererer?

- Opplever dere press fra staten?
- Press fra store selskaper som Statoil?
- Press fra interesseorganisasjoner (NGO) eller media?

Spm.6 Hvilke føringer legger dere for lokal deltakelse i Nord-Norge?

- Gjør dere noen konkrete grep for å fremme utvikling?

Spm.7 Hvordan forhold har dere til konkurrenter, kunder og potensielle leverandører i Nord?

Spm.8 Hvordan forhold har dere til lokale myndigheter? Samarbeid?

Spm.9 I hvilken grad vektlegger/tilrettelegger dere beslutninger etter:

- Politiske føringer?
- Samfunnsansvar (CSR)?

Spm.10 Hva oppfatter dere som de største fordelene for leverandørindustrien i NN?

- Kompetanse
- Ressurser (fysiske, finansielle, menneskelige)
- Infrastruktur

Spm.11 Hva oppfatter dere som de største utfordringene i NN?

- Hva er de største utfordringene for industrien i forhold til å kunne effektivisere prosesser og bli mer konkurransedyktige?
- Hvordan tror dere Nord-Norge kan bli konkurransedyktig i forhold til de etablerte klyngene i sør?

Spm.12 Hvordan er det mulig og hvilke grep må til for å øke konkurranseevnen i Nord?

- Innovasjon og økt standardisering?
- Mindre kontroll og byråkrati?
- Større fokus på strategi og innovasjon?

Appendix 2 - Interview with potential sub-supplier:

Spm.1 Hvordan har dere blitt påvirket av det økende kostnadspresset i industrien?

- Små vs. Store selskaper
- I hvilken grad er dere påvirket av de synkende investeringene?

Spm.2 Hvordan forhold har dere til ledende kontraktører?

Spm.3 Oppfatter du kontraktørene som samarbeidsvillige?

Spm.4 Har dere merket noen konkrete tiltak for å skape lokal deltakelse og fremme utviklingen i regionen?

Spm.5 Hva er deres største fordeler som leverandørselskap i NN?

- Kompetanse
- Ressurser (fysiske, finansielle, menneskelige)
- Infrastruktur

Spm.6 Hva er deres største utfordringene i NN?

Spm.7 Hvordan er det mulig og hvilke grep mener du må til for å øke konkurranseevnen i nord-norsk leverandørindustri?

- Innovasjon og økt standardisering?
- Mindre kontroll og byråkrati?
- Større fokus på strategi og innovasjon?