

NORWEGIAN SCHOOL OF ECONOMICS AND BUSINESS ADMINISTRATION

Entry and Operation Modes of International Oil Companies

Focus on Statoil ASA

By

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Abstract

This paper examines entry and operation modes of international oil companies on the Norwegian Continental Shelf, in the Gulf of Mexico, in Brazil and in Russia. The theoretical basis is the Integrated Transaction Cost Economics Model, and the focus is on implementation of company resources and capabilities in order to achieve optimal performance. The analysis is based on information of the Norwegian company Statoil ASA. The discussion concern; which organizational form is optimal for Statoil in implementation of company resources in the different areas, what organizational forms are possible and what role will the company play in that form. The paper concludes with a recommendation for organizational form, the value of operations in regard to revenue/cost ratio and opportunity cost, and a recommended future strategy for each of the areas.

Foreword

I would like to thank my thesis supervisor; Svein Ulset, Associate Professor at the Institute for Strategy at the Norwegian School of Economics and Business Administration, for his help with this paper. I would also like to thank INTSOK, Norwegian Oil and Gas Partners, for granting me access to their market outlook reports on the areas in question.

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1.0 Introduction

The current global situation for the international oil industry is one of declining oil reserves. Within the mature and well developed areas, the majority of new discoveries are relatively small and often difficult as well as costly to extract. There is promise for significant new discoveries in the Arctic regions of the world, but the climate and weather conditions are harsh in these areas, which makes also these deposits difficult and costly to extract. Furthermore, little exploration has been conducted in these areas to date, which means it will require considerable time before any potential deposits might be brought on stream. At the same time the prospect for world primary energy demand is on the rise. The reference section of the world energy outlook 2008 by the international energy agency (IEA) sets the growth at an average of 1.6 percent per year on average between 2006 and 2030 (International Energy Agency, 2008). This represents an increase in demand of 45 percent. This means that the current world production is inadequate to support the future demand.

International oil companies try to prepare by replenishing their listed reserves in stride with their production which requires a reserve replacement rate of at least 100 percent. But as the current global production will not suffice to meet such an increase in demand, new deposits of hydrocarbons need to be developed. The situation has led to more and more international oil companies turning to alternative petroleum sources such as tar sands and oil shale. The problem with these kinds of alternative sources are; they are currently very expensive to extract, the oil price has plummeted since its peak in the summer of 2008, which render most of these projects unprofitable until the oil price starts recovering. The environmental challenges connected to such operations due to the massive emissions are a major concern. The lack of cost effective technology to reduce emissions in any significant manner, only serve to deepen this concern in a world increasingly worried about the effects of global warming. This leaves the conventional petroleum sources, but a growing share of the worlds known reserves of hydrocarbons is controlled by developing or emerging economies, where the focus more often than not is to preserve these resources nationally through national oil companies. Another problem concerning such economies is the fact that the regulatory framework is often weak combined with a low degree of transparency. This provides additional challenges on top of the

usual problems of conducting business spanning great distance. The challenge for the world's international oil companies under these conditions; is gaining access to new deposits in order to preserve and augment their own listed reserves ,and thus the company value, as well as developing these deposits in an efficient manner. The distance in regulation between different areas will in such a globalized business have major impact on operations and overall performance. Examples of this includes; corruption charges in response to fees or gift giving in some cultures because this is viewed as bribes in the home culture, the inability to earn back investment costs in an area due to high taxes or other host government regulation, or the threat of nationalization of oil fields which renders investments made, as sunk cost. The decisive factor of whether to enter and how is often provided by the regulative framework and the underlying industrial conditions. This paper will explore the situation by analyzing Statoil ASA and certain areas in which they operate. The starting point will naturally be the Norwegian Continental Shelf that is the group's home range and then move on to consider how operations work in Brazil, Russia and the Gulf of Mexico (U.S. sector). The Gulf of Mexico is interesting because it is a well regulated area that has been developed for a long time and because; the United States is the leading economy of the world with a reputation for liberal market oriented solutions and exhibit a huge appetite for petroleum products. Brazil and Russia both have large hydrocarbon deposits and are members of the BRIC economies (Brazil, Russia, India and China), a term used to describe this group of rapidly growing developing economies, and are as such still going through regulatory reforms as the needs of their economy evolves. This will provide insight into economies in distinctly different areas of the world, but also in different stages of development and as such useful insight for comparison with other economies of similar development and geographical location.

1.1 Problem, Data and Method

The main Focus will be on the regulatory framework regarding operations in these areas. The central question is: what regulative challenges does Statoil face when contemplating operations in these areas?

In regard to successfully performing operations the questions are: How do local institutions and industrial conditions affect operations in this area? What is the best organization form for operation? Which resources and capabilities does the company possess that might exploit these conditions, or alleviate the pressure of the local conditions for a sustainable competitive advantage? More importantly, is the company served by full implementation of their competitive advantages?

The decisive factor for implementation of the company's internationally competitive advantages will be their relative share and role in a given project. Such roles stretch from simple service agreements, through partnership models of variable share levels, with or without operator status, to fully integrated companies with operator status. Another aspect to consider in furtherance of this is the protection of the company's resources, that these are not appropriated by other participants in a project. The transaction costs associated with implementing company resources are linked to the number of participants (declining fragmentation) in a project and the nature of the cooperation. The transaction costs are likely to be lower when all partners are part of the same company, than in a multi-party joint venture consisting of separate companies partly in competition with each other. This is due to the relative speed and cost of transactions associated with the different governance forms. When all partners are part of the same company, the decision is made at the top and implemented by the organization. In a more fragmented partnership there may be conflict about who has the authority to make the decision, how to implement, who should shoulder the cost etc. Transaction cost will also be lower for larger ownership shares by the operator due to increased decision authority. The flip side is that the level of innovation might suffer in licenses with few participants compared to operations where the selection of partners is based on experience, competence and interest.

Service agreements are strictly limiting by nature where the specifics are enforced through the written contract. They are however predictable concerning expected revenue and rights in a potential conflict. Service contracts should keep transaction costs low through expeditious

integration, but the protection of resources is not the strongest as implementation is visible to the other partners in the contract.

The relative ownership share in a partnership confers significant limitations or opportunities for the company through administrative control and weight in a conflict settlement. The relative share is also of major importance for creating economic incentives to leverage competitive advantages. This is mainly through the company share in the revenue stream.

The operatorship in a project provides administrative control over the production and the resources implemented in it. An operatorship will also confer a certain amount of added weight in a conflict settlement. Transaction costs are as mentioned tied to the number of participants and can be quite high, but protection of resources need not be better than in a service contract and implementation of resources are usually harder to agree on.

A fully integrated company will retain full administrative control as well as complete ownership of the revenue stream. Conflicts will either be internally in the company, where the company has final authority, or with the authorities in an area, in which case settlement will rely on the judicial system. But for fully integrated operations the company will also carry the entire cost and be exposed to the full extent of the risk. Transaction costs will however be lower as resources can be implemented rapidly and, as resources are implemented within the company, they are completely secure.

I will try to determine throughout this paper; the optimal organization form for each of the areas, the degree to which this organization form is possible due to regulation or other limitations, and in case the optimal form is not an option; will the cost of operations surpass the revenue. The latter is especially relevant in regard to opportunity cost. That is, could the company be better served by investing in another area?

The data applied in this paper will be based on publicly available information on Statoil and market outlook reports on the relevant areas by INTSOK. Additionally information from the International Energy Agency (IEA), the Norwegian Petroleum Directorate, the Mineral Management Service in the U.S, the National Petroleum Agency in Brazil, the Ministry of

Natural Resources in Russia, the World Bank and other sources publicly available through the Internet will be used.

The paper will start with a theoretical perspective based on the Integrated Transaction Cost Economics Model (TCE), dimensions of distance and a detailed description of the regulatory climate in the different areas. An analysis will be conducted based on the TCE-model adjusted for Statoil as a company and altered to fit the particulars of this case. This will further be augmented by a SWOT analysis of the company for each of the areas followed by a summary of the findings. The paper will be concluded by a recommendation concerning organizational form and future strategy for Statoil in each of the areas.

2.0 Theoretical Approach

2.1 TCE – Model

Williamson developed the transaction cost economics (TCE) based on the assumptions that human beings have limited rationality and sometimes act opportunistically, and therefore it can be costly to do business (Williamson, 1981). Transaction costs are costs incurred in making an economic exchange, or simply put the cost of doing business (Peng, 2006). Examples of transaction costs include; search and information costs, bargaining costs and enforcement costs. TCE takes into account the company's structure and governance forms, it does not view the company as simply a "black box". The question concerning how the firms behave and what is affecting the firm's strategy and performance, can best be illustrated by employing the "Integrated Transaction Cost Economic Model" (Ulset, 2008). The model is built around the application of strategy for optimal performance. In order to find the best strategy a company needs to consider what impacts on performance. In the model this is illustrated through boxes representing the relevant areas of; institutions, industrial conditions, a company's relevant resources and capabilities and a company's organization, with the relationship between these inputs being explained through connecting arrows.

Institutions

According to Douglas North institutions are defined as; “the humanly devised constraint that structure human interaction” (Peng, 2006) and companies respond to these through adjusting their structure, resources and strategy. Institutions are divided into formal institutions; laws, rules, regulations, and informal institutions; norms, culture and ethics. Examples of formal institutions are tax regulation and other regulation enforced by law. Informal institutions can be environmental concern in an area or notions about corporate social responsibility.

Industrial Conditions

The industrial conditions and competition are analyzed through the five forces framework by Michael Porter (Porter M. E., 1980), which consists of the level of rivalry among competitors, threat of substitutes, threat of entrants, bargaining power of buyers and bargaining power of suppliers.

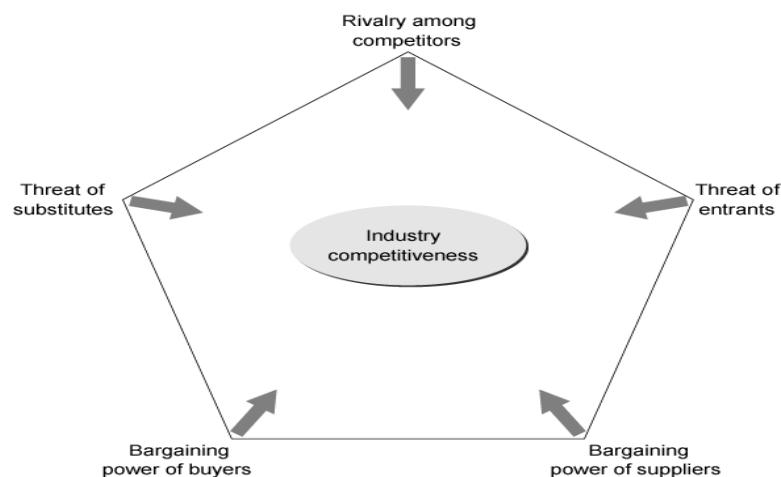


Figure 1: 5 Forces Framework

Resources and Capabilities

This refers to a company's relevant resources and capabilities for any given venture. These are analyzed through a V.R.I.O (Valuable, Rare, Inimitable and leveraged in the Organization) analysis and implemented in finding the best organizational direction for the company. In order for a resource to provide a foundation for sustainable competitive advantage it should fulfill all of these requirements (Barney J. B., 2007).

Organization

A company's organizational presence in an area is heavily influenced by institutions as external mechanisms and through the company's resources and capabilities. If a company is organized to exploit its valuable, rare and inimitable resources, it can in effect leverage a sustainable competitive advantage in that area/market. It has been concluded by Teece that a leading purpose of economic organization is to economize the business transaction costs (Teece D. J., 1986). Douma presents that markets and organizations are two of the alternatives available for coordination of economic decisions (Douma & Schreuder, 2002), but added to this we also find hybrid forms such as joint ventures, strategic alliances and contractual agreements. Hence the organizational options available to a company are of major importance for the choice of strategy and optimal performance.

Case

In the case of Statoil and their international projects, there is a strong connection between the institutions in a given area and the governance mechanisms available to the company for a successful establishment, development and continued operation in that area. These institutions are of paramount importance for in which degree the company will be able to transfer their organizational strengths to a given area, but also more importantly, if the company would benefit from fully integrating their resources in that area. In the TCE-model this relationship is given by the arrow connecting the institutions box to the organization box. The orientation is highlighted by the organization's need to adapt to and exploit the institutional regulation in order to perform optimally in the area. Implied in such exploitation is thorough examination of

the institutions for any possibility for preferential treatment or special concessions based on the company's strengths, and any potential spillover effects which might benefit the host area. In areas where the institutions provide restricting and costly regulation for the oil sector it is important to consider the industrial conditions, as these might provide a nurturing environment and compensate for strict regulation and thus justify operations in the area. There is the possibility that an area has regulations that limit the potential for profitable operations in conjunction with poor industrial conditions. The decision of entry and operation will then rely heavily on assumptions of the future. If future conditions, such as higher oil price seem plausible, entry and operation with a temporary loss can be an acceptable action. If future conditions do not seem sufficiently good, a company should not commit to the sector and save the cost associated with investment and operation. The hunt for additions to the listed reserves cannot be allowed to supersede economic demands of return.

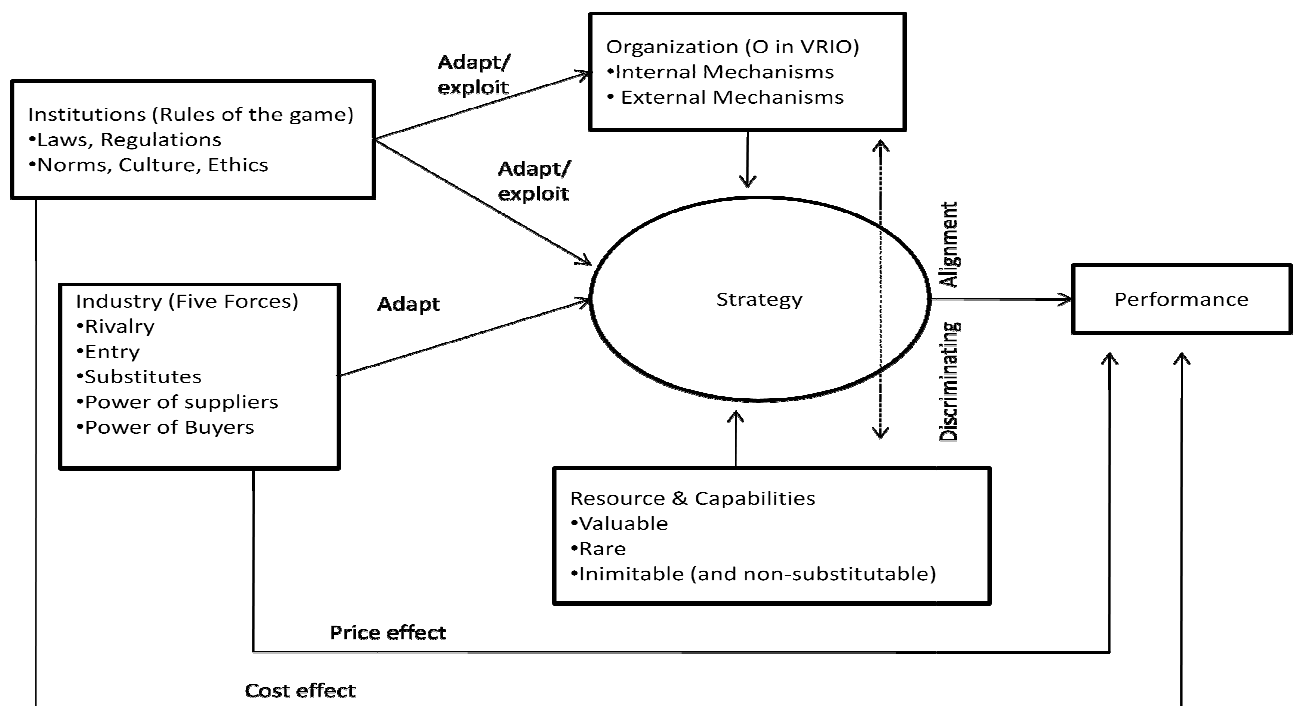


Figure 2: TCE-Model

2.2 Distance

According to the article *Distance Still Matters* by Pankaj Ghemawat, there are four basic dimensions of distance between countries that affect trade relationships; cultural, administrative, geographical and economic distance (CAGE) (Ghemawat, 2001). It has been claimed that distance does not impact as significantly today as in the past due to new information, technologies and global networks making the world a smaller and more homogenous place, but Ghemawat points out that this is not only an incorrect, but also a dangerous assumption. It is important to consider these dimensions before entering into a foreign market, as they reveal challenges of great significance for a successful business venture. Cultural distance will always be a factor when entering negotiations with counterparts of another cultural background, but I have elected to disregard this dimension because its inclusion would make the scope of this paper too wide. Geographical distance impacts on the oil industry because the products are large and bulky and is mainly transported by ships and pipelines and thus has a significant impact on transportation costs. This paper focuses on oil industry regulation within different areas and hence it is mainly the administrative distance which will be discussed. This dimension is of great significance for the oil industry as natural resources are often seen as a national heritage, hence the danger of nationalization is present, and because regulations differ greatly across the globe. We find examples through the nationalizations that took place in Argentina during the last century and the more recent nationalization in Venezuela. Of more immediate interest to this case, Statoil recently experienced a seizure of assets in Libya, where the government increased their take of the oil revenue from two of Statoil's fields (Bjerke, 2009). The oil industry is also characterized by large and often sunk costs and by considerable decommissioning costs. It is therefore important for companies that their investments are secure from government intervention. Economic distance is of little interest for this paper because of the global demand for oil and gas and the relative GDP levels of the countries in question does not impact on this. A summary and clarification of these dimensions of distance have been listed in a table describing the CAGE on the next page.

CAGE Framework of distance (Ghemawat, 2001)

	Cultural Distance	Administrative Distance	Geographical Distance	Economic Distance
Attributes creating distance	<ul style="list-style-type: none"> -Different languages -Different ethnicities; lack of connective ethnic or social networks -Different religions -Different social norms 	<ul style="list-style-type: none"> -Absence of colonial ties -Absence of shared monetary or political association -Political hostility -Government policies -Institutional weakness 	<ul style="list-style-type: none"> -Physical remoteness -Lack of a common border -Lack of sea or river access -Size of country -Weak transportation or communication links -Differences in climates 	<ul style="list-style-type: none"> -Differences in consumer incomes -Differences in costs and quality of; natural resources, financial resources, human resources, infrastructure, intermediate inputs, information or knowledge
Industries or products affected by distance	<ul style="list-style-type: none"> -Products have high linguistic content (TV) -Products affect cultural or national identity of consumers (foods) -Product features vary in terms of; size, standards or packaging -Products carry country specific quality associations (Wines) 	<p>Government involvement are high in industries that are:</p> <ul style="list-style-type: none"> -Producers of staple goods (electricity) -Producers of other "entitlements" (drugs) -Large employers (farmers) -Large suppliers to government (mass transportation) -National Champions (aerospace) -Vital to national security (telecommunications) -Exploiters of natural resources (oil, mining) -Subject to high sunk costs (infrastructure) 	<ul style="list-style-type: none"> -Products have a low value to weight or bulk ratio (cement) -Products are fragile or perishable (glass, fruits) -Communications and connectivity are important (financial services) -Local supervision and operational requirements are high (many services) 	<ul style="list-style-type: none"> -Nature of demand varies with income level (cars) -Economies of standardization or scale are important (mobile phones) -Labor and other factor cost differences are salient (garments) -Distribution or business systems are different (insurance) -Companies need to be responsive and agile (home appliances)

Figure 3: CAGE-Framework

3.0 Company Information

3.1 Statoil ASA

Statoil is a giant Norwegian energy company ranked as the eleventh biggest within oil and gas operations, and the 53rd biggest company in the world according to the Forbes Magazine web site in 2009 (Forbes.com, 2009). The company is listed on the Oslo and New York stock exchanges, but Oslo is regarded as the main listing. Statoil is the largest operator in water depths over 100 meters and is viewed as one of the World's largest suppliers of oil and gas, this includes being the biggest vendor of oil products in Scandinavia and the second largest supplier of natural gas to Europe, with a market share of 15 percent of the European gas market. The company is the result of a merger between Statoil and the oil and gas division of Norwegian Hydro in October 2007 (StatoilHydro, 2009). These two were the biggest operators on the Norwegian Continental Shelf (NCS) and both companies had previously been involved in international expansion. The resulting company was named StatoilHydro and currently dominates the NCS in addition to holding a strong international portfolio. During the company's general assembly of May 19, 2009 it was decided to return to the name of Statoil ASA as this is a well known brand that provides a statement concerning the Norwegian state's share in the company. Statoil is the operator in 39 producing oil and gas fields and have a combined equity oil and gas production of 1.9 million barrels oil equivalent per day. The company's proven reserves of oil and gas are set at 5.5 billion barrels of oil equivalent and the market capitalization is valued as above 500 billion NOK (at share price 170 NOK). The financial crisis has had a significant impact on the share price which is set as approximately 138 NOK today (June 11, 2009), so the market capitalization is currently somewhat lower than 500 billion NOK. The reserve replacement ratio of the company is currently set at 60 percent as a three year moving average. Statoil ASA is a national oil company where the Norwegian State owns 67 percent. Despite being under State control the company has a focus on value rather than volume, which means that the level of activity on the NCS might decrease as production is cut back due to low oil prices over time (Lindeberg, 2009).

The company has interests in many oil producing areas of the world and they employ approximately 29.500 people across 40 countries. Statoil claims to have an environmental focus

in regard to its operations, and that the company has a heightened awareness for the ethical dimension involved in international transactions within the petroleum industry. This ethical accountability refers not only to the company itself, but also to those act on behalf of Statoil and the company expects similar standards from their business partners. According to their homepage, Statoil is the world leader in deepwater technology as well as the world leader for carbon capture and storage. Lately the focus of the company has shifted somewhat from replacement of listed reserves to cost efficiency, which is natural in relation to the ongoing financial crisis and the relatively low oil price. The International expansion of the company is being focused on four areas; deepwater, harsh environments, gas value chains and heavy oil. The company uses a strict decision process when contemplating entry into an area or project in order to minimize cost, risk and other adverse effects for the company. The process has been listed in detail in the appendix. (StatoilHydro, 2009)

4.0 Territorial Information

4.1 Norwegian Continental Shelf (NCS)

The Norwegian Continental Shelf covers an area of 235.000 square kilometers as of April 16, 2009. There has been conducted oil exploration and production on the NCS for the past 40 years and the total recoverable petroleum resources are estimated at approximately 13 billion standard cubic meters of oil equivalents (scm o.e) as of December 31, 2008. Of these 5.1 billion scm oil equivalents has been produced and the estimate of the proven recoverable resources in the ground is 5.0 billion scm oil equivalents. There is also estimated to be 3.4 billion scm oil equivalents left undiscovered in the ground. These numbers indicate that there is potential for continued activity in this area for several decades. The NCS is divided into three areas; the North Sea, the Norwegian Sea and the Barents Sea. The bulk of the oil production is located in the North Sea with only a little in the Norwegian Sea and even less in the Barents Sea. The future prospects regarding the Barents Sea are currently highly uncertain on account of legislation curtailing exploration and production in several areas due to environmental concerns. (Energy Information Administration, 2009), (Norwegian Petroleum Directorate, 2009)

4.11 Policy and Legislation

The petroleum activities on the Norwegian Shelf are regulated through the Petroleum Act (Act of 29 November 1996 No. 72 relating to petroleum activities). The law states that the right to subsea petroleum deposits belongs to the state, and that the state has the exclusive right to manage said resources. The emphasis is on managing these resources in such a way that they benefit the entire Norwegian society. The Norwegian Continental Shelf is a well regulated area where production licenses are awarded by the King in Council, but the preliminary work is done by the Ministry of Petroleum and Energy (MPE) assisted by the Norwegian Petroleum Directorate (NPD). A central element of the resource management in Norway is to maximize the values inherent in the resources through sustainable petroleum activities. The industry is based in part on a licensing system which means that private players can be awarded licenses to explore for, extract and transport petroleum. This is accomplished through a two part

system: One ordinary concession round undertaken every 2 years aimed at immature and unexplored fields and, one annual round known as Awards in Predefined Areas (APA, since 2003), which focuses on mature fields with developed infrastructure and well known geology. Before licensing rounds can begin the areas in question must be opened for exploration and approved by the Norwegian Parliament; Stortinget. The licensing round for an area starts with the MPE inviting companies to nominate the blocks they wish to be included. The government decides which blocks, terms and conditions to include in the round based on the nominations from the companies as well as on analyses conducted by the MPE and NPD. After the announcement the companies have three months to prepare their applications, which can be filed singly or as group of companies. Production licenses are awarded through relevant, objective, non-discriminatory and preannounced terms. The most important criteria for the allocation of a production license are geological understanding, technical expertise and financial strength. The governments past experience with a given candidate may also be of significance. (Norwegian Petroleum Directorate, 2009), (Norwegian Ministry of Petroleum and Energy, 2009)

4.12 Regulation

The overarching responsibility for the regulative framework on the NCS lies with the Norwegian Parliament and executive power concerning policies is in the hands of the government. The responsibility for the resource management and sector as a whole lies with the Ministry of Petroleum and Energy (MPE) supported by the Norwegian Petroleum Directorate (NPD). The policy regarding licenses is that the system should be as transparent and efficient as possible. In furtherance of this there is no signature fee associated with the awarding of a license, only a handling fee of 100.000 NOK intended to cover the processing costs of applications. The technical and geological assessment of the applications is carried out by the NPD in close dialogue with the MPE who are responsible for the negotiations with the applicants. Production licenses are initially granted for a period of 10 years which carries with it certain statutes regarding seismic survey and/or exploration drilling. After the expiration of the 10 year period, companies are usually granted an extension for 30 years, but they are only entitled to those

areas in which they plan to start production. Companies are required to pay an area fee after the initial period of 10 years expires for those areas where they do not have any production or active exploration. This fee amounts to 30.000 NOK per standard square kilometer the first year, 60.000 NOK the second year and the maximum of 120.000 NOK for the third and subsequent years. The companies are exempted from this area fee if they present a plan for development and operation, but the exemption is only good for the area that covers the geographical extent of the deposits. Exemptions will also be granted for a period of two years if a company drills an exploration well in the area. The area fees have been introduced to keep blocks from being held by companies that do not conduct any activities on them. This is seen in relation to the Norwegian Government's policy of keeping a stable and sustainable pace of development on the NCS. The return of the license for an area is possible only if all the participants in the contract agree to this, in which case this area will be part of the next licensing round. The option of applying for production licenses as a group is an important aspect of the sector regulation because it allows the smaller oil companies, often referred to as "mosquitoes", to operate fields. This increases the total extraction on the NCS because the larger companies are usually not interested in the smaller finds. This is because the profit margin is often deemed too small to justify the resources and time needed for development. Also, the opportunity cost of not seeking to develop larger deposits abroad is too great for the big companies, whereas the small companies find such deposits to be a great opportunity. As mentioned the Norwegian authorities prefer a sensible and sustainable rate of exploration and production to complement the long term development of the oil industry. The APA rounds can be seen specifically in relation to this as they try to utilize the existing infrastructure in an area. Deposits that are usually too small to be developed can be extracted as satellites because of the proximity of existing infrastructure. In this way one maximizes the extraction of known resources from the mature areas before turning to the frontier areas. An important fact to consider on the NCS is the multiple interests per field. Beside the operator there can be several owners of the resources extracted. This could for example be two or three big companies in addition to several "mosquitoes" and the Norwegian state through Petoro AS, who is responsible for the state's direct financial interest, and/or through the Norwegian state's

ownership share in Statoil which is 67 percent. This can result in a certain amount of required coordination between the parties in order to implement decisions and changes in regard to the field. (Raustøl & Svensen, 2009), (FACTS: Norwegian petroleum activity 2008, 2008)

4.13 Royalties and Taxation

The tax authority in Norway is the Ministry of Finance and the Petroleum Tax Office. There are no royalties collected on the NCS, but keeping a sustainable development pace and the ability to stay cost effective is still very important due to Norway's tax regime. This includes a special petroleum tax of 50 percent on top of the normal corporate tax rate of 28 percent, bringing the total to 78 percent. Companies may however deduct all relevant expenses such as exploration, research and development, net financial, operating and decommissioning costs. Companies that are not in tax position may carry forward their losses and the uplift with interest for deduction in subsequent tax years. This amounts to 30 percent of the investment and is deducted as 7.5 percent per year for four years including the investment year. An application may also be made for a refund of the fiscal value of exploration costs in the companies' tax returns. The most important additional taxation linked to petroleum activities are the carbon dioxide tax, the nitrogen oxides tax and the area fees. The revenues are based on a norm price set down by the Petroleum Price Council (PPC), which is supposed to be equivalent to the price one would get between two independent parts. The norm price is calculated for each month and for each field by the PPC every quarter for the preceding quarter. This gives the following formula for taxation:

Revenues (normprice)
- Depreciation (linear over 6 years)
- Exploration, research and development, decommissioning costs
- CO2 tax, Nox Tax and area fees
- Net financial costs
= ordinary tax base (tax rate 28%)
- Capital uplift (7,5% of investments over 4 years)
= special tax base (tax rate 50%)

Figure 4: Tax example NCS

The CO2 tax rate in 2008 was 0.45 Norwegian kroner per liter of petroleum or standard cubic meter of gas extracted and the NOx tax rate was 15.39 NOK per kilo of NOx released. (Raustøl & Svensen, 2009) (FACTS: Norwegian petroleum activity 2008, 2008)

4.14 Limitations on Foreign interests

The upstream market on the NCS is in general open to foreign companies and individuals. The exception to this general rule is that a physical person domiciled outside of the EEA may not acquire oil-related interests. The transfer of a license, a participating interest in a license or any other direct or indirect transfer of interests in a license such as ownership shares may not take place without the approval of the Ministry of Petroleum and Energy and the Ministry of Finance. (Raustøl & Svensen, 2009)

4.15 Statoil on the NCS

As mentioned previously, Statoil is the dominant player on the NCS through their many operatorships, refineries and distribution network. The full extent is too great to be replicated in total here, but the information is readily available through their website. As the NCS is showing declining reserves the company is mainly concerned with enhanced recovery rates, sustainable solutions and the development of renewable energy opportunities. (StatoilHydro, 2009)

4.2 Gulf of Mexico

The United States of America are currently the largest consumer of oil in the world, but also the greatest importer despite the fact that the country is the third largest oil producer in the world for both crude oil and total oil production, and the second largest producer of natural gas (Energy Information Administration, 2009). That is, even though the nation has considerable reserves these are not nearly sufficient to cover its needs. The United States produce about ten percent of the world's oil and consumes about 24 percent, which means that the U.S are dependent on foreign suppliers for about 60 percent of their petroleum needs. This situation naturally makes it very important to enhance the recovery rate from their existing fields in order to lessen their dependence on foreign imports. U.S oil production is expected to peak at 6.3 million barrels per day in 2018, mainly due to new offshore finds and improved recovery rates onshore. The Gulf Coast region accounts for the majority of U.S crude oil production as well as nearly half of its refined products output and hence is the U.S's largest supply area. In the United States all oil and gas production is under the control of private enterprises despite the fact that over 80 percent of the recoverable resources are located on federal land or in federally controlled offshore waters. The total number of active operators in the exploration and production of oil in the U.S is over 15,000. The Gulf of Mexico is a mature basin which has been developed since 1942 and has seen over 6800 platform installations since the beginning. The majority of these have been located in shallow water, but there is an emerging trend for deepwater exploration and production. The market forecast is for continued growth in this sector until 2012 in accordance with deepwater growth. (Douglas-Westwood Ltd., 2008), (OECD/International Energy Agency , 2009), (Energy Information Administration, 2009)

4.21 Policy and Legislation

The United States currently have no national energy policy, but the soaring energy prices during the first half of 2008 combined with the rapidly growing consensus regarding the climate effects of fossil fuel, has led to widespread discussion within the US government and political bodies. This discussion has mainly two countervailing points of view. The one faction is mainly concerned with reducing the reliance on petroleum in the US economy, while the other focuses

on increased domestic oil exploration and production in an effort to reduce the dependence on foreign imports as well as price impacts on the economy. There are currently three areas of debate that could affect the petroleum industry significantly. Firstly, there is the question of whether to promote increased E&P activity and if so, in which areas. Secondly, there is the opportunity for displacing the use of gasoline through proportionately increasing the use of ethanol in transportation fuels. Thirdly and finally, there is the discussion about the promotion of alternative fuel vehicles. (OECD/International Energy Agency , 2009), (Caldwell, 2009)

The United States has several instances regulating the oil industry, but essentially it is a free market situation reflecting the federal government`s strong preference for market-based regulation in the energy and environment policy area. An example of this is the extensive use of trading mechanisms to reduce air pollution. Regulation of the upstream sector of exploration and production is differentiated between State and Federal law depending on who holds claim to the area in question. Because this paper aims to discuss more than the United States I choose to narrow the focus to only include the American territorial waters in the Mexican gulf, which are under Federal jurisdiction and hence Federal Law. In the United States the title to the reservoir is held by the owner of the mineral estate. This is usually the owner of the surface rights unless the mineral estate has been specifically separated from the surface rights, should this be the case the mineral estate is regarded as the dominant estate. Hence the holder of the mineral rights will be entitled to the use of the surface to the extent reasonably needed for exploitation of the minerals in the ground. On Federal land the Mineral Leasing Act of 1920, as amended, governs exploration and production activities. Upstream activities belong under the jurisdiction of the Department of the interior who regulates these through the Bureau of Land Management (BLM), The Bureau of Indian Affairs (BIA) and the Mineral Management Service (MMS). As stated above this paper focuses on the Mexican Gulf which is part of the outer continental shelf (OCS) beyond State Jurisdiction and as such is governed by the Outer Continental Shelf Lands Act (OCSLA). This part of the sector is regulated by the MMS, who issues leases and supervises development and production to ensure that regulations are in compliance. It is currently a very interesting time with the new Obama administration in the U.S

and what its impact on American energy policy will be. (Caldwell, 2009), (OECD/International Energy Agency , 2009)

4.22 Regulation

In the United States the right for exploration, development and production of petroleum resources are regulated through oil and gas leases. This applies for both public and privately held land. In regard to privately held reserves there are no specific qualification required to perform exploration and production. But in regard to federal resources, an applicant must follow the requirements laid down by the MMS and the BLM. For the offshore deposits the MMS use a bidding procedure when granting leases or permits. The activities for any given area are controlled through the terms of the lease in conjunction with some state and federal regulations governing the protection of the environment and related matters. The duration of the leases are generally divided into on primary term, ranging from one year for proven reserves up to ten years for undeveloped areas, and one conditional secondary term. This secondary term is connected to the properties of the resources and the expected lifespan of the production. The requirement for production to carry on into a second term is not always present in a lease, but in these cases there are usually other requirements reflecting the nature of the field. Such requirements might be the drilling of test wells or the payment of a delay rental. For leases negotiated between private individuals one might find a myriad of different terms and conditions to the leases. (Caldwell, 2009)

4.23 Royalties and Taxation

The U.S Department of the interior is responsible for the collection of royalties and other payment as laid out in the Federal Oil and Gas Royalty Management Act of 1982. The task of collecting these payments on federal land is executed by the MMS. The royalty, rent or bonus is shared on a 50/50 basis with the State in which the land lies. The State in turn distributes these funds in part to the counties where the production occurs. Royalties for private lands are connected to the market value of the product and are calculated individually for each

production site and set down in the leasing agreement. On public lands the royalty rate is more closely regulated. The Mineral Lands Leasing Act regulates the onshore federal leases and prescribes a royalty rate of no less than one eighth of the value of production. Federal offshore leases are regulated by the Outer Continental Shelf Lands Act which sets the royalty rate as no less than one sixth of the value of production. There are some opportunities for royalty relief set down in the Energy Policy Act of 2005. These are granted for gas produced from methane hydrates and for enhanced oil and gas production through CO₂ injection as well as for production of oil and natural gas in water depths greater than 400 meters in the Gulf of Mexico. A point of interest is the fact that the US Congress, by means of special legislation, and the Department of the Interior have the power to modify standard terms and royalty rates. (Caldwell, 2009), (OECD/International Energy Agency , 2009), (109th U.S Congress, 2009)

The principal tax authority at the federal level is the Internal Revenue Service. Customs duties are regulated by the US Customs Service an agency of the Department of the Treasury, while State taxes are administered by a variety of state-level agencies.

Taxation in the oil sector is as follows:

“Exploration and production activities are subject to the generally applicable federal income tax regime, but special incentives such as deductions for intangible drilling costs, accelerated depreciation of drilling and production equipment, and depletion of mineral deposits are available (subject to possible limitation by the application of the alternative minimum tax). Transportation, marketing and distribution activities are generally subject to the same rules applicable to other businesses” (Caldwell, 2009).

4.24 Limitations on Foreign interests

There are no direct limitations or requirements on foreign companies or individuals acquiring oil-related interests in the United States. However the President has *“the authority to review and ultimately prohibit or suspend any foreign merger, acquisition or takeover that threatens to impair the national security of the US. The statute's reach is broad and allows for review of joint ventures and the acquisitions of minority interests”* (Caldwell, 2009).

Transactions that touch upon national security include sensitive military export controlled technologies such as seismic collection and “critical infrastructure” which includes energy assets. The reviews are executed by the Committee on Foreign Investments in the United States (CFIUS) who exercises this authority on behalf of the President. Such an investigation might be invited by parties by a voluntary notice or the CFIUS might initiate one on its own accord. A transaction “cleared” by the CFIUS in a voluntary filing renders said transaction immune to the Presidents power under this provision of the law. (Caldwell, 2009)

The Federal government has very strong views regarding corruption, as exemplified through the Foreign Corrupt Practices Act of 1977 (FCPA). This Federal law is known primarily for its two main provisions, one that addresses accounting transparency requirements under the Securities Exchange Act of 1934 and another concerning bribery of foreign officials. Especially the latter provision makes it imperative for a company hoping to conduct business in this area to keep a strong focus on their business ethics, both within the U.S and in other areas of their global operations. If a company is perceived to be in conflict with this law the consequences range from investigation and fines to imprisonment (Foreign corrupt practices act: U.S Departement of Justice, 2009).

4.25 Statoil in the GoM

Statoil has a major presence in the greater Gulf of Mexico area with over 400 leases and is involved in several projects with a strong deepwater portfolio: Offshore fields in production include; *Q field, San Jacinto, Spiderman, Lorien, Front Runner, Zia, Seventeen hands.*

Offshore fields currently under development are: *Tahiti and Thunder Hawk.*

Offshore fields currently under appraisal include: *Jack, St. Malo, Big Foot and the Caesar Unit.*

These are managed through the Houston office which currently account for 20.000 barrels a day and the level of investment has exceeded 8.5 billion USD. This region is expected to provide further expansion for Statoil through acquisitions, farm-ins and future license rounds. Statoil also have a 32.5 percent share in Chesapeake`s Marcellus shale gas acreage onshore and although this is not part of their Gulf of Mexico portfolio it is an important addition to their gas value chain in the U.S. (StatoilHydro, 2009)

4.3 Brazil

Brazil has become an increasingly important player in the global oil industry with numerous big deepwater discoveries over the years and has attracted several of the world's big international oil companies. In recent years the oil production of Brazil has grown rapidly as major deep- and ultra deep-water fields in the Campos Basin has begun producing. This area is responsible for about 80 percent of Brazilian oil production, but the neighboring basins of Santos and Espirito Santo are showing promise through several new large discoveries. The strong growth in this sector is expected to last because of the continued high deepwater E&P activity. Brazil boasts the second largest crude oil reserve in South America through its, approximately 7.5 million square kilometers of sedimentary areas. These are distributed between 29 basins with very favorable geological conditions for the discovery of new exploitable reserves of petroleum, of which 2.5 million square kilometers are located in offshore areas. Currently there are 533 blocks covering approximately 285000 square kilometers classified as exploration areas under concession, this corresponds to just 5 percent of the Brazilian sedimentary basins.

Brazil became self-sufficient in oil during 2006, after having experienced nearly 300 percent growth in the oil industry since 1997. According to the National Petroleum Agency (ANP), the total production of oil in the country reached approximately 628 million barrels in 2006 with a production of around 1.7 million barrels per day, and estimated reserves reached approximately 12.2 billion barrels. The offshore production in Brazil is expected to grow by about 31 percent between 2007 and 2012 to approximately 2.3 million barrels a day.

Expectations regarding Brazilian offshore gas production are also positive, with a projected growth from 9 billion cubic meters per annum in 2007 to around 27.5 billion cubic meters in 2012. These figures show the rapid growth of the Brazilian oil sector and the potential for future operation in the area. Currently there are 55 oil companies involved in exploration activity within Brazil while there are 17 companies involved in production or development of production in the country, though most of these producers are smaller Brazilian companies.

(Douglas-Westwood Ltd., 2008), (Espinola de Lemos, 2009), (Energy Information Administration, 2009)

4.31 Policy and Legislation

Brazil operates with a federal monopoly concerning all activities in relation to their oil and gas resources as set down in the Brazilian Constitution. In effect this means that the Federal union holds title over all the mineral, natural deposits. Included in this is the diversification of surface and subsurface rights for both private and public lands, all subsurface rights are the property of the federal union and as such can only be explored by means of a concession agreement when related to oil and gas. Concessionaires are however entitled to the property of their production. A relaxation of the Monopoly came with Act no. 9478, dated August 6, 1997, also known as the "Petroleum Law". This law is responsible for the creation of the National Council of Energetic Policy (CNPE) and the National Petroleum Agency (ANP). The legal framework regarding the oil industry is comprised of: the Federal Constitution; the Petroleum Law; and the ANP ordinances and resolutions. The Country's energy policy concerning oil activities is anchored in the Petroleum Law and is determined by the government through the CNPE:

" The government aims at increasing the country's reserves, maintaining self-sufficiency in oil, and the development of domestic markets for goods and services, by setting local content rules that must be observed by concessionaires in the oil exploration and production phases. Furthermore, concessionaires must give equal opportunities to Brazilian suppliers when contracting goods and services, as provided for in the concession agreements" (Espinola de Lemos, 2009).

The Petroleum Law further decree that Exploration & Production activities (upstream) in the oil industry must be governed by concessions, preceded by bids and implemented by agreements. The same law further stipulated the change-over from a monopolistic state-owned company in charge of the sector to a competitive free market status, thereby facilitating private capital inflow. Consequently, the national Brazilian oil company Petrobras, while still the dominant player in the sector, has been developing a widespread program of partnerships with other companies in the exploration and production area as an integral part of its business strategy (Petrobras, 2009) . These joint ventures correspond to a widely adopted practice on the international oil scene where companies endeavor to share the risks inherent in Exploration

and Production projects, which also characteristically involve heavy investment. (National Petroleum Agency, 2009) , (Brazilian Government, 1997), (Espinola de Lemos, 2009)

4.32 Regulation

The main regulatory body for the oil industry in Brazil is the National Petroleum Agency (ANP). This agency is responsible for the definition of blocks and for setting the technical, economic and legal standards required for operations in Brazil. The ANP is also tasked with the awarding of bids for exploration, development and production. These are settled through bidding proceedings with the winner being granted the concession in return for a signature fee. Participants must comply with specific bidding qualifications set forth in the applicable tender protocol. These rounds are open for participation by both domestic and foreign companies, but in the case of foreign companies, they are required to incorporate a Brazilian company in order to directly perform oil activities. The acquisition of interests in the sector is more relaxed as long as the goal is to not directly perform E&P activities. The criteria for the evaluation of bidding offers are contingent on the local content (minimum and maximum percentages of local investments for the acquisition of goods and services); the signature bonus (a fee offered in exchange for the concession); and the minimum exploration programme (work units, which must be fulfilled by the concessionaire in the concession area during the exploratory phases). The ANP are additionally in charge of the supervision regarding the implementation of contracts. (Espinola de Lemos, 2009), (National Petroleum Agency, 2009)

4.33 Royalties and Taxation

Brazil operates with a royalty system concerning their petroleum resources as set down in the Petroleum Law. Royalties are paid for both onshore and offshore production, the regulation of these are specified in the respective concession agreements as well as guided by a specific rule concerning the government take for each type. The royalty rate, which is specified before a bid round commences, may vary from a minimum of 5 percent to a maximum of ten percent of the total amount of oil produced in a certain field. Payments are made in Brazilian currency every month and starts with commercial production in the respective field. There is also a special

participation to be paid for fields that have a high output. This is calculated on the basis of the amounts produced, the extraction location and the number of years of production. The special participation fee will be calculated quarterly and is levied on the net production revenue of each particular field. Additionally in the case where a field has to pay special participation for any given trimester, the concessionaire is required to commit one percent of the gross revenue of the field for research and development. There may also be payments for occupation or retention of areas; these are dependent on the sector, the exploratory phase and the exploratory period. (Almeida, 2007) , (Deloitte Touche Tohmatsu, 2004)

Brazilian taxation is set down in the federal constitution and regulated through the National Tax Code. There are general tax rules applicable to the federal union, states and municipalities, but also different categories of taxes such as corporate income tax, social contribution on profits and environmental contribution, which is a tax levied on projects impacting significantly on the environment. There is also exacted a contribution for intervention in the economic domain as a federal tax. This is levied in connection with certain contracts and affects the remuneration for services performed by foreign beneficiaries. Brazil also operates with a special customs regime that contains; drawback and the “repetro” regime. Drawback provides an incentive for exportation through suspension, exemption and refund of taxes concerning inputs imported for the production of export goods. The “repetro” regime provides a total suspension of federal taxes on equipment and materials temporarily imported to Brazil for the express use in research and exploration activities for oil. (Espinola de Lemos, 2009)

4.34 Limitations on Foreign Interests

Under Brazilian law concession contracts for exploration and production activities in the oil industry is only allowed for Brazilian companies. However foreign companies are allowed to participate in ANP bidding procedures, but in order to execute a concession contract and directly perform E&P activities they need to incorporate under Brazilian law. There are however no limitations on requiring interests in Brazilian companies. (Espinola de Lemos, 2009)

4.35 Statoil in Brazil

Statoil is well established in Brazil which is of particular interest due to the fact that the company can fully employ their expertise in deepwater technology and routines here. In Brazil the company has a 100 percent stake in the Pelegrino field after gaining Anadarko's remaining 50 percent during 2008. Additionally they have seven exploration licenses and three more exploration licenses won in the 2006 round that are awaiting signature. These are divided among the Campos, Camamu-Almada, Jequitinhonha, Espirito Santo and Santos Basins. Statoil is expected to become the largest international offshore operator in Brazil in terms of production by 2012. (StatoilHydro, 2009)

4.4 Russia

Russia is an energy superpower with large deposits of oil and the biggest natural gas deposits in the world. The exact volume of the reserves are unknown as these are regarded as a State secret, but expert estimates place proven oil reserves between 60 and 180 million barrels, while gas reserves are estimated at between 90 and 100 billion tons of oil equivalent. Russia is expected to have the eight largest oil reserves in the world and was ranked as the largest producer of crude oil in 2007 and the second largest in total oil production, in addition to being the largest natural gas producer. Most of Russia's oil reserves are located onshore, but the potential for oil and gas fields located on the Russian Continental Shelf (RCS) is high as exemplified by the Sakhalin 2 and Shtokman fields. There have been an aggressive development in the Russian offshore oil and gas sector in recent years and this is expected to continue, especially in the Barents and the Caspian Seas, and offshore oil production is set to double between 2007 and 2012 (Douglas-Westwood Ltd., 2008). Hence Russia is of immense interest and importance for oil companies wishing to expand their listed reserves. After the dissolution of the Soviet Union, Russia has been open for trade with the world, but the regulation of the oil sector has been very unclear. Russia has also increasingly operated with a nationalistic energy profile which lately has restricted the access to their petroleum resources. (Frolov & Patterson, 2009), (Energy Information Administration, 2009)

4.41 Policy and Legislation

In Russia all subsoil resources belong to the state up until the moment of extraction. There is a distinction between surface rights and mineral rights, where surface rights gives no claim to the natural resources located under the plot. But a subsoil license usually provides the holder with title to the extracted deposits. Kremlin policy makers exhibit an inclination to advance the Russian State's influence in the energy sector with the goal of exerting greater control over oil production and increasing the focus on the development of the domestic market (Kuszniir & Pleines, September 18, 2007). Hence state ownership in the oil industry has been growing in recent years in combination with increased restrictions on foreign investment, such as high taxes on oil exports and extraction. In conjunction with this there has also been an increased

centralization drive in the sector by transferring nearly all power over to federal jurisdiction and minimizing the regions say in subsoil matters (Tompson, 2005). Expanded State intervention combined with restrictions on foreign investment poses a serious risk to efficiency within the petroleum sector. An example of this nationalistic policy is given by the fact that Russia's State-influenced oil and gas companies are obtaining controlling stakes in previously foreign-led projects such as the formerly Shell led Sakhalin II project. State-owned export facilities have grown at breakneck pace, while private projects have progressed more slowly or have been met with roadblocks by State-owned companies or by various government agencies.

The primary regulation of the Russian oil and gas sector is set down in the law No. 2395-I on Subsoil Resources of Feb. 21, 1992 as amended the Subsoil Law. This law was proposed amended in 2005 by the Ministry of Natural Resources of the Russian Federation (MNR). The proposed amendments were aimed at restricting the participation of foreign controlled Russian companies in certain fields, on the pretext that these fields have a special significance regarding the defense and economic security of the State. The federal law "On the Continental Shelf of the Russian Federation" of Nov. 30, 1995 as amended provides regulations for operations in offshore areas beyond the 12-mile territorial sea limit. A new Federal Law "On Procedures for Foreign Investments in Companies of Strategic Significance for National Defense and Security" was passed on April 16, 2008. This law imposed restrictions on foreign investors trying to acquire control over Russian companies that are deemed to have strategic importance, but more importantly it introduced amendments to the Subsoil Law. One of the key introductions in this law was the concept of sites of Federal significance and ways of limiting the foreign participation in projects on these sites (Polonsky, Josefson, & Stepanov, 2006).

In addition to the previously stated laws, the Federal Law on Production Sharing Agreements of 30 December 1995, as amended (the PSA Law) has impact on the regulation of the petroleum industry. This law concerns the legal framework regarding Russian and foreign investment in the exploration and production of mineral resources under product sharing agreements (PSA's). The Ministry of Industry and Energy (MIE) is the authorized body in respect to PSAs as set down in the regulations concerning the functions and powers of said ministry. PSAs are today

considered to be largely inefficient in attracting foreign investment to Russia due to the difficult procedures involved in the process. Most of the few PSAs enacted in Russia even predate the PSA Law and have been altered to fit Russian interests. (Frolov & Patterson, 2009)

4.42 Regulation

In order to perform Oil E&P activities in Russia, a company needs to hold a license or be hired as a contractor by a holder of such a license. In Russia, these are issued through tenders or auctions, the only exemption being production licenses granted through the conversion of an exploration license upon commercial discovery. In principle, licenses for on-shore activity are open for both Russian and foreign companies and individuals meeting the relevant requirements, but in reality subsoil licenses are seldom granted to foreign entities. As described in detail further down there is prohibition in effect for non-Russian entities to hold off-shore licenses. Subsoil licensing in Russia is found under the jurisdiction of the Federal Agency for Subsoil Use (Rosnedra) which is an administrative body with both regional and federal offices. In addition the Federal Supervision Service in the Domain of Environmental Use (RosPrirodNadzor) is the administrative body responsible for overseeing state control in respect of subsoil management. This includes the supervision and control of geological exploration and efficient exploitation of subsoil resources. Both these agencies are under the jurisdiction of the Russian Ministry of Natural Resources (MNR), which is the main regulatory body concerning the Subsoil Law. Another governmental instance of importance is the Federal Service for Ecological, Technological and Nuclear Supervision which reports directly to the government and is responsible for environmental issues and industrial safety compliance.

According to the Subsoil Law the maximum time limit on exploration licenses are five years for on-shore activity and ten years for off-shore activity, both with the contingency for extension if required for the completion of works. Production licenses on the other hand may be granted for the entire lifetime of the project, although in reality they are usually granted for a 20-year period with the opportunity for extension. There is also the opportunity for being granted a combined E&P license issued for the lifetime of the project, but the generally these are granted

for 25 years with the possibility for extension. (Frolov & Patterson, 2009), (Danilov, 2006) , (Russian Ministry of Natural Resources, 2009)

4.43 Royalties and Taxation

There are no direct royalties in Russia, but rather a system of fees connected with subsoil use. The initial fee is connected to the grant of subsoil rights, which is the payment made by the winner of a tender or auction to the Russian government. There is also a fee connected to the issuance of a license, which are generally set at an insignificant amount as recompense to the government for the work involved in the issuance and are decided on a case-by-case basis. Holders of exploration licenses are required to pay a regular subsoil use fee which is calculated based on the total area of the exploration and the established government rate. There are also established fees for participation in tenders and auctions as well as for geological subsoil information obtained from the Russian State authorities.

Tax authority in Russia is wielded by the Federal Tax Service. Companies involved in oil exploration and production in Russia, are required to pay a mineral extraction tax on top of the general tax regime applicable to all companies doing business in Russia (i.e. profits tax, VAT, property tax, payroll-related taxes and certain minor regional and local taxes). This mineral extraction tax on oil, with certain exemptions from the general rule, is currently set at 419 rubles per ton of extracted oil. This is further multiplied by coefficients based on a specific formula that takes world oil prices and field maturity into account. There has been some discussion of lowering this direct extraction tax for fields that improve the extraction rate and thus the lifetime of the field, however this was mainly an issue before the oil price started falling, but might be a possibility once more when the oil price recovers. There is a different tax regime for companies operating under PSAs, depending on the PSA terms and regional and local legislature. Differences can concern exemption from property and transport tax with respect to fixed assets and vehicles used directly for PSA purposes, or refunds for various taxes previously paid to budget. The general procedure is that the oil and gas extraction tax is

reduced by half up until the planned commercial production is achieved. (Frolov & Patterson, 2009),

4.44 Limitations on Foreign investment

As mentioned above there are strict limitations on foreign investment in Russia due to the increasingly nationalistic energy policy. The most recent addition to the legal framework that curtails foreign interests is the concept of sites of federal significance. Plots that are classified as sites of Federal significance are those which include one or more the following criteria:

- “Subsoil plots containing deposits and showings of uranium, diamonds, high purity quartz, the yttrium group of rare earths, nickel, cobalt, tantalum, niobium, beryllium, lithium, or the platinum group of metals (irrespective of the size of the deposits).
- Subsoil plots containing the following reserves, as evidenced by the State Register of Reserves, as of January 1, 2006: recoverable oil reserves above 70 million tons, gas reserves above 50 billion cubic meters, hard-rock gold reserves above 50 tons, or copper reserves above 500 thousand tons.
- Subsoil plots located in the inland sea waters, territorial sea waters, or on the continental shelf of the Russian Federation.
- Subsoil plots that can only be developed using land used for defense and security.”
(Frolov & Gomonov, 2008)

The users of subsoil plots of federal significance may be legal entities registered in the Russian Federation. When foreign companies are participants in tenders and auctions, limitations regarding these strategic subsoil plots have been set so that a preliminary consent is needed from the Russian government for acquisition of 10 percent or more shares in, or control over a company holding subsoil rights. The limitation is stricter for foreign States, international organizations and companies under their control, where the level required for a preliminary consent is set at 5 percent. For offshore fields there is a prohibition in effect against foreign investors acquiring controlling interest or 50 percent or more shares in companies holding subsoil rights. Furthermore users of subsoil plots on the Russian Continental Shelf (RCS) may

only be legal entities established in the Russian Federation and have at least five years of experience in developing subsoil plots on the RCS. There is also a requirement for the charter capital that the State hold a share of 50 percent or an entity, through which the State holds the right to direct or indirect disposal of more than 50 percent shareholder level votes, control 50 percent. (Frolov & Gomonov, 2008)

4.45 Statoil in Russia

Statoil has been present in Russia since the early 1990`s, but their commitment to the area is limited to the Shtokman and Kharyaga fields in the upstream sector. In regard to the Shtokman field, the company owns a 24 percent interest in the Shtokman Development AG, which is responsible for the development of phase one of the project, but the company have no direct ownership of the field, which is the largest offshore gas field in the world with an estimate of 3.8 trillion cubic feet of gas and 31 million tons of condensate. The deal is regarded more as an option than a direct ownership stake and it is therefore dubious if deposits from Shtokman can be recognized as additions the listed reserves of the company on the international stock exchanges (Øverland, January 22, 2008). Although the Development AG is set to operate the field for the first 25 years after commercial production is started, it is dependent on a final investment decision planned to be executed during 2010. The company also has a 40 percent stake in the Kharyaga oil field, which is a producing field operating under a PSA. In the downstream area the company operates a network of retail stations within the Murmansk and Pskov regions as well as in St.Petersburg through a subsidiary. Statoil has recently signed an intention deal with Gazprom concerning joint research, development and production of petroleum resources in the northern areas of both Russia and Norway. The deal is set to last three years and is a sign of continuity and long term commitment. Statoil comments that this only natural as Norway and Russia are strategic partners and share possibilities in the arctic areas (Tjelta, 2009). (StatoilHydro, 2009)

5.0 Analysis

5.1 Statoil

Statoil, like most of the oil companies in the world, struggles to replace their reserves and is thus ever expanding into new areas of exploration to improve their reserve replacement ratio. For 2007 this rate was 86 percent for Statoil and their moving average for the past three years have been 60 percent. This means in effect that the company is shrinking and that continued expansion is important to bring the rate over 100 percent to secure renewed growth for the company. With this in mind, the company has had exploration as their main strategy since 2004. For 2008 however, the replacement ratio has been no more than 34 percent. This has been explained by a high production rate and the fact that new discoveries require time to mature before entering production. If the total resource base is included instead of the strict definition of oil reserves in the calculation, the situation appears more positive. The total resource base of the company has increased by seven billion barrels the last two years and is not set at 20 billion barrels. (Lindeberg, 2008) , (Bjerke, 2009) , (DN.no, 2009)

5.11 TCE – Model Statoil

The TCE – Model has been adjusted to fit Statoil Hydro as a company and the situation this paper focuses on, namely the declining oil reserves and the regulatory climates in which the company operates. The two forms of institutional regulation that mainly impacts on company operation are tax regulation and limitations on foreign investment. The threat of substitutes factor have been removed from the industrial based view because there are no viable short term substitutes to oil and natural gas in the current energy market. The power of buyers' variable has also been removed because it has no impact on the focus of this paper. This is because no single buyer, with the possible exception of the U.S strategic reserve, has any significant impact on the oil price as this is closely correlated with the global economic situation. The continuing financial crisis and the rapid fall in the oil price until it stabilized on approximate 2004 levels before starting its slow recovery is an example of this. The updated model can be seen below.

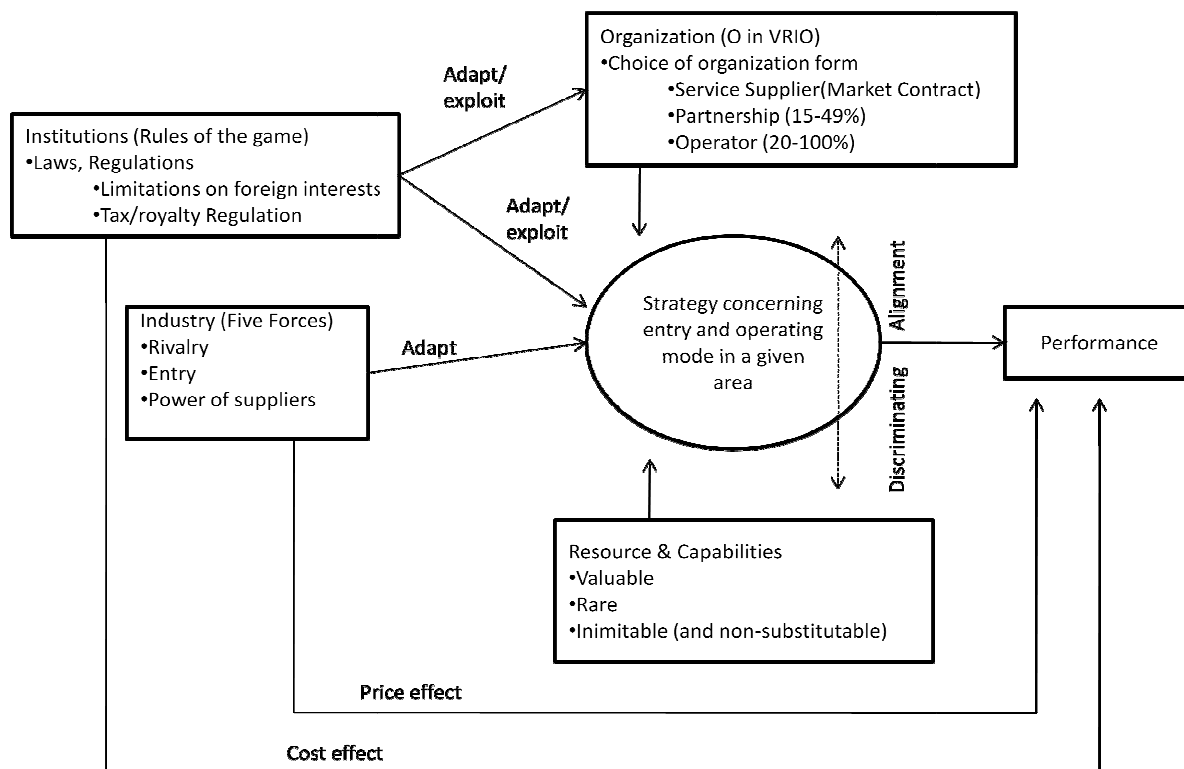


Figure 5: TCE-Model Statoil

5.12 Note on Supplier relations

According to the company annual and sustainability report for 2008, Statoil frequently employ local suppliers due to geographical constraints or because of political requirements regarding local content in foreign countries. This is sometimes problematical due to the high demands placed on suppliers to this industry regarding health, safety and the environment (HSE), not to mention the technical standards required to operate efficiently. Not all areas boast suppliers of the necessary levels and so other measures must be enacted. This can be; to import the goods needed from another area despite the cost, or as Statoil is now doing in northwestern Russia, investing with the goal of developing a competent local supply network. This is done to enhance the local Russian participation in oil and gas projects in general and the Shtokman project in particular. The company is also fostering Russian-Norwegian cooperation through sponsored conferences, matchmaking events and venues to help Russian and Norwegian companies find partners. (StatoilHydro, 2008), (StatoilHydro, 2009)

5.13 Concerning Risk

There are a number of factors that affect the financial results of operations. For Statoil the most significant are the ones that affect the price they receive in NOK for their products. These include the level of the oil and gas prices, the trends in the exchange rate between the USD and NOK, equity production and entitlement sales volumes of liquids and natural gas, available petroleum reserves and the expertise as well as the level of cooperation between Statoil and its partners in the extraction of said reserves, and asset portfolio due to acquisitions and disposals. New trends in the international oil industry might also affect the financial results, included in this we find potential actions by governments and other regulatory authorities in the areas where the company is present. Other factors that might contribute are refining margins, increasing cost of oilfield services, supplies and equipment, increased competition for exploration opportunities and operator licenses. Additionally, potential or continued actions by the members of the Organization of Petroleum Exporting Countries (OPEC) might affect price levels and demand. Possible deregulation of the natural gas market is also a risk moment as this could cause substantial changes to existing market structures and the stability of prices. (StatoilHydro, Statutory report, 2009)

5.14 V.R.I.O analysis for Statoil

Capabilities	Valuable	Rare	Inimitable	Leveraged in Organization
Capital	+	-	-	+
Distribution network	+	-	-	+
Deepwater technology/procedures	+	+	(+)	+
Carbon Capture technology	+	(+)	-	(+)
Etchical Awareness	(+)	(+)	-	+
Environmental Focus	(+)	(+)	-	+
National Oil Company	+/-	(+)	(-)	+
Insights on Organization and Entry	+	-	-	+

Figure 6: V.R.I.O Statoil

Capital

Capital is naturally very important and valuable in the international oil industry, as it is necessary to be able to compete for new finds and in the development of new technology. But it is hardly a rare commodity as all of the major international oil companies have a strong capital base due to the lucrative nature of the industry. Statoil actively uses their funds to acquire new resources and provide funding for research which proves this variable is leveraged within the organization.

Distribution Network

A distribution network is of utmost importance to an oil company and is therefore very valuable, but it is seldom a rare trait, unless one happens to be the sole possessor of access to strategically important pipelines, but it is not an inimitable trait. Most of the pipelines Statoil use are operated by Gassco AS, a company wholly owned by the Norwegian State, but the pipelines themselves are owned by the company Gassled, in which Statoil owns 32 percent. The pipelines on the NCS are part of the biggest offshore pipeline gas transportation network in the world. The distribution network is without doubt leveraged in the organization to provide delivery of the company's products.

Deepwater Technology

Deepwater technology and operational procedures are valuable assets for a company operating in such environments and looking to expand into similar new areas. This is a relatively rare asset as few companies excel at this form of production and especially rare for Statoil as the world leader within this field. However this technology and knowledge is not inimitable, but it requires cost, time and research to obtain it and so it provides an edge in the short term. Statoil obviously uses this technology and knowledge in their operations on the NCS which provides the basis for said assets. But they have leveraged these in the organization by utilizing them in the Gulf of Mexico, in Brazil and to gain access to the Shtokman Development AG.

Carbon Capture Technology

Statoil claims to be the world leader in carbon capture technology which without doubt is a valuable asset, especially with the increased focus on environmental issues by both people and governments across the globe. To be the world leader in this technology is evidently a rare skill, but this is not inimitable. Others might gain this distinction through time and research, so continued focus on this technology is needed to maintain the position. This technology is leveraged in the organization through its use in CO₂ injections for improved yields from fields. It is also leveraged for the express use of limiting emissions in a significant way as Statoil's operations on the NCS are the most energy efficient in the world, emitting only about one third of the world average per barrel produced (StatoilHydro, *New energy realities*, 2009). But this technology could also be used on a wider scale as exemplified by the decision to cancel the plans for a carbon capture facility in relation to Statoil's tar sands project in Canada. This decision goes against their statement to be an environmentally concerned company, but has been explained by the high costs related to the project, a project that is currently in the red because of the low oil price even before one accounts for the costs of building a carbon capture facility (DN.NO, NTB, 2009) (Bjerke, 2009).

Ethical Awareness

Ethical awareness is an important focus to employ, but it is only valuable in those areas that put stock in such values. In other areas it might be seen as counterproductive in regard to prevalent customs that cannot be followed because they violate ethical standards. These include gift giving, introduction fees etc. which might be viewed as corruption according to the ethical document. The inability to follow such customs might very well cost a company licenses or access to exploration areas. So this focus will be valued in most of the western hemisphere and other well regulated and transparent areas, but might serve as a hindrance in other areas where less ethical companies will be more successful. We find an example of this in regard to the Chinese oil companies operating in Sudan. This focus is relatively rare, but more and more companies implement ethical conduct in their strategy documents, especially because of the United States view on corruption and the repercussions this might have, but also as a

preemptive strike to protect the company's reputation. Statoil expects not only their employees, but also suppliers and other firms connected to the company to adhere to their ethical standards. Statoil also employ letters to their business partners of what is considered appropriate behavior and approach towards their employees. These facts suggest that Statoil can be considered an emerging ethical multinational company, which is stage 4 on a scale of 1-5 (1 being an amoral MNC, 5 being an ethical MNC) concerning ethical development in MNCs (Gooderham & Nordhaug, 2003).

Environmental focus

There is a rising concern for the environment globally, mainly due to the greenhouse effect and the Kyoto agreement, which has made emissions more expensive. Hence an environmental focus is a very valuable asset for public opinion and governmental goodwill. The oil industry has traditionally been considered rather "dirty" with oil spills and emissions of CO₂, NO_x etc. Statoil's strategy of an environmental focus is innovative and still quite rare, though is far from inimitable and other companies are following suit. This focus has been leveraged in the organization by consideration for the environment taken into account for new developments and funding for environmental research provided. The company's decision to test fully floating wind turbines in conjunction with the fact that Statoil has entered into a partnership with the Norwegian power company StatKraft to build a large floating windmill park outside of Norfolk in England, can be seen as a commitment to this environmental focus (Fadnes, 2009). The company has also invested in research of tidal power, wave power, hydrogen and biofuel, but these investments are insignificant compared to the investments in conventional oil and gas (Lindeberg, 2009). The truth is that no alternative energy source can so far match oil and gas for energy density or convenience, but the replacement of a coal power plant with a gas plant may reduce emissions of up to two thirds. Hence through their massive export of natural gas Statoil contributes significantly to the reduction of emissions in mainland Europe and the U.K. (StatoilHydro, New energy realities, 2009)

National Oil Company (noc)

Statoil is a national oil company through the Norwegian State's majority ownership. The global situation at present is that national oil companies own most of the world's known reserves led by a few giants such as Saudi Aramco, the National Iranian Oil Company, Iraq National Oil Company, Kuwait Petroleum Corporation, Abu Dhabi National Oil Company and the state owned Venezuelan oil company PdVSA. National Oil Companies have to balance their commercial efficiency with social responsibility and as such might have better understanding for their counterparts in other countries. Hence Statoil might have a better bargaining position when seeking licenses in areas predominantly under the influence of a national oil company. On the other hand this distinction might be experienced as a hinder in areas that place great emphasis on the free market and are suspicious of state intervention such as in the United States of America. However there are about a hundred national oil and state companies across the globe so it is not all that rare a distinction, but not all these are involved in international activities and it still provides an edge over non-national international oil companies in areas where noc's are valued. Nor is this an inimitable approach to the oil industry, but it is now a rare occurrence for new national oil companies to be launched. This is leveraged in the organization of Statoil as this is part of the organizational culture. Statoil also leverages this through their understanding of this as an asset to be used in negotiation. (PWC, 2005)

Insights on Organization and Entry

The external mechanisms are derived from the local institutions, especially laws and regulations are important external mechanisms, and imposes restrictions upon the organization's ability to perform in that environment. That is, they have a significant impact upon which organization form (internal mechanisms) the company can employ for optimal performance in that environment. In furtherance of this a company can acquire certain insights of how to lessen and exploit the institutions and regulations present in an area for its own benefit. Such insights concerning corporate capabilities include economic incentives, administrative control and conflict settlement and are instrumental in choosing the optimal organizational form in any given area. Is also provides the basis for a decision concerning the value of actually committing

the full force of company resources and capabilities or if a passive ownership structure will prove a better option. The economic incentives depend on the entry forms open for a company, including relative share, in a given area that present the best economic results (see table below). The extent of administrative control a company can exert in a given area hinges on the corporate form of operation and the company share in that operation. Conflict settlement will depend on the number of partners present in a project and the company's relative share in that project in the case of internal conflict. In a conflict with the authorities of a given area, conflict settlement will rely heavily upon to which degree the rule of law is present in that country. That is, how strong are written contracts, how transparent, just, independent and easy to traverse is the court system. Such insights are valuable for picking the optimal organization form for entry and continued operations, but they are hardly rare or inimitable as such knowledge is present in most MNC's. It is obvious that such knowledge has been leveraged in the organization as cost efficiency and optimal performance is the first objective of all successful MNC's. The most common organizational forms in the international oil industry have been listed below with their respective strengths and weaknesses concerning economic incentives, administrative control and conflict settlement and summarized in a table.

Market Contract

Market contracts can have strong economic incentives; e.g. if the company's profit is tied to a specified percentage of the revenue it has an incentive to stay cost effective. As a contracted party the company will have no administrative control beyond that which is specified in the contract. The flip side of this is that the company will have a strong foundation for conflict settlement as the details of the relationship is specified in the contract.

Hybrid Forms

Hybrid forms such as the joint venture might provide economic incentives, but these usually become a question of relative size. A minority partner will seldom have any strong economic incentive to fully integrate its resources due to their lack of administrative control and markedly weaker position in a conflict settlement. A majority partner on the other hand will have strong economic incentives to fully integrate their resources as it will have considerable administrative control and the stronger position in a conflict settlement. Within the oil industry there is another factor that is important, namely who holds the operatorship. The relative size is of lesser importance as the operator holds administrative control and as such a minority partner as operator would have a strong economic incentive to fully integrate its resources. This would hold for a minority partner who holds a reasonable share, if the share was ten percent then there would be little incentive. The share would have to be at least 20 percent for the added control of an operator ship to provide any significant economic incentive to integrate the company's resources and capabilities.

Wholly Owned/Hierarchal

A wholly owned hierarchal organization form will have little use of considering economic incentive as they operate on a budget and retain the entire revenue stream. Increased revenue is welcome as long as it does not bring any added tax burden. This form will have full administrative control over its resources and capabilities and there is little ground for conflict settlement as it is a single company.

	Market Contract	Hybrid Forms	Wholly owned/Hierarchal
Economic Incentives	++	+	0
Administrative Control	0	+	++
Conflict Settlement	++	+	0

Figure 7: Organizational Forms

Area Analysis

5.2 Norwegian Continental Shelf

Norway has a very strong State presence in the petroleum sector. According to Doing business 2009 (DB 2009), a publication of the World Bank and the International Finance Corporation which measures the ease of doing business across the following variables; starting a business, dealing with construction permits, employing workers, registering property, getting credit, protecting investors, paying taxes, trading across borders, enforcing contracts and closing a business, Norway is ranked as number 10 of 181. This ranking is decided on the basis of a specific case considering a medium sized company, but it still provides an important insight concerning the level and transparency of regulation for the area in question (The World Bank, The International Finance Corporation, 2009). Norway is ranked as number 14 on the Corruption perceptions index table (CPI) with a CPI of 7.9 (scale 1-10), which is evidence of a low level of corruption (Transparency International, 2009).

5.21 Institutions

The Norwegian Continental Shelf is a very costly area in which to perform operations, mainly due to the special petroleum tax rate of 50 percent that comes on top of the normal corporate tax rate of 28 percent, but also because of the lesser fees connected to CO₂ and NO_x emissions and the area fee. There is however no royalties collected on the NCS, a fact that relieves some of the burden incurred by the high tax rate. According to the paying taxes variable of DB 2009, Norway is ranked as number 18 with a total tax rate of 41.6 percent over four installments, also this variable is for a medium sized company case, but provides important insight concerning the regulative difficulty connected to paying taxes.

5.22 Industry (5 forces)

Rivalry

Rivalry is present on the NCS, but as there are no bidding procedures or signature fees in this area the scope of rivalry is limited. There is however a large number of companies present, both large and small, which vie for the blocks included in concession rounds. Another point of interest is the Norwegian State's direct economic engagement in the sector governed by Petoro and the majority share it holds in Statoil ASA. This means that the Norwegian State holds a vested interest in the sector and thus their impartiality in the distribution of exploration blocks might be questionable. An example of this can be seen in relation to the 20th concession round where Statoil gained five of the total 21 new production licenses, and the 2007 APA round where the company was offered interest in 12 production licenses and gained the operatorship for nine of these (Norwegian Ministry of Petroleum and Energy, 2009). The best way of leveraging oneself on the NCS is through good technological, geological and environmental expertise combined with financial capability. In short professional good conduct with an eye for sustainable long term production will be valued by the NPD. Conclusion: High rivalry, but tightly controlled.

Power of suppliers

There are no clauses for preferential treatment of Norwegian suppliers for E&P activities on the NCS. That said, the proximity of these suppliers combined with their expertise for deepwater operations in harsh weather grants them a certain edge. However the UK and Denmark has similar proximity and knowledge and British and Danish suppliers will as such be able to compete against Norwegian suppliers for contracts on the NCS. However one needs to consider import regulations and taxation on foreign goods and services, something which usually provides a certain amount of protection for the domestic supplier. Statoil has been able to reduce supplier costs as oil prices have declined by implying the threat of reduced activity on the NCS by virtue of their large engagement in the sector; it is however doubtful that any other player on the NCS has the market share required for duplicating this feat (Lindeberg, 2009). Conclusion: Medium/Low supplier power

Entry

There are no real barriers concerning entry on the Norwegian Continental Shelf, but gaining access for a new company can be difficult because of the total State regulation of this sector. Especially since the NPD puts emphasis on past experience with a company in addition to technical and geological understanding. Hence a good international reputation will be very important for an international company seeking access to the NCS. The addition of more players on the NCS will increase the competition for licenses, but would most probably have little impact on Statoil's performance in this sector. Conclusion: Low threat of entry.

5.23 Organization Form

There are no specific rules regarding allowed ownership structures on the NCS, but there are no fields fully developed and operated by a single company. As previously mentioned many licenses are distributed to groups of applicants, this suggests that joint ventures and contractual agreements are much employed organizational forms on the NCS. The most common form of organization in the development of petroleum deposits is a partnership with several participants, with differing shares of the production and one operator. This can be regarded as a multi-party joint venture. The densest form of partnership is one with one operator and the remaining share of the project owned by the State through Petoro AS. Hence it is hybrid forms that are prevalent on the NCS. Originally this system was meant to divide cost and risk between the participants because of the uncertain nature of the deposits as well as provide the basis for spillover effects from the American companies to the newly created Norwegian companies. Today this partnership model provides a fostering environment for the smaller Norwegian companies unable to participate internationally. This provides added security for the investment, share of risk and learning opportunities from the larger companies. The shares in projects and fields on the NCS are tradable in the market, but are subject to approval by the MPE and the Ministry of Finance. This allows the larger companies the opportunity to increase their share in projects they find interesting, up to a level where they feel comfortable in submitting their full resources and capabilities in its development and

production. This also allows for the option of selling shares in projects a company find less interesting or deem it will be unable to obtain the required level for full, active participation.

5.24 S.W.O.T, Statoil - Operating on the NCS

	HELPFUL	HARMFUL
INTERNAL ORIGIN	<p><u>Strenghts</u></p> <ul style="list-style-type: none"> • Long experience and presence • Close connection to the state • Major energy company with strong financial capability • World leader in offshore technology • World leader in carbon capture and storage 	<p><u>Weaknesses</u></p> <ul style="list-style-type: none"> • State has majority ownership • Heavy media exposure as Norway's largest company and because of the governments majority share
EXTERNAL ORIGIN	<p><u>Opportunities</u></p> <ul style="list-style-type: none"> • Capitalize on state interest in major discoveries • Use the dominant position as leverage in supplier relations 	<p><u>Threats</u></p> <ul style="list-style-type: none"> • State might assert control over important decisions • Heavy tax burden • Payments for emissions and area fees

Figure 8: S.W.O.T - NCS

5.3 Gulf of Mexico

The Gulf of Mexico is a well developed sector expected to peak in 2012 (Douglas-Westwood Ltd., 2008), but most of the easily accessible reserves have been developed so that further expansion is mainly tied to deep water deposits. According to Doing Business 2009 the United States are ranked as number 3 of 181 on the ease of doing business. The United States are ranked as number 18 on the CPI table with a CPI of 7.3, which correspond to a low level of corruption (Transparency International, 2009).

5.31 Institutions

The royalties for the offshore deposits in the GoM is set at no less than one sixth of the value of production which is significant, but should not impact on profitability unless the project is marginal to begin with. In accordance with the EP act of 2005 there is however a possibility to earn royalty relief for projects that increases extraction through CO₂ injection and for operations in water depths over 400 meters. There is the faint possibility that a deposit might touch upon matters of national security, but this issue can be settled by a voluntary notice to the Committee on Foreign Affairs in the United States (CFIUS). There are however, quite a few concerns that need to be dealt with in conjunction with E&P activities in the gulf: Exploration plans and development and production plans need to be confirmed by the MMS before they are executed. Permits are required for wells, platforms and production facilities and contingency plans for oil spills and hydrogen sulfide must be in place. This means that only serious players with the necessary technical and geological expertise will qualify for an operatorship. On the paying taxes variable of DB 2009, the United States are ranked as number 46 with a total tax rate of 42.3 percent over ten installments.

5.32 Industry

Rivalry

As mentioned earlier the GoM is a well developed area which has seen oil E&P since the 1940s. This means that the easiest recoverable resources are already in production and that remaining resources are costlier to develop. Additionally the number of companies present in this area is very high. Hence the rivalry for the best prospective blocks is quite high, which is often the case when bidding procedures are being used. This rivalry is only heightened by the U.S reliance on the fact that the market regulates itself. Conclusion: High rivalry.

Power of suppliers

There are no specific clauses pertaining to preferential supplier agreements within the GoM. Local suppliers will however have an edge on account of proximity and knowledge of the local conditions. But Mexico also has oil activities in the GoM with similar proximity and experience, which makes it plausible to believe that American suppliers will meet competition from their Mexican counterparts. Also here it is important to consider import regulations, but tariffs should not apply in this case because both Mexico and the U.S are members of the North American Free Trade Agreement (NAFTA). This will lessen the power of suppliers and make it easier for oil companies to secure beneficial contracts and improve their results in this area. However there are a vast number of companies present in the GoM and thus a good potential for contracts for suppliers. Conclusion: Low supplier power.

Entry

As the GoM exhibits a high degree of rivalry it can be relatively expensive to engage in a bidding process. Combining this with the fact that most new discoveries are in deep (over 1000 feet) or ultra deepwater (over 5000 feet) it becomes evident that entry into this area will be costly. There are however no barriers to entry beyond the fact that capital is required, although deepwater experience is increasingly becoming useful in order to compete on an equal basis. The main effect of new entrants into this area is a higher level of rivalry, which will impact on the bidding proceedings and the cost of shares in projects due to increased demand. Conclusion: Low threat of entry.

5.33 Organization Form

The norm in the Gulf of Mexico is a partnership model, but with usually fewer interests per field than we find on the NCS. Due to the level of rivalry and deep water nature of most undeveloped deposits, hybrid forms such as joint ventures or contractual agreements for the fields of interest are plausible options in order to reduce costs and risk. Although the initial awards in the area are administered by the MMS through auction procedures, there exist established routines for trading of shares through acquisitions and farm-ins. This is a valuable option as long as the true value of the project can be relatively accurately calculated. This can prove difficult due to all petroleum projects being linked to the oil and gas prices which are at times quite difficult to predict as exemplified by the oil price the last two years. Gas Prices are somewhat more stable due to its bulky nature which makes it necessary for most of it to be transported by pipelines and thus the competition has geographical constraints.

5.34 S.W.O.T, Statoil – Operating in the Gulf of Mexico

	HELPFUL	HARMFUL
INTERNAL ORIGIN	<p><u>Strenghts</u></p> <ul style="list-style-type: none"> • Major energy company with strong financial capability • World leader in offshore technology • World leader in carbon capture and storage • Strong deepwater capabilities 	<p><u>Weaknesses</u></p> <ul style="list-style-type: none"> • State has majority ownership • National oil company
EXTERNAL ORIGIN	<p><u>Opportunities</u></p> <ul style="list-style-type: none"> • Use deepwater capability to leverage ones position due to many new deepwater deposits • Use carbon capture and storage expertise to leverage ones position due to U.S governments focus on increased extraction rates. 	<p><u>Threats</u></p> <ul style="list-style-type: none"> • State might assert control over important decisions • Bidding process, many other companies with strong financial capability • Deposits may touch upon matters of national security

Figure 9: S.W.O.T - GoM

5.4 Brazil

Brazil is one of the BRIC economies and has a federal monopoly concerning petroleum resources, allowing only companies incorporated in Brazil to conduct E&P activity. A large amount of the estimated reserves of Brazil are connected to subsalt deposits which are located at great depths with high pressure and significant amounts of natural gas. This presents huge technological hurdles as well as big infrastructure developments that must be overcome before these fields can contribute on a large scale to world oil supply. This means that these will be costly and require time for sustainable development. According to Doing Business 2009, Brazil is ranked as number 125 of 181 on the ease of doing business scale. The country ranks as number 80 on the CPI table with a CPI of 3.5, which corresponds to a significant level of corruption (Transparency International, 2009).

5.41 Institutions

To be able to directly conduct oil E&P activities in Brazil it is necessary to incorporate a company under Brazilian law. Ownership interests in the Brazilian oil industry are not under this constraint and so passive engagement in the sector is possible without incorporating in Brazil. The royalty rate in Brazil is as mentioned between five and ten percent and so does not present any arduous constraint on a project, but the potential for more payments to the Brazilian government in the form of special participation and area retention fees might threaten the profitability of a project, especially since most of Brazil's deposits are located in deep water. The alleviating factors are the "repetro" and drawback regimes described in detail under the Brazil section. Drawback is only useful for inputs used in the production of goods meant for export and has not been very relevant in the oil industry up until now, but Brazil is expected to become a net exporter of oil during 2009 (Energy Information Administration, 2009). On the paying taxes variable of DB 2009, Brazil is ranked as number 145 with a tax rate of 69.4 percent over 11 installments.

5.42 Industry

Rivalry

Brazil uses a bidding procedure where concession contracts are granted for a signature fee which is decided upon through said procedure. Such procedures might lead to a high level of rivalry, but Brazil has mostly deep and ultra deepwater deposits which limits the number of companies with the necessary capital and technology to operate them. The fact that it is necessary to incorporate a company under Brazilian law to be allowed to perform E&P activities directly further decreases the level of rivalry. Brazil is however still a very promising area, but the number of big international companies is still low. Conclusion: Medium/Low rivalry.

Power of Suppliers

Brazilian suppliers have a stronger position than suppliers in most countries on account of the Petroleum law. The law secure that concessionaires must give equal opportunities to Brazilian suppliers when contracting for goods and services for a project. This is further strengthened through local content requirements in the bidding tenders. On the other hand the “repetro regime” provides incentives for bringing in the equipment from foreign suppliers in the research and exploration of oil. This means that Brazilian suppliers have a strong position in regard to the production and service aspects of the petroleum sector, but a somewhat weaker one in regard to research and exploration. Conclusion: High supplier power.

Entry

As previously mentioned most deposits in Brazil are located in deep and ultra deep waters and are as such costly to develop and in need of heavy investment. Similarly to the U.S, Brazil also employs bidding procedures in the awarding of licenses, which adds to the cost of operation in the area. The consequences of new entrants into the area are the same as in the Gulf of Mexico, namely higher bidding and project share costs. As there are fewer companies operating in Brazil the increase will differ from the increase in the GoM, as that area is closer to saturation. One additional player on the Brazilian scene would thus have higher effect than one more player in the GoM. Conclusion: High threat of entry.

5.43 Organization Form

The most common organizational form within Brazil is the joint venture which corresponds well with the nature of deepwater deposits and the need to share costs and risk. For international oil companies this will most often be in partnership with Petrobras, as this company is the dominant player in Brazil. Keeping a continuous good relationship with Petrobras is thus a good investment for future prospects in Brazil. But for big companies willing to incorporate in Brazil there are no barriers for a sole operatorship, although this is a riskier and more costly approach, through auctions or subsequent acquisitions. This approach would probably be better for companies that have been present in Brazil for some time in partnership with Petrobras, and as such have formed their own experience, connections and network within the country. To sum up, it is Hybrid forms and the wholly owned hierarchal form that is available in Brazil.

5.44 S.W.O.T, Statoil - Operating in Brazil

	HELPFUL	HARMFUL
INTERNAL ORIGIN	<p><u>Strenghts</u></p> <ul style="list-style-type: none"> • Major energy company with strong financial capability • World leader in offshore technology • World leader in carbon capture and storage • Strong deepwater capabilities • National oil company 	<p><u>Weaknesses</u></p> <ul style="list-style-type: none"> • State has majority ownership
EXTERNAL ORIGIN	<p><u>Opportunities</u></p> <ul style="list-style-type: none"> • Use deepwater capability to leverage ones position due to mainly deepwater deposits • Use ones position as a national oil company to gain joint venture partnerships with Petrobras which is also a national oil company 	<p><u>Threats</u></p> <ul style="list-style-type: none"> • State might assert control over important decisions • Bidding process, many other companies with strong financial capability • Potentially many payments due to royalties, special participation and area retention fees, which might result in small profit margins or rendering a project unprofitable.

Figure 10: S.W.O.T - Brazil

5.5 Russia

Russia is also a BRIC economy, but also an energy superpower with a nationalistic view of their petroleum resources and a very strong state influence in the sector. According to Doing Business 2009, Russia is ranked as the 120th economy in the world when considering the ease of doing business. On the CPI table Russia is ranked as number 147 with a CPI of 2.1, which corresponds to a high level of corruption (Transparency International, 2009).

5.51 Institutions

The greatest challenge in Russia is the concept of sites of federal significance introduced by the federal law “On Procedures for Foreign Investments in Companies of Strategic Significance for National Defense and Security” of April 16, 2008. This law severely limits the opportunities for foreign companies to gain significant control over Russian subsoil deposits. Beyond this there is still a problem of unclear legislation connected to the area. This is exemplified through the lack of clarity and consistency in the issuance of licenses. The Subsoil law specifies that the Auction Commission is responsible for the issuance of licenses with approval of the Rosnedra being a pure formality. However in practice Rosnedra or its territorial body makes the decision, while the Auction Commission only being responsible for recording the auction results (Polonsky & Sergei, 2005). Another example of a problem concerning legislation is the fact that there is no specific law regarding associated gas from petroleum extraction. There are some rules concerning this mentioned in other laws, mainly in the Subsoil law and in the federal law “On protection of the environment” of January 10th, 2002, but these are difficult to implement for several reasons. Mainly because the terms of utilization are not legally defined and associated petroleum gas is not one of the legally established types of mineral deposits. Other concerns regarding associated gas are the lack of a customer base for the product, lack of transportation infrastructure and stringent governmental price controls (Fatkullina, 2006). A clear and present danger in Russia is the strong presence of the State. The fact that the courts are not truly separate from the executive branch of the government might result in seizure or a forced sale of assets with minimal legal protection, as the Norwegian telecom company Telenor recently experienced. This is a clear indication that there is little security and protection for a company’s

assets within Russia and that the level of politically induced risk is quite high. The fact that several governmental agencies are involved with the sector is also an element of concern as these might provide contradictory signals and messages concerning projects. This might delay or derail a project leading to significantly increased costs. On the paying taxes variable of DB 2009, Russia is ranked as number 134 with a tax rate of 48.7 percent over 22 installments, which suggest some difficulty connected to this activity.

5.52 Industry

Rivalry

The rivalry in Russia is relatively low because most promising finds go to Gazprom or Rosneft, which are controlled by the Russian government or else to other Russian companies. Russian companies still have to be careful to operate within the frames the government prefers or they might find themselves in the same position as Yukos oil (Yakov & Ekaterina, 2007). The restrictions on foreign companies operating in the country further decrease the level of rivalry. However, the level can be quite high for certain projects where foreign companies are invited to vie for participation as was the case with Shtokman. Overall the level of rivalry for international companies in Russia is relatively low. Conclusion: Low rivalry.

Power of Suppliers

There are no specific rules regulating the power of suppliers in Russia, but as a transitional economy it is plausible to believe that there is a certain pressure to use Russian suppliers. Such clauses can for example be included as local content in PSA charters and market contracts. As Russia is a country where relationships are highly valued, using Russian suppliers might provide beneficial synergies. Aside from this there might be significant amounts to save in transportation from using Russian suppliers due to geographical distance. Conclusion: Medium/high supplier power.

Entry

With the new laws enacted recently, Russia has become more restricted to foreign companies once more, which limits the possibilities for entry strategies. Foreign companies are currently not allowed to own more than a 49 percent stake in Russian oil projects which eliminates the possibility for wholly owned foreign companies either through acquisition or Greenfield projects. The total ban on foreign companies acquiring operator licenses offshore is further evidence of the restricting nature of the Russian petroleum sector. The threat of entry is thus very low, but as there are so few foreign companies present and the level of opportunities open to foreign entities so small, the addition of a single new competitor could have significant effect on the rivalry. Conclusion: Low threat of entry.

5.53 Organization Form

In Russia we find several ownership structures in evidence for foreign companies onshore: These include product sharing agreements (PSA`s), service contracts where the company is entitled to a certain share of the production (a form of market contract), and minority partnerships. Offshore the only option currently available is the service contract, although there are some preexisting PSA`s, although most of these have been amended to limit the foreign ownership share. To sum up, it is market contracts and hybrid forms that are possible organization forms for international oil companies in Russia.

5.54 S.W.O.T, Statoil – Operating in Russia

	HELPFUL	HARMFUL
INTERNAL ORIGIN	<p>Strenghts</p> <ul style="list-style-type: none"> • Major energy company with strong financial capability • World leader in offshore technology, strong deepwater capabilities • World leader in carbon capture and storage • National oil company 	<p>Weaknesses</p> <ul style="list-style-type: none"> • State has majority ownership • Foreign company with foreign state majority ownership
EXTERNAL ORIGIN	<p>Opportunities</p> <ul style="list-style-type: none"> • Use offshore technology and deepwater capability to leverage ones position due to Russian need to gain more knowledge in this field. • Use the fact that one is a national oil company to leverage ones position due to Russian nationalistic energy policy. • Proximity to Company home range on the NCS with respect to suppliers, expertise and distribution. 	<p>Threats</p> <ul style="list-style-type: none"> • State might assert control over important decisions • Bidding process, many other companies with strong financial capability • Deposits may be/become part of sites of federal importance • New increasingly nationalistic regulations passed by Russian authorities may curtail or seize interests • Regional courts use court system as a weapon against foreign interests

Figure 11: S.W.O.T - Russia

5.6 Area Findings Summary

The findings from the analyses have been plotted into the table on the next page, which has been arranged from left to right, based on the strength of the State versus free market orientation in the areas. The model is further divided into different stages of corporate presence in a sector. This starts with the decision to apply for a license where institutions in conjunction with the rivalry from other companies are the most important inputs. The next stage concerns operations in the area, where institutions are still very important, but the most important question concerns the choice of entry strategy and operation mode. Additionally it becomes important to consider the power of suppliers in the area with regard to cost effectiveness and hence the profitability of the project. The final stage concerns the performance of the project where tax regulations are the most important factor although other regulations might have considerable impact. The degree to which the available organizational forms provide significant incentive to fully leverage the company’s resources and capabilities will determine the role of the company as an active or passive participant and thus

performance. The data and information has been applied to the different stages according to relevance.

Areas		Russia	Norway	Brazil	USA
License/operation	Laws & regulations	Several government agencies involved, tenders and auctions, sites of federal importance	“beauty contest”, Norwegian petroleum directorate the controlling instance	The national petroleum agency (ANP) sole controlling instance, concession contracts through auctions, signature fee	Mineral Management Service the controlling instance, mineral rights for lease
	Rivalry	Low, biased towards state controlled Russian companies	High, but tightly controlled	Medium/Low, limited to the larger international companies	High
Operation	Entry modes and organization form	JVs with Russian companies with the foreign company as minority partner, minority partner in development companies for offshore	Partnerships with many interests per field, including very small companies referred to as “mosquitoes”	Joint Ventures, predominantly with Petrobras, some Wholly Owned Foreign Enterprises	Relatively few operators per field, JV’S, Partnerships
	Threat of entry	Low	Low	High	Low
	Power of suppliers	Medium/high	Medium/Low	High	Low
Performance	Financial + Tax regulations	Several different fees/tax. Limited company shares	Special petroleum tax 50%, capital uplift, area fee, emission taxes	Royalty/tax, special participation, area retention fee, “repetro” regime	Royalty/tax, royalty-relief

Figure 12: Area Summary

5.7 TCE-Model findings and preliminary results

	NCS	GoM	Brazil	Russia
Regulative Conditions	<ul style="list-style-type: none"> • Positive <ul style="list-style-type: none"> a) Capital uplift • Negative <ul style="list-style-type: none"> a) 50 % special tax, area fee, emissions tax 	<ul style="list-style-type: none"> • Positive <ul style="list-style-type: none"> a) Possibility for royalty relief • Negative <ul style="list-style-type: none"> a) Faint possibility of deposit touching on national security 	<ul style="list-style-type: none"> • Positive <ul style="list-style-type: none"> a) “Repetro regime” • Negative <ul style="list-style-type: none"> a) Several payments to government 	<ul style="list-style-type: none"> • Positive • Negative <ul style="list-style-type: none"> a) Sites of federal importance b) Significant restrictions on foreign investment c) Uncertain regulatory regime
Possible bargaining position for special concessions	<ul style="list-style-type: none"> • None, but Statoil does in effect receive preferential treatment through large state ownership. 	<ul style="list-style-type: none"> • None 	<ul style="list-style-type: none"> • National oil company • Possesses valuable offshore technology and procedures the country would benefit from 	<ul style="list-style-type: none"> • Possesses valuable offshore technology and procedures the host country would benefit from • National Oil Company
Beneficial industrial conditions	<ul style="list-style-type: none"> • Tightly controlled rivalry, no bidding auctions or signature bonuses • Medium supplier power 	<ul style="list-style-type: none"> • NAFTA = low supplier power 	<ul style="list-style-type: none"> • Medium rivalry, relatively few players present = good access to large discoveries 	<ul style="list-style-type: none"> • Low rivalry
Other factors that justify entry	<ul style="list-style-type: none"> • Home Range 	<ul style="list-style-type: none"> • Deep water deposits • Proximity to U.S market 	<ul style="list-style-type: none"> • Large deposits • Deep water deposits 	<ul style="list-style-type: none"> • Huge deposits • Major contribution to gas value chains • Harsh environment • Pipeline access to European Market
Preliminary Results	<ul style="list-style-type: none"> • Very good, but sector in decline 	<ul style="list-style-type: none"> • Good, but mature sector that will soon peak 	<ul style="list-style-type: none"> • First field will come on stream during 2010, but expected rapid growth in producing fields after that 	<ul style="list-style-type: none"> • Receiving revenue from the Kharyaga field, but potentially huge costs connected to the Shtokman field with uncertain return

Figure 13: TCE – Findings and preliminary results

6.0 Discussion and Recommendations

6.1 Norwegian Continental Shelf

6.11 General Summary

As previously mentioned the NCS is showing signs of decline and Statoil is mainly concerned with enhanced recovery rates and sustainable solutions. There is still exploration being conducted, but this is regulated by the government through the blocks they choose to include during the concession rounds. Hence the evolution of this sector proceeds according to the Norwegian State's wishes for sustainable development. There are expectations of significant deposits located in the northern areas, but these are currently off limit for exploration citing environmental concern, and the public discussion of whether to allow E&P here in the future is still going strong and will be a major topic in the upcoming election.

The focus on improved environmental technology is of great importance in an age where the public focus on this parameter is strong and governmental regulation provide harsh penalties for companies that neglect to regulate their emissions. This is especially true for the NCS where governmental taxation on CO₂ and NO_x emissions are relatively high and strictly enforced. As the NCS is the home range of Statoil and because of the majority ownership of the Norwegian State in the company, it is often subject to close public scrutiny in the media. Decisions made concerning operations in other areas may thus have a significant impact on public opinion on the NCS and might lead to governmental intervention. A recent example of such an occurrence is the decision to forego a carbon storage facility at the company's tar sands project in Canada. The opposition in the Norwegian Parliament called for the government to vote for a withdrawal from the project on the general assembly, as a number of other shareholders announced they would vote for withdrawal in backing of a demand made by Greenpeace. The government however retains majority in the parliament and their decision has been to continue to support the management of Statoil regarding this project. A decision to withdraw could have lead to significant sunk costs for Statoil and the need to reduce their listed reserves, which again would most probably lead to reduced company value in the international market through the stock

exchange listings. This exemplifies the risk on the NCS as not only financial, but also political in nature.

6.12 Organization Form Discussion

Economic Incentive

For Statoil as the dominant player on the NCS it will be necessary to have the operatorship or control a significant share of a project (25+ %), either itself directly or through a subsidiary such as StatoilHydro Petroleum As, in order to fully commit their resources and capabilities due to economic incentive. In projects where Statoil is a minority participant, the company will not have a significant economic incentive and so act as a passive owner and not commit the full extent of their resources in its development. This is easily understood through opportunity cost theory; the full extent of the company's resources committed to a project where the company is only entitled to a small amount, say ten percent, of the revenue does not reflect the relative value of said resources and these are thus better used elsewhere. This can be regarded as a variant of the free rider problem, where the company would shoulder more than its fair share of the cost of production only to receive the same amount of the revenue as they would have, had they not committed the full extent of their resources. The other participants of the partnership would then reap rewards disproportionate with their investment and would in effect be a kind of free rider on Statoil's resources. An exemption from this rule applies to the cases where Statoil acts as the minority operator (often 10- 12 % share) for fields where the majority share is held by the Norwegian State through Petoro As. This can be regarded as a form of service agreement between Statoil and the Norwegian State through the latter's majority share in the former. This is the most active ownership that the Norwegian government routinely enforces in Statoil, by using the company as an operator fully committing its resources for a relatively small part of the revenue, through their majority share. Statoil is involved in projects on the NCS in all these roles; majority partner and active owner, minority partner and passive owner and minority interest and operator for Petoro.

Administrative Control

There are always multiple interests per field on the NCS through several companies owning a stake in the operation combined with the fact that the Norwegian government often retains a portion through its direct economic engagement governed by Petoro. Hence administrative control can be difficult to exert, especially if you are minority partner in a field or if your interests do not coincide with those of the Norwegian government. The most important factors are the relative share of the company in the project and who hold the operatorship. In order to successfully implement the company's resources and capabilities through administrative control, Statoil would have to hold majority share or act as the operator of the project.

Conflict Settlement

In case of a conflict that it is not possible to solve internally through corporate regulations or relative shareholder power, it is possible to apply for mediation and a ruling from the NPD. If the conflict is with the government either through Petoro or Statoil, the only possibility will be to seek a ruling through the court system, which is considered independent and just in Norway, with the option of appeal to the EU court system. Although Norway is not part of the European Union, the country complies with the majority of EU regulation and a court ruling will carry significant weight in a conflict.

Also for this dimension, it is important to hold the majority share in order to successfully promote the company's side in a conflict. The potential for a conflict between Statoil and the Norwegian government is nonexistent as the government would simply exercise its power as the majority share holder in the company to settle the matter in their favor.

6.13 Conclusion and recommendation

The optimal form for Statoil on the NCS is probably a fully integrated company as sole operator, or as operator in a majority partnership with the remaining share being held by the Norwegian Government through Petoro AS. Sole control is however not awarded on the NCS and a partnership model with only Petoro is a rare occurrence.

The partnership model most in evidence on the Norwegian Continental Shelf works well for Statoil as the company is the dominant player in this area; it holds the majority in most of the projects it is involved and is the operator for the majority of the fields on the NCS. The conditions for the company concerning economic incentive, administrative control and conflict settlement are beneficial and conducive to fully committing the company's resources and capabilities to improve profitability. The level of transaction cost is significant with this organization form, but it is a price that must be paid in order to have a presence in this sector. The revenue in this sector is definitively enough to justify the cost of operation, but the opportunity cost of participating in extracting the smaller deposits is too great for this to be a valuable option. This is because there are more promising deposits internationally that better justify the expenditure.

As this model works well for the company, it will be best served by continuing this organization form in its current state. The focus ahead for the company should be on continued sustainable development and enhanced extraction rates, but also include increased emphasis on renewable energy sources and carbon capture technology. These focus areas will contribute to the company with new revenue possibilities and cleaner, more environmentally considerate operations. Better carbon capture technology will also contribute to increased public and governmental goodwill and financial gain through decreased CO₂ and NO_x emission fees.

6.2 The Gulf of Mexico

6.21 General Summary

The Gulf of Mexico is as previously mentioned a mature area where most of the remaining recoverable deposits are found in deep- and ultra deep-waters. Statoil is the world leader in offshore technology and as such possess an edge for operations in the GoM. The awarding of Licenses in this area are distributed through bidding procedures, which require research of the block in question as well as analysis of prospective rivals for the lease, in order to be able to field the best offer. There is a certain risk element in the area connected to extreme weather in the form of hurricanes, which can lead to financial loss in the form of temporary shutdown of production and damage to platforms, vessels and equipment. There is also some risk connected to the ethical dimension of business in regard to the strictness of American anti-corruption and competition authorities. Failure to abide by the standards of these agencies might lead to severe fines and loss of reputation and the repudiation of these through the court system, if the accusation is experienced as unjust, is time consuming and expensive. But as long as Statoil adhere to its own ethical values and corporate policies (see appendix), the company should not experience any undue attention from these governmental agencies. The risk that a deposit should touch upon matters of national security is minimal and any insecurity concerning this can be put to rest by a voluntary invitation for an examination by the CFIUS. The fact that American authorities are interested in reducing the country's dependence on foreign oil should prove beneficial for companies operating in the Gulf of Mexico. This will most probably be in the form of continued and expanded royalty relief programs as well as facilitating of blocks open for exploration and development. The American Economy's demand for petroleum products is huge and will still remain large even should the American Government succeed in its reduction. Hence production facilities in the GoM are strategically sound in relation to the short distance to this market as this minimizes transportation costs. The main risk connected to the Gulf of Mexico is financial in nature.

6.22 Organization Form Discussion

Economic Incentive

Statoil, as a player in the GoM cannot hold to the same standards as the company has on the NCS in regard to expectations concerning organization. The company is not the operator for any of the projects in which they hold an interest within the GoM, and their relative share is lower than in most of their projects on the NCS. A minority share and lack of control over projects suggest that passive ownership and steady, but lesser, income from the revenue stream is the organization form that best suits the company in this area. It certainly does not provide a strong economic incentive to implement the company's full resources unless the share and control of the project can be increased.

Administrative Control

The number of participants per field in the GoM is usually just a few with no governmental participation. This suggests that administrative control will rely most heavily on the relative size of the partners in that project and written contracts concerning the operation. As Statoil is not the operator for any of the projects they hold interest in within the GoM, the company's administrative control to implement their resources and capabilities is limited. This suggests passive ownership that just collects revenue. Because even if the company's share in a project is deemed significant enough to implement their resources, such implementation will be difficult to achieve if the company lack administrative control.

Conflict Settlement

Conflicts that cannot be settled internally will most probably go to the court system, which is considered independent and just. As the United States is probably the country with the most litigation in the world, strong legal support is a must. Without holding the operatorship or the majority share in projects, Statoil's ability to enforce their position in a conflict is severely limited. Such a position suggest a passive ownership of the company's assets in the Gulf of Mexico.

6.23 Conclusion and recommendation

The model of organizational form from the NCS will be difficult to implement in the Gulf of Mexico as the administrative distance to the NCS is too large. Further, Statoil's minority share in projects and lack of operatorship in this area makes such an organization form impossible. The optimal organization form for Statoil in the GoM would be a majority ownership with operator status, but this can be both difficult and costly to achieve due to the high level of rivalry. As the situation is today, the company will be best served by a passive ownership structure where they pick up their share of the costs and revenue without making any effort to implement the company resources and capabilities. This keeps transaction costs to a minimum, as the company will not put any effort into implementing resources or trying to make decisions for the project. Presence in the sector is justified in regard to revenue/cost ratio because share size is often significant and the option to acquire larger shares is present, while costs are relatively easy to ascertain in advance. This is also a good sector in regard to opportunity cost, as access is relatively good and so is the expected revenue stream.

Concerning the path ahead in the GoM, the company should focus on increasing their share and gaining the operatorship in those projects where they can increase profitability by implementing the company's resources and capabilities. For Statoil, these are fields located in deep- and ultra deep-water and/or fields where the company can significantly improve extraction rates by employing CO₂ injection. This is based on the company's world leadership in offshore technology and procedures as well as their long experience with CO₂ injection. In addition to improved potential yields from the fields due to Statoil's expertise in these areas, operations of this nature qualify for royalty relief in the Gulf of Mexico.

6.3 Brazil

6.31 General Summary

Brazil boast many deep- and ultra deep-water deposits and as such Statoil is well equipped to operate them in light of the company`s world leadership in the area of deepwater E&P. The catch, as previously mentioned is the requirement to incorporate a company under Brazilian law to be an operator in Brazil. But as Statoil is already the sole operator of the Pelegrino field it is obvious that the company has incorporated in Brazil. The risk tied to operating in Brazil is mainly financial due to bidding auctions, costly deepwater developments and the aforementioned potential for many payments to the government through royalties, taxes, special participation and area retention fees. As Statoil has experience from the NCS, where the cost of operation is also high, this should not present any particular problems careful analysis and budgeting cannot account for in advance. Despite the fact that the country is a transitional economy the regulations pertaining to the oil sector seem transparent and justly enforced. Neither is there evidence of any imminent political threat to seize foreign interests in the sector. The country is however ranked as number 80 on the world corruption perception index for 2008 with a CPI of 3.5, so the potential for corruption is definitively present and a company concerned with upholding certain ethical standards should beware of this fact (Transparency International, 2009).

6.32 Organization Form Discussion

Economic Incentives

Joint ventures are the dominant organization form in Brazil, but the option for fully owned and integrated operation of projects is also present. In addition the number of participants in the joint ventures is low and company shares are quite high. This provides significant economic incentive for full implementation of company resources and capabilities as the company`s share of the revenue stream will be total or significantly large to justify such an action.

Administrative Control

Joint ventures are much in evidence within Brazil and thus administrative control depends on the relative share in the venture and the charter upon which it is based. But as long as a company incorporates in Brazil, there are no restrictions that it cannot operate a field fully by itself if it can acquire this during a concession round or through subsequent acquisition of field shares.

Statoil holds 100 percent interest and operator status in the Pelegrino field and thus have complete administrative control of resources and capabilities. This supports full implementation of the company resources in order to run the project as profitably and efficiently as possible. For the other projects in which Statoil holds interest, administrative control will again depend on the relative share. But as Statoil's share in Brazil is mostly found in the interval 30-60 percent (StatoilHydro, 2009), the level of administrative control should prove quite high and support full implementation of the company's resources.

Conflict Settlement

If a conflict cannot be resolved internally by the participants in the project it will most probably end up in the court system. As Brazil is quite far down on the corruption perceptions index (number 80), it is difficult to ascertain how independent and just the court system really is. The relatively high Statoil share in the projects they participate in within Brazil provides the company with a significant amount of power in case of a conflict. This supports a decision to fully implement their resources as the company has a strong position for enforcing its views in a conflict.

6.33 Conclusion and recommendation

The model from the NCS could in theory work in Brazil as this area is similar. This in regard to a number of smaller companies present combined with several of the international giants in the sector. Also the nature of the deposits is similar, by being deep water. Yet the regulative nature of this area differs significantly with auction proceedings, signature bonuses and significantly larger shares divided between fewer partners, which lead to most deposits being developed

under joint ventures or in a fully integrated company. This shows that the administrative distance between Norway and Brazil is significant. The industrial conditions are also a concern in Brazil as threat of entry and the bargaining power of suppliers is quite high. But the nature of the Brazilian oil sector still provides good incentives for full implementation of company resources through the large shares available in projects. This is in association with the cost/revenue ratio, as the large shares available make up for the payments required by the State. But also regarding opportunity cost, as it is difficult to obtain so large shares in many other oil producing areas of the world.

Hence Statoil ought to commit their full resources in the development of their interests in this sector. This is because the company's share of the revenue will be significant and because of their superior offshore technology which can improve profitability of the fields. The optimal form of organization for Statoil in Brazil is probably a fully integrated company. But as this comes with a high cost and risk it will limit the number of projects it is possible to participate in. Hence a mixture of joint ventures and fully integrated operations is probably the best course in Brazil to be able to participate on a wider scale. Statoil is currently engaged in this direction and should continue this strategy. The transaction costs associated with dual partner joint ventures and fully integrated companies are not the most arduous, but in the case of joint ventures, protection of company resources are significantly weaker than in a fully integrated company.

The focus ahead should be on sustainable and cost effective development of their interests in the area and continued participation in exploration. Exploration is important for further expansion in this area, while the "repetro" regime provides economic incentives to participate through suspension of taxation on exploration. Further expansion should focus on obtaining larger shares in the fields to be able to operate them and if possible implement a fully integrated company through complete ownership, if this is desired. Regarding the deposits it proves difficult to enlarge the company share significantly in; it will be beneficial to sell these shares in order to increase the company presence in other fields.

6.4 Russia

6.41 General Summary

Russia is as mentioned earlier an energy superpower, but the nation also guard its deposits zealously through enacting an increasingly nationalistic energy policy. The Kremlin has imposed significant limitations on foreign interests in their oil and gas sector and is proposing increasingly strict regulation of the sector. The huge gas deposits in Russia marks the country as extremely important for a company, such as Statoil, looking to enhance their gas value chain. The strict regulation presents a major challenge when attempting to conduct business in Russia. The many governmental agencies involved with the sector are also a major concern on account of the fact that each and every one of them has significant power and might derail or stop a project dead in its tracks. Conditions have however improved somewhat with the transfer of all regulation of the oil sector into federal hands. This should also decrease the potential for corruption as the local officials in the regions no longer has any input as to who will be awarded a license. Russia is ranked as number 147 on the world corruption perception index for 2008 with a CPI of 2.1 so the potential for corruption is clearly present and this danger needs to be kept in mind. But the country still has a need to develop their offshore oil and gas sector despite closing it off for foreign ownership, as well as a need for better technology and procedures within offshore exploration and production. Therefore it is possible for international companies to gain access to deposits offshore in Russia by participating in development companies such as the Shtokman Development AG, where Statoil and Total are present as foreign partners. The risk when operating in Russia is mainly political in nature as companies cannot be completely sure that the government will not enact new strict regulations of the sector that might curtail profits or seize interests. Institutional and industrial conditions aside, the environmental conditions in Russia are harsh and the only western harbor open during winter is St.Petersburg. Harsh weather conditions can lead to financial risk in the form of damage to ships and production facilities as well as through large transportation cost, especially if the company is refused access to the pipeline network.

6.2 Organization Form Discussion

Economic Incentive

There is no prevalent organization form in for foreign companies in Russia as the country has strict limits for foreign participation in their oil sector, which has led to foreign presence in the country being small. The forms in evidence include minority joint ventures, product sharing agreements and market contracts. These various organization forms exhibit a common characteristic in the fact that foreign partners are not allowed to hold majority share. This keeps economic incentives for full implementation of company resources low. The uncertainty of the Russian regulation and potential future legislation that could further curtail foreign interest weakens economic incentives further. The threat of State appropriation of company resources dictate that full implementation would be unwise and could lead to a significant economic loss in form of sunk cost.

Statoil's drive to be part of the Shtokman development AG is best explained by a wish to prove their position as a leading company in development of fields in the harsh northern environment. The project touch upon two of Statoil's main development areas; gas value chains and harsh environments and failure to be included in this project could have been experienced as a loss of face. Located at a water depth of 350 meters the field is also a borderline deep water project. The project further contributes with new learning opportunities and the possibility for inclusion in further developments on the Russian continental shelf. These facts can be seen as incentive for committing the company's resources and capabilities to a project with such uncertain return for Statoil. The vast resources of Russia is an economic incentive in themselves, if full implementation of the company's resources can lead to further access to these resources under potentially better conditions based on experience, the option is valuable to pursue. Although trusting the Russian authorities to lift limitations in the future might be wishful thinking. The economic incentives in Russia are based on the nature of the vast amount of petroleum resources, but the uncertain regulative environment suggest that full implementation of company resources and capabilities will not be in the company's best interest.

Administrative Control

The amount of administrative control a company can exert in Russia is minimal due to the fact that foreign companies are not allowed to act as operators, nor are they permitted to obtain majority share in projects. This insures that foreign companies cannot implement their resources and capabilities without consent of the Russian majority partner. These facts support a passive ownership model in Russia, where the revenue stream is the important aspect. In the case of a market contract the company is entitled to a specified value of the production, but again the uncertain regulative environment in conjunction with the lack of respect for written contracts in Russia suggest that full implementation will be unwise.

Conflict Settlement

Conflict settlement is difficult in Russia because foreign companies cannot obtain majority share in a project. In addition there is little respect for written contracts and the court system is not fully independent from the government and prone to be biased towards Russian interests. This is especially true for the regional courts where complaints will initially be lodged, where the judicial system is used as a weapon by Russian officials to limit foreign interests as exemplified by the Norwegian company Telenor in its struggle with the Russian company Alfabgroup. According to the CPI table, Russia is highly corrupt as they are number 147 on the table with a CPI of 2.1. This is another symptom of the Russian regulative environment that indicates that full implementation of company resources and capabilities are unwise.

6.3 Conclusion and recommendation

The optimal model in Russia would most probably be a fully integrated company due to the uncertain nature of the sector and the major State influence in Russian partner companies. It is obvious that neither a fully integrated company nor the Norwegian model can be implemented in Russia because of the limiting nature of the regulations in this area. For this, the administrative distance is just too great. For offshore areas the only possibility is the service contract which offers little in the way of administrative control over the project. Usually a market contract offers security concerning expected revenue and conflict settlement, but this is

not truly the case in Russia. There is nothing that suggests that a full implementation of company resources and capabilities will prove profitable in Russia. Transaction costs associated with implementation should be low for a service contract if implementation is desired or even possible, but protection of company resources will as mentioned also be low. The costs are expected to be high in regard to offshore development and the revenue, especially foreign company share in it, is far from secure. The opportunity cost of operations in Russia is thus high as the same amount of investment can be spent in other areas of the world for far more secure revenue streams. This means that Russia presents poor conditions both for revenue/cost ratio and opportunity cost and company presence here ought to be passive or none at all.

In the case of Statoil and the Shtokman development, the only thing that can truly justify a full implementation of the company's resources and capabilities is if: The company's objective in this project is internal competence enhancement, and/or it is an action taken in defense of the company's position as the world leader in natural gas development under harsh conditions in deep water. The problem is that Statoil is the junior, minority partner in this project; both Total and Gazprom controls a bigger share of the development company. Hence, Statoil has in reality no administrative control and the weakest position in a potential conflict. The economic incentive will probably hold as long as the contract is not altered in the future or the costs of the project become drastically higher than anticipated. But the uncertain nature of this area and conditions backing it support a passive organization model.

For future endeavors in Russia, Statoil can use their participation in Shtokman and the experience, relationships and network accrued by this to leverage their position as a good candidate. The company resources which are most beneficial in Russia are; the offshore technology and experience with harsh weather conditions that the company has acquired on the Norwegian Continental Shelf. Statoil is already involved in fostering a reliable supplier industry in Russia and should continue this project as this should decrease long term costs, but also because of the potential synergy effects resulting from the goodwill and relationships created by this strategy. This might provide basis for better opportunities and can be used in

combination with Statoil`s distinction as a national oil company in future negotiations, which might help to alleviate the fears of Russian politicians of foreign companies entering to steal their national heritage.

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8.0 Appendix

8.1 Statoil ASA's Corporate Values and Policies

The values of Statoil which are claimed to be at the core of their management system are; courageous, open, hands-on and caring and are reflected in the corporate values. The company operates with nine corporate policies that describe their way of conducting business which include the following:

8.11 Health, Safety, Environment (HSE)

Statoil want to use the natural resources in an efficient manner and deliver energy that support a sustainable development, as well as secure safe operations for humans, the environment, the society and possessions. This will be accomplished through the implementation of HSE in all business sectors and the improvement of HSE results across all activities. The importance of HSE will be demonstrated through practical leadership and behavior in conjunction with encouraging openness concerning all HSE related matters. Additionally the contribution to sustainable energy systems and technology is a major focus for the company.

8.12 Ethics

The company believes that ethical conduct is a necessary condition for sustainable development and enforces this belief by demanding a high ethical standard from everyone in representation of the corporation. This includes operating within the legal confines, securing that the ethical guidelines are well known through the necessary education and that these are being followed to the full extent.

8.13 Corporate Social Responsibility

Statoil contributes to sustainable development through their core operations in the areas where they have an active presence. This is accomplished by securing positive synergies from their operations to support host countries in their ambitions for development through considerations of how choices impact on host country interest as well as company interests. Of

equal importance is the security of openness, anticorruption and respect for human rights and working conditions in their operations.

8.14 Employees

Statoil wants to secure the quality of employees through the encouragement and opportunity for personal responsibility, growth and development. The focus is on an inspirational and including working environment that induces diversity. The core values are included in all aspects and the rewarding of employees is on the basis of performance, reflecting not only the work they submit, but also on their behavior.

8.15 Communication

Communication is regarded as an integrated part in the business conduct and is approached in an open and precise manner to build and maintain a good reputation. This is achieved by conveying a clear vision for the corporation and consistently delivering the same message across the company. Communication is expected to be led proactively in a clear and accurate manner while treating company information and brand as an asset.

8.16 Risk Management

Risk is identified, evaluated and controlled throughout the entire value chain to secure safety in operations and attaining the corporate targets. There is a focus on both the up- and downside in risk assessments for all activities while the management and coordination of risk is made at corporate level. The understanding, communication and quantification of the entire risk exposure and implementation of appropriate measures are regarded as the overall objective.

8.17 Economy and Finance

The key objective is securing that the company delivers good results in all its activities while maintaining competitive standards in the completion of overarching goals and strategies. This is

achieved through maintaining high quality on the ambition to action vector with good reporting routines, controlling and economic results.

8.18 Procurement and Logistics

The Statoil approach to suppliers is to regard them as contributors of great value to the company, its partners and customers. This means that maintaining a good and strong relationship with qualified suppliers is of great importance as it will provide the company with a sustainable competitive advantage. The focus is on achieving the maximum creation of value through using the optimal combination of company and supplier resources to secure the supply of goods and services of the requisite quality at the requisite time. Suppliers are however expected to comply with company values and standards in regard to HSE, ethics and social responsibility.

8.19 Flow of Information

The flow of information is processed in a way that secure that it is accurate, appropriate and available in accordance with its degree of confidence. Information is expected to contribute to the improvement of working processes their efficiency and secure business continuity. The process of information is further expected to contribute in the securing of future corporate needs while adhering to internal and external demands and in no way causing damage to the company, its employees or partners.

8.2 Statoil ASA; Decision Process

Statoil uses a stepwise process when deciding whether to pursue an opportunity called the Capital Value Process (CVP). By going by decisions in such a structured manner, the company secures that the project in question is of good quality and creates synergies across the organization. This process also secures through integrating all functions in an efficient and qualitative decision-making that business opportunities evolves into projects that operate as profitable as possible for the entire value chain of Statoil.

The relevant codes in the process are as follows:

- DGA: Approval to develop a business opportunity
- DGB: Approval for negotiation
- DGC: Accept for a negotiated deal concerning the assessment of new exploration- or business opportunities
- DG0: Approval to start studies concerning evaluation and implementation
- DG1: Approval to start concept development
- DG2: Preliminary decision concerning execution
- DG3: Decision concerning execution
- DG4: Start of operation

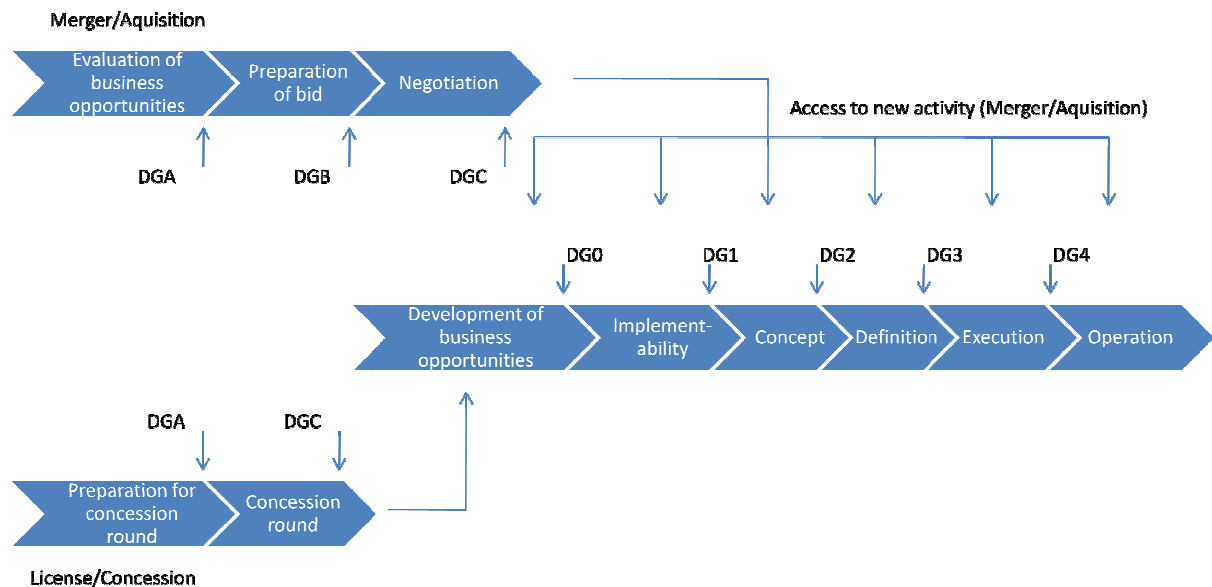


Figure 14: Decision Process, Statoil

(StatoilHydro, 2008)

8.3 On Joint Ventures

"A joint venture is a legal organization that takes the form of a short term partnership in which the persons jointly undertake a transaction for mutual profit. Generally each person contributes assets and share risks. Like a partnership, joint ventures can involve any type of business transaction and the "persons" involved can be individuals, groups of individuals, companies, or corporations" (Cornell University Law School, 2009).

Joint ventures usually come in two types, either as an incorporated or unincorporated JV. The first option is derived from the incorporation of a legal entity by two or more partners to develop a specific project. The other option is what is known as a contractual joint venture. These are generally structured through the execution of a consortium agreement. You find several types of subcategories for joint ventures for both incorporated and unincorporated ones. JV's are often executed in the form of 50/50 partnerships, but other ownership structures such as minority and majority JV's are also in evidence. This type of legal organization is increasingly used in the oil industry, especially in regard to gaining entrance into foreign markets. The general approach here is for foreign companies to form a joint venture with a domestic company in the country they wish to enter. This is an excellent strategy for sharing costs and risks in relation to projects. In areas that are less developed, foreign companies often contribute in the form of cutting edge technology and internationally accepted business practices, while the domestic partner provides an industrial position complete with a domestic network of suppliers, buyers, relationships and the necessary governmental documents such as the license for exploration and production. It is also a way for national companies in possession of a valuable production license, but lacking in funds, to invite international support so that the field can be developed under their control.

8.4 On Unitization

8.41 Unitization on the NCS

Unitization is much in evidence on the NCS where the government makes an effort to increase efficiency in relation to cross border reservoirs between the NCS and the continental shelf of the UK. This includes signing a bilateral agreement regulating the process inter alia in regard to the necessary governmental approvals. It is established through the Petroleum Act that petroleum deposits that extends beyond one block with different license holders or onto the continental shelf of another state, are subject to the prevalent regime of making an effort to reach an agreement concerning the apportionment of the deposit as well as deciding the most efficient coordination of petroleum activities in relation to said deposit. This would also apply in connection to several petroleum deposits where joint petroleum activities would be more efficient. All agreements for joint unitization activities need to be approved by the MPE.

8.42 Unitization in the GoM

There are currently no cross-border unitizations involving the United States. However, in accordance to international experience such cases are usually settled through the execution of treaties or by international arbitration. There are however unitized fields, the formation of which may be voluntary, but in several jurisdictions they are involuntary and are enforced under statutes or agency determinations.

8.43 Unitization in Brazil

So far there have been no cases of cross-border reservoirs in Brazil. In respect to domestic reservoirs that envelops more than one block, the concessionaires in question are expected to prepare evaluation plans and unitization charters either commonly or separately for the ANP to consider and approve of before entering into unitization agreements. If an agreement cannot be made between the concessionaires the ANP will act as arbiter and settle the matter based on the general rules of law in conjunction with best industry practice. In the event of the a reservoir between a concessionaire and a bloc under the title of the ANP, the agency will act as

a concessionaire, but all cost in preparation for the unitization agreement will be incurred solely by the other concessionaire.

8.44 Unitization in Russia

Concerning cross-border reservoirs Russia uses unitization rules set down by some treaties by the commonwealth of independent states (CIS). These only apply to cross-border reservoirs between CIS countries. In regard to domestic unitization there are no specific rules, the general rule in such cases is to set up a contract between the parties stating their activities in relation to deposit and all further issues regarding unitization to be governed by said contract.