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The future of international oil and gas extraction firms

The drill into competition and internationalization strategies

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0 EXECUTIVE SUMMARY

The report starts with giving background information of the oil industry. The industry has been going through significant changes where the strong position of International Oil Companies (IOCs) worsened due to the increase of control over the global natural resources by National Oil Companies (NOCs) owned by governments. This has leaded to the research question of: *Which previous and future factors influence the decision-making process of oil producing companies regarding internationalization and how can the future strategy benefit in order to maintain their position within the changing industry?*

Following, the report goes into the methodology that structures the report and the research design. The research obtained a situationalist approach to have a blend of objectivism and subjectivism using the methodological view of Abnor & Bjerke and the system approach.

Hereafter, the report provides the theoretical foundation for further analysis in the report. The first theory will enable to identify internationalization strategies. Based upon the oil industry, the theories chosen are the LLL theory, analyzing whether companies internationalized with the aim to Link, Leverage and/or Learn internationally. Following, Dunning's eclectic approach was used to identify factors as Ownership advantages (core strengths of the internationalizing firm that influence international success positively), Location advantages (favorable conditions of the foreign market to the firm) and Internalization advantages (full control in new market favorable) for entry mode choice.

Following, different entry modes groups are explained such as *exports* (producing in second or third country and transporting the goods to the foreign market), *licensing* (contractual agreement with third party representing the firm in the foreign market), *Equity Joint venture* (two firms starting a third organization that will be active in the foreign market) and last a *wholly owned subsidiary* (firm enters the foreign market by acquiring or starting a 100% owned firm). For the competition and industry analysis, Porter's five forces model is giving insight in the power/threat of market competitors, suppliers, buyers, substitutes and new entrants.

Following chapter includes a case study, giving insight in the firm Royal Dutch Shell, one of the major IOCs. Different project of the firm, suppliers, buyers, value chain, competitors

and market information, are described providing information for further analysis.

The chapter after contains the analysis of the entry modes and internationalization theories based upon the Shell Business case. Major findings here are that the LLL theory has been repeatedly used in internationalization steps since multiple of the factors were observed. In addition, the eclectic approach has been identified as the theory used for determining the most suitable entry mode, resulting in most cases in a fully owned subsidiary entry mode.

In the following chapter, Porter's five forces are analyzed based upon the business case information. This resulted in Figure 4, which illustrates the strength of every single force based on a scale from 1 to 5 where 5 is the strongest. It turned out that the bargaining power of both suppliers and buyers is quite high. The other factors are a threat of lesser extent. Shell is recommended to focus on limiting the suppliers'- and buyers' bargaining power by strengthening their industry role by R&D investments. In addition, Shell should focus on exploring new oil and gas resources in the seas and oceans worldwide since deep-water extraction is a specialty of the firm and the chance of getting full control and without the input of an NOC is more likely. Extraction projects in territories with unstable political condition remains a good alternative. As part of the current analysis of porter's five forces, also an indication was made for the future development of the factors resulting in Figure 5, estimating the future reflection of the condition of Porter's five forces.

The last chapter contains conclusion and recommendation of the report providing answer to the problem statement. The chapter recommends an overall strategy to Shell, containing steps: 1. Reconsider strategy (Porter's 5 forces), 2. International search for new drilling opportunities (LLL Theory), 3.Foreign Market Entry Mode (Eclectic approach), 4. Obtaining the drilling right and internationalize, 5. Drilling and strengthening expertise and skills, 6. Exhaust source and close down activities. R&D investments are continuously involved. This process will continue to be a vicious circle as long as the first step, reconsidering the strategy based on Porter's five forces, proves to repeat the process and continue to hold this strategy. In case the analysis of Porter's five forces tells that the industry has too many high threats and parties gained maximum bargaining power-, in combination with scarcer global natural resources, the firm is advised to start investing in the production of alternative resources. Following this strategy, it is believed that Shell will remain competitive and successful in the ever-changing environment.

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1 INTRODUCTION

In this chapter, the study will be introduced by explaining the background of the research, problem statement and limitation of this report.

1.1 Research Background

The conditions of many of the biggest oil companies are looking very well and thus their future seems to be very bright. After a drill into the core of these companies, their actual situation within the industry is slightly different than one might perceive. This contradiction is deceiving due to the many factors, which tell that the future of these companies is actually stagnating and getting darker.

In the post-World War II period, the world economy has dropped to a dreadful level (Reference) where many countries, later known as the western world, has seen their state-economy falling and national wealth dropping significantly due to long period of war. Hereafter, in the post-World War II period, the European continent has shown political stability and no great conflicts threatening the economies worldwide on great scale. This has been caused by e.g. the European Recovery Program (ERP) (also known as the Marshall plan) where "Sixteen nations, including Germany, became part of the program and shaped the assistance they required, state by state, with administrative and technical assistance provided through the Economic Cooperation Administration (ECA) of the United States" (marshallfoundation.com). In addition, the foundation of the European Coal and Steel Community (ECSC) has been contributing to political stability in Europe since this treaty is perceived as the precursor of the European Union. This treaty "brought in 1951 France, Germany, Italy and the Benelux countries together in one community with the aim of organizing free movement of coal and steel and free access to sources of production" (Europa.eu).

Since the 1950's, a group of oil and gas producing companies positioned themselves strongly in the industry and have until today secured their strong position. Lifting on the economic recovery and boost within the United States of America and Western-Europe that made the demand for oil and gas boom, in combination with the technological

revolution that made these companies able to drill for gas and oil in more and more situations. Thus, rising supply, made these companies grow into a group of companies that today can be placed among the largest companies in the world. Taking a small look at these companies it can be noted that the size and the strength of these have gained over time. Still in competition with Apple of being the most valuable listed firm in the world, Exxon Mobil is with a market capitalization of $417 billion a true giant. Another big player in the market is Royal Dutch Shell which is the most valuable company listed on the London Stock Exchange. The firm Chevron is employing around 62,000 people worldwide and is operating in over 130 nations. The last example that indicates the strength of these companies is illustrated by BP. This company has been facing major problem over the last years with the d*eep-water horizon Disaster* where due to explosion during deep-water horizon oilrig working in the Gulf of Mexico in April 2010 resulted in a great economic and environmental disaster. To compensate the disaster and the economic and environmental consequences, BP paid $90 billion in fines and compensations. The strength and size of a company such as this one is illustrated by its ability to pay such a sizeable amount in fines and compensations and still being able to operate after. In the last decades, there has been a change within the industry resulting into great consequences for the firms and shifts within the industry.

Image 1: Deepwater Horizon Disaster of BP in the Gulf of Mexico April 20th 2010

Source: stevenjohnhibbs.wordpress.com

First, the demand for oil and gas increased over the last decades. It has been seen that around 60% of the oil demand is used for transportation (August 3rd 2013 - The Economist) which obviously remained to increase due to globalization and development of countries such as the USA and Western-Europe. The amount of cars on the American- and European roads has increased, along with the amount of sea- and air transportation movements.

Another beneficial fact for the oil producing companies was that the supply of oil and gas has been in the lift. Over time, new oil wells have been found, enabling the oil producing companies to produce more of their product. In addition, technology and expertise that is needed to drill for oil increased and therefore the oil producing companies were able to drill as well to oil- and gas-wells at locations with complex geographical circumstances (August 3rd 2013 - The Economist).

Despite the fortunate factors that normally would complement the success for these companies, one important factor is threatening the existence of the previous mentioned firms. The leading oil companies within the industry are losing ground. In the last decades, countries that possessed oil and gas sources within their national territory started to operate the production activities themselves by founding National Oil Companies (NOCs). Today, these NOC's possess 90% of the worldwide oil- and gas reserves around the world. As a result, the capital generation out of oil- and gas producing activities have now been streaming (partly) towards national governments that (at least to a certain degree) own the NOCs instead of to the big oil and gas producing companies. In addition, the rate of available natural resources such as oil and gas has been diminishing over the years due to oil and gas extraction at large scale as a consequence of rising global demand.

Obviously, these factors are very decisive for the success of the oil companies since they have been rapidly running out of sources to produce oil and gas in the last decades. Therefore, the giant firms in the industry have been exploiting their added value in terms of knowledge and expertise repeatedly since sources got more scarce. The firms focused on specializing into three activities/company characteristics that required comprehensive expertise and skills. These activities/company characteristics are:

- Activities concerning complex source structure/chemistry: oils mixed with other types of liquids, gasses, rocks and sand;
- Drilling work in complex geographical and/or metrological circumstances: offshore drilling, deep-water drilling, North-pole drilling activities etc.;
- Operating in political unstable countries that impede drilling activities in anyway: War, safety concerns, drilling permission fluctuations.

It is for the abovementioned reasons that the major oil companies in the industry have been

spending more and more over the last decades to increase the level of expertise and skills available within the firms to be able to drill for oil in the abovementioned circumstances. Therefore, with the percentage of oil wells diminishing and the rising costs for operating the residual percentage, the future does not look so promising for the major oil companies.

1.2 Problem Formulation

The IOCs have over time internationalized all over the world, starting new drilling projects in the world's backwaters. Due to exploiting of the sources, the international activities per location are not ever lasting and thus new projects are founded elsewhere. This continues internationalization is perceived as a vital element for the strategy of these companies over time and it could potentially be the key to future success.

The major oil- and gas-producing firms within the industry are thus facing problems. These companies are now focusing on a small percentage of oil wells that can be characterized by (a combination of) factors such as complex chemical structure, complex geographical and/or metrological location or political unstable territory. The last two characteristics will be used to see what strategies the major firms opt in terms of internationalization, to remain successful within the industry.

The IOC's have become proficient in internationalizing which has developed over time into a competitive advantage over the NOCs. The IOCs have gained the sources and expertise to keep on internationalizing in the future and can use this tool as the strategy to survive the current and future changes and related threats of the industry.

Taken all into account, the following research question is formed:

Which previous and future factors influence the decision-making process of oil producing companies regarding internationalization and how can the future strategy benefit in order to maintain their position within the changing industry?

Since the existing independent oil companies are still competing within the industry, where at the same time the rates of oil and gas resources are declining, it is vital to understand key elements to win the remaining rates and to compete within the industry. In order to solve the problem statement, a set of internationalization related theories will be presented. Subsequently, a case study shall be utilized to search for the characteristics of the theories

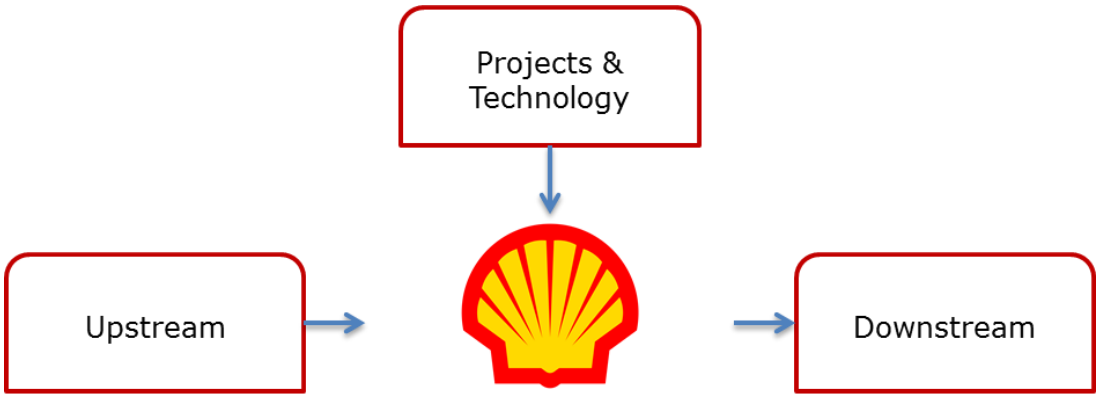
explained. Finally, the most feasible internationalization strategy to the changing industry will be named

1.3 Limitations

This report is limited to secondary information gathered from various sources such as the Internet, annual reports and books, to construct the case study – the input for the analysis and discussion. Therefore, it is acknowledged that all findings are limited to this scope of information and a certain degree of subjectivity is adopted when solving the focal issues.

Taking Royal Dutch Shell as an example, the business activities of the oil industry can be separated into different business parts (see Figure 1). First, the firms have upstream activities in the form of a section that focuses on the search for- and recovers natural gasses and crude oil. Additionally, transportation, manufacturing and the availability of the right infrastructure to obtain these natural resources is also part of the main activities of this department. The second division of the IOCs is the downstream part that takes care of distribution, marketing and selling of the products that are manufactured by the IOCs. The main products of these firms exist of fuels and gasses used for home transportation and industrial purposes. The last division common for these companies is the Project and Technology department of the firm that takes care of innovation and technology that is needed for the current activities of the firms but is also responsible to deliver expertise and technology needed to stay competitive when it comes to future possible projects. This report will mainly focus on the internationalization of the upstream division within the oil industry and thus focuses mainly on the search for new international production resources.

Figure 1: Overview of business activities of Royal Dutch Shell



Source: Self-made based on shell.com

2 METHODOLOGY

The methodological chapter will elaborate on the methods, tools and approaches used in order to answer the problem formulation of this report. The required foundation is created in this chapter to achieve the goals of this report. In addition, this chapter will deliver the required project design to clarify the structure and the chosen directions in the report.

2.1 Paradigm defined

The term paradigm is nowadays connected to Kuhn (1970), who is describing and framing various scientific findings over time in different fields. The paradigm represents a set of common understanding and common questions asked about the phenomenon being studied (Kuada, 2011). In addition, Kuhn is arguing that science in general is not strengthen necessarily of summing facts but more of continuous reframing the foundation of ideas. The paradigm will clarify the structure that is used to do the research and get the questions asked that is aimed for and how result of research should be interpreted.

Kuhn states that "in its established usage, a paradigm is an accepted model or pattern" (Kuhn, p23, 1996). However, he is also stating that his explanation of a paradigm is not appropriate for science since it is rarely an object for replication. Therefore Kuhn defines a paradigm as "an accepted judicial decision in the common law, it is an object for further articulation and specification under new or more stringent condition Kuhn (1996:23). Paradigms get status and prestige in case the result of it is more successful than its competitors. Therefore, a paradigm can be still very limited at the time of creation. Succession of a paradigm is obtained in case a promise of success is discovered in the selected and still incomplete examples Kuhn (1996:24). In case the current used paradigms are not adequate to deliver the right research results, new paradigms are set in order to continue for success where the former failed to do so. This report is aiming for success with currently existing paradigm since the aim here is not for new developments in philosophical research but merely intents practical use in international business economics.

To conclude this sub-chapter, the paradigm needs be defined that will be used for the research purpose of this report. The terminology of the paradigm is in this report interpreted as how the researcher understands and faces the problem statement of the

research. Kuhn considers shifting within a paradigm as doable. Therefore, it is understood that a degree of freedom in creating the structure of the research, which could gradually shift, since it relies on the wishes and needs of the scholar. Kuada is stating that a common definition of paradigm among scholars of philosophy of science is "in terms of four sets of assumptions – i.e. ontological assumptions, epistemological assumptions, methodological assumptions, and assumptions about human nature" Kuada (2011:42). This method of defining the right paradigm and the right approaches needed for the research of this study will be further elaborated in the next sub-chapters.

2.2 The four levels of understanding

It is important to present the four levels of understanding in philosophical assumptions, which are ontology, epistemology, human nature and methodology. In addition, an elaboration is made of the main views in every level of understanding. Different views, understandings and perception of ontology will lead to different research approaches and thus to different outcomes. It will focus on issues that deal with the perception of reality in a subjective or objective manner or by perception of a combined version. At this point, the chapter will continue to elaborate on the different levels of understanding.

2.2.1 Ontology, realism and nominalism

This paragraph is dealing with ontology that describes how philosophy of science scholars factually position themselves in the knowledge they claim to know something about and what is reality. The social sciences scholars have different perspectives of the social world. Some scholars perceive the social world as reality and external to any individual enabling external objective observations, while others believe that every individual has created its own perception of the social world, which is perceived as reality but can be subjectively constructed (Kuada, 2011).

Within the ontology dimension there is a distinction made between the Objectivist approach, which is titled as *Realism*, and the Subjectivist approach, titled as *Nominalism*. Both the approaches have a different perspective of the social world and thus can be seen a various realities. Realism "*postulates that the social world is real and external to the individual cognition. That is, the "real" world is made up of hard, tangible and relatively immutable structures"* Kuada, (2011:43) (Fast and Clark, 1998). For this reason, it is

perceived that a single individual cannot shape reality and surroundings since its part of it and which in addition is limited since the individual only has the ability to understand parts of reality and thus results in limited perception and understanding. The Nominalism perspective is in the contrary saying, "*that reality is constructed by individuals in interaction with each other and is presented in the form of names, labels and concepts"* (Fast and Clark 1998). This means that individuals do have influence and power to move and change the external world and are thus part of it and can understand reality.

2.2.2 Epistemology, positivism and anti- positivism

Epistemology is the next level of understanding related to ontology and the term is describing the nature of knowledge and the means of knowing – i.e. "how we know what we know" or what we conceive as a "truth" Kuada (2011:34). In addition, there is a variety of perceptions on this level. Several scholars believe that they can obtain an external position from the social world and therefore can observe and understand the facts. Another group of scholars believes that *the social world can only be understood by occupying the frame of reference of the individual actor whom the researcher seeks to study. That is, the social world must be studied "inter-subjectively"* Kuada (2011:34).

The next approach is positivism which is an epistemological approach that "seeks to explain and predict what happens in the social world by searching for regularities and causal relationships between its constituent elements" Burrel & Morgan (1979:5). Observations can be done externally by observing and identifying characteristics and links of the social world and the research topic. Burrel and Morgan state that by using this particular approach it is "possible to identify and communicate the nature of knowledge as being hard, real and capable of being transmitted in tangible form" Burrel & Morgan (1979:1). Nevertheless, it could also be said that anti- positivism contradicts "the utility of a search for laws or underlying regularities in the world of social affairs" Burrel & Morgan (1979: 5). Scholar that obtain this approach perceive the social world can be seen "only from the point of view of individuals who are directly involved in the activities which are to be studied" Burrel & Morgan (1979:5). For this reason, it is understood that the main idea is that the basic elements of relativism that form the social world are impossible to be studied from outside the social world but are preferred to be studied internally that will give the scholar full understanding.

2.2.3 Human nature, determinism and voluntarism

The next level concerns *human nature* which is the perspective one has on the relation between human beings and their surroundings and how the two influence or shape each other. "Some researchers see the social environment as being outside the individual. Other researchers hold the view that human beings and the social environment co-determine each other" Kuada (2011:34).

Related to these questions, *Determinism* states that human actions are influenced by external factors in their social environment and thus its external environment influences a researcher. The contrary statement know by the term *voluntarism* which is believing that individuals act freely and completely autonomous from the social world (Burrel & Morgan, 1979).

2.2.4 Methodology, nomothetic and idiographic approach

This paragraph is elaborating on methodology which is the term used that "describes the reasons underlying the choice and use of specific methods in the research process, - i.e. how you may go about gaining the knowledge you desire" Kuada (2011:34). The methodological framework is formed by visions concerning the different approaches as described in previous paragraphs such as ontology, epistemology and human nature. A specific Methodology that can be obtained is the nomothetic approach using systematic usage and techniques that in general is resulting in usage of quantitative techniques such as surveys and questionnaire- usage to identify trends and do hypothesis testing (Burrel & Morgan, 1979). Then, there is also the idiographic approach which is also applied by various researchers which is stating that the research topic, hypotheses testing and analyses can only be done by obtaining own personal experiences and understanding through "getting inside situations and involving oneself in the everyday flow of life" Burrel & Morgan (1979:6).

2.2.5 Objective – subjective perspectives

The objective and subjective views to research are returning distinctive topics in the discussions of paradigms in social science. This distinction is also acknowledged by Burrel and Morgan. This discussion continues and discusses the question "whether researchers can see "reality" only from an objective (i.e. external) or a subjective (i.e. socially constructed) perspective or whether reality can be seen from both perspectives in the same

project" Kuada (2011:35). Choices concerning the adoption of which approach are of high influence of the final research design of the report. Kuada describes that researchers can be categorized into three groups. The first group consists of purists, which are the researches that believe that the objective and subjective perspectives are mutually exclusive and thus are of such a big difference that they should not be mixed in one research. The second group consists of situationalists which have a more flexible attitude towards the set of perspectives. These researches state that there are various social phenomena which all need different approaches where a combination is possible between objective and subjective perspectives which as a result provides a better analysis in research and complement each other. The last group that is described is the group of pragmatists. This group of researches adopted a perspective where not the researcher is the factor that determines the choice of a specific approach but the research topic does. Therefore, the researcher has to adapt his approach to the approach that suits best to every single research topic and thus both perspectives, or a combination of the two, are possible Kuada (2011:35). The research of this report will adopt is a situationalists view. This perspective is chosen due to the fact that this approach uses different perspectives and therefore enables both an objective and a subjective view through the report and will use a combination of the two that will give the research better understanding and gain better insight in the problem statement and research that needs to be solved. To continue on this choice of perspective, it is required to decide which fundament will be used for the research by deciding for the right paradigmatic typology. In the choice for the right typology, it must be stated that the complementary factor of subjectivity and objectivity will play an important role and thus Abnor and Bjerke's typology of paradigms will be incorporated since these assumed the two as not mutually exclusive and thus using the two separately or a blend of the two is possible.

2.3 The Abnor and Bjerke typology

Abnor and Bjerke's typology describes three different views (analytical, systems and actor) that inquirers use to advance research methodologies to study, understand and develop human organizations (Collen, 2012). Abnor and Bjerke set apart theory of science and methods. According to Abnor and Bjerke, theory of science covers the ultimate presumptions (or ontological and epistemological discourses) in the social sciences (Kuada, 2011). In addition, they also make a distinction between paradigms and

methodological views since they are convinced that one can identify what a researchers fundamental thoughts are and thus the existing relations with the practical use of different methodological approaches (Kuada, 2011). To continue, Abnor and Bjerke created three methodological approaches being used by researches in order to create knowledge. These approaches can also give insight into the presumptions of the researcher and at the same time deliver the requirements to shape the use of practical instruments such as creating an operative paradigm (Abnor & Bjerke, 2009). As a result, Abnor and Bjerke have developed six overlapping paradigms:

1. Reality as a concrete phenomenon that is conformable to law and independent
2. of the observer
3. Reality as a concrete determining process
4. Reality as mutually dependent fields of information
5. Reality as a world of symbolic discourse
6. Reality as a social construction
7. Reality as a manifestation of human intentionality

Based on the paradigms above, Abnor & Bjerke identified three methodological approaches: the analytical, systems and actors approaches. The next paragraphs will elaborate on these approaches.

2.3.1 Abnor and Bjerke's analytical approach

Abnor and Bjerke developed the analytical approach, which is stating that the reality is objective and can thus be analyzed externally by researchers in order to achieve different scientific results. This approach believes that the reality is build up from of different elements that can be individually taken apart and analyzed and together complement the reality (Kuada, 2011).

As a result, the analytical approach sees the creation of knowledge as a contribution to the fact that is researched, at best as generalizable explanations. The researcher is assumed part of a collective research heading into similar directions and sharing homogenous methodical procedures and methodic. The result of the research can be alike to other research studies, can provide better understating of the research issue or can bring up new facts and knowledge. Which one of these result are laying at the end of a researcher's

research is not of importance. If new findings are the result of research, it is preferred that these are not based on understandings that differ radically from the dominant assumptions of the collective. The result of a study that is in line with analytical approach is in general resulting into a consultancy report or general investigation (Abnor & Bjerke, 2009).

To conclude, it can be stated that this approach is showing great signs of objectivity since it is based upon external sources and studies that are used for analysis mainly from directions such as public information/statistics/sources and of people that have personal experience with the topic and thus have knowledge about the topic (Abnor & Bjerke, 2009).

2.3.2 Abnor and Bjerke's systems approach

Abnor and Bjerke developed a second approach called the systems approach. In a "systems approach", a social entity such as a group, an organization or a community is conceived as a system which consists of constituent elements. Between these elements, relations exist (Kuada, 2011). This approach sees the different parts as related and thus influential to other parts of reality which therefore cannot be taken out of the system for analysis without influencing other parts. Therefore, the systems approach reality is not summative (Abnor & Bjerke, 2009). The system approach understands that a researcher investigating a specific research topic looking for patterns and facts cannot be seen as fully isolated individual of reality. Therefore, a specific subject of study is not be investigated individually but must be done in combination with related parts of the environment. Hence, the context of research is an important factor to be taken into consideration in the search for trends, facts and relations. In addition, the irregular facts also need to be considered to complete the research (Abnor & Bjerke, 2009).

It is natural to assume that a systems study result in the form of a more comprehensive report contains unique result in relation to this kind of study. An important statement made by Abnor & Bjerke is that the system approach is requiring "the right combination of circumstances at national, regional, industry and individual company levels will provide the solution - and the systems creator of knowledge has a rather pragmatic attitude to which they should be" (Abnor & Bjerke, 2009).

To conclude, a system study could be relatively large where researchers are expected to

add besides primary data (interviews, observations and discussions), also large amounts of secondary data in order to broaden and complement the studies. Different attributes of the system need to investigated in order to get the right overall picture of reality. In addition, the systems need to be analyzed for over a longer period of time in order to understand the history of the system and thus which factors shaped the system and its characteristic to the form it obtained today.

2.3.3 Abnor and Bjerke's actors approach

The third and last approach that Abnor and Bjerke have developed is the actors approach. This approach has a very different identity compared to the previous two. *"Researchers subscribing to this approach see reality as emerging from interactions between each individual's own experiences and the experiences of others within his social community over a period of time"* Kuada, (2011:53). This means that the social world has been developed over time by actions, counteractions, reflections and thoughts negotiations, sharing of meanings, social influences and opinions. Hence, subjectivity plays an important role in this approach.

To conclude, subjectivity is highly influencing this approach and it is therefore less applicable on this report since the nature of this research will mostly deal with facts and objective matters rather than subjective.

2.4 Constituting methodological approach

Within this part of the report, a start is made with describing the methodological approach. This will be done by using the different levels presented in the methodology chapter titled as ontological, epistemological and human nature- level that need to be developed. The initial philosophical view need to be elaborated and in addition the degree of either subjectivity or objectivity of the reality needs to be identified in order to design the methodological view. The earlier elaboration of the Burrel and Morgan's terminology in this chapter is used for structuring the initial philosophical view.

As stated, a start will be made with the ontology describing the factual reality. This report is dealing with the global commercial oil and gas extraction industry. Subsequently, this environment is consisting of elements such as IOCs, NOCs, suppliers and buyers. These elements are all players of the industry and are therefore not just names or concept but are

actually forming tangible and concrete structures that this report is aiming to study. All of the constituent elements are part of the oil and gas industry. Hence, the different elements of the environment are related to each other and have various forms of influence on another. An example of this approach is the division of market shares among the biggest IOCs in the world, which are divided, established and hardly changing. Therefore, the industry might have high entry barriers for new entrants and thus in these studies it is impossible to structure and therefore it can be grasped by independent research which this report intends to do.

As described before in this chapter, realism "postulates that the social world is real and external to the individual cognition that is, the "real" world is made up of hard, tangible and relatively immutable structures" Kuada (2011:53) Fast and Clark (1998). Therefore, it is concluded that the report will incline to realism in order to obtain an objective view when it comes to the ontological level of the research.

The second level where a specific view needs clarification is the epistemology level. This level is determining how the researcher of the report thinks of how the knowledge can be gained. The research in this report is not taking an anti-positivist approach since the it is perceived that the research can be done externally from the industry and observations can objectively made from an external point of view and researchers do not have to be directly involved in the activities and/or players that are topic of the research according to Burrel & Morgan (1979:5). Laying focus in this report on the Royal Dutch Shell from on external point of view, will enable the research to get the right observations of a firm that has common characteristics to the other big players in the industry and thus the outcomes of the study is perceived to be representative for the industry. Hence, a positivistic approach is obtained for observation in this research.

The third level is making assumptions regarding the human nature of the research. In this level, it is determined whether the researcher is under influence of by its surroundings and is therefore shaped by it (determinism) or whether the researcher is completely autonomous in its research and is not influenced by its surroundings (voluntarism). This research is considered as rather deterministic since the external environment influences the researcher and so is the obtained information and the reached sources. Moreover, due to the fact that the availability of resources is to extensive to be all researched a subjective

determination takes place in selection the appropriate resources and thus what to use and what not.

Within the different paragraphs and sub-chapters, different conclusions have been drawn. Based on these, the systems approach of Abnor and Bjerke is selected since it is perceived to be most suitable for this research report. The oil and gas industry, being a fixed industry with fixed elements, players and relations all influencing each other, makes the system approach very suitable since the reality here is build up out of various constituent parts. In addition, the research will go over a large amount of time and use a significant amount of secondary data to analyze in order to broaden and complement the studies. Different attributes of the system need to be investigated in order to get the overall picture of reality. It is expected that the system approach will enable the research to solve the problem statement.

2.5 Methods and techniques

Within this subchapter, the methods and techniques used to utilize this project are highlighted. The chosen techniques and methods are expected to be in line with earlier research approaches. The clarification of methods and techniques is part of the confirmation of the operative paradigm. The methodical procedure *"refers to the way the creator of knowledge incorporates, develops, and/or modifies some previously given technique (e.g., a technique for selecting the units of study, for collecting data, or for analyzing results) in a methodological view. Adopting and possibly modifying a previous result and/or theory is also called a methodical procedure*" Abnor & Bjerke (2009:17).

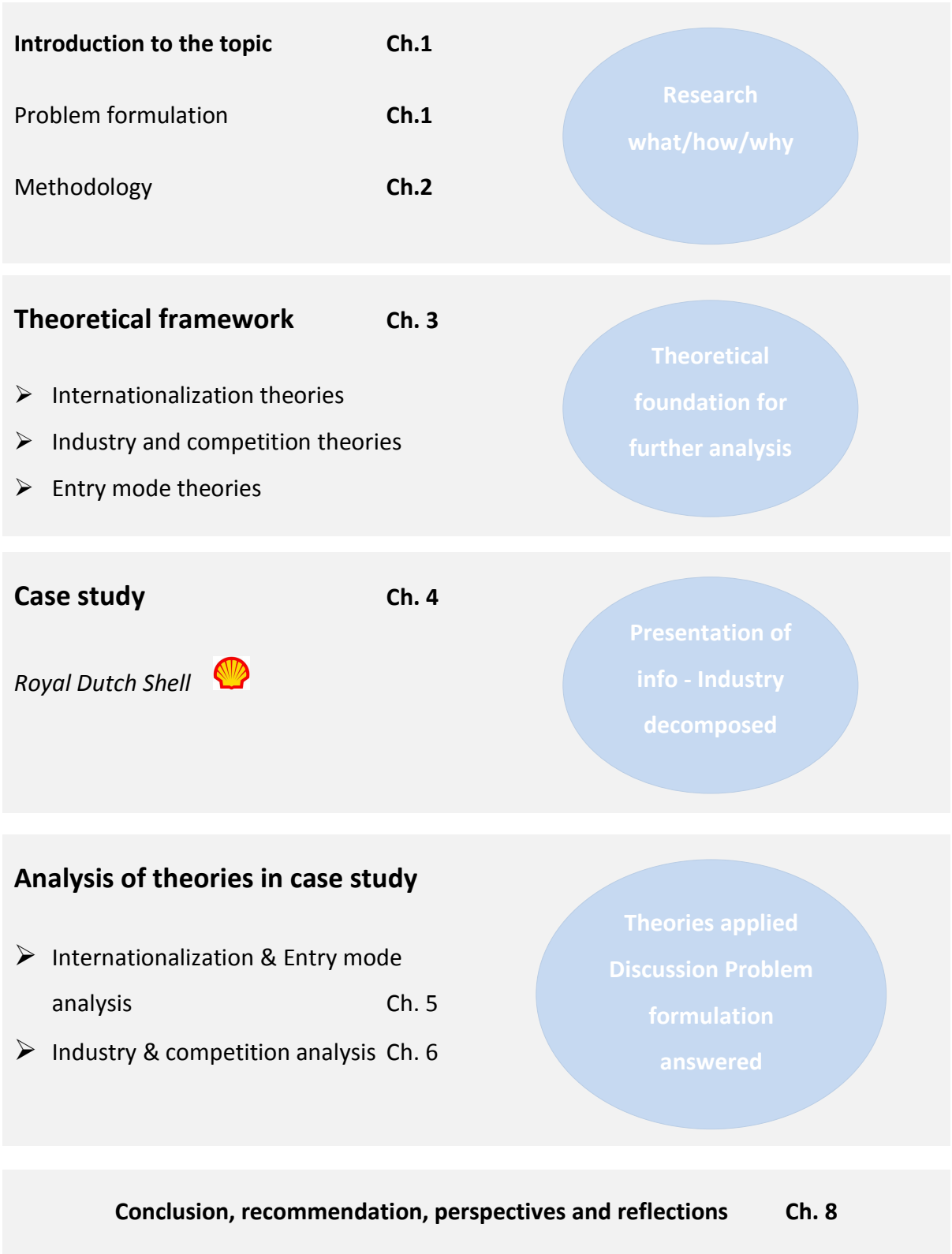
Within this report, the methodical procedure that is chosen in order to operate the research is the focus on practical use in the form of a case study. This research is focusing on the identification of different theories in historic and current strategies of the major players in the international oil and gas extraction industry. By labelling historic actions of a representative example of the industry with identified theories, enables the research to observe patterns and trends within the industry that could be explained. Subsequently, the observed application of theoretical techniques in different situations enables the research to focus on other similar cases or the future and provides the research to base future strategic actions on. The historic research of data in this field will provide the foundation for a case

study further used for the application of theories. The company Royal Dutch Shell has been selected for this research since it has been one of the major players in the industry that shows great similarities with the other players and is expected to be influenced significantly by the industry changes. In addition, the firm is showing a set of historic events that suits the intention of this research perfectly such as intensive internationalization (extensive global presence), variety of entry mode usage and multiple competitive moves in reaction to industry (changing) characteristics. The sources that are intended to be used for this research exist of the official company publications (e.g. annual reports), internet resources, cases studies, article publications. Lastly, a variety of books is used for internationalization, industry analysis and entry mode- theory clarification and for laying research fundament.

Several methodics are implemented in this research. This terminology stands for "the way in which the creator of knowledge relates to and incorporates these techniques made-into-methods into to his/her study process, and the way the study is planned and conducted is called methodics" Abnor & Bjerke (2009:17). The term methodics, which should be related to the systems view as well, has been designed "to generated pictures of those systems which are believed to be there out in the fact filled reality, that is, to gradually move forward to get better and better pictures of those systems" "Abnor & Bjerke (2009:40). The report intends to clarify the situation in the industry by creating the case study in order to provide full understanding of the system. Following, the analysis of the case study by use of the given theories will give an academic understanding of strategies in the industry. Last, conclusions can be drawn and recommendations, to the addressed firms and researchers, are enabled.

2.6 Master Research Project Design

Figure 2: Master research project design



Source: Self-made

2.7 Methodological conclusions

To conclude this chapter, the findings and statement of this chapter will be summarized and listed in order to clarify the approaches used for the research of this report. The research of this report will be done by use of the situationalsit approach due to required blend of objectivism and subjectivism in the research. This has automatically been resulting in the use of the methodological approaches as the ones developed by Abnor and Bjerke. This is in line with fact that the oil and gas extraction industry is consisting of different constituents, such as the IOCs, NOCs and the specific suppliers and buyers in the industry, all together complement the system and influence one another. The system approach has been leading into the use of the tool case study in order to provide the right fundament for further analysis.

To conclude the methodology chapter, a short overview of the outline of this report is given. The report is starting with an introduction to the topic, giving the basic knowledge to get a complete understanding of the problem formulation which is positioned after. In the next chapter, the methodological framework for this report is delivered needed to give the reader understanding of philosophical a scientific decisions made and the approaches used in the report. The next part of the report exists of the theoretical framework. This chapter explains the theories used in order to give the reader the basic knowledge in understanding further parts in the report. The following chapter is the case study of the report. The chapter aims to elaborate on a specific case/firm, representative for answering researchers questions. Subsequently, the report arrives at the part of analysis where the theories are applied to the case study and thus academic insight is given into the topic, delivering the information to answer research questions. The final chapter contains conclusion and recommendations answering the problem statement of the report.

Attached to report, the reader can find the references used for information gathering, a glossary explaining common terms/abbreviations used in the report/oil and gas industry and lastly, the appendices containing the information that occasionally is referred to in the report.

3 THEORETICAL FRAMEWORK

Within this chapter, theories that will be used in order to define future strategy are presented. Understanding the key-theories used by the International Oil Company (IOC) will be vital knowledge to point out trends and strategies further in this study. First, the report will elaborate with internationalization theories. Next, industry and competition theories are explained needed to get understanding of the elements that IOCs are dealing with. The last part of this chapter contains a focus on entry mode theories needed to analyze historical international market entry of IOCs for possible future reuse. The chapter will only focus on selection of theories that seem most adequate in the research and most applicable to the obtained information.

3.1 Internationalization theories

The internationalization theories are chosen to be analyzed within this report since it is a vital tool that is used by companies within the oil industry to strengthen and improve their current position within the industry and therefore can be seen as the potential key for future success.

3.1.1 Dunning's eclectic approach (OLI)

Dunning's approach explains and highlights the necessity of the presence of locational variables in the foreign investment decision. Dunning's Framework (1988) structured the foreign investment decision by developing a theory and underlying necessities to frame the decision-making. Dunning describes that in order to make a foreign market entry successful and let the international production increase, three conditions have to be met. The first condition to be satisfied is: Ownership.

3.1.1.1 Ownership

Ownership advantages can be achieved when a firm possesses specific knowledge capital. When a firm possesses knowledge capital, it owns expertise, expertise, human capital (managers) and/or certain patents, technologies, brands, reputation etc. The advantage of owning knowledge capital is that this kind of intangible assets could be replicated in multiple foreign markets. When a firm decides to enter a new market, it faces different

uncertainties that could influence the market entry. To overcome these uncertainties, the firm could use its factors of success in the market entry of the foreign market.

3.1.1.2 Location

Location is the second condition that Dunning highlights in his theory. Location advantages within the new market can be found in the factors of production. These are the different modes of production, crucial in the realization of the core-business of the firm. These factors are similar to the production factors in the home market and their availability in the foreign market is vital in realizing a successful market entry. Without the availability of location advantages, the market would be served via exports and thus could drive costs up of the entering firm.

The third and last condition that is described by Dunning's approach is the condition of Internalization.

3.1.1.3 Internalization

Internalization advantages can be realized when a firm decides to acquire a firm instead of selling the right of the service offer to a party, which is already established in the foreign market. The use of an intermediate entry mode by e.g. contracting, licensing, franchising, strategic alliance or joint venture brings along certain disadvantages and risks. Therefore, the firm needs to consider the costs of acquiring and internalizing an established firm in the foreign market versus the disadvantages and risks that comes along with the intermediate market approach.

3.1.2 Linkage Leverage Learning (LLL)

Assumed is that the IOCs are making use of another internationalization theory which is the Linkage Leverage Learning (LLL) framework (Mathews, 2006). To understand the oil industry better, an outlined description of the theory- and its characteristics will be given.

3.1.2.1 Linkage

Linkage advantages can be obtained through a firm's focus on getting resource advantages externally. Firms using this theory aim for a global orientation because there is a higher chance to find new opportunities in the global market rather than in the home market. These opportunities would include acquiring new resources through foreign markets. To

access these new markets, a firm would have to deal with new risks. A firm could work with a form of partnership, or joint venture in order to minimize those risks. When these firms link together to create a network, new opportunities are exploited at a faster pace due to an increased level of cooperation.

3.1.2.2 Leverage

Leverage advantages can be obtained when a firm seeks for opportunities to establish links with partners to leverage resources. Decisive in seeking resources to be leveraged is their potentiality to be leveraged. One source fitting two firms to use it delivers a higher return on investment for the owner of the source and limited investment for the new entrant.

Linkage and Leverage are two of the elements, which are in contrast with the OLI theory. The OLI theory derives the advantages to be obtained from ownership of resource, while firms seek for external opportunities by Linking and Leveraging foreign resources and parties by cooperation.

3.1.2.3 Learning

Continuous gaining of the Linking and Leverage advantages will stimulate the learning process of the firm in understanding how to perform those activities itself more effectively (organizational learning). Stimulation of the learning process can be realized by e.g. the formation of R&D alliances which can be beneficiary for entire regions and economies. The latecomer or newcomer MNE's gain lots of knowledge, expertise and experience through this learning process where Leveraging and Linking are continuously repeated. The learning process will become the standard approach for the firm to enter new markets and gain a solid market position in the markets where they are late- and/or newcomers. This process of learning and building enables the firm to be involved in the process to achieve sudden appearance in a highly competitive market and/or acceleration of the internationalization process.

3.2 Entry mode theories

The following subchapter will take different entry modes into discussion. First, the foundation will be laid, necessary to understand further analysis of shell's internationalization steps from the entry mode perspective.

3.2.1 Exports

Exporting is the entry mode where the firm has the lowest involvement into the foreign market. Products are produced in the domestic market or a third country and transferred to the new-to-enter market. This entry mode is the most common one and can be the first step into a foreign market. This entry mode requires the lowest investment in the foreign market and subsequently includes low involvement in the foreign market.

3.2.2 Licensing

This entry mode contains neither investment nor direct ownership in another country but still enables a firm to establish local production in a foreign market. Licensing belongs to the group of non-equity entry modes, which also contains similar entry modes such as R&D contracts, alliances, etc. These kind of licensing contracts normally stand for longer term and include a great variety of additional responsibilities. The contract includes a licensor (Internationalizing firm) and a licensee (firm in the foreign market) where the licensee takes over several functions of the value chain that normally belong to the tasks of the licensor. Licensing can be done in two different ways were the first one is only arranging the legal matters and the conditions concerning transfer of right and the loyalties the licensor will get. The second approach includes further going cooperation e.g. R&D and equity exchange (Hollensen, 2011). The investment made into the foreign market is higher compared to the export entry mode but still is relatively low in comparison to next entry modes that will be described. In addition, involvement in the foreign market and control over the way the firm reaches the customers in this market are rising but still relatively low.

3.2.3 Equity Joint Ventures

This form of entry mode belongs to the group named as ‘Foreign Direct Investment (FDI)’ or ‘Equity mode’. A joint venture is a form of partnership between two firms that form a new entity with a new name. Foreign and/or a local firm an enterprise where ownership and control are shared. In this case, the joint ventures can also be named as international joint venture where the partners of the partnership are located in different countries. Joint ventures entail a certain type of equity that sets this entry mode apart from the previous described entry modes (Hollensen, 2011). Investment into the foreign market is rising however not the costliest entry mode. Involvement in the foreign market and control over

the new entity in the foreign market are relatively high.

3.2.4 Wholly owned subsidiary

This is the last group of entry modes, also known as the hierarchical mode, where the internationalizing firm is fully owning and controlling the foreign entry mode. This mode is more about the degree of control the headquarter has, varying from only the governance role or full strategic control over the subsidiary. This entry mode includes relatively the highest involvement in the foreign market and highest control over the subsidiary. A wholly owned subsidiary can be realized by several ways. There is Greenfield investment, where the internationalizing firm is building up an own subsidiary up from the ground. This could be a costly and time consuming investment since distribution channels and other partners need to be found and the firm needs to find its way in the industry, habits, customer needs, country specific etc. An advantage is that the firm does not have to deal with traditional practices of the established concern (Hollensen, 2011). The other way of entering the market with a fully owned subsidiary is by acquisition. This is a rapid method were also established channels, partners, customers, goodwill and brand name are acquired. Acquisition could become a costly method to enter a foreign market. Acquisition could be in horizontal form, where a competitor is acquired, or vertical, where a party up or down in the value chain is acquired.

3.3 Industry and Competition theories

The following paragraphs will focus on the explanation of theories that later in the report are used for the analysis of the industry. This sub-chapter is diving into the industry and competition characteristics of the oil and gas industry. The theory of Porter's five forces has been chosen to apply since it will give better insight in the industry characteristics and will provide the IOCs with insight on threats coming from the industry side. In this part, also Porter's diamond could have been used to give extra insight in the characteristics of the firm in the case study, which is Royal Dutch Shell. Nevertheless, the theory is focusing on the domestic market characteristics where the firm has been established and thus assumable still have great effect on the firms identity. However, the choice has been made not to focus on this since Royal Dutch Shell, coming from the Netherlands, has internationalized decades ago and has nowadays obtained an international dominated

character (see in case study chapter). Based on this fact, Porter's diamond is left out of the analysis. Distribution of control, power and investment between the two partners is divided by percentage, which vary per joint venture.

3.3.1 Porter's 5 Forces

In this sub-chapter, Porter's five forces will be elaborated to deliver a framework for further analysis of the industry level of a firm. This theory of the five forces consists of different actors that are present in the industry with a certain interest or function. These factors are new entrants, suppliers, substitutes, buyers and market competitors. Subsequently, a short introduction is needed to these actors, their interest and/or function within the industry and their potential role and power in comparison to the firm of further analysis. The importance of using this theory is that it enables the firm of interest 'to find a position in industry where the company can best defend itself against the five forces, or can influence them in its favour' (global marketing, Svend Hollensen 2011). Notion of the actors and their role within the industry in comparison to the firm of interest enables the firm to identify its strengths and weaknesses, its position within the industry and shows which strategy changes have greatest impact. This theory can contribute significantly to the future strategy formulation of the firm of interest (see paragraph 6.1).

3.3.1.1 Market competitors

The first actor of Porters 5 forces model is consisting of market competitors. This factor gives insight in the rivalry existing within the industry between the different competitors. The amount of rivalry is depending on several factors:

- The concentration of the industry: this factor concentrates on the division of power in the industry according to market share size of the present firms. The more unequal these market sizes are the less rivalry existing within the industry.
- Rate of market growth: if the industry has still lots of potential of growth to offer to the firms within, they tend to battle more for winning new potential customers instead of winning customers of their competitors.
- Structure of costs: low fixed costs discourage price cuts to fill up firm's capacity.
- Degree of differentiation: products that have a high degree of diversification are hard to copy by competitors or newcomers in the industry and therefore rivalry is relatively low. The opposite applies for commodity products that encourage rivalry.

- Switching costs: Rivalry is limited in case the firms in the industry have invested significant amount of resources in for example expertise, knowledge, technology. This makes the product specialized and therefore it is not worth the investment to change industry or product.
- Exit barriers: firms generally tend not to switch industries in case the possibilities to switch to another industry are limited, when firms are highly integrated within their supply chain (obtain all channels from raw materials to customers) or due to high switching costs. Thus, the intensity of rivalry within their industry is high.

Important is that firms realize their position within the industry and the wellbeing of the industry needs to be cherished and short term self-interests are occasionally to be ignored.

3.3.1.2 Suppliers

The next factor within the industry is the group of suppliers. The suppliers can have high bargaining power since raw materials and/or components are vital for a firm and therefore the costs can have impact on a firm's profitability. The amount of bargaining power is relatively high in these scenarios:

- There are a limited number of suppliers in the industry and they are more concentrated than the firms to which they sell.
- The products that the suppliers sell are highly unique or differentiated and therefore hard to be substituted by others. Therefore, they are highly important to a firm.
- The products are not supposed to be in combination with other products sold to the industry.
- The threat exists that the supplier is integrating forward in the industry.
- There is no threat existing of buyers integrating backwards in the industry in the form of taking over suppliers´ activities.
- The market is of relatively low importance to the supplier(s).

An important note here is that a firm can adapt a strategy to reduce the bargaining power of a supplier by finding alternative products that can substitute the original ones, pose the threat of backward integration or can produce standardized products enabling a larger group of suppliers to deliver.

3.3.1.3 Buyers

The next factor to discuss is the buyers' power. This group is also important within the industry and thus the bargaining power of the buyers is high in situations such as:

- High concentration rate of the buyers and/or purchase in large extents.
- There is a significant threat of buyers integrating backwards in the manufacturing process of the industry.
- The purchased products are standardized and/or undifferentiated.
- The number of sellers of the product is high. Thus, a large number of competitors are competing for the same customers and so the chance of replacement is high.
- The lower the profits of the buyers are the higher the chance is for incentives to lower the purchasing costs.
- The impact or importance of the seller's product on the buyer's product is low however, the price of the product is of high importance.

The strategy of the firm can be designed with the intention to reduce buyers' bargaining power. To achieve this, the firm can increase number of customers they sell to, to impose the threat of forward integration by taking over activities of for example OEMs and distributors or by producing highly valued and differentiated products to increase the importance of the firm within the manufacturing process of the final product. Another important fact is in case the buyer of the firm is not the final consumer in the chain. Therefore, the buyer of the firm can possibly influence the purchasing behavior of the final customer and thus its bargaining power is high (Porter 2008).

3.3.1.4 Substitutes

The fourth actor in Porter's five forces is the threat of substitutes in the industry. Substitutes are products that can replace products in the industry and thereby lead customers of the industry and the related profits to another one. Industries that are highly successful and thus generate high profits generally tend to attract the possibility of competitors entering the industry with substitutes. The threat of substitution relies on:

- whether the buyers are open-minded to replace their current purchased products by substitute products.
- how the price and performance of the substitute products are in comparison.

- the costs for the buyers to switch from their original purchased product to the substitutes.

An important note for strategy formulation of a firm in relation the substitutes is that the threat of substitutes is minimalized by building up switching costs through e.g. making the product more unique so a substitute is losing its identification as being a substitute. In addition, making differentiated products that highly connect to the wants and needs of the customer will diminish the likelihood of replacement by a substitution product.

3.3.1.5 New entrants

The last factor of Porter's five forces is the group of new entrants. This group can enter the industry and start competing for the same customers and profits as the firm of interest does. Therefore, rivalry in the industry is increasing which is not beneficial for the firm of interest. The threat of new entrants is inherent to the barrier of entry to the industry. Barriers of entry are effected by:

- Economies of scale;
- Rate of diversification and originality of a firm's products creating customer loyalty towards the products;
- The capital resources needed can be an obstacle in industries where these are high;
- The switching costs, which means how expensive it is for a customer to switch from one supplier to another. Higher dependence of the supplier enables higher switching costs.
- Whether the new entrant can also access to existing distribution channels or whether it can create its own distribution channels in the industry.

In case a firm is active within an industry that already has high entry barriers it still has to hold intentions to raise the entry barriers even more, in order to keep a potential interesting market unattractive to potential new entrants. High need of expertise and knowledge, great R&D investments or the need for complex technology in order to produce a certain quality of the products are examples of increasing entry barriers. The contrary result is achieved in case somehow the manufacturing costs are drastically lowered (e.g. new inventions or technology) and thus entry is simplified.

The explanation of the theory of Porter's five forces model is summarized in Appendix 1.

4 CASE STUDY ROYAL DUTCH SHELL

This chapter will elaborate on the internationalization history of Royal Dutch Shell. This IOC has been present within the industry over many years and realized a strong position within the market. This firm has been significantly internationalizing in the past to become successful within the industry and realized tremendous turnovers. Therefore, in this case study the focus will be on some major internationalizations steps and analyze in what way they were realized. Consequently, these steps will be related to the internationalization theories in order to find patterns in internationalization achievements. The case study focuses mainly on internationalization on the upstream side of the firm (see Figure 1). Additionally a broader perspective is given of the oil and gas extraction industry and the company characteristics of Royal Dutch Shell.

4.1 Internationalization

Royal Dutch Shell, more commonly known as Shell, is part of the group of biggest IOCs in the world. At the beginning of 2014, the firm employed 92,000 employees worldwide and generated $451.2 billion of revenues resulting in $16.5 billion of net income in 2013. Important fact here is that 1.3 billion has been invested into research and development, which amounts 7.9% of the net income of the firm. In order to maintain successful in the industry, the firm has been internationalizing by acquiring oil and gas resources all over the world. Some notable internationalization steps of the firm are identified. Important information to be noted in every project is:

- Country
- Year
- Entry mode
- Motive(s) identified
- Size of investment
- Percentage of source control
- How was the source won
- Cooperative parties

4.1.1 Majnoon Field. Basrah, Southern Iraq 2009

Source: Shell.com

These oil fields in the south of Iraq belong to the world's largest oil fields. Royal Dutch Shell won the contract in in January 2010 to be lead operator and has an interest of 45% in this oil field. The contract was won by a subsidiary of Shell called Shell Iraq Petroleum Development (SIPD). A 20-year deal, where Shell is providing the technical assistance needed in the development of the oil field was sealed with this contract. This oil field has reached a number of 210.000 barrels of oil per day, a higher number than was originally calculated and containing an estimated number of 38 billion STOIIP (stock tank oil initially in place). Shell is operating in this deal on behalf of an operating consortium including the Royal Dutch Shell, Petronas and Missan Oil Company, which is the NOC of Iraq.

The contract was obtained by means of a tender (for more explanation of this process please see sub-chapter 4.4). Since this oil field is one of the largest in the world, it is assumed that Shell aimed for source control in order to control a significant amount of new resources and thus to be able to increase production or stabilize current production in the future.

4.1.2 Trans Niger Pipeline Loopline, Nigeria 2013

The Trans Niger Pipeline project is responsible for the transportation of 180,000 barrels of crude oil per day which is quite a large number. Therefore, the project is also accountable for a large percentage of Shell's natural resources and thus their activity in Nigeria is to ensure production. The project has caught the attention of different media in the last year due to the fact that in the transportation loopline that Shell constructed, several leakages have been monitored resulting in pollution of the local environment. Shell already constructed the loopline at an alternative route because the region has high risk of bypassing, sabotage and illegal refining. For this reason, the firm blamed these reasons for

the leakages but some environmental campaigners blame the old loopline infrastructure for it that was already there for different projects (Reuter, 2013).

With this project, Shell extended its presence in Nigeria since it has already been active within the country since 1936. Shell has been operating by its fully owned subsidiary named 'Shell Petroleum Development Company of Nigeria (SPDC)', which renewed and won new contract over the years to extend Shell's presence in the country. The investment made for this particular project is expected to be $1.5 billion, needed to secure the pipeline better against sabotage and thievery and adapt it to the new project. SPDC has formed a joint venture with the Nigerian National Petroleum Corporation (NNPC) were the division of control is: Nigerian National Petroleum Corporation (NNPC: 55%), Total E&P Nigeria Ltd (10%), and Nigerian Agip Oil Company (NAOC: 5%).

4.1.3 Gumusut-Kakap Sabah, Malaysia, 2008

This project is located offshore Malaysia and complies an oil source at 1220 meters depth underwater. Drilling to this source at this location, Shell is aiming for a peak annual production of 135.000 barrels per day. Shell has been active within the Malaysian market for over 120 years. This project, where the firm will drill for oil sources in deep-water, will be the first deep-water project for Shell to operate in Malaysia. Because this type of project is one of the key fields of expertise the company has, the firm has a great chance here to expose the firm to the Asian region and thereby possibly enables future projects to be granted to Shell. As stated on Shell's website "Shell is playing an active role in developing a deep-water service industry in Malaysia by bringing its technology and expertise into the country". This could be seen as a possible secondary motive for the firm. Primary motives are in this case equal to the previous discussed projects where the main intention is to control a certain amount of natural resources to be used for boosting current production and/or securing future production. Shell announced in January 2011 an investment in Malaysia of RM5.1 billion for the development of three project where this particular one is part of. The division of interest in this particular project is as follows: Shell 33% (operator), ConocoPhillips Sabah 33%, Petronas Carigali 20%, Murphy Sabah Oil 14%. Murphy Oil Corporation has been the discoverer of the source, which informed Shell about this opportunity (Murphyoilcorporation.com).

In the downstream segment in Malaysia, shell has also been investing in

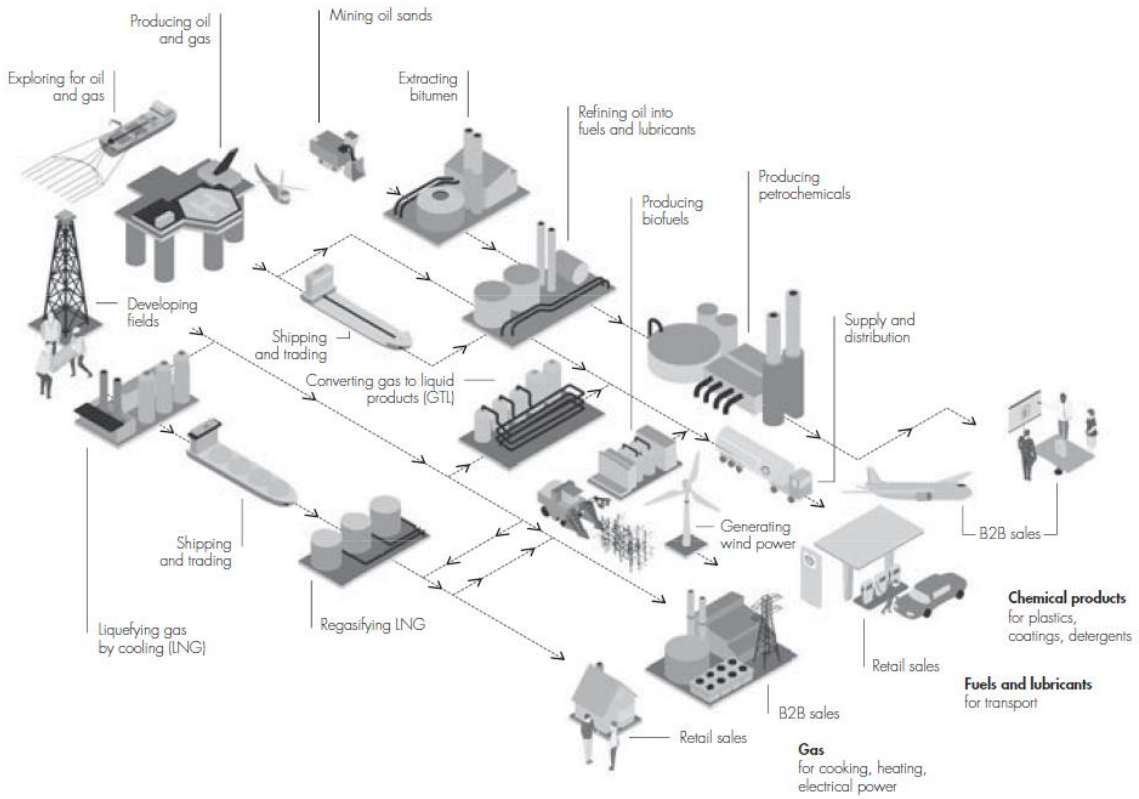
internationalization. In April 2007, the firm acquired 100% of the shares of the wholly owned subsidiary of Conoco Jet (Malaysia) Sdn Bhd, that has been operating the he ProJet retail marketing assets in Malaysia (gulfoilandgas.com). With this deal, Shell has expanded in the Malaysian market with 44 ProJet branded retail service stations and 14 vacant land sites primarily in Kuala Lumpur. The Malaysian market is a growing one and therefore Shell has been aiming to increase their presence within this market and the entire growing Asian market. Before the acquisition, Shell already owned 830 retail services around the market (gulfoilandgas.com).

4.2 Value chain

The value chain of the Royal Dutch Shell in the oil industry is represented in Figure 3. Shell has business activities through the whole value chain, which can be divided into two groups: upstream activities and downstream activities (see paragraph 1.3). A start is made with a description of the upstream activities. The firm is exploring for new oil and gas fields as part of securing future production activities. Secondly, the firm is pumping up oil from the fields it controls and is mining sands that contain oil. The third activity contains the conversion of the raw materials into products that can be sold to the market. This activity exists of a number of categories, which are the conversion of gas to liquid products (GTL), extracting the bitumen (extracting the sand, clay and water from the oil sands), refining oil into fuels and lubricants, regasifying LNG, producing biofuels and producing petrochemicals. At this point, the downstream activities are described. The fourth and final stage of the value chain in the oil industry is the distribution by Shell. This activity is subcategorized into retail sales (distribution by gas station to single customers), Business-to-Business (B2B) Sales (gas for cooking, heating, electrical power) and Business-to-Business sales for the use of producing chemical products (plastics, coatings and detergents). A last range of activities of Shell that are less connected to the previous oil and gas related activities is generating wind power, which is a new activity of Shell, which is aiming for alternative resources of energy. Finally yet importantly, all of the above individual activities are interconnected by an overall activity of Shell, which is transportation. The transportation activities of the firm are included in the business activities portfolio and are established by Shell Transport and Trading Company Limited (Shell Transport). All the transportation activities that connect the value chain from raw

materials toward the distribution to the customer are all in hands of Shell. To conclude, it can be stated that all the primary activities of the value chain as it is described by Michael Porter (Porter, 1985), which are inbound logistics, Operations, Outbound logistics, Marketing & Sales and Service, are fully covered by Shell.

Figure 3: Business Overview Royal Dutch Shell



Source: Royal Dutch Shell - Annual report 2013

4.3 Suppliers

As it was described in paragraph 4.2, all activities of the value chain, from raw materials to customer, are controlled by Shell. Therefore, Shell has limited suppliers that contribute to the primary activities of the firm. To some extent, NOCs can be seen as the suppliers of Shell since these firms will ask for Shell's services in case they need that for their project(s). This indicates also that NOCs are customers but in exchange for being a customer, the NOC supplies Shell with natural resources the firm needs for its production.

4.4 Buyers & Products

The customers of Shell need to be identified for further analysis in this report. Shell's

customers are categorized into different customer groups based on common characteristics that can be used for further analysis. The categories of Shell's customers downstream are: retail, lubricants, business-to-business and last Chemicals. At the upstream side of the firm Shell is dealing with another type of customers, belonging to the group of NOCs. Some of these categories are also sub-categorized.

Retail is the first category that is discussed at the downstream side of Royal Dutch Shell. This group of customers is purchasing the Shell products at the Shell retail stations. The firm has this kind of retail stations in over 70 countries worldwide and sells a set of different fuel products that provide better performance or cleaner engines.

Lubricants is the second group of customers of downstream side Shell. The firm is also producing and selling technically advanced lubricant that are used for different purposes such as: passenger cars, trucks, industrial machinery, mining, power generation, agriculture and construction. Also in the shipping and boating industry, Shell is selling its products serving around 15,000 vessels worldwide of all sizes.

Business-to-business is the third customer group that Shell knows at the downstream side. This group is responsible for purchasing fuels and special products in a whole range of commercial fields. Shell aviation is supplying airplanes and airports with fuels accounted on a number of approximately 7000 airplanes per day at over 800 airports worldwide. Shell Gas (LPG) is providing liquefied petroleum gas to retail, commercial and industrial customers that use these products for transport, lightning, cooking and heating. In addition, Shell is selling, by the department of Shell Commercial Fuels, Shell Bitumen and Shell Sulphur products such as transport, industrial and heating fuels, Bitumen and Sulphur (used in road surfaces, concrete production, textiles and mining.

Chemicals sale is the last category of customers that Shell has at the downstream side. The firm is selling petrochemicals to around 1000 industrial players that belong to the top biggest firms in the industry used for products such as cars, clothing, lavatory items and helmets. For this reason, Shell's chemical business is part of the top 10 biggest firms in the world bases upon the generated revenues of the firm.

National Oil Companies (NOCs) are forming the group of customers that deal with Shell at the upstream side. This group can also be perceived as the suppliers of Shell since they

give Shell access to oil and gas resources in the state territory that the NOC is belonging too. These firms possess nowadays over 90 percent of the global oil and gas resources. Nevertheless, these firms do not have the (technological) knowhow and expertise in the firm as companies like Shell do. Therefore, the NOCs request firms like Shell for a proposal (also known as Request for Proposal (RFP)) what and how they can deliver to finalize the project that these NOCs give assignment too. If an IOC as Shell sees potential in the project and is confident of the fact that they can deliver the right assistance, the IOC reacts on the Request for Proposal by sending out one. If then the NOC decides to actually start taking actions to extract the oil and/or gas, it will send out a so-called '*tender'* that request IOCs to deliver a proposal for the project with actual conditions and prices they offer to take the project for. The NOC is receiving all of these tender bits and takes them in consideration based upon its own scale of prioritization. Based upon this consideration of the IOCs' tender bits, the NOC will assign the operating partner(s) that thus wins the project. In the oil industry, the NOCs generally do not (only) pay the IOCs for their services but tend to give the IOCs a share of ownership in the oil/gas field that will be operated. Thus, NOCs can deliver Shell work in the upstream business and thus are also classified as a customer group (Shell.com).

4.5 Competitors

An overview of the biggest competitors in the industry of Shell is given in Table 1. A distinction is made between NOCs and IOCs (grey marked). The downstream market is more dominated by the IOCs and the upstream market is dominated by all players listed in Table 1. NOCs can also be excluded from competitors in the upstream market due to the fact that they are owned by governments which regulate the domestic market. Therefore, governments of territories that have an NOC operating, can decide to make the NOC the exclusive firm in drilling activities. In some markets, e.g. Mexico, no IOCs are allowed to be active at the downstream side of the industry either and thus NOCs do possess the full value chain in these states obstructing a role for the IOCs. Therefore, labeling NOCs as being competitors can sometimes be deceiving the reality in a specific industry.

Table 1: International- and National Oil Companies

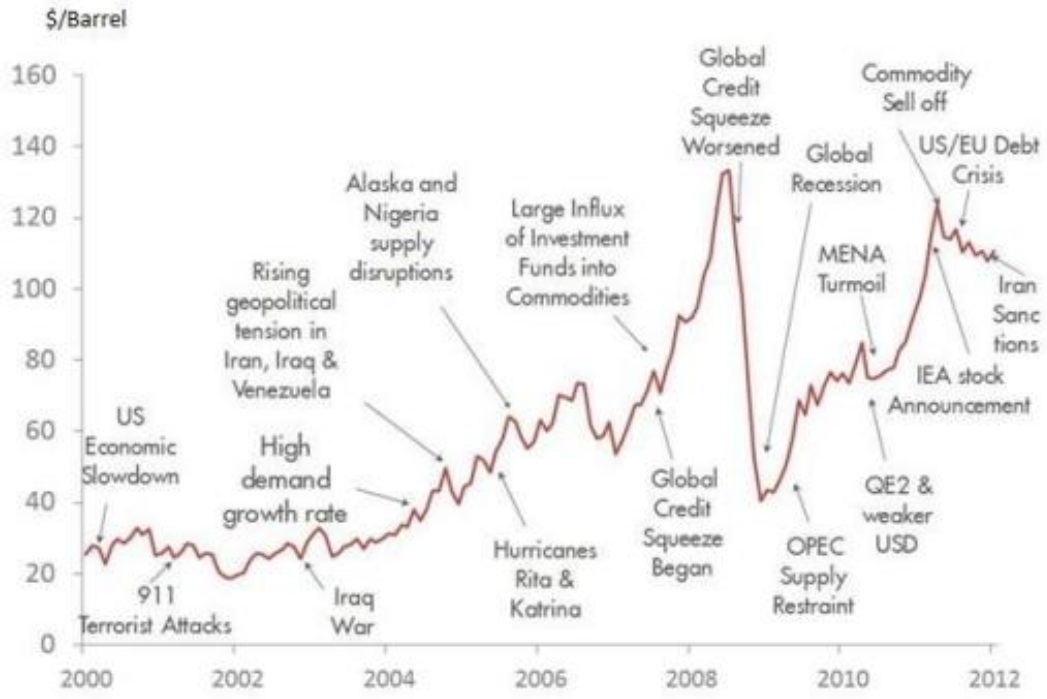
Company	**Production,** 2012 or latest, m b/d*	**Reserves** 2010 or latest, bn barrels*	**Market Value** 2013 $bn
Saudi Aramco	12,7	307	na
Gazprom (Russia)	8,4	112	92
NIOC (Iran)	6,1	311	na
Exxon Mobil	4,1	25	417
PetroChina	3,6	23	239
Kuwait Petroleum	3,3	112	na
Shell	3,3	8	218
Pemex	3,2	11	na
BP	3	7	130
Chevron	2,9	9	244

Source: The Economist - Oliver Wyman; Wood Mackenzie; Bloomberg; company report

4.6 Crude Oil Prices

The crude oil price is an important factor in the industry influencing the relationship between buyers and suppliers and determines the rate of production. The oil price is highly influenced by the global economy and fluctuates in case of big historic and economic events (see Graph 1). Since a great amount of global production is coming from a group of countries that are titled as the Organization of the Petroleum Exporting Countries (OPEC), this international organization but also economic cartel is influencing the price of crude oil and gas.

Graph 1: Crude oil prices from 2000 to 2012



Source: Shell data 2012 - http://www.shell.com/global/products-services/solutions-for-businesses/bitumen/risk-management.html

The Brent crude oil price is an international crude oil benchmark used in the oil industry. This benchmark has set the trade of oil barrels within a range of $97 - $118 in 2013. The Oil price for both Brent and West Texas Intermediate were changed slightly compared to 2012 due to a change in pipeline capacity. Table 2 gives an overview of the average oil and gas prices in the period of 2011-2013 indicated by some of the leading parties in the oil and gas industry.

Table 2: Oil and gas average industry prices

	2013	2012	2011
Brent ($/B)	$ 108,66	$ 111,67	$ 111,26
West Texas Intermediate ($/b)	$ 97,99	$ 94,13	$ 95,04
Henry Hub ($/MMbtu)	$ 3,70	$ 2,76	$ 4,01
UK National Balancing Point (pence/therm)	£ 68,12	£ 59,74	£ 56,35
Japan Customs-cleared Crude ($/b)	$ 110,21	$ 114,77	$ 109,10

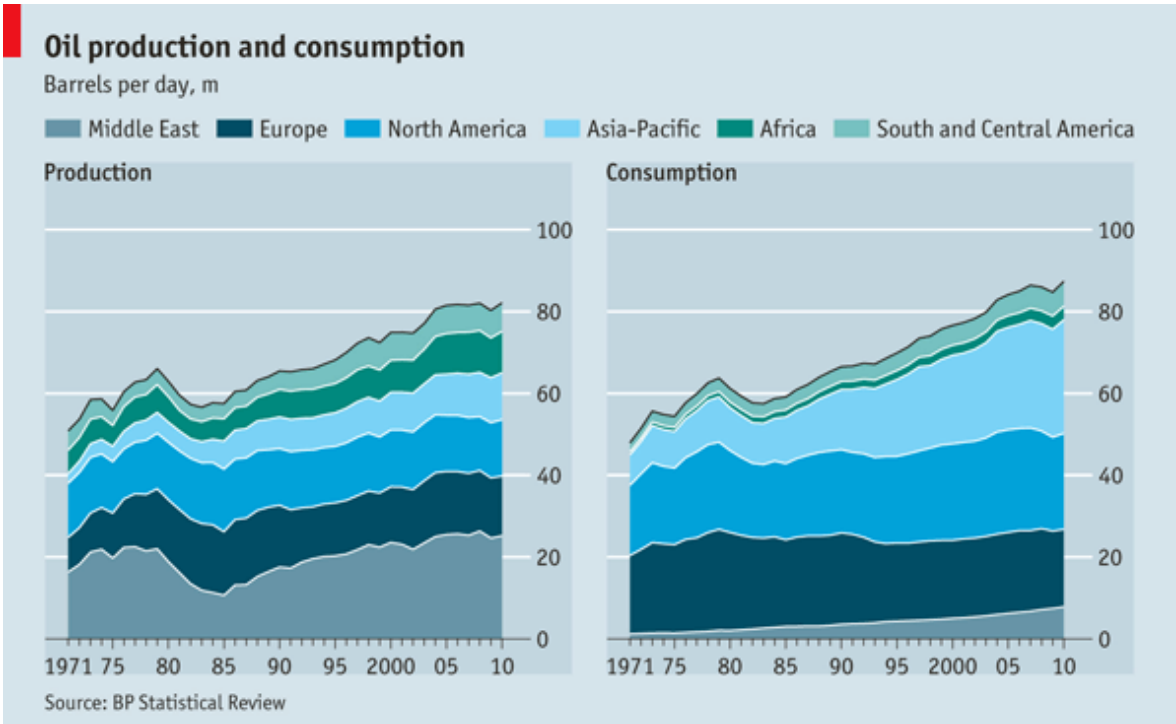
Source: Royal Dutch Shell - Annual report 2013

4.7 Oil production and consumption

Graph 2 illustrates the oil production and oil consumption trend since the 1970's. The graph tells that the consumption and to a lesser extent production have been growing tremendously over the last decades. This increase has been mainly stimulated by the demand growth for oil in Asia – Pacific and partly North America. In addition, the European market has been responsible for a certain rate of the demand as well but has not been seeing the same growth as in the previous mentioned continents.

When it comes to the oil production number, it can be seen that the biggest change in supply comes from the Middle East countries but also production in the other continents has been seeing a steady growth.

Graph 2: Oil production and consumption



Source: BP statistical review/the economist

5 INTERNATIONALIZATION & ENTRY MODE ANALYSIS

In this chapter, the internationalization history of Royal Dutch Shell will be analyzed in order to identify patterns and trends in the choice for specific internationalization methods in specific cases. Projects listed in sub-chapter 4.1 will be analyzed in terms of: 1.) internationalization motive, 2.) internationalization strategy used and 3.) entry mode choice identification. The theories, elaborated in chapter 3, are here applied to the case. A full overview of Shell's international coverage can be found in Appendix 2.

5.1 Internationalization analysis: Majnoon Field. Basrah, Southern Iraq

With this project, Shell obtained control over a large amount of oil since this field is seen as one of the biggest in the world. The motive for Shell here was to obtain a large source of oil in order to increase short-term production and to prevent a shrink in resources in the future and thus to be able to continue future production. In addition, the firm also has the chance here to start a new project enabling the opportunity to get more expertise, skills and experience in a project with a complex technical and political character.

5.1.1 Internationalization strategy Iraq

The internationalization strategy that is identified in this step into a foreign market is the LLL theory. Two elements of this theory have been identified in this international project of Shell. Those are linkage and learning. It has been found that Shell is aiming to link internationally in order to get control over resources it needs to continue and increase production of oil and gas products in the future. Therefore, the firm is aiming for international linkage to obtain access to new resources. In the case of the Majnoon field in southern Iraq, a subsidiary of Shell has been working in cooperation with Petronas and Missan Oil Company to control the oil field. The field is originally owned by Missan Oil Company, the NOC of Iraq, but Shell has Linked itself to this firm in order to get (partly) access to the Iraqi oil and gas resources in return for Shell's delivery of its services. In addition, Learning advantages are also obtained by Shell. Not in the traditional way where the firm is learning from a partner with exceptional skills in a specific field but more by an 'on-the-job training' approach', meaning that R&D is done- and experience is obtained by

practice of drilling towards the oil field. This possibility to improve expertise, technology, skills and experience is here related to the Learning element of the LLL theory. This goal could not have been achieved in the same way if Shell decided to remain domestically.

5.1.2 Entry mode selection Iraq

From the outcome of the analysis of this internationalization case in Iraq, Dunning's eclectic approach is identified for the choice of entry mode. As has been seen in sub-chapter 3.1.1, the eclectic approach identifies the increase in propriety for a firm to engage into international production when three conditions are satisfied: Ownership-, Locational- and Internalization advantages. The ownership advantages for Shell can be found in the drilling expertise and know-how that Shell possesses to be able drill for oil and gas in political unstable territories (like Iraq) and the technical and managerial knowledge the firm has to be able to drill for oil and gas in geographical complex environment.

The Locational advantages of Shell in Iraq are of a lesser extent available. Shell is highly dependent in their work on skilled workers which already work for Shell and obtained their skills and knowledge while working for the firm. Therefore, it is expected that Shell will transfer the skilled workers to Iraq from other countries needed in order to perform the drilling activities. In addition, activities such as transportation of crude oil and gas and the manufacturing process to the final consumer products will be done by Shell. However, the raw materials needed for the production of the final products are available in the new market and are the main reason for the internationalization step. For these reasons, it could be concluded that the Location advantages are partly applicable.

The Internalization advantages are definitely high since the raw materials can be controlled at a higher rate in case fewer partners are needed to drill the source and win the resources. This automatically results in a higher revenue generation for Shell, which is a great Internalization advantage. In addition, the outflow of specific technological and operational skills and knowhow within the firm is something that Shell tries to prevent since this has been acknowledged as a core competence. The outflow of skills and knowledge from the firm to other parties involved in the drilling process or firms that are licensed by Shell to perform their activity could lead to termination of Shell's role in similar projects in the future. Keeping knowledge internally is thus in this case an Internalization advantage. Lastly, a new project is another possibility for Shell to actively gain more skills and

expertise by an 'on-the-job training' approach and thus strengthen a core competency of the firm.

In this international project in Iraq, the three characteristics of sources are bringing in advantages. Knowing this outcome, Appendix 4 concludes which entry mode is the preferred one. Therefore, FDI is chosen. This theoretic analysis is corresponding with reality since Shell controls the source by means of an established subsidiary called 'Shell Iraq Petroleum Development (SIPD)'.

5.2 Internationalization analysis: Trans Niger Pipeline Loopline, Nigeria

This sub-chapter delivers an analysis of the internationalization case in Nigeria. The aim for this project was to continue the presence of Shell in Nigeria and thus continue to use previous made investments by using partly the infrastructure needed to win the oil resources. In addition, previous gained experiences and expertise on how to operate in a political unstable region where there is a chance for thievery, sabotage and illegal refining to take place are now reused for the further extension of Nigerian projects. The motives of internationalization to Nigeria are purely upstream related since the Nigerian market has no great potential for Shell to sell its products too due to the fact that 62% of the population (170m) is living in extreme poverty and thus is not a direct market to sell oil and gas products too. Nevertheless, the country does have an economic positive outlook with an annual GDP growth of 6-8 % (CIA World fact book).

5.2.1 Internationalization strategy Nigeria

In line with previous analysis, it has been seen that also in this project the LLL theory can be identified from the project analysis. When it comes to Linkage, the main aim for Shell when it entered Nigeria was to find new sources for production in order to secure continuation and possibly increase production. The firm did this by Linking with the NOC of Nigeria in order to get access to resources. This aim has been seen in the previous analyzed project in Iraq as well (see sub-chapter 5.1.1). The second intention for internationalization here is similar to the project in Iraq where the Shell has the possibility to gain experience, improve skills and technological expertise by practice of the project. However, in this project there are also signs of the Leveraging by Shell. Since it already had part of the infrastructure needed to extricate the oil resource, it start working together

in a Joint Venture where (part of) the same infrastructure could be reused in cooperation with a partner. This partner also needed this infrastructure and thus the investment made and the investment required for adapting the infrastructure slightly can be leveraged between two parties.

5.2.2 Entry mode selection Nigeria

As a result of analyzing the Trans Niger Pipeline Loopline, the presumption of the use of Dunning's eclectic approach by Shell's in its entry mode strategy is strengthened. The Ownership advantages in this case can be traced again in drilling expertise and knowledge that Shell possesses to be able drill for oil and gas in political unstable territories (like Nigeria) and the technical knowledge the firm has to be able to drill for oil and gas in geographical complex environment.

The Location advantages are also available in great extent due to the fact that Shell has already been running previous projects in the region and therefore already had the required personnel present in order to control this project. Another location advantage is the fact that previous established infrastructure is (partly) reused and therefore the return on investment for Shell on this pipeline system is better. Additionally, Shell is aiming to let regional businesses contribute and profit in the projects it is controlling worldwide. Therefore, it can be assumed that also here in Nigeria local business will participate in the project. Local wages and costs are relatively low and thus this could be seen as a locational advantage for Shell to minimize costs to some extent.

The Internalization advantages are also present in Shell's historic consideration in the same form as in the project run in Iraq and describe in more detail in this analysis of that particular project in subchapter 5.1.2. The first advantage is that the revenues and outcome are going to be higher in case the amount of involved corporations is kept low. Secondly, if Shell is operative as the controller of the source, the spillover effects, in the form of knowledge outflow, are kept to minimal extent. Lastly, this new project is another chance for Shell to strengthen expertise and skills, and thus a core competence, within the firm and thus to license the project will terminate this chance.

As a result of this analysis, it has been seen that the three elements are present in the foreign market and thus FDI is recommended as the chose form of entry to the country as

according to Appendix 4. This recommendation is also followed in reality since Shell has decided in the past to start an own subsidiary in Nigeria (SPDC) which would run all of the future projects in the country. Later, SPDC created a joined venture with the local NOC in order to control a specific oil source in the country. This case illustrates a general trend that is seen in the oil and gas industry namely the blame for environmental consequences. In many cases, NOCs work in collaboration with IOCs in their territory. The IOCs are benefiting greatly of these cooperative agreements since they gain access to new sources and thus generate new revenue income. However, NOCs benefits even more of the oil and gas resources within their territory, used by many governments to fill up their own national expenses. However, in case a project is facing problems with environmental consequences, the firm to blame is most cases the IOC. Therefore, NOCs can operate and benefit of a disputable business, however without getting dirty hands.

5.3 Internationalization analysis: Gumusut-Kakap Sabah, Malaysia

The motive for Shell to internationalize to Malaysia is three folded. Two of the motives are parallel to the motives that have been observed in the other project. The first one is the possibility to get control over a new source that will provide the company with the opportunity to boost short-term production and/or secure future production. The size of the source is more limited compared to the previous described sources but still of significant extent to be able to deliver to this possibility. Secondly, this project involves deep-water source drilling which is a specialty of Shell. Therefore, employees can practice their skills, gain more experience, test technologies in practice and absorb more expertise into the firm. An example of this is the "record-breaking 23,000-tonne superlift in March 2012, by raising the platform's topsides 45 meters (nearly 150 feet) above ground while the 17,500-tonne (equivalent to 1,200 Boeing 737s) hull was moved underneath them". The last motive that was found is in line with the last one described. The deep-water drilling is a specialty of Shell. Since it was the first project of Shell in Malaysia that involved deep-water drilling, successful completion could function as proper advertisement of Shell's specialties and possibly result in future Malaysian/Asian projects recruitment.

5.3.1 Internationalization strategy Malaysia

The use of the previous identified internationalization theory, the LLL theory, is in this

project repeated. Linkage is evidently the first factor that is present in Shell's internationalization theory. Prior to many of these project, certain oil exploration firms discover the source and subsequently connect the opportunity to possible project operators. In this case, Shell states the following "we thank Murphy for their partnership and cooperation that has enabled this opportunity" Shell website (2012), indicating that Shell has linked with Murphy Oil Corporation to get into the process of becoming the source operator. Thus, shell has used Linkage in order to get access to extra sources. In addition, the firm is Linking with this firm also to strengthen the own firm by letting employees and the firm gain experience, improve skills and technological expertise by practice of the project. This example is directly related to the Learning element of the theory.

5.3.2 Entry mode selection Malaysia

This sub-chapter focuses on analyzing the historic decision of Shell for the entry of the Malaysian market. The firm entered the foreign market by a fully owned subsidiary titled as Shell Malaysia, which has been dealing with the Malaysian activities. This subsidiary has been expanding the activities of Shell in the Malaysian market as well at the downstream side of the firm in the form of the acquisition of Conoco Jet (Malaysia) Sdn Bhd. The different steps that Shell took to enter the Malaysian market over time can be linked to Dunning eclectic paradigm. The Ownership advantages can be traced in the form of Shell's expertise and knowledge which is a great completive advantage over other IOCs and NOCs certainly when it comes to this project involving deep-water drilling activities, one of the specialties of Shell. For this reason, the Ownership advantages are present, stimulating extensive involvement in this project and thus the foreign market of Malaysia.

Due to the fact that the Asian market is growing steadily, Shell has chosen to put high stakes in the Asian market and be actively present in order to benefit of high economic growth. This can be labelled as Locational advantages since the company is locating itself in the region in order to possible expand further in Asian market in the future. The main Locational advantage is obviously the presence of the natural resources for Shell to produce it products.

The last factor present in the theory and thus the entry mode selection by Shell is the Internalization advantages. The advantage here for Shell is to enter the market itself to enjoy the advantages of Internalization in a booming market optimally. The project enables

presence of Shell in the Asian market and in addition absorption of additional experiences skills and technology by the firm.

To conclude the analysis of this Shell project in terms of entry mode, it has been seen that also Dunning's eclectic approach has been used in this entry mode selection. Since all the factors of the theory are present in this project, Appendix 4 is recommending market entry in the form of a wholly owned subsidiary. This has been done in reality since Shell has entered and expanded in the Malaysian market by Greenfield and Acquisition market entry.

5.4 Sub-conclusion

Based upon the analyses made in the previous sub-chapters, a conclusion regarding the internationalization strategy trend in terms of motive, internationalization theory and entry mode is given here.

First, the observed trends in the Shell's motive(s) for internationalization are defined. It has been seen that Shell has been expanding the firm internationally frequently in the history of the firm. Motives for expansion are mainly found in reasons such as finding new sources that the firm needs in order to produce its products. The firm has therefore secured production or created a possible boost in production every time the firm entered a new market. Occasionally, the firm has been internationalizing upstream to countries that are not necessarily interesting for the downstream activities (e.g. upstream internationalization to Iraq and Nigeria) and vice versa (diversity of internationalization can be seen in Appendix 2). Another motive that has been frequently identified is the possibility these projects enable for Shell to obtain more technological skills, expertise and experience. This is beneficial for the firm's core-competency, which is the ability of Shell to drill in geographical complex locations, and/or political unstable environments. The continuous urge for internationalization of the firm presents repeatedly new opportunities for the firm and its employees to improve the experience, technology and skills present, enabling the firm to stay ahead of competition or to prevent forward/backwards integration of other parties in the value chain (this argument will be elaborated in the next chapter). In addition, the continuous urge for internationalization also provides the firm with new operating projects and sources control over time securing production in a market with declining

supply possibilities.

Second, a conclusion is drawn after the analysis of the internationalization steps of Shell in order to identify which internationalization strategy the firm applies to let steps to foreign markets happen considered and eventually successfully. In the operating and controlling projects of Shell, the trend was observed where future internationalization steps of the firm were considered and decided based on the LLL theory. Mainly, the Linkage and learning facets of the theory were decisive for future internationalization steps. These elements of the theory have been observed mostly due to the fact that Shell has been Linking the firm to other companies such as NOCs, source-exploration firms and competing firms, merely to gain control over new sources or to be appointed as the operator to new sources. The Learning factor has been observed in a variety of projects. In Iraq and Nigeria, the firm had a chance to operate a source and the drilling project resulting into significant new experiences and skills for the firm. In Malaysia, this was the same case however additionally the firm also had the chance to advertise the firm and its core competency when the firm continued to deliver successful projects such as the deep-water drilling project. Therefore, these kind of projects can also been interpreted as opportunities to create goodwill in the region, strengthen the brand name and to increase incoming opportunities in the form of future projects. Occasionally, Shell leverages its own sources such as the Nigerian case where a pipeline infrastructure was leveraged. Nevertheless, this has not been a direct consideration in the internationalization steps of the firm and thus is therefore not taken into account. To conclude on the internationalization strategy, Shell is obtaining a LLL approach in order to achieve its primary and secondary goals.

Last, Shell's entry modes selection approach is summarized and conclusions on the applied strategy are drawn. Dunning's eclectic approach is identified as the applied strategy since its three selection factors that influence the entry mode decision are observed.

The ownership advantages have been available in all of the examples analyzed before in this chapter. The ownership advantages that Shell possesses are their extensive expertise, knowledge and skills in specific fields. This core competency cannot be transferred easily to another firm and therefore, the propriety for shell to engage into international production rises and is mainly driven by this competency of the firm.

The Location advantages are also located in most of the projects analyzed. In most of the project, the majority of needed personnel and equipment is delivered to the firm internally. However, the firm is also aiming to involve local business in the projects to the highest extent. In case local business is tapped, this could result in direct advantages based upon low salaries and tax advantages. Nevertheless, the majority of the activities are done by Shell itself. In addition, the possible need for local resources (e.g. electricity, water etc.) could result in price advantages for Shell and thus mean locational advantages. Last, locational advantages can also be perceived in the managerial and technical skills, experience and knowledge of the firm. The different projects are located in different geographical and political areas. These are examples of direct locational advantages (also to some extent Internalization advantages) to the firm since it will have the opportunity to strengthen its core competency by full extent in case it decides for the highest engagement to the foreign market.

Last, the Internalization advantages have also been a great factor for Shell to engage to the foreign market in such high extent. The upstream side of Shell has been internalizing its services and not a particular product that could be sold by another party under contractual agreement. In addition, when another firm in the foreign market is contracted to grant Shell's services to the market, Shell would be required to instruct the contracted party, which would be impossible due to the amount of knowledge, and expertise plus, Shell will terminate its own unique competitive advantage. Another Internalization advantage is that the potential revenue streams out of these projects are significant which Shell thus want to optimally enjoy.

As a result of the analysis, it is concluded that Shell is using Dunning's eclectic approach for the selection of the right entry mode for a specific situation or project. The three selection factors that influence the decision are illustrated in Appendix 4. In almost all scenarios, it can be seen that Shell has entered foreign markets by wholly owned subsidiaries mostly in the form of Greenfield (Iraq and Nigeria) but in some cases Acquisition. This is the result of the availability of advantages in the three factors that Dunning's eclectic approach prescribes: Ownership, Location and Internalization.

6 INDUSTRY AND COMPETITION ANALYSIS

This chapter will elaborate upon the current state of the oil and gas industry and its competition level. Within this chapter, the emphasis is laid upon on the external current and future developments within the industry and the firm(s). The chapter analyses the identity, trends and the changes of the oil industry and gives a glance at the intensity of rivalry by means of Porter's five forces. The outcome will stimulate or discourage the development of a future international strategy for the firm.

6.1 Meso-economic Environment

In paragraph 3.3.1, the theory of Porter's five forces (M. E. Porter, 1998) is explained which is here used for further analysis. In order to be able to make a clear comparison between the different factors and between the future and current situation, as grading system is used. The strength of every single force has been calculated as following: Every force exists of an X amount of factors that influence the overall shape of it. In the analyses, every factor has been classified as low (0 points), medium (0.5 point) or high (1 point) effect/stimulating or rate. The final strength of a single factor is calculated by adding up the score of all the factors, diving this score by the number of factors that form the force, multiply this score with 100% and finally divide by 20 to be able to but it on a scale of 0 (weak factor) to 5 (strong factor).

6.1.1 Intensity of rivalry: market competitors

In defining the strategy, market competitors is an important factor since it gives an outline of the amount of rivalry within the industry and thus to which extent a firm has to battle for market share, customers and profits.

As described in the article "*Supermajordämmerung - The day of the huge integrated international oil company is drawing to a close*" in the economist on august 3rd 2013, the international oil and gas industry is dominated by seven huge IOCs that have been dominating the industry since the 1950s. These companies are also known as "the seven sisters" which are BP, Esso, Gulf Oil, Mobil, Royal Dutch Shell, SoCal and Texaco. These are the major players of industry and not much has changed in the strength and position in the industry of these companies. The market shares of these great players within the

industry are relatively equal. According to Porter's first force of the 5 forces, market competitors, equality of market shares within the industry indicates that the industry is highly concentrated which is according to Michael Porter a sign of intense rivalry within the industry and therefore contributes to it. No great changes in this factor are expected.

Nevertheless, the competition in the industry has changed since the share of oil reserves that is owned by the NOCs has increased. According to the Economist, the seven major IOCs controlled in the 1950s around 85% or the global oil reserves. Nowadays, this number has drastically changed since 90% of the global oil reserves are controlled by the NOCs. This clearly indicates that the rivalry has changed among the industry. Competition has not necessarily changed due to the increase in control of the NOCs since these firms do not compete in the international environment and in their respective national environment, the government assigns control to these firms. Therefore, one could state that these firms are not competing at all. Nevertheless, the share of oil reserves that is still available for the major IOCs has drastically decreased. The first force, market competitors, of Porter's 5 forces tells that possible market share growth is an important factor in indicating the rivalry within the industry. The market shares of the IOCs have changed drastically over the last 6 decades and therefore it can be noted rivalry has increased. This factor of the first force of Porter's five forces contributes to higher intensity of rivalry in the international oil industry. These market share growth rates are expected to flatten.

According to Michael Porter, the structure of costs can lead to intensive rivalry in the industry since high fixed costs encourage price cuts to fill capacity. If the fixed costs are already high, the firm can use this as a tool to win market share within the industry by lowering the price and sell more products than it would do for the original price. Nevertheless, the oil prices are driven by supply and demand and market sentiments and the minimum price set by the OPEC countries (see sub-chapter 4.6). Therefore, the oil price is difficult to reduce by one part since the world oil price is determined by factors that can hardly be influenced by an IOC. Additionally, the oil revenues are of such a great extent that oil companies would lower the price to win market share since that is less important in the industry. Demand for oil will continue to exist so therefore the IOCs have no reason to lower the price of the oil since they aim to have the highest return of their investments to produce the oil. Overall, this factor of the first of five forces of Michael

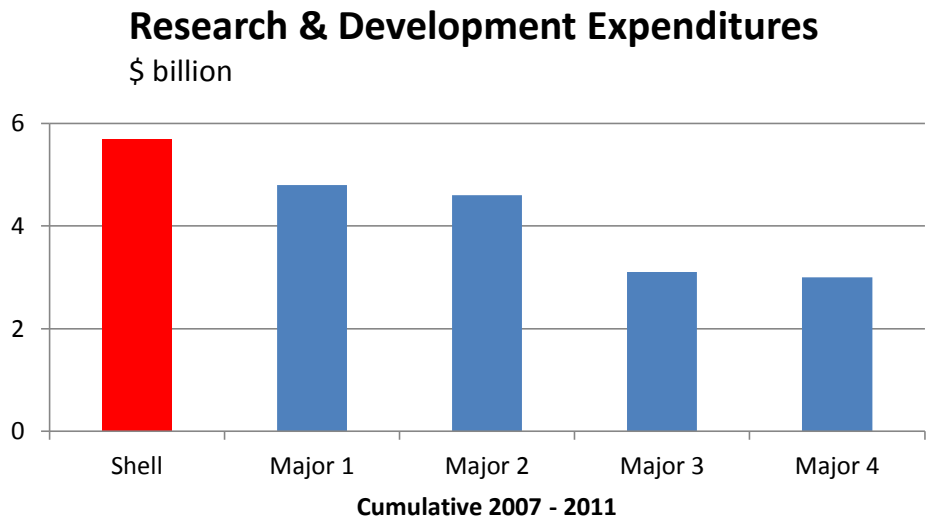
Porter can be qualified as low rate of rivalry and expected to change.

A factor that has been described by Michael Porter in his theory is the degree of differentiation within the industry, which is therefore an important one to analyze for the oil and gas industry. The crude oil that is produced and sold as gasoline for many different purposes, mainly transportation purposes, is not differentiated to large extent. The selling point of the IOCs could be differentiated in the form of different services and products for sale at their gas stations however the gasoline that is sold at the gas stations is a commodity product. The main difference can be found in the upstream activities of the firms, which is the part where the firms drill for oil and gas. The different IOCs have their own specialties as Shell has e.g. decades of experience in deep-water drilling activities. Therefore, it can be stated that the industry is medium differentiated. In terms of technology expertise and knowledge, the industry is highly differentiated and thus the industry has characterizations of having low rivalry since firms have their own specialties and thus customers. Nevertheless, Porter also states that industries of commodity products encourage rivalry and therefore have a high rate of rivalry. To conclude, this factor of the first force of Porter's five forces can be labelled as medium intensity of rivalry. Since Specialty will be the competency to compete on in the future, it could be said that the intensity of rivalry of this factor will become low in the future.

The seven major IOCs have been active within the industry for years and therefore build great expertise, knowledge and experience in both managerial and technological terms that enables the firm to produce oil from sources that are highly contaminated with other chemicals such as polymer, to drill in the most complex geographical scenarios and in complex political territories. The R&D activities enable the current activities of the firm and create future business for Shell. Graph 3 gives an indication of the R&D investments made within the industry which e.g. for Shell sums up to a billion dollars annually. The products of the firms in the international oil and gas industry are therefore highly specialized and thus it is not worth the investment to change industry or product for the IOCs. Porter describes that the intensity of rivalry is limited in case its firms invest their resources highly in e.g. R&D. These past expenditures in R&D have been made for over decades and the resulting expertise, knowledge and technology also have created a competitive advantage for the IOCs in comparison to the NOCs. Thus, switching costs but

also the exit barriers that are part of the first force make the rivalry within the international oil industry less intense. However, when in the future the conditions of the industry make Shell decide to aim for alternative energy production, the previous made R&D investments will be wiped out and thus switching costs and exit barriers become low. Therefore, at that point the rate of rivalry will increase in both factors.

Graph 3: Research & Development expenditures Shell and four other major IOCs



Source: Shell Investor handbook 2011 - http://reports.shell.com/investors-handbook/2011/projectstechnology/rdexpenditure.html

The analysis of the first force of Porter's five forces, 'market competitors' is made. The different factors that influence this first force all show different rates of rivalry. Combining these rates, the overall rivalry rate is determined. The outcome was as follow:

- **The concentration of the industry**: High intensity of rivalry (no future change)
- **Rate of market growth**: High intensity of rivalry (no future change)
- **Structure of costs**: low intensity of rivalry (no future change)
- **Degree of differentiation**: medium intensity of rivalry (low in the future)
- **Switching costs**: low intensity of rivalry (high in future)
- **Exit barriers**: low intensity of rivalry (high in future)

Overall, after the analysis it can be noted that rivalry in the oil industry has a medium rate of rivalry intensity. Some factors contribute to a high intensity, such as the rate of market growth and the concentration of the industry and others pull down the rate of rivalry in the

industry such as the switching costs and the exit barriers. The intensity of rivalry of the industry is rated by 2.1 on a scale 5 where 5 stands for high strength of factor. The future intensity of rivalry is expected to increase to 3.33 in the future.

6.1.2 Suppliers' power

The second force that Michael Porter describes in his theory is the bargaining power of suppliers in the industry. This group in the industry is important to analyze since they possess the raw materials needed for the product of the IOC to produce and therefore are important players in the value chain of the industry and related revenue flows. At this point, the analysis will go into the different factors that influence the bargaining power of the suppliers in the industry.

The suppliers are identified in paragraph 3.3.1.2 which forms the base of this analysis. This paragraph concluded that all of the primary business activities of the value chain are controlled by Shell. Nevertheless, a distinction has been made that set apart the governments and/or NOCs that control newly found oil and gas fields. When Shell wants to be included in performing activities concerning these sources it is depending on these groups that can assign Shell as a controller of these fields. Therefore, it is assumed that these parties, that control Shell's necessary access to the resources needed for Shell's primary business, are the suppliers to the firm.

The first factor of the second force of Porter's five forces describes that suppliers' bargaining power is high when they are more concentrated to the firm to which they sell. The NOCs are established by governments in order to control and commercialize oil and gas resources that are located in the state's territory. Therefore, in every state, a single firm is controlling these resources and thus the number of suppliers is limited and additionally highly concentrated. Therefore, this factor is contributing to high bargaining power of suppliers in the industry.

The second factor describes a stimulus to high suppliers' bargaining power in case the product that the supplier is selling is highly unique or differentiated. The products sold in the oil and gas industry are obviously oil and gas. These products are categorized as commodity products and therefore are not unique neither differentiated. Nevertheless, the availability of these raw materials is unique and scarce. Therefore, the factor is perceived

to be unique in its availability and is thus contributing to higher bargaining power of the suppliers.

The third factor that concerns and influences the bargaining power of the supplier is whether the product is sold in combination with other products to be sold in the industry. This is not fully the case. The oil and gas that is controlled by Shell in cooperation with NOCs is not in combination with required purchases of other products offered by the NOCs. Nevertheless, sealing contracts between NOCs and IOCs does normally contains the assumption that the IOC is using as much local labour as possible in order to generate a knowledge and cash flow from IOCs to local labour, which factually is not always happening according to the Economist (The Curse of Oil: The Paradox of Plenty,'' The Economist, December 20, 2005, print edition). Other pushed obligations from NOCs to IOCs are the incidental responsibilities such as the '*Majnoon project*' in Iraq where the first stage of Shell's project development contained the clearing up an area of 22 square kilometres highly contaminated by explosive remnants of war (shell website, 2014). The extra responsibilities assigned to the firm are not obligatory however are necessary to operate the oil or gas source adequately. These tasks do not give the suppliers an extra amount of bargaining power. To conclude, this factor in the oil and gas industry is classified to have minimal stimulation of suppliers' bargaining power.

The threat of forward integration of suppliers in the industry is the fourth factor that influences the bargaining power of the suppliers in the oil and gas industry. As has been described before in paragraph 4.3, Shell is controlling the complete value chain from extracting the natural resources to distribution to the final customers. Therefore, it is normal to assume that there is hardly or no threat of forward integration of suppliers in the value chain. Nevertheless, this threat definitely exists since the NOCs possess most of the global oil and gas resources and contract the IOCs primarily because of their technological and managerial knowhow, expertise and skills within the industry that the NOCs do not possess. It has been seen in Graph 3 that the IOCs invest heavily into R&D since the firms are aware of the fact that this is their competitive advantage compared to the NOCs. This is thus creating the existence of demand for their services and prevents forward integration of NOCs in the oil and gas industry. The IOCs therefore have created an advantage that clears this threat for now and possibly also in the future. Thus, there is a clear future threat of

forward integration by the NOCs in the industry and therefore the stimulus created by this factor can in the future only increase suppliers' bargaining power. The current solution to keep this threat a permanent possible future threat, Shell has to continue to invest into R&D to keep a competitive advantage.

The fifth factor that influences the bargaining power of the suppliers in the oil and gas industry is stimulating if no threat exists of buyers integrating backwards in the industry in the form of taking over suppliers´ activities. The buyers of NOCs are in general the same buyers as of IOCs but on a more domestic level. Thus, the buyers of IOCs will here be analyzed. As can be seen in paragraph 4.4, buyers of the IOCs exist in different forms. The first category of sales in retail sales, done with individual that purchase oil and gas in the form of petroleum at the gas stations of the IOC. This group are single unorganized customers that do not form any potential threat to the supplier to integrate backwards into the value chain. The second group of buyers is formed by Business-to-Business sales that are done to businesses that need oil and gas for e.g. cooking heating and electrical power. These firms have different core businesses and the oil and gas-extraction industry has low threat of new entrants (see paragraph 6.1.5). The chance for this group of customers to integrate backwards and takeover suppliers' activities is thus unlikely. The same argument that states why there is no threat from current customer of the industry to the suppliers is applicable on the third group of customers that Shell has. These are the business-to-business sales that concerns customers that need oil and has for the production of chemical products e.g. plastics, coatings and detergents. However, IOCs are also to some extent buyers of NOCs. IOCs do have the tendency to integrate backwards and take over the role of NOCs. Nevertheless, NOCs are owned by governments that can set regulation in favor of the NOCs, diminishing the chances for IOCs to integrate backwards in specific states. The outcome of the analysis of this factor clearly states that there is not clear threat of backwards integration by customers in the industry by taking over suppliers' activities and thus this factor is stimulating the bargaining power of the suppliers in the industry.

The last factor that completes the second force of Porter's five forces is the relative importance of the market to the supplier. If the importance of the market to the supplier is low, the supplier gains higher bargaining power. Globally, Shell has to deal with multiple different NOCs that contract the IOC to operate their oil and gas resources if needed. The

need for Shell's contribution to operate the sources originally owned by a NOC varies based upon the (technological and managerial) expertise, knowhow and skills needed. Nevertheless, the NOCs are generally only operative in one national industry and thus have only one market to sell too. This clearly indicates that the oil and gas industry is highly important to the suppliers. Also, if the (technological and managerial) expertise and knowhow are missing to operate a particular source by the NOC itself, there is no question whether to continue to operate individually or hire the help of a party that does possess this. Therefore, the IOCs are highly important to the NOCs. The conclusion here can be drawn that this factor indicates low bargaining power for suppliers.

So to conclude on suppliers' bargaining power in the oil and gas industry, the influence of the various factors that complete the second force of Porter's five forces are individually identified as following:

- **Limited number of suppliers that are individually highly concentrated and do not compete directly with each other**: high suppliers' bargaining power (no future change).
- **Oil and gas resources are commodity products but unique because of its scarcity**: high suppliers' bargaining power (no future change).
- **Suppliers' products are not sold to the industry in combination with other products**: low suppliers' bargaining power (no future change).
- **No current threat exists that the supplier is integrating forward in the industry only future threat**: medium suppliers' bargaining power (no future change).
- **No threat of buyers integrating backwards in the industry in the form of taking over suppliers´ activities**: high suppliers' bargaining power (no future change).
- **The market is of high importance to the supplier(s)**: low suppliers' bargaining power (no future change).

To generalize suppliers' bargaining power, the analysis indicates that the power of this group within the industry is relatively medium/high. Several factors contribute to a high bargaining power, such as the limited number of suppliers, their concentration, the scarcity of their products sold and not threat of backwards integration by buyers. Other factors harm the bargaining power of suppliers such as the lack of other products sold in

combination with the main product, and the importance of the market to the supplier. The supplier not being able to create a current threat to the industry with forward integration neither harms the bargaining power nor stimulates it. The Suppliers' bargaining power within the oil and gas industry is rated by 3.5 on a scale of 5 and thus is quite high. This rate is expected to remain stable in the future until the moment the natural resources are exhausted.

Shell's future strategy steps should therefore focus on reducing the bargaining power of a supplier by finding alternative products that can substitute the original ones such as renewable energy sources or the firm should focus on finding new oil and gas sources that can be operated by Shell, preferably not in cooperation with a NOC. Moreover, the firm should continue to invest heavily on R&D since this is the competitive advantage of the firm and thus prevents forward integration of the supplier in the supply chain.

6.1.3 Buyers' power

Michael Porter's third force out of five stands for buyers' power in the industry. The buyers are also of great importance to Shell since this group is responsible for the turnover of the firm. The analysis on buyers' bargaining power is done based upon the identified buyers in paragraph 4.4 and thus two groups of buyers are used: retail customers and business-to-business.

The first factor that will be analyzed to discover the influence on the buyers' power in the industry is to see the rate of concentration and purchases sizes by the different buyer groups. The first group that was identified is the group of customers in the retail sales that purchase their products mainly at the gas stations that sell Shell's owns. These buyers use the gas and oil products that Shell is selling mainly for transportation purposes (The Economist - Supermajordämmerung - August 2013). The group is not concentrated and organized since these are individual customers purchasing for low amounts for own use. This group can be classified as having low buyers' bargaining power.

The second group of customers that here is identified is responsible for the business-to-business sales. The single customers are more organized on their own but are not directly related to other business-to-business customers. The customers are not organized as a group but every customer is highly organized and concentrated individually. Additionally,

their respective purchases are of a quite large extent and thus represent a large share of Shell's total revenues. These customers of shell do meet the requirements in this factor to be classified as customers with high buyers' bargaining power and thus is low.

Porter is referring to a second factor that determines overall buyers' bargaining power. This factor is about the possible existing threat of buyers integrating backwards in the value chain in the industry meaning that buyers would take over activities of Shell. The buyers that represent the retail sales are, as discussed before, unorganized decentralized individuals. Additionally, the existing players in the industry have been investing great amounts in capital to achieve the position within the industry they have today. High capital power is needed to enter the oil and gas extraction industry, which therefore only a few firms can afford. For these reasons, it is very unlikely that buyers decide to concentrate and organize themselves and subsequently invest the adequate capital in order to take over activities that originally were the responsibility of other parties in the industry such as Shell.

The business-to-business segment is more organized, centralized and has more capital power. Nevertheless, it is not assumed that this group will integrate backwards into the value chain. This is mainly because the investment needed to enter, and the years it will take to achieve a good position in the industry, are too extensive to assume that one of the buyers is expecting to become profitable or survive the backwards integration in the oil and gas industry. Therefore, it is reasonable to assume that this buyers group has low bargaining power.

The third factor that can increase the buyers' bargaining power is in case the products sold in the industry are standardized and/or undifferentiated. As analyzed before, oil and gas products are commodity products and thus standardized an undifferentiated. Customers responsible for retail sales are perceived to have less connection with one of the suppliers of oil and gas products and are more price-sensitive. Consequently, buyers will easily choose for one of the competitors of Shell without any switching costs involved. This group thus has a higher buyers' bargaining power and will e.g. start purchasing their fuel at one of Shell's competitors in case the firm decides to raise its prices.

The buyers' bargaining power of the other group of buyers of Shell's products are

businesses that need Shell's products for their own manufacturing. Since, more suppliers of these products are positioned in the industry and thus one of these customers can switch supplier in case they are pushed away from Shell for whatever reason. These firms are of larger extent and thus Shell is more sensitive to these companies' purchase orders. To conclude, these buyers have higher bargaining power when it comes to this factor.

The fourth factor that determines this force is the amount of sellers that are comparable to Shell and thus can form a possibility for the customers of Shell to switch to. Customers, which are part of the retail sales, do already change suppliers quite quickly since they only look at price and are less sensitive for secondary factors of one of the suppliers. Therefore, the chance for Shell to be replaced by another IOC as supplier of this group is assumable. Buyers' bargaining power is thus high when it comes to this part of the factor.

The same applies to the business-to-business customers. These customers are more connected to Shell since they are singed by contract. Nevertheless, after the contract is expired these customers are also able to replace Shell for one of its competitors in case the previous contract term has not been satisfactory. To conclude, this group of buyers is classified as having high bargaining power according to this factor of Porter's force.

The fifth factor that Porter describes as part of the buyer's force is describing the influence of buyers' profits. The lower the profits of the buyers are the more likely an incentive is made to lower the purchasing costs of the products purchased. This statement is applicable on the oil industry and thus influences Shell. As can be seen in Graph 1, the oil price has been fluctuating a lot during the last decade. This graph also indicates different reasons for change in price for crude oil. The biggest fall in price is seen in 2008. This is the year the one of the biggest global economic crisis of all times struck countries worldwide. Due to the economic crisis, governments but also firms and individuals suffered economically. Economic crisis is directly related in a downfall of income for governments, firms and individuals and thus their profits. Therefore, it can be concluded that profits of buyers do influence the selling price of oil mainly because of changes in supply and demand. Nevertheless, the oil prices are changing globally in case demand is falling and so, this is a factor that Shell can hardly influence. The only way that buyers have high bargaining power is in case the profits of most/all of the buyers are falling since an individual buyer with falling profits is easily replaced by another since demand is high. The total group of

buyers' thus has high bargaining power based on the analysis of this factor.

The last factor that is described to complete the third force of Porter's five forces is the amount of impact the products of the seller have on the buyer's product in combination with the price rate the seller's products have. The more important the product of the seller is to the product of the buyer in combination with a low product prices, will make the role of the seller more important to the buyer and therefore decreases the buyer's bargaining power. The demand for oil has been increasing tremendously over the last decades as can be seen in Graph 2. The rising demand curve influences the last factor that is here described due to the fact that more and more parties require oil for their daily activities or their core production activities. As described in the Economist (Supermajordämmerung - August 2013), 60% of oil consumption is used for transportation purposes and the number of global transport movements is only rising. The other 40% goes mainly to power production, petrochemicals production and other industrial usage. Transportation movements will not be substituted by large proportion (alternative energy is getting more important but cannot substitute the original energy production methods yet) making the oil production thus key in realizing movement and transportation. Therefore, oil consumption is an important factor for the buyers of the products and thus Shell is an important seller. In the future, where alternative energy will become a more usual source of energy, buyers will rely less on traditional energy and thus bargaining power of buyers will increase.

The role of price is this factor needs a brief explanation. In case a product is of high importance to the buyer and its manufacturing activities, it can be assumed that this product is thus also key in the cost determination within the firm and thus the profits of the buyer. In case the price of this particular product has always been low, a sudden price increase has influence to the cost structure of the buyer's firm and consequently its product price and profit margin. Therefore, the buyer is facing potentially high threat of changes in the firm such as the one described above and thus buyers' bargaining power would be low. In case the product price of the seller is already relatively high, a further price increase is unlikely and parties down the value chain have already adapted to the high price level, the possible threat and the consequences for the buyer are relatively low. Due to high impact of the Shell's products to the retail business but also to the business-to-business segment, it can be concluded that buyers have low bargaining power when it comes to the impact of

Shell's products on their business activities or, in case of the retail business, consumers' daily activities. In the future, where alternative energy will become a more common source of energy, buyers will rely less on traditional energy, the prices for traditional energy become less applicable and thus bargaining power of buyers will increase.

Earlier in this analysis, the products of Shell's were determined to be of high importance to the buyers. The price level of oil has been going through an unstable growth during the last decades with significant changes due to multiple events (see Graph 1). The constant increasing price has led to a high price for oil products to the buyers of the product. An increasing oil price over a long time has become a factor for the buyers' business activities. Over time, the buyers had the chance to adapt to the price increases and adapted and reacted to historic and future price increases (e.g. aiming for alternative energy resources). Nevertheless, the price is still very important and can be driven up higher in the future due to declining supply and rising demand and therefore, further increase of the price is expected. To conclude on this part of the factor, the price of the product has become less important over time since it has been increasing steadily but higher prices continue to require further need of adaption to the prices by the customers of oil products. Therefore, the rate of buyers' bargaining power is estimated as medium.

To conclude the fifth factor, which is labelled as the importance of Shell's products and selling price to the buyers' (business) activities, can be rated as having a medium/low stimulant to buyers' bargaining power.

All the different factors that determine the bargaining power of Shell's buyers have now been analyzed and leaded to the following outcome:

- **Buyers are hardly concentrated and purchase individually medium/low amounts**: low buyer's bargaining power (no future change).
- **There is no threat of buyers integrating backwards in the manufacturing process**: low buyer's bargaining power (no future change).
- **Shell's products are standardized and/or undifferentiated to the customers**: high buyer's bargaining power (no future change).
- **A large number of competitors are competing for the same customers**: high buyer's bargaining power (no future change).

- **Fluctuations of buyers' profits let the chance for incentives to lower the purchasing costs also fluctuate. Thus, reaction by Shell happens in case buyers' profits fall**: high buyers' bargaining power (no future change).
- **Shell's products are of high importance to its buyers. The importance of the Shell's product price to its customers is of medium importance**: Medium/low buyers' bargaining power (future rise expected).

To conclude the third force of Porter's five forces it can be concluded that the bargaining power of the buyers of Shell have in general a medium level. The buyers' bargaining power is in the analysis of Porter's five forces quite high. Companies such as Shell are having high focus on their upstream activities such as finding new sources for the production activities. Assumable, the focus lays here since this could form an acute problem for the existence of the firm. Moreover, demand has only been increasing over time and thus no immediate threat exists at the downstream side of Shell. Nevertheless, the buyers do have a great bargaining power which is expected to rise slightly in the future and thus in this could result in a future threat. It would be advisable for shell to apply future strategy and focus more on diminishing buyers' bargaining power.

6.1.4 Substitutes

The fourth factor that Porter describes in his five forces theory is the threat of possible substitutes for the product of the IOC to be replaced by. Substitutes are products that can replace products in the industry and thereby lead customers of the industry and the related profits to another one. The threat of substitution relies on three factors that will be analyzed in this paragraph.

The first factor that influences the amount of threat by substitutes within the industry is whether buyers would be open-minded to replace their current supplier of the purchased products by another one that offers a substitute product. This part of the factor focuses on questions such as; do the buyers have an emotional relationship with the products of the current supplier or do they have a preferred product supplier? First, the focus will be on customers that generate the retail sales for Shell. The individual customers that drive cars or need the fuel products of Shell for other purposes have in general no emotional relation to the firm or a direct preference for its products, mainly because Shell is selling a commodity product that is needed only for their transportation needs. Substitution barriers

are quite low in case of commodity products meaning that there is a significant chance for Shell products to be substituted by its customers. A clear example that this fact is already happening is the increasing popularity of the so-called "green vehicles" (Vehicles with engines that drive on green energy such as electricity in order to reduce air pollution) by drivers worldwide. The customers of these vehicles are able to travel in vehicles that need no/minimal fuel made out of oil and gas products and drive on green energy. These ways of transportation became are a lot more affordable than the gasoline using vehicles and therefore can be seen as a substitute of oil-and gas products. Moreover, governments of multiple states nowadays also promote this way of driving by providing the needed infrastructure that these vehicles need (building recharge points to recharge the battery of the cars). For these reasons, it can be concluded that Shell is facing a reasonable substitution threat since retail consumers are getting more and more open-minded for cheaper alternatives of transportation. Nevertheless, it will take a significant time to get all consumers of transportation open-minded for the green vehicles and thus there is no major direct threat to shells market. The threat of substitution can be classified as medium/high but expect to become higher in the future.

The other sales group for Shell existing of the business-to-business segment is also showing some interest in alternative energy. These firms have seen their costs of producing rising in the last decades due to rising crude oil prices and therefore started to consider alternative ways of getting energy, other than products that were produced by use of gas and oil. In relation to the substitution of oil and gas products, the role of Corporate Social Responsibility (CSR) has become more important over the last decades. Since customers tend to choose their purchases more considered and aware of how the way the products are produced and what the effect of production has on the environment, firms tend to prioritize CSR higher than in the past. The increasing prices, increasing scarcity of oil and gas resources and the negative effects the production has on the environment are several main factors that make the firms that belong to the business-to-business segment of Shell become more open-minded for substitute products. Thus, the threat for substitution is quite high for this customer group of Shell.

The second factor that influences Porter's fourth force is titled as substitution, which is the price and performance of substitute products. Shell has a great variety of products for sale,

which therefore also result in the presence of a great variety of possible substitution products. Since 60 % of oil and gas products are consumed for transportation purposes, this factor will focus mainly on substitutes that could take over this part of consumption. The substitution products for this product can be mainly found in green energy products.

The aviation industry is a large customer group of Shell's products and therefore need to be taken into investigation. The substitute product for this customer to purchase would require the airplanes also to fly on alternative resources. Little is known of initiatives to replace the conventional jet fuels other than the company Virgin Air, which is aiming to develop "green aviation fuel" (The Guardian, October 11th 2011). Virgin Atlantic "hopes to help convert waste gases from industrial steel production into a jet propuslion that could ultimately account for nearly a fifth of the present annual global consumption of aviation fuel" (The Guardian, October 11th 2011). If this initiative results in a breakthrough in the aviation industry, it could result into a great threat for Shell sales. Nevertheless, in the short term it is not expected that the aviation industry is switching drastically to alternative resources making the Shell products unneeded. To conclude, the threat of substitution is currently low but possibly rising in the future.

The shipping industry has falling behind in the development of using green alternatives for gasoline usage. In 1948, International Maritime Organization (IMO) was established with the aim to reduce the pollution caused by the shipping industry. In the past, ships have been burning the cheap, unrefined crud, laden with sulphur and other nasties, which were left over when oil was refined. The shipping industry has now to comply with a flood of new regulation that will force the industry to start thinking about green alternatives (the Economist, March 30, 2013). For this reason, it could be conclude that the shipping industry is still very much depended on products such as the ones that Shell is producing however, current events push the shipping industry to aim for alternative, more green products. Thus, at this point the threat of substitution is low but rising in the future.

The automobiles industry has been more developing when it comes to engines running on alternative fuels other than the original gas guzzling cars. Many alternatives engines have been developed over the years resulting into the offer of hybrid cars in all class-segments in the car industry. A substitute product has been created. When it comes to the price of these cars, many governments try to support the electric and hybrid cars by e.g. tax

advantages. “In 2012, the Chinese government set a target to produce 500,000 electric and hybrid cars by the end of 2015. This number is very small compared to the 14.6 million passenger cars selling in last years (red. 2012) the world’s largest auto market” (Forbes, China's Auto Industry Eyes Subsidies For Electric, Hybrid Cars, 6th march 2013). Nevertheless, the government is actively supporting the production of electric and hybrid vehicles, of which the number of production is only expected to rise due to high rate of pollution in Chinese urban areas and because several automobile industry officials have in 2013 been seeking to expand the subsidy program. This case in the Chinese car industry illustrates the price for electric and hybrid cars to become more favorable in comparison to cars with the original engines and thus the price of substitutes products to become more attractive. The governmental support for the use of electric and hybrid cars has been seen in multiple countries worldwide. The performance of these vehicles became equal during the last years. Users of these vehicles notice small differences compared to cars with the original engines although the battery of electrical cars needs to be recharged faster than an original car would need fuel. Nevertheless, significant differences in performance are minimal and thus the price effect of these cars is a big advantage of the substitute product, making the threat for Shell higher.

To conclude on this factor concerning the performance and price of substitute products, the majority of known substitute products are showing minimal threat of replacement to Shell’s products however, with a rising support for developing and introducing alternative resources in the different transportation industries. Therefore, the treat of substitution is expected to become higher in the future.

The last factor that completes the fourth force of Porter’s five forces is the height of the switching costs involved for customers of Shell to start purchasing a substitute product. The retail sales of Shell, individuals buying gasoline at the gas stations of Shell for transportation purposes, are not connected to the firm in the way of legal bindings such as a contract. However, a group of sales that is generated out of the retail sales is coming from businesses that possess a leasing agreement in combination with tank pass. In some cases, this pass can only be used at e.g. gas stations that are owned by Shell and therefore there is a legal agreement with a part of the retail sales and Shell. Firms that have such an agreement can easily switch to a provider of substitute services at the expiration date of the

legal agreement without sizable switching costs. Examples of substitute providers are public transportation services that do require the firms to purchase from Shell or stimulate lease agreements of green vehicles. Individuals that have no agreement with any IOC and thus have no switching costs, represent the other part of Shell's retail sales. Shell is trying to bind these customers by marketing actions such as saving programs that can lead to free purchases or gifts in Shell's gas stations shops. Anyhow, switching costs for this customer group of Shell remains low and thus the threat of substitution is high.

The business-to-business segment is the other customer group that needs to be analyzed on possible threat of substitution. It has been seen in paragraph 4.4 that the business-to-business segment is selling to firms that use Shell's products in a great variety of industries such as industries as aviation, transportation, lighting, cooking, heating, road construction and concrete production. These industries represent individually smaller amounts of Shell's sales. Assumedly, the purchase costs of the products of Shell are relatively high in relation to the costs of producing for companies that use the products for cooking, lighting, heating and concrete production since these are industries were lower amounts of revenues are generated. Therefore, most of the firms acquiring the products of Shell that are accounted to the business-to-business segment have few/no alternatives for the products and thus are obliged to purchase Shells products. For example, firms in the aviation industry are expected to have high switching costs since their fleets exists of aircrafts flying on the kerosene, a product delivered by IOCs, and thus are dependent on the oil production and thus low threat of substitution. Other ways of transportation do get a broader set of substitute options such as the ones discussed before in the retail industry (automobiles). Nevertheless, many industries are looking for more environmental friendly ways of producing since this has become a bigger issue globally and thus a priority for these firms. R&D has been needed to develop alternative ways of producing which enables these firms to substitute Shell's products possibly in the future. Currently, the threat of substitution based on this factor is thus low, since switching costs are high. It is expected that switching costs will fall in the future and so the threat of substitution becomes higher.

- Both Retail customers and the business-to-business customers of Shell are open-minded for substitute products: medium/high threat of substitution (expected to become high in the future).

- Low substitute products yet available but initiatives for development of those is highly supported. The threat of the ones available is high and rising in the future: low threat of substitution (expected to become medium in the future).
- The costs for the retail segment to switch are low, however the costs for the business-to-business segment to switch to a substitute product are high: medium threat of substitution (expected to become medium/high in the future).

To conclude the fourth force of Porter's five forces, it could be said that based upon the analysis of the different factors that determine the threat of substitution of Shell's products, the threat of substitution is of medium extent but rising in the future. The products that Shell delivers are not highly unique and thus customers could easily switch to substitute products. Nevertheless, the products of Shell will not lose their customer demand, bringing Shell in a favorable position.

6.1.5 New Entrants

The last of five forces that Michael Porter mentions is the threat of new entrants of the industry. This group can start competing for the same customers and profits as Shell does with the same type of products and firm, when it enters the industry. Therefore, rivalry in the industry is increasing which is not beneficial for the IOC. The threat of new entrants is inherent to the barriers of entry to the industry. For this reason, the analysis will focus on the barriers of entry to see how big the threat is of possible new entering parties.

The first factor that needs to be identified is how attractive the industry is by the presence of possibilities of economies of scale. Firms from outside the industry might see this possibility where they can lower the impact of a products fixed costs on the profit margin by producing/selling a higher number of its products. This can be achieved by expanding abroad (more potential customers) or by producing another product that has common factors of production that drive a firm's fixed costs. Both scenarios contain little (extra) threat for Shell. The firm is already operating within the global market (in more than 70 countries) and so are its direct competitors. The possible threat of a firm in a new country is thus minimal since this in many countries already happened and thus Shell has already anticipated on these historic changes in the industry. The second scenario is in case a firm from another industry would enter the oil and gas extraction industry in order to expand its market and thereby creating economies of scale. Previous analyses in this chapter have

already pointed out that, to enter the market and to become able to compete with the already established IOCs, high investments for R&D are required which vaporizes the direct potential for economies of scale advantages. Therefore, the threat of new entrants from this direction is minimal. The threat is expecting to rise with the increase of alternative energy use since new entrants could focus on that while the IOCs will swift there angle of business to this industry and thus new possibilities of economies of scale arise and the R&D investments made are more equal between the IOCs and new entrants.

The second factor that is part of the fifth force of Porter's five forces is describing to which extent the products sold by Shell are creating customer loyalty by means of originality and diversification. It has already been described before in previous analyses that Shell's products can be categorized as commodity products, which in general have little characteristics that customers can become loyal too. All of the characteristics that a customer can get loyal too are firm related such as the image that the firm is creating by e.g. corporate social responsibility but also by means of marketing e.g. loyalty rewards for customers that frequently return to a Shell gas station. These are minimal actions that could create some sort of customer loyalty to the firm but are not strong enough to become prioritized over customer pull factors such as purchasing price or quality. Therefore, this will not form an obstacle for new entrants to find customers directly after entry. Therefore, it could be concluded that this factor is not forming a barrier for entry and the threat of new entrants coming into the industry is high for Shell.

Another group can here also be seen as a customer although Shell is not selling to this group. This is the group of NOCs which request Shell's services in oil and gas extraction projects (see paragraph 4.4). New entrants could enter the market and start competing for these kinds of assigned projects. From this perspective, the service and tasks that Shell delivers to the NOCs is highly differentiated and original. The firm has built up great expertise and (technological and managerial) knowledge in a specific range of fields. Therefore, this customer group is very loyal and the strong brand name of Shell and its reputation have created a differentiated set of services and products that resulted in loyalty and goodwill. Based on this, the threat of new entrants that Shell faces is relatively low.

The third factor that is part of the new entrants force or Porter's five forces is the capital resources needed in order to enter the industry in a proper way and being able to become

competitive with the original players in the industry. Because of analyses in previous paragraphs, it was concluded that the investments required to enter the industry are relatively high in terms of capital but also in terms of time. It has been seen in Graph 3 that the yearly R&D investments of the IOCs are high and the firms are also known as to have made these kinds of investments for over decades. New entrants of the firm should be able to see great potential in the oil and gas industry beyond the high investments. Therefore, the threat of new entrants in the form of a player coming into the industry that also becomes an IOC is low.

A continues threat is still existing on new entrants into the industry in the form of NOCs. Nowadays, still new resources are found in different territories worldwide that most often also directly result in the establishment of a new NOC or an existing one in the state taking control. This however, has become a general trend within the industry that can be confirmed with the percentage of 90 percent of global oil and gas resources being controlled by the NOCs. Thus, NOCs taking control over newly found oil and gas resources should be taken for granted, rather than seeing this happening as incidental. However, the threat will continue to exist of the NOCs taking over the operation activities of IOCs in case the NOCs manage to go through the R&D needed to shut down the role of IOCs in operating oil and gas resources that need certain (technical and managerial) expertise. Since NOCs have been established by state governments, and possibly have generated large capital income of historic oil and gas resource operations, it could be assumed that NOCs possibly possess the financial strength needed to conquer the investment obligation for new entrants in the industry. The threat of new entrants in high (technological and managerial) expertise of the industry is thus of medium extent.

The fourth factor that determines the probability of new entrants to enter the industry is the height of the switching costs. These switching costs are accounted to the new entrant when it enters the new industry and has to connect to the suppliers in the industry and their products. In the oil and gas industry, it has been seen that IOCs already possess the full value chain from extracting the natural resources to selling the products to the final customer. The suppliers in the industry are in the majority of the cases the NOCs that control the oil and gas resources (see paragraph 4.3). Therefore, the new entrant is supposed to connect with these parties. In paragraph 4.4, the process of organizing supply

sources is described. This process clearly indicates the possibility of oil and gas resource supply as a return of facilitating the NOCs with the (technological) expertise that is required to operate the source(s) successfully. For this reason, it can be concluded that the switching costs in getting an NOC as a supplier include the R&D investment required to become a partner of a NOC. In the previous paragraph, it was already discussed that this yearly investment in R&D is quite high and has been done for over decades. To conclude, the threat of new entrants is relatively low when it comes to this factor.

The last factor that determines the likelihood of new entrants to enter the industry is analyzing whether it could also access the existing distribution channels or could create its own distribution channels as an alternative. Shell has a strong established distribution network throughout the full value chain in order to supply its products to its customers. Other firms that consider entering the industry will not get access to the distribution channels of Shell. Therefore, it would have to establish its own distribution network, which can be a costly requirement to become active in the industry. As a result, the threat of new entrants based on this group is low.

To look from another perspective, the NOCs can become a new entrant in the industry in case a new oil or gas source is found in some territory worldwide. Some of these states already established an own NOC that control the state's oil and gas resources. In some cases, the NOC is controlling a great amount of high valued oil and gas resources, which it will continue to control over a long range of time. This issue can be illustrated by the example of the Mexican NOC Petróleos Mexicanos (PEMEX). In 1938, the Mexican president President Lázaro Cárdenas expropriated major U.S., British and Dutch oil companies (Forbes, Dec 2013). After that, the Mexican government started an own NOC called PEMEX in order to control the country's own oil and gas resources. This NOC has developed after this moment its own national infrastructure in Mexico to commercialize the country's oil and gas resources. The firm developed a distribution network, taken position in all the parts of the value chain, which is nowadays commonly seen in the streets of Mexico. Active IOCs in the Mexican market were forced to leave and got only little compensation in return not even close to meeting the turnovers the firms would have generated if still present in the market. This group can be seen as new entrants and thus show a high threat since it can develop national value chain and distribution channels.

Only in situations where Shell's high technological and managerial skills, experience and expertise are needed face little threat.

So all the factors that are part of the fifth force of Porter's five forces have been analyzed and the outcome can be summarized as following:

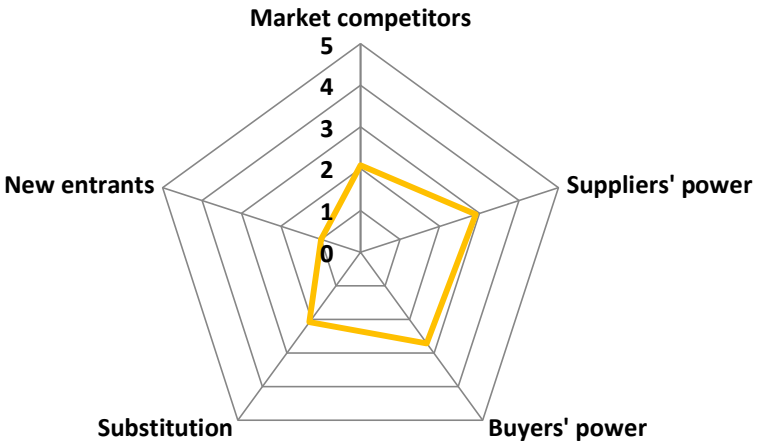
- Economies of scale possibilities are low: Low threat of new entrants (expected to become medium in the future).
- Low rate of diversification and originality of Shell's products creating customer loyalty downstream, high rate of diversification and originality upstream: medium threat of substitution (no future change).
- The required capital resources to enter the oil and gas industry are quite high. Some players with potential interest have the resources: low- to medium threat (no future change).
- The switching costs to switch from one supplier to another are high: threat of new entrants is low (no future change).
- The threat of new entrants in the form of firm(s) establishing a new IOC is low. The establishment of new NOCs or existing NOCs taking over the market in a single state is a more plausible scenario. Therefore, the threat of this group becoming new entrants is much more likely: Medium threat of new entrants (no future change).

To conclude on this force, the threat of new entrants entering the industry of oil and gas production is quite low. Overall, most of the forces turn out a low or medium indication of threat. Nevertheless, the firm should keep in mind the possible threat of some parties that turn out to show more threat in general. The retail sales that Shell has is showing low connection to Shell and thus if a new player enters the industry, it could take over customers and revenues. The biggest threat exists of NOCs in the industry that possibly take over resources in a particular state and move forward in the value chain and taking over Shell's activities. In order to keep the threat of new entrants minimal, Shell will have to focus on maintaining and raising entry barriers to the industry. New entrants see their chances of success in the industry declining when Shell will e.g. keep investing heavily in R&D, which makes the costs to entry higher, creates a lead in level of expertise and knowledge and thus retains the importance of Shell's role in the industry.

6.1.6 Sub-conclusion

This sub-chapter will draw conclusions based upon the analysis that has been done upon the competition and industry characteristics. The result of the analysis of this chapter is illustrated in Figure 4, representing Porter's five forces and the rates of strength per force. The calculation system of the strength of every force is explained at the beginning of this chapter.

Figure 4: Porter's five forces diagram - current situation in the international oil industry



Source: Self-made

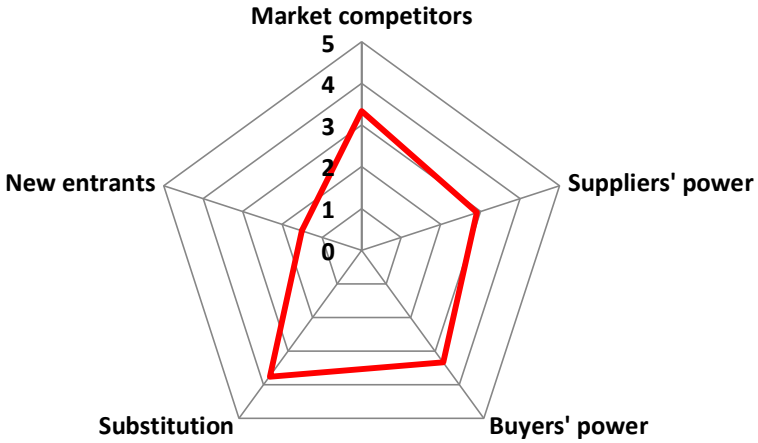
(0- weak, 5- strong factor)

Porter's five-forces model demonstrates the state of competition and profit potential in an industry (Svend Hollensen, Global marketing, p110, 2011). Based upon this outcome in Figure 4, it can be concluded that the strongest factors within the industry is first the suppliers' power and second the buyers' power. Therefore, the strategic focus of Shell should be on these forces. The strategy for Shell to obtain should include several elements. To reduce suppliers' bargaining power, the firm should focus on finding new sources of supply or threaten to integrate backwards in the supply chain. The latter is a difficult action to enable since Shell is already presented throughout the whole supply chain. Nevertheless, Shell is recommended to focus on finding new sources of supply, which can mean several things. First, Shell is recommended to keep focusing on winning new contract with NOCs

by making the firm's role vital in the oil and gas extracting activities by investing heavily in R&D. This could make Shell become more important in future oil and gas extraction projects however, it could become an investment without a future in case the oil and gas resources are exhausted and the obtained (technological and managerial) knowledge and expertise is no longer needed. Nevertheless, oil and gas reserves are not expected to run out in the next decades but scarcity is expected to rise. Therefore, on the short term it is recommended to invest highly in the R&D required for oil and gas extraction but slowly decrease investments. The current investments in R&D for alternative resource products should gradually be increased in order to become a core business in the future. A proposed investment graph is given in Appendix 3. Nowadays, Shell is running several activities to sell alternative- more environmental friendly- fuels. The analysis of this chapter also revealed that in the future the threat of substitution and market competitors could increase in case the demand for alternative resources/green energy is rising. Trends are showing that this demand is rinsing which makes the market more attractive for new entrants. In addition, global oil and gas resources are getting scarcer which will make consumers look for alternatives. Shell should adapt to these industry chances preferred too early than too late which will provide them in the future with a new core business if the traditional ones, oil and gas products, are not able to be delivered anymore.

Based on the findings in the analysis of the current situation and the development of the factors in the future, an indication is made of the expected future strength of the five forces. The outcome is illustrated in Figure 5. The message that this figure expresses is that several factors in the industry will continue to grow into bigger threats and suppliers'- and buyers' bargaining power will continue to develop in their advantage. This figure is an indication of the expected future where Shell could decide at a certain point in time to switch its core business and focus e.g. on the production of alternative sources of energy. This moment should be chose based upon the scarcity of the natural resources combined with the outcome of Porter's five forces analysis that should be continuously done in the future to keep track of the situation and decide whether the industry remains profitable for the firm and/or if needed to adapt the firm's strategy to the changes.

Figure 5: Porter's five forces diagram - future situation in the international oil industry



Source: Self-made

(0- weak, 5- strong factor)

In the meantime, exploring globally for new sources of supply of gas and oil is another activity that Shell should continue to do. The search for sources in areas that are in expertise field of Shell, such as deep-water sources, is preferred since there is a higher chance of Shell to become full owner of these fields and because they could be in international waters and thus not get directly under control of a NOC. In case a NOC does get possession over the newly found resource, the chance for Shell to become (one of) the controller(s) is slightly higher due to their expertise of this type of location. Another chance, where the ethical perception is left out of scope, is targeting to get control over (newly found) resources positioned in states with unstable political systems or situations that do not have an NOC and will not be able to establish one. The threat here is that the current regime of the state might enrich only a handful people but the majority of the country is not benefiting of the generated oil and gas drilling revenues. Nowadays, these kind of practices could result in bad publicity of an IOC and thus could be a tricky business. Nevertheless, the potential income for the IOC is expected to be higher since unstable regimes in general are not able to control the sources like NOCs in stable states do and therefore have lower bargaining power and allow less control over activities in return

for a price.

The threat of new entrants is currently the lowest followed by both market competitors and the threat of substitutions. Based on this, Shell has to adapt its future competitive strategy by emphasizing less focus on the stability of market share division in the industry among the different players in order to protect the structure of the industry. The threat for Shell not to profit of industry structure changes is clearly present however, the industry is already changing its shape due to external factors that Shell cannot or hardly influence. Another action of Shell not to prioritize highly in the development of future strategies is the focus on increasing switching costs, to tighten the current customer to the firm. The threat of new entrants is low and thus customer will not switch away from Shell so easily. Lastly, attempts to higher entry barriers to the industry with the intention to keep new entrants out, is another strategic elements that the company should focus on less.

These findings will be taken into account in the final chapter where conclusions and recommendations are drawn.

7 CONCLUSION/RECOMMENDATION

The final chapter contains conclusions drawn based upon the findings in the previous chapters of this report. Consequently, the chapter will provide answers to the problem statement and research questions stated at the beginning of the report. Hereafter, a strategy recommendation to Shell is drawn.

A changing competitive environment, a moving industry and a fall in natural resources are elements that pressure and threaten the existence and success of IOCs' business models heavily. Nevertheless, the NOCs still need the IOCs as much as they did historically.

It has been discovered that there is a clear line in the strategy of the firm Royal Dutch Shell. The firm aims to find new resources worldwide by own (or oil and gas exploration firms) natural resource discoveries or by linking the firm to NOCs worldwide that nowadays possess 90% of the global natural resources. The latter has become a more common phenomenon over time. This research has proven that Shell obtained a specific strategy to gain access to the sources these NOCs control in exchange for the services of Shell. This is directly the second aim for Shell which is to make their role within international oil and gas extraction project evidently and inevitable. This role is obtained by gathering, obtaining and absorbing great quantities of managerial and technological expertise, skills and experience in geographical and political complex environments resulting later on into the development of the firm's unique selling point and in addition to gain a competitive advantage over others. To secure the continuous aim for these goals and thus the success of the firm, shell adopted a strategy where internationalization is vital for the firm's future existence and success. For this particular reason, the Linking, Leverage, Learning (LLL) internationalization theory has been so effective in Shell's steps into foreign markets. This theory formulates decisions for internationalization steps based on direct goals of the firm and based on maximum benefit of the firm from the new market entry. The two abovementioned direct goals, can subsequently also be interpreted as the motives for internationalization. Truth is, this strategy is more suitable for established powerful firms since risk could be substantial and required investments significant.

Another observed part of the strategy is that Shell has historically been deciding by which mode to enter a foreign market based on Dunning's eclectic approach where the three

categories of advantages are investigated before actualization of the planned internationalization step. In combination with the specific goals the firm has- and the internationalization theory applied, the outcome of Dunning's eclectic approach has, in Shell case, repeatedly pointed at wholly owned subsidiary as entry mode. This approach enables Shell to benefit of the foreign step but moreover to achieve the previous set goals.

After these two strategies are applied and the internationalization step is completed by obtaining the contract to become controller/operator of the source, the firm is hereafter ready to drill to- and exploit the source. This process is actually a vicious circle where after the source is exhausted, the firm ends its extraction activities, closes down the drilling location and can internationalize again to another country in order to find new sources of raw material income. Obviously, another option is to find a new source to operate is the same foreign market as before. However, after the cycle ends the first step to see whether a new cycle needs to be started is to reconsider the strategy by using an industry and competitor analysis in the form of Porter's five forces (see Figure 6).

The competitor and industry analysis has been done in the report through Porter's five forces since it was perceived that this would give the proper outcome to decide whether the previous set goals/ internationalization motives, internationalization strategy and applied theories were still suitable in the continuous changing industry and competitive environment and thus to start to cycle again. In case the threat of three forces plus the strength of bargaining power of the remaining two forces is getting very strong,- in combination with ending supply of new oil and gas sources - internationalization steps as were seen before are discouraged. As an alternative in that case, Shell is recommend to fully focus on alternative energy.

The analysis of Porter's five forces has described the current situation in the oil and gas industry and identified its competitive state which at this point turns out not be an obstacle for further internationalization steps. The five forces are shaped by a variety of different factors. The analysis showed that the strongest forces in the industry are the bargaining power of first suppliers and second buyers. The strength of the suppliers can be related to the strengths of the NOCs which will try over time to integrate forward into the supply chain and will keep trying to diminish the role of IOCs in extracting projects. In addition, based on the research, it is expected that that the threat of substitutes and market

competitors will increase fastest in the future. For these reasons, Shell is recommended to keep investing in Research and Development that will enable the firm to freeze the current condition of the ratios of the five forces minimalize the development of threats and bargaining power. The firm will strengthen on the short term its competitive advantage and thus improves the chance on obtaining new operating contracts. On the long term, the curve of R&D investments should flatten and continuously stagnate, where the curve, representing R&D investments in alternative energy, will show the opposite trend. Lastly, the firm should explore more fore resources on its own in the oceans and seas worldwide since it enlarges the chance to get (full) control and ownership in deep-water oil and gas extortion projects without a NOC wanting to be (fully) involved.

Nevertheless, Shell cannot fully stop the development of the five forces and therefore it is recommended to reconsider current strategies continuously in order to see whether the current strategy is still realistic and suitable in the changing industry and competitive environment. To illustrate the recommended strategy to Shell clearly, Figure 6 has been created. All steps of the strategy will contain continues investments in R&D, as long as the strategy remains a vicious circle and thus the firm has not decided yet to aim completely for alternative resources. When the Royal Dutch Shell decides to obtain the recommendations of this chapter and obtain the strategy, it will continue to remain successful in the changing oil and gas extortion industry in the future.

Figure 6: Recommended strategy to Royal Dutch Shell

Source: Self-made

Reflections and perspectives

The project is focusing on Royal Dutch Shell and therefore the recommended strategy might not be fully applicable to other IOCs. Nevertheless, the IOCs have many similarities and therefore it is still assumed that the analysis of Shell provides a representative image of the situation within the oil and gas extraction industry. Another element is that the strategy has been highlighted from different theoretical perspectives that are assumed most applicable on the oil and gas extraction industry however, a variety of other theories not applied in this research, could possibly add additional perspectives to the reality and the strategy. Nevertheless, the current applied theories give a complete sketch of the situation. This is directly a recommendation for further research where different theories can be used to highlight the phenomenon from different perspectives and bring up new sights and information possibly to a further extent. Last, quantitative research would give extra value to this research and stimulate the findings of the report.

8 LITERATURE LIST

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Images

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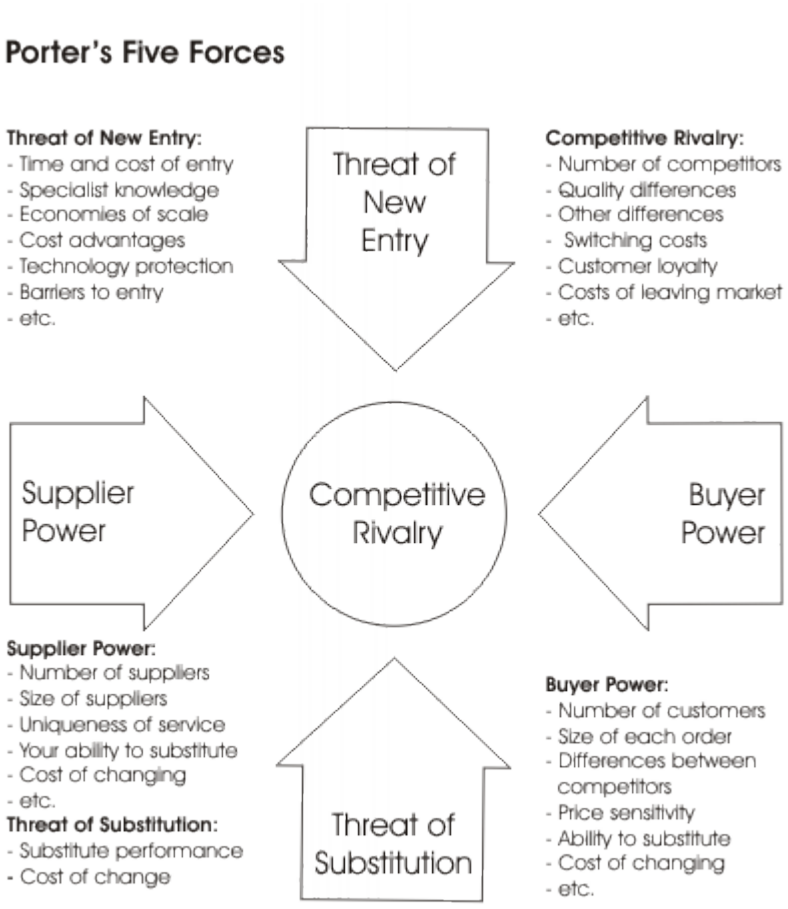
- The Royal Dutch Shell Website - www.shell.com

9 GLOSSARY

BBL/D	=	barrels per day	OEMs	=	Original Equipment Manufacturer
CSR	=	Corporate Social Responsibility	OPEC	=	Organization of the Petroleum Exporting Countries
IOC	=	International Oil Company	R&D	=	Research and Development
KBBL/D	=	1000 barrels per day	SPDC	=	Shell Petroleum Development Company of Nigeria Ltd
NNPC	=	Nigerian National Petroleum Corporation	STOIIP	=	Stock tank oil initially in place. A stock tank is a storage tank on the surface for oil.
NOC	=	National Oil Company			

APPENDICES

Appendix 1:Michael E. Porter's Five Forces



Source: Competitive Strategy: Techniques for Analyzing Industries and Competitors - Michael E. Porter

Appendix 2: Royal Dutch Shell Subsidiaries

SIGNIFICANT SUBSIDIARIES (AUDITED)

Significant subsidiaries at December 31, 2013, and Shell's percentage of share capital (to the nearest whole number) are set out below. All of these subsidiaries have been included in the "Consolidated Financial Statements" on pages 101-139. Those held directly by the Company are marked with an asterisk (*). A complete list of investments in subsidiaries, incorporated joint arrangements and associates will be attached to the Company's annual return made to the Registrar of Companies.

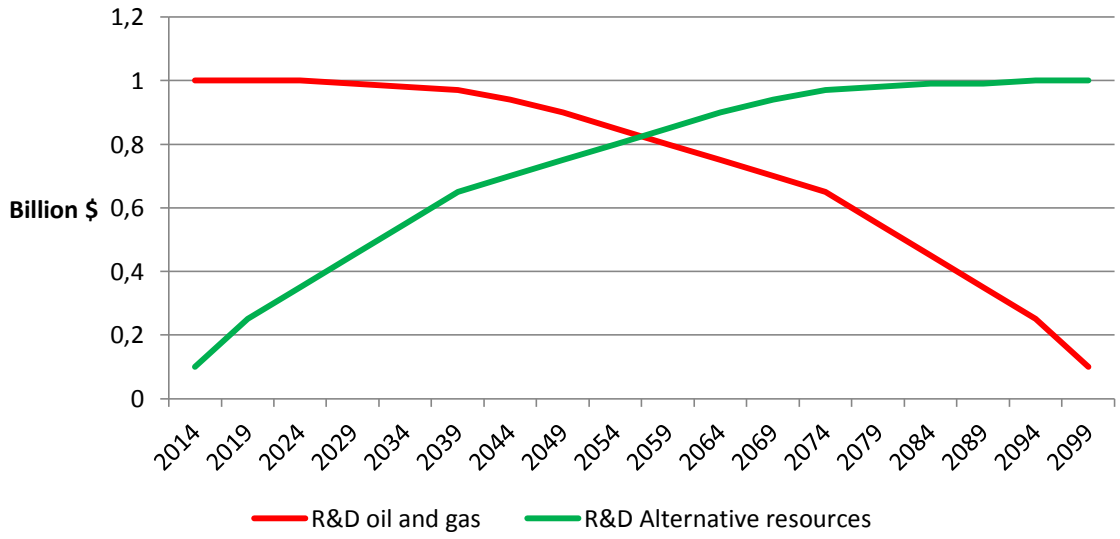
Company name	%	Country of incorporation	Principal activities	Class of shares held
Shell Development (Australia) Proprietary Limited	100	Australia	Upstream	Ordinary
Shell Energy Holdings Australia Limited	100	Australia	Upstream	Ordinary, redeemable [A]
Qatar Shell GTL Limited	100	Bermuda	Upstream	Ordinary
Tacoma Company Limited	100	Bermuda	Upstream	Ordinary
Shell Canada Energy	100	Canada	Upstream	Ordinary
Shell Olie – OG Gasudvinding Danmark Pipelines ApS	100	Denmark	Upstream	Ordinary
Shell Gabon SA	75	Gabon	Upstream	Ordinary
Shell Italia E&P Spa	100	Italy	Upstream	Ordinary
Sarawak Shell Berhad	100	Malaysia	Upstream	Ordinary
Shell Kazakhstan Development B.V.	100	Netherlands	Upstream	Redeemable [A], non-redeemable
Shell Olie – OG Gasudvinding Danmark B.V.	100	Netherlands	Upstream	Ordinary
Shell Philippines Exploration B.V.	100	Netherlands	Upstream	Redeemable [A], non-redeemable
Shell Nigeria Exploration and Production Company Limited	100	Nigeria	Upstream	Ordinary
The Shell Petroleum Development Company of Nigeria Limited	100	Nigeria	Upstream	Ordinary
A/S Norske Shell	100	Norway	Upstream	Ordinary
Enterprise Oil Limited	100	UK	Upstream	Ordinary
Shell EP Offshore Ventures Limited	100	UK	Upstream	Ordinary
Shell U.K. Limited	100	UK	Upstream	Ordinary
Shell US E&P Investments LLC	100	USA	Upstream	Equity (Voting)
SOI Finance Inc.	100	USA	Upstream	Ordinary
SWEPI LP	100	USA	Upstream	Partnership Capital
Shell Compania Argentina De Petroleo S.A.	100	Argentina	Downstream	Nominative
Shell Western Supply & Trading Limited	100	Barbados	Downstream	Ordinary
Shell International Trading Middle East Limited	100	Bermuda	Downstream	Ordinary
Pennzoil-Quaker State Canada Incorporated	100	Canada	Downstream	Ordinary
Shell Canada Limited	100	Canada	Downstream	Ordinary, redeemable [A]
Shell Chemicals Canada Limited	100	Canada	Downstream	Ordinary, redeemable [A]
6040187 Canada Inc.	100	Canada	Downstream	Ordinary, redeemable [A]
Deutsche Shell GmbH	100	Germany	Downstream	Ordinary
Deutsche Shell Holding GmbH	100	Germany	Downstream	Ordinary
Shell Deutschland Oil GmbH	100	Germany	Downstream	Ordinary
Shell Luxembourgeoise Sarl	100	Luxembourg	Downstream	Ordinary
Shell Nederland Raffinaderij B.V.	100	Netherlands	Downstream	Ordinary
Shell Trading Rotterdam B.V.	100	Netherlands	Downstream	Ordinary
Shell Eastern Petroleum (Pte) Limited	100	Singapore	Downstream	Ordinary, redeemable
Shell Eastern Trading (Pte) Limited	100	Singapore	Downstream	Ordinary, redeemable
Shell Energy Europe Limited	100	UK	Downstream	Ordinary
Shell Trading International Limited	100	UK	Downstream	Ordinary
Equilon Enterprises LLC	100	USA	Downstream	Membership Interest
SCOGI, G.P.	100	USA	Downstream	Equity
Shell Chemical LP	100	USA	Downstream	Partnership Capital
Shell Energy North America (US), L.P.	100	USA	Downstream	Partnership Capital
Shell Trading (US) Company	100	USA	Downstream	Ordinary
SOPC Holdings East LLC	100	USA	Downstream	Membership Interest
SOPC Holdings West LLC	100	USA	Downstream	Ordinary

[A] Non-voting class of share

Company name	%	Country of incorporation	Principal activities	Class of shares held
Shell Oman Trading Limited	100	Bermuda	Corporate	Ordinary
Solen Insurance Limited	100	Bermuda	Corporate	Ordinary
Shell Finance Luxembourg Sarl	100	Luxembourg	Corporate	Ordinary
Shell Treasury Luxembourg Sarl	100	Luxembourg	Corporate	Ordinary
B.V. Dordtsche Petroleum Maatschappij	100	Netherlands	Corporate	Ordinary
Shell Brazil Holding B.V.	100	Netherlands	Corporate	Ordinary
Shell Finance (Netherlands) B.V.	100	Netherlands	Corporate	Ordinary
Shell Gas B.V.	100	Netherlands	Corporate	Ordinary
Shell International Finance B.V.*	100	Netherlands	Corporate	Ordinary
Shell Overseas Investments B.V.	100	Netherlands	Corporate	Ordinary
Shell Petroleum N.V.*	100	Netherlands	Corporate	Ordinary
Shell Finance Switzerland AG	100	Switzerland	Corporate	Ordinary
Solen Versicherungen AG	100	Switzerland	Corporate	Registered (Voting)
Shell Overseas Holdings Limited	100	UK	Corporate	Ordinary
Shell Treasury Centre Limited	100	UK	Corporate	Ordinary
Shell Treasury Dollar Company Limited	100	UK	Corporate	Ordinary, redeemable
Shell Treasury U.K. Limited	100	UK	Corporate	Ordinary
The Shell Petroleum Company Limited	100	UK	Corporate	Ordinary
The Shell Transport and Trading Company Limited	100	UK	Corporate	Ordinary, redeemable
Pecten Victoria Company	100	USA	Corporate	Ordinary
Shell Oil Company	100	USA	Corporate	Ordinary
Shell Petroleum Inc.	100	USA	Corporate	Ordinary

Source: Royal Dutch Shell - Annual report 2013

Appendix 3: R&D investment proposal in oil and gas drilling and alternative resources



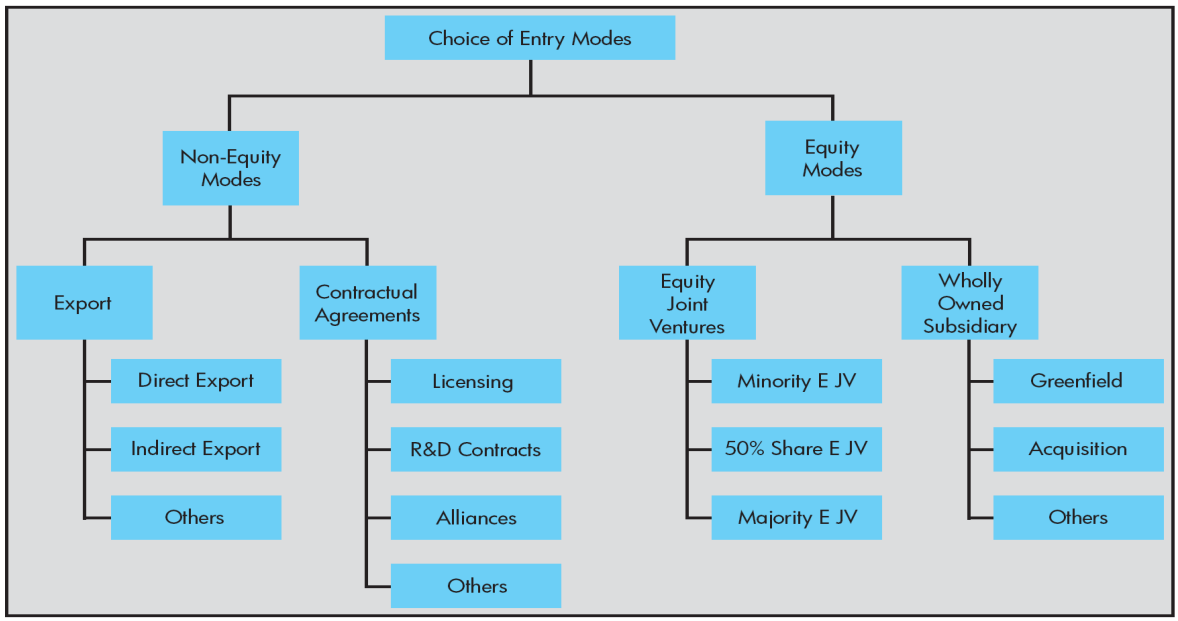
Source: Self-made

Appendix 4: Dunning Eclectic approach overview

Dunning Eclectic Paradigm		Categories of advantages		
		Ownership advantages	Internalization advantages	Location advantages
Form of market entry	Licensing	Yes	No	No
	Export	Yes	Yes	No
	FDI	Yes	Yes	Yes

Source: Kapitel 2.2 Eklektische Theorie. Verlag Dr. Kovac. 2009-03-09 - http://www.verlagdrkovac.de/3-8300-0428-1.htm

Appendix 5: A Hierarchical Model of Choice of Entry Modes



Source: Yigang Pan and David K. Tse, "The Hierarchical Model of Market Entry Modes, "Journal of International Business Studies, 31, no 4 (4th Quarter 2000):535-554