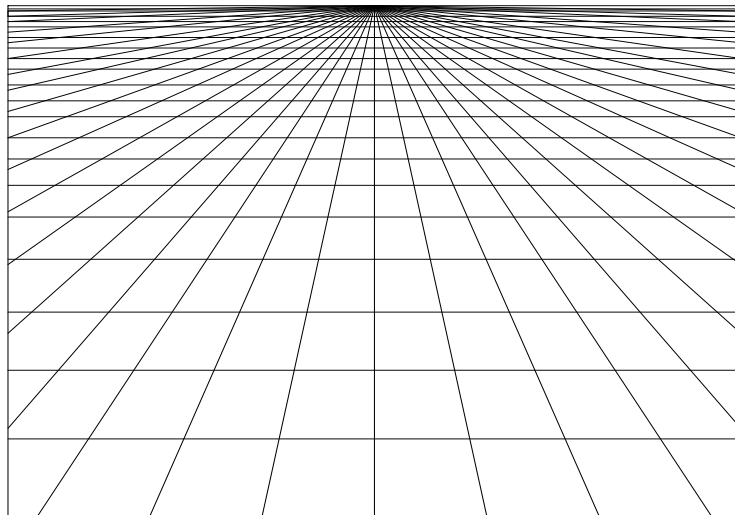


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ESST Master's thesis

International technology transfer (ITT) and corporate social responsibility
(CSR): A study in the interaction of two business functions within the
Norwegian petroleum company Statoil

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Abstract

I study Statoil's use of international technology transfer (ITT) and corporate social responsibility (CSR), and ways in which the two business functions interact within Statoil. Some reflections are made on how the academic fields of ITT and CSR – both of which are extensively studied by scholars – can be seen to overlap.

My reflections are illustrated with examples of combined ITT and CSR projects from three countries of significant importance to Statoil's strategy for international growth: Angola, Russia and Venezuela. I have interviewed seven Statoil employees and one university professor who manages Statoil-funded projects in Venezuela.

I hypothesise that Statoil will either have or be in the process of formulating explicit strategies for the combined use of ITT and CSR; that Statoil's recent history as a technology recipient will affect its attitudes to technology transfer and knowledge sharing today; and that the Norwegian government, as Statoil's majority owner, will influence or attempt to influence how Statoil conducts its ITT and CSR projects. The first hypothesis is partly confirmed, the second is confirmed and the third is refuted.

Additionally, I discuss selected theoretical frameworks from the two relevant academic fields and how compatible they are with the actual situation in Statoil. Most notably this concerns Bozeman's (2000) suggestions for criteria for measuring technology transfer effectiveness; Wang et al's (2004) theories of a firm's *capacity* and *willingness* to transfer technology; and the notion, espoused by several scholars within the CSR field, of CSR as a *voluntary* activity.

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I would like to thank all the people at Statoil, and Professor Golan of NTNU, who took time out of their busy schedules to answer my questions. I am particularly grateful to Ilse Castellanos and Morten Fejerskov, who believed in my project, helped me get the ball rolling and put me in touch with their colleagues. I wish to stress here that the information revealed through interviews with Statoil representatives are their personal perceptions and may not always represent the corporate view in Statoil. The conclusions and argumentation in the thesis are made by me personally and do not necessarily represent the views of Statoil or the interviewees.

Helge Ryggvik has been an inspiring and devoted supervisor and deserves a special thank you for illuminating me with regards to the Ricardian theory of rent. I finally have a better term than “Klondike” to describe my hometown, Stavanger.

Stine, thank you for sponsoring this thesis and for giving me time and peace when things were hectic!

Table of Contents

Abstract	3
Acknowledgements	5
Chapter 1: Introduction	9
Chapter 2: Methodology and sources	13
2.1. A qualitative and deductive approach designed as a case study	13
2.2. Interviews	16
Chapter 3: Definitions, literature review and theory	19
3.1. International technology transfer (ITT).....	19
3.1.1. Definitions	19
3.1.2. Literature review and theoretical background.....	22
3.2. Corporate social responsibility (CSR).....	28
3.2.1. Definitions	28
3.2.2. Literature review and theoretical background.....	31
Chapter 4: Empirical findings	35
4.1. Statoil's approach to technology management.....	35
4.2. The growth of CSR in the global petroleum industry and in Statoil.....	37
4.3. Examples of combined ITT and CSR projects within Statoil	43
4.3.1. The Angola-Norway Higher Education Initiative and the Management and Technology Transfer programme in Angola	43
4.3.2. Skills-development and technology transfer programme in Venezuela.....	47
4.3.3. Supplier development and strengthening of education in Northwest Russia.....	50
Chapter 5: Analysis of empirical findings.....	55
5.1. Characteristics of combined ITT and CSR projects	55
5.1.1. Effectiveness criteria	59
5.1.2. Is CSR always voluntary?	62
5.2. How history influences ITT and CSR in Statoil	63
5.2.1. Statoil's capacity and willingness to transfer technology	67
5.3. The Norwegian government: An active owner?	69
Chapter 6: Concluding remarks.....	75
6.1. The research questions	75
6.2. Methodological remarks.....	80
References	83
Interviews	85
Appendix I: Acronyms and abbreviations.....	87
Appendix II: Interview guide	89

Chapter 1: Introduction

The aim of this thesis is to shed light on how the business functions of international technology transfer (ITT) and corporate social responsibility (CSR) coexist and interact within the Norwegian petroleum company Statoil. In less than four decades of existence, Statoil has developed from relying almost exclusively on foreign know-how to its status today as an integrated energy company with industry leading technological capabilities in a number of areas, most notably in the exploration and development of deep sea oil and gas fields.¹ Simultaneously, an expansion of Statoil's geographic horizon has occurred, from the Norwegian continental shelf to the global oil and gas stage. While Statoil's first ventures abroad occurred already from the early 1980's, the main thrust of internationalisation traces its roots to the alliance Statoil entered with BP in 1990. As of 2010, Statoil is present in 42 countries on 5 continents (Statoil, 2011a).

At the most fundamental level, this thesis is inspired by a desire to understand the very processes which constitute the transfer of knowledge from one actor to another. Such transfer, of course, happens every minute of every day in every country of the world, so a narrowing of scope is called for. Three factors were decisive in the choice of Statoil as the topic of study. First, whereas the core curriculum of the ESST course is biased towards domestic university-industry technology transfer, I wanted to study how technology and technological know-how move across borders. Statoil is large enough to have well organised strategic processes related to ITT, and has a sufficiently international profile for it to present itself as an interesting object of study in this regard.

Second, as a former history student, I wanted to investigate how contemporary phenomena can at least partially be explained by events in the past, in this case the development of the Norwegian petroleum innovation sector in the 1970's and 1980's. Once a

¹ In recent years, the oil business has also displayed increasing interest in *ultra*-deep waters, e.g. waters of more than 1,500 metres depth. This is an area in which Statoil *cannot* be said to have industry leading competences.

net recipient of technological know-how, Statoil now has a knowledge base which it actively seeks to utilise as an asset when competing with other firms to obtain exploration licences and operatorships. How is Statoil's use of its technological knowledge base today influenced by its history, bearing in mind that some of the people who learnt the trade in a time when Statoil was dependent on foreign know-how still work for the company? Third, the Norwegian government owns two thirds of Statoil, and I found it relevant to search for signs of governmental influence on Statoil's approach to ITT. Finally, I wanted to find a novel approach to technology transfer, and I believe I've done so in highlighting the interaction between the business functions of ITT and CSR. While there exists a large body of academic literature on each of these topics, the ways in which the two interact and influence each other are hitherto relatively unexplored.

The research behind this thesis aims to answer three research questions. Before I started gathering empirical data, I made a broad assumption about how each of the research questions would be answered, and I then conducted interviews in order to confirm or refute my hypotheses. The research questions with their corresponding hypothesis are as follows:

R1: What are the unique features of projects which Statoil initiated or participates in and which combine elements of corporate social responsibility and international technology transfer?

H1: Statoil employees will consider ITT an efficient way to meet CSR targets. There will be a clear strategy within Statoil on how to employ ITT in a CSR context.

R2: How does Statoil's relatively recent history as a technology recipient influence the firm's attitudes to international technology transfer today?

H2: Statoil employees will be conscious about their company's history and eager to contribute to international technology transfer.

R3: Given the Norwegian government's ambition that state owned companies should take a leading role in promoting corporate social responsibility, in what ways does the government influence or attempt to influence Statoil's policies for corporate social responsibility and international technology transfer?

H3: Government bureaucrats and politicians will have specific expectations to how Statoil meets its CSR targets. Statoil will be actively encouraged by government actors to engage in ITT.

After a discussion on methodology in Chapter 2, I will introduce the academic fields of CSR and ITT in Chapter 3. Chapter 3 includes a discussion on how to define the respective terms and explains the main theories I use to analyze the empirical findings. In Chapter 4, I make use of interviews with Statoil employees and representatives of partner institutions, as well as document analysis, to shed light on three programmes which Statoil administers or funds and which combine elements of ITT and CSR. Chapter 5 gives an analysis of how the empirical evidence answers the research questions and how it fits with the selected theoretical contributions. Finally, Chapter 6 sums up the findings, discusses weaknesses and limitations with this thesis and offers suggestions for further research.

Chapter 2: Methodology and sources

2.1. A qualitative and deductive approach designed as a case study

The research I have conducted is of an exploratory kind, more than explanatory or descriptive. Given the limited time available for research, the difficulty of getting full and unfettered access to relevant information controlled by Statoil and the fact that there is no pre-existing theoretical framework which fits my exact topic of research, I have found it sensible to limit my ambitions to providing an initial overview of what the combination of CSR and ITT could mean for business and how researchers could approach the topic. In scope, I have chosen to limit myself to describe and analyse three projects, rather than attempting to cover the full range of Statoil's CSR and ITT projects.

I have used a deductive, qualitative methodology. It is deductive in the sense that I started with a number of assumptions or hypotheses on how CSR and ITT would function within Statoil and then confronted my assumptions with examples from the real world to test their validity. I also made use of some suggested theories from the respective academic fields of CSR and ITT and investigated how they fit with the actual situation in Statoil. The methodology is qualitative in the sense that I have only to a very limited extent sought to provide exact measurements of the processes and outcomes of CSR and ITT. Rather, I aspire to the greatest possible richness of description of the few projects I have investigated, covering social mechanisms, actors' beliefs, and influences on CSR and ITT from Statoil's history and its socio-political context.

There are a number of reasons why I consider a qualitative approach as best suited to answer my research questions. First, it has been pointed out that technology transfer as a system is "continuous and dynamic, rather than discrete and static" (Calantone et al., 1990: 27). Second, as for CSR, my aim in this thesis is not so much to examine quantifiable data on expenditure, number of employees or number of projects, as it is to learn more about what

CSR means to Statoil's employees and how they see CSR as an integrated part of their company's business. Finally, it seems unreasonable to assume that a firm's strategies are developed independently of all external influence. Implicit in my assumption that the Norwegian government somehow plays a role in how Statoil enacts its CSR policies, is an assumption of some sort of social pressure being exercised on the firm, and I wanted to qualitatively examine where this pressure is pronounced and how it is perceived.

I have designed my research as a case study of the company Statoil with three specific sub-cases – namely Statoil's operations in Angola, Northwest Russia and Venezuela – to serve as examples of how CSR and ITT are carried out within the company. George and Bennett (2005) provide useful advice for how to get the most out of a case study, some of which has inspired my work. It should be pointed out, however, that whereas George and Bennett are interested in case studies as a method to develop new scientific theories, my primary target is rather to give a description of how CSR and ITT coexist within Statoil, and I have very limited ambitions for how generalisable my findings will prove to be with regards to other companies. I believe that it would be pretentious to put forth a complete theoretical framework on the simple basis of three cases from within one single company, but I still believe that the *description* of these three cases can serve as a useful first foray into the merging of two hitherto separated academic fields.

The design phase of this project was the one where I most closely followed George and Bennett's recommendations. The phase is constituted of five distinct tasks (George and Bennett, 2005: 73-88). The first stresses the necessity of a clear specification of the problem and the research objective, which I have done through formulating research questions with corresponding hypotheses. The second task consists of specifying dependent and independent variables to be explained or predicted. In this thesis, business projects in Statoil which combine elements of international technology transfer and corporate social responsibility

constitute the dependent variable or, in more common terms, the object of study. The independent variables, or the phenomena expected to have an influence on the object of study, are first and foremost Statoil's history and the Norwegian government's ownership of Statoil, but also theories from the respective academic fields, as described in Chapter 3.

The third task of case study research design is to select cases. I have chosen combined CSR and ITT projects in Angola, Russia and Venezuela, because these projects are explicitly mentioned on Statoil's website (Statoil, 2011c, Statoil, 2008a).² George and Bennett warn about the danger of *selection bias* when choosing cases to study, or in other words, that the researcher can be tempted to select only cases which appear to fit well with the predetermined hypothesis (George and Bennett, 2005: 22). When selecting the three cases I present here, I had no knowledge of how they would fit with my initial assumptions, other than the fact that they all include elements of both CSR and ITT, which is of course a prerequisite for sensibly including them in the study. It is necessary to stress, however, that the findings I present should not be interpreted as generalisable to a wider class of events. They remain valid for the sole purpose of describing how CSR and ITT interact *within* Statoil, and can only hypothetically be valid for other companies as well. The description of how specific mechanisms work can still be highly valuable, especially if, as is the case here, little previous research on the topic exists. At the same time, I am aware that I can at best expect to say something useful about *whether* and *how* a variable has influence on the outcome of a process, and little or nothing about *how much* it mattered (George and Bennett, 2005: 25).

Fourth, a case study research design should include an idea of how variance in the variables will be described. The authors warn about an over-simplified description of variance, for example with only two possible outcomes such as "success" and "failure". I will attempt to give as rich as possible an explanation of Statoil's ITT and CSR projects, and I

² The sustainability report of 2008 also mentions projects in Algeria and Nigeria, but Statoil is today substantially more committed to the projects in Russia and Venezuela.

believe that, having interviewed both people with first-hand experience from projects and people with coordinative oversight over several projects, I have gained a nuanced understanding of how these projects function. Finally, George and Bennett espouse a clear formulation of data requirements and general questions. By that they mean that questions asked during interviews should not put words in the mouth of the interviewee, but allow him or her to give a personal interpretation of events. It is also important that the same general questions are asked of each interviewee, so as to open up for comparison between cases. During interviews, I let the interviewee speak as freely as possible, in order to keep open the opportunity to gain new insight that I hadn't predicted in the preparatory phase. Still, a core set of questions was asked of all interviewees (see Appendix II).

2.2. Interviews

In total, I have conducted seven interviews and received a written response from an eighth informant to questions similar to those asked in interviews. For each of the three cases I describe, I have received input from one representative with hands-on experience from the country in question. Morten Fejerskov has worked for Statoil Angola with knowledge transfer and technology cooperation; Benedikt Henriksen has several years of experience from CSR and ITT projects in Northwest Russia; and Professor Michael Golan is the project manager for the Norwegian University of Science and Technology's operational role in Statoil-funded CSR and ITT programmes in Venezuela.

In addition to these three, I have interviewed five Statoil employees who hold or used to hold coordinative positions related to CSR or technology management. Rolf Magne Larsen was formerly head of Statoil's division for International exploration and production, colloquially known as INT³, and later led the division responsible for CSR and country

³ In a subsequent reorganisation, the old INT was split in two new units, namely Development and Production International (DPI) and Development and Production North America (DPNA).

analysis; Ilse Castellanos currently leads the CSR division of Statoil DPI⁴; Simon Hayes works with technology management and used to work in a unit called International Industrial Development which attempted to coordinate the strategic use of technology transfer; Hege Ebeltoft used to be the technology manager in INT; and Hans-Aasmund Frisak is responsible for governmental contacts of relevance to Statoil's international projects.

All in all, I find that the eight respondents provide a body of information which can be said to be reliable. They work in different departments with different projects. Some of them have a primarily technological background; some are more focused on CSR. One is not employed by Statoil and thus provides a useful outsider's vantage point on how Statoil works. However, given the third research question, which concerns the Norwegian government's real or perceived influence, it would doubtless have been useful to include an interview with a representative from the Ownership Section of the Ministry of Petroleum and Energy. Written contact was made with the section in June 2011, but was not met with a reply. I intended to reiterate the contact after the summer holidays, but as the terrorist attacks in Oslo in July 2011 struck the ministry very hard, I chose to desist from further attempts. I still believe that the answers I received from Mr Frisak cover this research question to a satisfactory level. The information Mr Frisak provided was of such a kind that I do not expect that the ministry would find reason to deny any of the content, nor did I find it to contrast with what any of the other respondents within Statoil said.

One possible criticism of relying so heavily on interviews is that, by virtue of being an interpersonal social contact arena, interviews may bring about reflexivity, or that the interviewee gives answers he or she believes the interviewer wants to hear. I cannot give a waterproof guarantee that reflexivity has not occurred and I know for certain that, regardless of whether or not the information provided has been given a favourable twist by the

⁴ See previous footnote.

interviewee, some information has not been given at all. Most notably, this concerns information deemed as competition sensitive. Still, my experience of the interview situation was that, even though I was treated with respect and a generally welcoming attitude, there was still a tacit perception of a social hierarchy in which I, as a student, was not in any way seen by the interviewee as a threat and that, accordingly, he or she spoke candidly and did not hesitate to interrupt or correct me. Consequently, I believe that reflexivity has been relatively limited in the interviews conducted for this thesis and I also believe that I have treated the interviewees' information with the necessary criticism in the analytical chapter.

Chapter 3: Definitions, literature review and theory

Just about every scientific article on ITT or CSR either proposes a definition of its own or discusses previously suggested definitions. With so many definitions available, I do not consider it constructive to put forth yet more, nor will I choose specific definitions from the bundle and stick rigorously to them for the remainder of the discussion. If that were to be my approach, I would risk excluding projects which Statoil itself refers to as ITT or CSR from the discussion, because, as we shall see, there is far from complete compatibility between definitions put forth by academics and the way the concepts are understood in everyday business life. In this chapter I therefore present and discuss a selection of proposed definitions, and in the analytical chapter I attempt to demonstrate how different ITT and CSR projects in Statoil correspond or conflict with the definitions. I also attempt, in this chapter, to give a general introduction to the relevant academic fields through a literature review.

3.1. International technology transfer (ITT)

3.1.1. Definitions

To begin with international technology transfer, which is the academic field most closely related to the STS curriculum, I find that the available definitions are often biased towards the manufacturing sector or exceedingly concentrated on the commercial outcomes of technology transfer, and I have considered it useful to critically investigate what is meant by each of the three words in the term “international technology transfer”.

“International” is the most straightforward of the three. ITT – and therefore this thesis – is concerned solely with the movement of technology or technological know-how across national borders. Statoil has extensive cooperation with Norwegian universities, most notably with the Norwegian University of Science and Technology (NTNU), but insofar as this cooperation is conducted with the aim of developing technology for use within Norway, it

will not be treated here. Yet, Norwegian universities also play a significant role in Statoil's *international* technology transfer projects, as will be clearly demonstrated.

Moving on to the word "technology", it has been noted that "the most common view of technology is "a tool", and then discussions proceed as to just what type of tool qualifies as technology" (Bozeman, 2000: 68). The notion of a "tool" is useful in underlining that "technology" is by no means limited to mere blueprints or machinery, but can incorporate an array of techniques, managerial skills and even societal structures which facilitate the pursuit of efficiency and financial profits. Technology transfer can just as well be defined free from any financial implications as "the process by which science and technology are transferred from one individual or group to another that incorporates this new technology into a new or improved process, product, system or way of doing something" (Singh, 2003: 2). In either case, it is clear that *knowledge* must always be diffused along with technology in the form of physical objects, or else the physical objects cannot be put to use.

During the work on this thesis, I have moved further and further from an initial assumption that "technology transfer" as conducted by Statoil would primarily mean selling, donating or explaining the functioning of specific pieces of machinery, to an awareness that Statoil's ITT programmes are often directed towards a general strengthening of human capital through different educational programmes. The understanding of technology as more complex and dynamic than a simple bundle of artefacts was staunchly defended by a group of researchers who convened in the mid-1980s to stake out a new line of research on technology as a socially constructed system. The group saw technological systems as built up by components which include, but are not limited to, physical artefacts, organisations, scientific components, legislative artefacts and natural resources, and which interact and affect each other in a number of ways. In this school of thought, commonly referred to as SCOT, which is an acronym for the Social Construction of Technology, technology is defined as "problem

solving usually concerned with the reordering of the material world to make it more productive of goods and services” (Hughes, 1987: 53).

Finally, the word “transfer” is relatively unproblematic, provided that one does not understand it to mean something being “free” or given away from one party to the other. In fact, the ITT projects which Statoil is involved in often obliges both parties to incur significant costs, not just financial costs, but also costs in the form of use of time. The discussion on costs notwithstanding, a notion of “movement” is definitely present in the transfer term; some entity must inevitably be delocalized in order for “transfer” to be an accurate description of the event. Furthermore, it is important to note that “transfer” is not a one-way, one-step, instantaneous process, but can involve several leaps between transferor and recipient, and also a prolonged period of adjustment to a new setting before the technology is stabilized. Hughes observed that “because a [technological] system usually has embodied in it characteristics suiting it for survival in a particular time and place, manifold difficulties often arise in transfer at another time or to a different environment” (Hughes, 1987: 67).

The petroleum industry is unique in many ways, for example in that it is an extractive industry, which means that the site of production of its core product – raw petroleum – is predetermined by this resource’s location. Moreover, the industry is dominated by very big companies and is characterized by a potential for huge profits and massive technological reorientation of the economy of a country in which petroleum resources are discovered. Among other things, this means that government is likely to be heavily involved in the industry, as is *inter alia* illustrated by the fact that the Norwegian government owns two thirds of Statoil. Because of its specificities, it would be useful to have more available definitions directly targeted at the petroleum industry in particular, but scholarly work on technology

transfer in the petroleum industry is not abundant. One valuable contribution has been given by Zakariya, who explicitly treats the question of what “transfer” should mean:

As far as petroleum operations are concerned, the importation of the necessary tools and human skills by the foreign operator for his own purposes does not constitute in and of itself any real transfer of technology. (...) Ideally, a real transfer of technology lies in the ability of the developing country to purchase or hire directly the most advanced technical means of petroleum exploration and development, if and when it so wishes, at a reasonable price. It also lies above all, in developing the mental skills of its citizens to utilize these technical means effectively, alone if they choose to do so (Zakariya, 1982: 208).

Such a view of the transfer need not in and of itself have implications for how Statoil conducts its ITT programmes, because the interests of a company clearly do not necessarily equate the interests of a country. But since we have noted how government usually takes a strong interest in the petroleum sector, and assuming that governments in countries where Statoil operates adhere to Zakariya’s recommendations, Statoil should expect to meet requirements that their ITT programmes concentrate heavily on improvement of indigenous human resources. In fact, one could easily imagine a conflict of interest between national governments wanting to increase the skills of the workers in its petroleum sector, thus increasing the autonomy of the sector with regards to foreign firms, and foreign firms wanting to capitalise on their potentially lucrative knowledge advance.

3.1.2. Literature review and theoretical background

Since one of the research questions in this thesis seeks to identify ways in which Statoil is influenced by history, it is necessary to give a brief overview of how the Norwegian petroleum sector developed from the first discovery of oil on the Norwegian continental shelf in the late 1960s and up until today. It is noteworthy that although no Norwegian company initially possessed the technological capabilities necessary to operate independently on the continental shelf, the legislative framework accompanying the development of the sector was

set up so as to allow for the maximum rate of return on petroleum resources directly to the Norwegian state. The Norwegian state bureaucracy already had experience from building institutions for the exploitation of natural resources, after the country's hydropower sector had been developed at the end of the 19th and beginning of the 20th century. Furthermore, Norway already played a part in the international petroleum industry, albeit indirectly, as around 20% of the global tanker fleet was registered in Norway and Norwegian shipyards were busy building ever more freighters (Engen, 2009).

Still, the nascent Norwegian petroleum sector was completely reliant on foreign know-how: "There was no mention of an independent Norwegian investment in technology, and special competence had to be imported. The central issue was to establish appropriate connections where the Norwegians could participate and thereby gain profitable experiences" (Engen, 2009: 183). Moreover, it is worth noting that in the late 1960s and early 1970s, Norwegian authorities were genuinely concerned about the amount of foreign currency available to the country, and they worried that an expansive domestic petroleum industry would hinder the inflow of currency which would come about as a result of investments by foreign oil companies (Ryggvik, 1997: 30-31). Established in 1972, Statoil therefore initially functioned more as an intermediary agent between the know-how of international oil companies and existing Norwegian industrial competencies, than as an independent company.

Engen points out that Statoil, along with the rest of the Norwegian petroleum industry, owes much of their technological competences of today to the system of "goodwill points" which operated from 1979 and which, when exploration licences were awarded, gave advantages to foreign companies having engaged in technology transfer to the benefit of Norwegian firms. The start of production on the giant Statfjord and Gullfaks fields – which were operated by Statoil after a development phase in which Statoil was trained by Mobil (Statfjord) and Esso (Gullfaks) – can be seen as demarcations of when Statoil fully acquired

the capacity to independently develop and operate oil and gas fields (Ryggvik, 2010: 43, 109-110).

Aside from historical accounts, articles which treat the topic of technology transfer in a more general manner have proven to be of more relevance to this thesis than the few I have been able to identify which treat the petroleum sector specifically. In their literature review, Reddy and Zhao (1990) sort scholarly work on technology transfer in three broad categories according to whether they focus on the host country perspective, the home country perspective or the transaction perspective. In the host country perspective, Reddy and Zhao assert that the acquisition of a new technology does not automatically entail proper assimilation and integration of the new technology into the host firm or host country. Consequently, the costs incurred by technology transfer extend beyond the costs of the technology itself and are affected by geographic distances, communication needs, the nature of the technology to be transferred, as well as industry and country characteristics. Indeed, the authors seem sceptical to how much real benefit a host society can expect to gain from technology transfer initiated by multinational corporations (MNC), since MNCs easily fall for the temptation to charge excessive prices and display what the authors dub “technological arrogance”. It is pointed out that “the choice of technology by the MNCs seldom favors the social objectives of the LDC⁵ host countries. Numerous other studies support the argument that MNCs actually do little to adapt their technology to conditions in LDCs” (Reddy and Zhao, 1990). An observation which is relevant for the petroleum industry is that LDCs *could* have reason to be sceptical towards unfettered imports of capital-intensive technology – which is precisely the sort of technology which dominates the petroleum industry – as it may have effects on employment and income distribution.

⁵ LDC = least developed country

When it comes to the home country perspective, Reddy and Zhao highlight a controversy in the scholarly debate on whether ITT is a disadvantage for home countries as it dilutes their technological lead or a benefit because it facilitates access to new markets. When discussing technology transfer initiated by MNCs like Statoil, it is of course natural to assume that there is a strategic motivation behind such projects, precisely in that they aim to open up new markets. Knowing, however, that Norwegian authorities only a few decades ago put down significant efforts in building up and protecting indigenous technological capabilities in the Norwegian petroleum sector, it appears relevant to search for signs of worry among decision-makers that technology transfer could take some of the edge off Norway's technological lead.

Articles which primarily study the transaction perspective have taken an interest in explaining exactly *what* is being transferred in the process, or what technology *is*. In this respect, it once again becomes clear that rather than the sale or transfer of blueprints or functioning machinery, the transfer of *specialized know-how* is usually the object of interest for articles on international technology transfer. As will become clear in this thesis, when Statoil talks about technology transfer, it is practically never a question of transferring nuts-and-bolts technology, so it could be claimed that *knowledge sharing* would be a more fitting term.

Furthermore, Reddy and Zhao confirm that the very term "transfer" would be problematic if it were perceived as the description of a costless delocalization of technology, because actual technology transfer often comes with significant costs for both the transferring and the acquiring party. "Costs" in this respect are more than financial costs, as Reddy and Zhao observe that "the transfer of technology, in most cases, calls for a sustained relationship between two enterprises over a period of time" (1990: 295). It thus becomes clear that

technology transfer should not be treated as a quick-fix solution but something that both parties need to commit to over time.

A model for measuring the effectiveness of technology transfer – the Contingent Effectiveness Model – has been elaborated by Bozeman and includes six different criteria for evaluating effectiveness. Measured by what Bozeman calls the “*out-the-door*” criterion, a technology transfer will be effective by the very fact that it has occurred, namely by one entity having received technology provided by another. The *market impact* criterion assesses if the transfer has led to changes in a firm’s market share or improvements of the profit margin, whereas the *economic development* criterion gauges similar effects on a country or region rather than on a single firm. The *political reward* criterion measures goodwill a company gains from governments or national oil companies in the wake of technology transfer. The *opportunity cost* criterion assesses whether the resources spent on technology transfer could have been put to better use elsewhere in the organisation and, finally, the *human capital* criterion measures the effect of technology transfer on the skills of workers in the host country economy (Bozeman, 2000: 644-649). A major assumption of the model is that no single criterion makes much sense by itself. Rather, all evaluations must take into account several of the proposed criteria.

Wang et al (2004) studied knowledge transfer from MNCs to Chinese firms in which the MNCs held shares. Knowledge is treated as a company’s most strategically important resource, and the authors conclude that the amount of knowledge contributed by the parent company is affected by that company’s *capacity* to transfer and *willingness* to transfer. Since it specifically treats China, parts of Wang et al’s article are of little interest to this thesis. In light of the research question concerning historical influences on Statoil’s present technology transfer activities, I have nevertheless found it useful to examine how different technology transfer stakeholders perceive Statoil’s capacity and willingness to transfer knowledge.

The parent company's *capacity* to transfer, according to Wang et al, is primarily affected by its knowledge base and the level of competence of its employees expatriated to China. The first factor seems somewhat evident, as the more sophisticated a firm's knowledge base is, the more likely it is that what is actually being transferred will be of high quality. Expatriates' competences are particularly important for tacit knowledge, because "when the underlying knowledge is tacit or the objective of the transfer is to change the mindsets of the recipients, significant learning would not take place without the presence of expatriates" (Wang et al., 2004: 174-175). The ideal expatriate, as sketched by Wang et al, must first and foremost possess superior managerial and technical skills. But they must also be culturally sensitive and committed to sharing knowledge. Language skills are seen as helpful in achieving the objective of cultural sensitivity.

The parents' *willingness* to transfer is affected by the subsidiary's importance to the MNC, the ownership structure and, in the case of joint ventures, the relationship with the partner (Wang et al., 2004: 175). Again, the first factor is probably the easiest to accept. It seems only natural that a mother firm will be more intent on boosting the skills of a subsidiary if the subsidiary has high sales, than if its economic activity is relatively minor. With regards to ownership structure, Wang et al observe that wholly owned subsidiaries are easier targets for transfer than joint venture partners or subsidiaries thereof. This is first because the mother firm can decide exactly what to transfer to its wholly owned subsidiary and how much to spend on transfer, second because it need not worry about technology being stolen, and third because the mother firm can reap all the economic benefits from technology transfer on its own. In the case of joint ventures, where risks of unauthorised technology appropriation by the partner are higher, a good relation between the partners is found to increase both the likelihood that knowledge transfer will take place and the quality of transfer.

3.2. Corporate social responsibility (CSR)

3.2.1. Definitions

Since it first came into widespread use in the 1960's and 1970's, CSR has become something of a trend word within innovation and management literature, to the extent that a clear definition seems more difficult to discern the more one reads. It is seemingly easy to explain in a commonsensical way: CSR is when companies try to do some good for the wider society without expecting financial remuneration. But without further specification, this explanation would allow for an enormous amount of a firm's activities to be labelled as CSR. Is the promotion of gender equality CSR? Or paying fair wages even in times of high unemployment? Or what about a case where a firm sells a product and gives some of the income to a cause perceived as "noble" but at the same time makes a substantial profit itself?

Marrewijk devoted an entire article to the problem of defining CSR, and actually concluded that a "one solution fits all" approach should be abandoned and that "each company should choose – from the many opportunities – which concept and definition is the best option, matching the company's aims and intentions and aligned with the company's strategy, as a response to the circumstances in which it operates" (Marrewijk, 2003: 96). He still goes some way in explaining a broad understanding of the term. The question, he says, is how to name the notion of a "more humane, more ethical and a more transparent way of doing business", and he proposes that "in general, corporate sustainability⁶ and CSR refer to company activities – voluntary by definition – demonstrating the inclusion of social and environmental concerns in business operations and in interactions with stakeholders" (Marrewijk, 2003: 102). Even though this is a good general description of CSR, one could still direct criticism towards the assumption that business activities are always voluntary. On a very fundamental level it is true, of course, that starting and running a business is voluntary.

⁶ I shall not dwell upon Marrewijk's separation of the two terms "corporate sustainability" and "corporate social responsibility", as they are sufficiently similar for me to consider it admissible to use CSR as an umbrella term.

However, we shall see that when Statoil sets up business in a new country, it often faces contractual requirements to engage in certain activities which are later reported as “social investments” in the company’s sustainability report, even though the activities can hardly be described as voluntary.

Another type of definition which does not arrive at an entirely accurate description of Statoil’s approach to CSR, stresses that CSR must in some ways be detached from the “interests” of the firm. For example, McWilliams and Siegel define CSR as “actions that appear to further some social good, beyond the interests of the firm and that which is required by law. This definition underscores that, to us, CSR means going *beyond* obeying the law” (2001: 117). In fact, both the assumptions of this definition – that CSR must move beyond the firm’s interests and that it must do more than simply obey the law – can be criticised. After a closer look at the real world, it becomes clear that CSR is probably more often than not in the interests of the firm, or at least *assumed* by the firm to be in its interests. What the concept of corporate social responsibility underlines is precisely that economic activity need not be a zero-sum game where one firm’s progress necessarily causes another economic actor’s decline. In fact, the very purpose of CSR can be said to be the search for ways in which a firm *and* its surrounding environment can benefit from the firm’s activities.

Matten and Moon (2008) provide an interesting comment on the notion that CSR must mean to move beyond compliance with the law. In a comparative study of attitudes to CSR in Europe and the United States, they conclude that if American companies seemingly engage in more CSR-related activities than their European counterparts, this can be explained by the smaller role government plays in the US as compared to Europe. Because of smaller government, companies are left with more responsibility for their employees, which gives US companies the opportunity to label for example fair wages and the provision of health care as “CSR”. This does not mean that European companies are less concerned with employee

benefits; it simply means that in Europe, such provisions are to a larger extent included in legislation and therefore outside the scope of discretionary managerial decisions. Matten and Moon thus distinguish between “explicit” and “implicit” CSR, respectively “corporate policies that assume and articulate responsibility for some societal interests” and “corporations’ role within the wider *formal and informal institutions* for society’s interests and concerns” (Matten and Moon, 2008: 409). In this respect, Matten and Moon’s definition can be seen as a broadening of McWilliams and Siegel’s, because the latter does not include the former’s notion of ‘implicit CSR’.

Since we are studying CSR in Statoil, as well as real or perceived attempts by the Norwegian government to influence how Statoil approaches CSR, it is necessary to mention how these two actors understand the concept of CSR. Statoil operates with a three-point corporate policy on social responsibility, which states:

We are committed to contributing to sustainable development based on our core activities in the countries in which we operate by:

- Making decisions based on how they affect our interests and the interests of the societies around us
- Ensuring transparency, anti-corruption and respect for human rights and labour standards, and
- Contributing to local content in our projects by developing skills and opportunities in the societies in which we operate (Statoil, 2010c).

In this context, it is particularly worth noting the third bullet point; skills development in local communities is indeed a central aspect of combined CSR and technology transfer in Statoil.

As for the Norwegian government, it takes the position that

CSR involves companies integrating social and environmental concerns into their day-to-day operations, as well as in their dealings with stakeholders. CSR

means what companies do on a voluntary basis beyond complying with existing legislation and rules in the country in which they are operating (MFA, 2009: 8).

We can see how this explanation of CSR does not include any specific references to neither technology transfer nor knowledge sharing, and we can also note the emphasis on *voluntary* activities and the understanding, similar to McWilliams and Siegel's, of CSR as moving beyond compliance with legislation.

3.2.2. Literature review and theoretical background

Several authors have noted how CSR has resurfaced as a scholarly discipline during the past decade after a first wave of interest in the 1960's and 70's and a subsequent drop in interest during the 1980's (Hockerts and Morsing, 2008, Marrewijk, 2003). The renewed prominence of CSR in management and innovation literature can be ascribed to mounting concern about the consequences of globalisation and a desire to hold multinational firms accountable to a wider array of stakeholders than simply their own shareholders. Indeed, an important question pertaining to CSR is to decide to *whom* or to *which actors* organisations are responsible.

Suggestions have included the *shareholder* approach, as expressed by Friedman (1970); the *stakeholder* approach, formulated by Freeman (1984); and the *societal* approach, according to which companies are an integral part of society as a whole and therefore are responsible to it.

The main line of argument in Friedman's article is that the social responsibility of business is a problematic concept, since only persons can be responsible and "business" is, at best, an artificial person. Business' purpose is to generate income to their shareholders, argues Friedman, and the only socially responsible initiatives that he will accept from business are the ones with clear self-serving motives; for example, he does admit that a corporation which is a major employer in a small community can gain from providing amenities to that community or from helping it improve its government.

R. Edward Freeman introduced the term *stakeholder management*, which of late has come to dominate the academic discourse on CSR. “The aim of stakeholder management is (...) to analyze how a company can serve its customers and be lucrative while also serving its other stakeholders such as suppliers, employees, and communities” (Hockerts and Morsing, 2008: 6). While *servicing* other stakeholders may seem like a noble thing for a firm to do, the stakeholder approach to CSR is just as much about a firm’s desire to familiarise itself with an array of stakeholders’ opinions and to some extent exert influence over them. *Stakeholder management* is a term which appeared frequently in interviews I conducted with Statoil employees, suggesting that this line of thinking carries strong influence within Statoil.

As for the *societal* approach, Marrewijk (2003) provides a philosophical argument in defence of CSR. He assumes that reality is composed of elements which he refers to as *holons* and which are neither completely independent – *whole* – nor completely dependent – *part*. Holons express their *wholeness* through self-assertion and self-preservation, capacities which make up the *agency* of the holon. On the other hand, participatory, bonding and joining tendencies make up the holon’s *communion*, which expresses its *partness*. Bearing this framework in mind, Marrewijk explains the emergence of CSR as a re-equilibration of an imbalance in the global wholeness which has occurred as multinational companies have put too much weight on their *agency* to the detriment of their *communion*. “As can be expected from theoretical exercises, countervailing power is emerging in the growth, both in number and impact, of the (global) civil society” (Marrewijk, 2003: 98).

In an attempt to circumvent the discussion of the moral rationale behind CSR, McWilliams and Siegel (2001) suggest that there is an “ideal” amount of CSR for a company to provide and that managers can determine this amount through cost-benefit analysis. Their article applies a theory-of-the-firm perspective, “based on the presumption that managers of publicly held firms usually attempt to maximize shareholder wealth, with a vigorous “market

for corporate control” as the primary control mechanism” (McWilliams and Siegel, 2001: 18). They hypothesize that *demand* for CSR comes from two sources: consumers and other stakeholders. In sum, McWilliams and Siegel propose that managers should treat decisions regarding CSR just as they treat other investment decisions. They also claim to have demonstrated that, although companies which provide CSR will have higher costs than other firms, the relationship between CSR and profits will be neutral, or in other words: a firm which increases its spending on CSR will, in the long run, see neither an increase nor a reduction in their profits.

In a guest editors’ introduction to a special issue of the *Journal of Management Studies* devoted to the topic of CSR, McWilliams et al summarise the most important contributions to the CSR literature thus far and the main approaches scholars have taken (McWilliams et al., 2006). In addition to Friedman’s shareholder approach and Freeman’s stakeholder approach, McWilliams et al mention *stewardship theory*, according to which managers have a moral obligation to “do the right thing”; *strategic leadership theory*, which postulates that under certain conditions, such as transition, managers will employ CSR strategically; and the *resource-based view-of-the-firm theory*, under which firms are bundles of imperfectly mobile resources which – if valuable, rare, inimitable and non-substitutable – can constitute a competitive advantage. A reputation for being socially responsible can be one such resource. The authors stress CSR’s potential as a differentiator of products otherwise difficult to differentiate and it would hardly be exaggerated to say that oil and gas, Statoil’s main products, are very homogenous products, in the sense that they are very difficult to differentiate. The authors further suggest a conceptual distinction between strategic, coerced and altruistic CSR and point to an article in the same special issue which suggests that both a firm and the wider society are better off when the approach to CSR is strategic, rather than coerced (Husted and de Jesus Salazar, 2006).

In a literature review meant to provide theoretical grounding for research to be undertaken by the Nordic Centre on Corporate Responsibility, Hockerts and Morsing (2008) note that CSR has become such a popular theme in management literature that it can safely be referred to as “the latest management fad”. At the same time, they claim, most firms which keep CSR in their corporate toolbox seem to think of CSR as a means to reduce risk rather than a means to drive innovation, and it is therefore questionable if CSR can really be said to be fully integrated into business processes. Four different *levels* of analysis of CSR are identified: An *institutional* level, where CSR is viewed as a strategic tool firms adopt to gain legitimacy or, as the authors put it, a “licence to operate”; an *individual* level, on which managerial discretion and an individual desire to do good leads to development of CSR policies; an *organizational* level, which sees CSR as a tool for stakeholder dialogue; and finally a *global* level, where global sustainable development is seen as the goal and CSR as one of the tools.

Chapter 4: Empirical findings

4.1. Statoil's approach to technology management

Before the merger between Statoil and Hydro in 2007, Statoil INT asked for a business unit which was to have industrial development as its core activity. Accordingly, International Industrial Development (IID) was established through the merger and existed within the new StatoilHydro from 2007 to 2011. The purpose of this unit was to attempt to strengthen and coordinate Statoil's approach to local content and capacity building. As of today, Statoil is engaged in six bilateral technology cooperation agreements (TCA) with other national oil companies (NOC) – respectively in Angola, Brazil, China, Mexico, Russia and Venezuela – but IID has been shut down and country managers again operate completely independently with regards to initiatives to new TCAs.

Even though there is no longer a separate business unit with coordinative responsibilities, industrial development as such is still very much on the agenda in Statoil. The motives for engaging in overseas industrial development are threefold: First, it is a question of positioning, gaining goodwill with regulatory authorities and eventually gaining access to production licences. Second, the activities related to industrial development are considered as useful to get to know the situation and the particular challenges in a new operating environment. In this respect, Statoil considers that industrial development has a risk mitigating function. Finally, developing local industry helps Statoil achieve its CSR goals, as well as to satisfy local governments' frequent requirements for a certain amount of local content (Hayes, interview, 2011).

As for the TCAs, Statoil's aim is just as much to acquire as to share knowledge. That being said, the six individual TCAs span broadly; in some of them, Statoil has very little to learn while in others Statoil quite possibly learns more than it teaches (Hayes, interview,

2011). In either case, if one adheres to an understanding of technology limited to physical artefacts, it would be erroneous to say that the TCAs result in technology transfer, as they include neither sales nor transfers of machinery or blueprints, nor have they lead to patentable innovations. But according to the interviewee, the programmes were never supposed to lead to patentable innovations either, the purpose being limited to knowledge sharing and business development. Morten Fejerskov, who has worked with the Sonangol⁷-Statoil TCA, explained that, while specific technologies are not actually transferred, Sonangol is given access to expertise from Statoil and technologies are applied and demonstrated. Fejerskov believes that Statoil is more open in the knowledge sharing process than comparable companies (Fejerskov, interview, 2011).

Hege Ebeltoft, who used to be the technology director of Statoil INT, pointed out that Statoil's strengths lie more in the understanding of proper *applications* of technology than in the development of technology as such:

What Statoil excels at is to understand the problem, have a holistic view of things and go in and solve the problem. If you just buy some gadget, if you don't understand how to use it... You have to know what to buy. If you want a cup, you can buy it from Schlumberger, but we know whether you need a cup or a glass (Ebeltoft, interview, 2011).

Schlumberger is – together with Weatherford International, Halliburton and Baker Hughes – one of the world's leading providers of oilfield services. Ebeltoft's cup-and-glass metaphor is meant to illustrate that oil companies usually purchase technology in the form of physical artefacts from such service companies, rather than developing it in-house. Zakariya observed this pattern already in 1982: "Although they control the initiation and exploitation of petroleum technology, and have a monopoly of the organizational and management techniques, the international oil companies practically never hold the technology concerned" (Zakariya, 1982: 209). If we invoke the definition of technology used by the United Nations

⁷ Angolan NOC

Conference on Trade and Development (UNCTAD), competences as the ones Ebeltoft describe may indeed be seen as integral to the company's total technological capacity:

'Technology' includes not only knowledge or methods that are necessary to carry on or to improve the existing production and distribution of goods and services or indeed to develop entire new products or processes, but also entrepreneurial expertise and professional know-how. The latter two elements may often prove to be the essential competitive advantage possessed by the technology owner (UNCTAD, 2001: 6).

In fact the cup-and-glass metaphor stands as an excellent description of how Statoil thinks about technology as a broad concept and how physical artefacts are only to a very limited extent involved in technology transfer programmes. In section 3.3., where I present specific examples of combined ITT and CSR projects in Statoil, it will become clear how the movement of physical technology is in fact almost irrelevant to projects which Statoil refers to as *technology transfer*. Instead, the programmes emphasise knowledge sharing and the strengthening of local economies' capacity to independently develop and manage relevant technology.

4.2. The growth of CSR in the global petroleum industry and in Statoil

Frynas notes how oil companies in general over the past decades have become more and more engaged in activities which at first glance might appear to have little or nothing to do with the discovery, extraction, refinement and sales of petroleum products:

Oil companies now help to build schools and hospitals, launch micro-credit schemes for local people and assist youth employment programmes in developing countries. They participate in partnerships with established development agencies such as the US Agency for International Development (USAID) and the United Nations Development Programme (UNDP), while using NGOs to implement development projects on the ground (Frynas, 2005: 581).

As we have seen, according to some definitions, it might also be referred to as CSR when oil companies promote environmental technologies and sustainable development, as for instance BP has tried to do since 2000 when it stopped using its full name “British Petroleum” and launched the slogan “Beyond Petroleum”. There is, however, a fine line in cases like these between CSR and marketing or even pure spin, as commentators have pointed out that BP’s non-petroleum investment portfolio remains microscopic compared to its investments in hydrocarbons (Landman, 2010).

Regardless of definitions, it is clear that oil companies – controlling vast financial resources and often doing business in weak or even failed states and in a challenging security environment – played a major role in putting CSR on the business agenda, simultaneously spurring increased interest in the topic among academics within the economic and management disciplines. In many ways, CSR arose as a tool for risk management, as MNCs like BP and Shell attempted to respond to pressure from external stakeholders. In BP’s case, the formulation of a CSR strategy came about as a response to mounting criticism of the company’s presence in China after the 1989 Tiananmen Square protests, as well as controversies in Colombia where security staff with close links to the country’s paramilitary forces were hired to guard BP installations (Ryggvik, 2010: 253). As for Shell, the most important factors to trigger the new CSR policies were the controversies caused by Shell’s alleged links to the hanging of human rights activist Ken Saro-Wiwa in Nigeria in 1995 and by the company’s plans to sink the storage and tanker loading buoy Brent Spar at sea the same year (Frynas, 2003).

In 1990, Statoil entered what was called a “strategic alliance” with BP. Although Statoil had to a limited extent been involved in petroleum activities outside Norway since the late 1970s, the formation of the BP alliance was definitely the single most important step in what was to become a strategic realignment towards global operations (Larsen, interview,

2011). Together with BP, Statoil was involved in oil and gas activities in Azerbaijan, Angola, Vietnam and Nigeria, but it was only in Nigeria that Statoil was to take a leading role (Lerpold, 2003: 82-83). The former director of Statoil INT, Rolf Magne Larsen, recalls that operating in unfamiliar socio-cultural environments was a relatively new experience to Statoil and there were few, if any, formal procedures for social risk mitigation (Larsen, interview, 2011).

Statoil therefore began to formulate a CSR policy soon, but not immediately, after entering into the alliance with BP, and the already mentioned case in Nigeria in 1995 in many ways served as an eye-opener. Writer and activist Ken Saro-Wiwa – who had led a campaign against severe environmental degradation caused by oil companies in Ogoniland in the Niger Delta – was arrested and hanged by the regime of military dictator Sani Abacha. Saro-Wiwa's execution provoked outrage around the world, and pressure mounted for oil companies to condemn the execution. Statoil refused to do so, its information director claiming that “we have made it a policy in Statoil not to make statements on political conditions, governance and so on” and that “Statoil does not conduct foreign policy; that is up to Norwegian authorities” (Rønning, 1995). Larsen recalls that Statoil was unprepared for the extent to which the wider audience reacted negatively to such statements: “We came off as a company devoid of feelings. We had to professionalise our thinking about difficult issues we did not have experience to deal with. We had to understand the political, understand the culture, understand the local communities, risks and opportunities” (Larsen, interview, 2011).

CSR in Statoil thus arose as a response to a difficult situation the company was unwittingly put in. Recalling McWilliams et al's (2006) distinction between strategic, altruistic and coerced CSR, it then seems reasonable to say that CSR in Statoil is – or at least was – primarily strategic CSR. Strategic CSR is closely linked to stakeholder management, a term frequently brought up by Statoil employees during interviews, indicating that the

primary motive for CSR today remains strategic more than altruistic. Alternatively, if we invoke the terminology proposed by Hockerts and Morsing, we can say that Statoil uses CSR to obtain legitimacy – a “licence to operate” – but also as an organizational tool for stakeholder management.

The alliance with BP came to an end in 1999 after a merger between BP and Amoco the previous year. 2001 marked another watershed in Statoil’s history when it was listed on stock exchanges in Oslo and New York and the Norwegian government sold around 20% of its shares. In 2007, the oil and gas division of Norsk Hydro, another large Norwegian energy company, was merged with Statoil, thus creating a company which is undisputedly the dominant actor on the Norwegian continental shelf. The Norwegian government today owns 67% of Statoil.

Notwithstanding its dominant position within Norway, Statoil is determined to continue the global expansion which started in the early 1990s, but it has by all accounts failed to establish a secure foothold among the leading international oil companies. Even though it has offices in some 40 countries around the world, Statoil has operatorship of only two producing fields, respectively in the Athabasca tar sands in Canada and on the Peregrino field off the coast of Brazil (Statoil, 2011d).⁸ Although it is fully possible for an oil company to make a profit as a relatively passive co-owner of a producing field, operatorship is considered essential in order to build a functioning industrial organisation, to take a leading role in negotiating the purchase of technology from the oil service companies, and also for positioning towards future licensing rounds. For these reasons, gaining operatorship is a strategic priority for Statoil in its international operations, as well as in Norway.

CSR plays an important role in Statoil’s ongoing international expansion. It is a *line responsibility*, meaning that each of Statoil’s business units is in charge of independently

⁸ Additionally, Statoil is the operator of exploration licences in Algeria, Canada (Newfoundland), the Faroe Islands, Mozambique, Great Britain, the United States (Alaska and the Gulf of Mexico) and in Venezuela.

planning and implementing CSR initiatives (Castellanos, interview, 2011). The CSR policy is built around three core commitments: Ensuring transparency and anti-corruption, respecting human rights and labour standards and generating spin-offs from the company's core activities to the benefit of local communities (Statoil, 2011b). Based on a risk assessment, and mainly a *social* risk assessment, conducted in the early stages of business development in a new country, Statoil will enact CSR programmes which it considers suitable to achieve the desired outcomes given the local particularities. In theory, all non-OECD country offices must prepare a CSR plan. As of 2010, however, CSR plans were only prepared for 80% of the non-OECD countries with Statoil operations, as well as for Canada, the United States and Mexico. It is still worth noting that there has been a rapid increase in the percentage of countries which do prepare CSR plans; the similar numbers for 2007, 2008 and 2009 were, respectively, 33%, 50% and 57% (Statoil, 2010b).

I have indicated that Statoil's commitment to CSR can be said to be born out of strategic priorities, rather than of altruism. In this respect, it is worth mentioning how a few current and former CSR employees within Statoil regard their company's commitments. To Rolf Magne Larsen, the main reason for having a CSR policy is to "ensure that we have a correct and respectful behaviour and that we understand risks and opportunities" (Larsen, interview, 2011). Ilse Castellanos underlined how CSR contributes to a "strengthening of local capacity" (Castellanos, interview, 2011) and this, we shall see, is closely linked to how CSR intertwines with technology transfer. As for Hans-Aasmund Frisak, he described Statoil's CSR policy as a strategic asset and a competitive advantage, not to be understood as simple charity, nor as a tactical move to buy goodwill, but rather as a sincere attempt to create shared value together with relevant stakeholders (Frisak, interview, 2011).

Frisak went on to cite the director of Statoil's operations in Canada who was asked by a journalist what he considered to be the biggest challenge related to the controversial oil sand

project in Alberta. One would easily expect to hear an answer about environmental damage from exceptionally high CO² emissions and ensuing pressure from the international green lobby, but the director answered that the local population would be the biggest challenge, and that Statoil would not be able to achieve anything in Alberta if the local communities did not agree with their presence. Consequently, after an initial period of stakeholder dialogue and conducting risk assessments, Statoil has decided on which CSR measures it deems most relevant for the area, and among them figures a programme to offer vocational education to the local population that will enable them to gain employment at Statoil's sites.

Part because of the risk of corruption and part because of a desire to quantify the seemingly unquantifiable, the CSR business sometimes appears characterised by an exceptional zeal towards reporting. CSR staff interviewed for this thesis stressed that extreme caution is taken to ensure compliance with different international standards. Since 2008, Statoil's annual report features an own section on sustainability. The sustainability report is separately audited by Ernst & Young and includes mentions of how the report rates according to the Global Reporting Initiative Index⁹ and according to the UN Global Compact Index¹⁰. Moreover, Statoil is committed to support implementation of the Extractive Industries Transparency Initiative (EITI)¹¹ in countries in which it operates. Opinions among interviewees as to the usefulness of this reporting were mixed. Whereas Ilse Castellanos approved of the reporting and assured that the related paperwork does not take up an exceedingly large amount of CSR staffers' time, Hans-Aasmund Frisak stressed that physically getting the job done is more important than reporting it.

⁹ The Global Reporting Initiative (GRI) is a Dutch NGO which produces a framework for sustainability reporting through dialogue with business, civil society, labour, academic and professional institutions. Statoil's sustainability reports from the years 2008-2010 have all been given the best attainable GRI score.

¹⁰ The UN Global Compact is a policy initiative, through which companies commit themselves to comply with 10 principles in the areas of human rights, labour, environment and anti-corruption. Statoil's sustainability reports fully satisfy the UN Global Compact's requirements for communication on progress.

¹¹ The EITI is an NGO based in Norway which invites countries to adhere to a set of principles mainly concerning the public disclosure of payments from oil companies to governments. As of 2010, eight of the countries in which Statoil operates have implemented the EITI.

Determined efforts within reporting and quantification notwithstanding, the benefits that spring from CSR initiatives can to a certain extent be said to be of the rather intangible sort. Networking, cultural acclimatisation and knowledge build-up are all central. Since having good contacts with authorities and regulators is of significant importance in the petroleum industry, and since the lack of operatorship makes it more challenging to establish and maintain such contacts, CSR initiatives can in some cases serve as a valuable substitute to operatorship, since it gives the company an opportunity to engage authorities in dialogue over the aims of the project and its future outlook (Larsen, interview, 2011).

4.3. Examples of combined ITT and CSR projects within Statoil

4.3.1. The Angola-Norway Higher Education Initiative and the Management and Technology Transfer programme in Angola

Angola is currently the country outside Norway where Statoil has the highest production, but Statoil has yet to gain operatorship in any Angolan licence. A civil war ravaged the country from the moment it gained independence from Portugal in 1975 and until the opposition leader Jonas Savimbi was killed in 2002. Most of the country's oil resources are located offshore in deep waters, and a combination of improved technology, rising oil prices and relative political stability since the end of the civil war has over the past decades made Angola one of the definite hot-spots of the global petroleum industry. A visitor to the capital, Luanda, cannot fail to notice the prevailing boom town atmosphere, as expats' and well-connected Angolans' SUVs clog the traffic while a small army of Chinese guest workers build new roads and glitzy skyscrapers. At the same time, poverty levels, though in rapid decline, remain at over 30% (UNDP, 2010), and spillovers from the petroleum industry to the rest of the economy – severely constrained by a lack of qualified human resources – are limited (AfDB et al., 2011: 144).

Part as positioning in the hope of gaining operatorship in the near future, and part as an effort to improve access to qualified labour, Statoil is engaged in several projects and programmes in Angola which aim in one way or another to strengthen education and local capacities and at least one of them – the Angola-Norway Higher Education Initiative (ANHEI) – has a clear CSR profile. Essentially, ANHEI aims to educate teachers to teach petroleum related subjects at the Agostinho Neto University (UAN) in Luanda. More specifically, the programme selects 5 students annually to follow a two-year master's programme where the first two semesters consist of courses in either petroleum geosciences or petroleum engineering at the Norwegian University of Science and Technology (NTNU) in Trondheim and the last two semesters consist of courses and writing of a thesis at UAN.

The programme is mainly a contract between NTNU and UAN; Statoil acts as facilitator and sponsor, but the bulk of the expenses are being covered by the Norwegian Agency for Development Cooperation (Norad). Statoil's main contribution has been to provide industry relevant guidance for students who are about to select a topic for their thesis, and also to help with training, supervision, office space, hardware and software for the students during the last two semesters. Statoil has also, with the help of its contacts from international universities and consultancies, set up short courses for the ANHEI students and other UAN students within topics like salt tectonics, seismic interpretation, satellite images and remote sensing.

Following the introduction by Angolan authorities of a contractual obligation on oil companies to hire at least 70% of their staff locally, programmes like ANHEI are potentially a major direct benefit to the companies. After decades of civil war preceded by colonial rule, Angola's education system is in a poor state, and the oil companies struggle to find sufficiently qualified personnel within the country. At least in theory, ANHEI would remedy such recruitment problems, and is regarded by Statoil as a better solution than simply

providing scholarships to the best students. In the long run, Statoil hopes that the programme will improve both the quality and the quantity of Angolan university graduates and also that it will lead to the establishment of an Angolan Master's programme in petroleum geosciences and engineering.

However, the first four years of the programme has brought up some challenges, most notably with regards to student selection. Information about the programme was scarce and applications correspondingly few. This resulted in UAN selecting students that were not sufficiently motivated or had poor English skills. The result was that the students had problems to follow the courses that were taught and did not manage to complete their education. To mitigate this problem Statoil contacted UAN and offered to assist in the selection process. Information meetings for students were set up, where former students and Statoil representatives informed about the program. Interviews were conducted where also Statoil representatives participated and preparatory courses in English and basic skills were set up for the students that were selected. According to Morten Fejerskov, the changes to the recruitment process have been fruitful, and the contingent scheduled to graduate in the summer of 2011 appears promising (Fejerskov, interview, 2011).

Another problem with ANHEI has been to get UAN to engage the students after they graduate. The objective is that most or all of them should return to UAN to teach, but red tape and insufficient funding tends to put obstacles in the way. The Angolan university system is old and bureaucratic, and UAN was not sufficiently prepared to hire students. According to Fejerskov, it sometimes takes years to create a new teaching position and the wages are not competitive. In addition, the university is generally ill equipped, both financially and materially (Fejerskov, interview, 2011).

Like ANHEI, the now defunct Management and Technology Transfer Programme (MTT), was also aimed at strengthening petroleum-related competences in Angola. However,

while ANHEI primarily targets the university sector, there was an explicit business motivation behind MTT, which was an initiative between Statoil and Sonangol aimed at recruiting and educating engineers and geoscientists for joint operations on Block 34, where Sonangol is the operator and Statoil has a 50% ownership share, its largest in any Angolan licence. In contrast to ANHEI, MTT has not been regarded as or promoted as a CSR project. The objective was to build up a qualified local workforce able to conduct operations on Block 34.

MTT ran for 6 years and provided a total of 40 Angolans with higher education ranging from bachelor's degrees to PhDs. The students were first given two years of training in English, the last of which took place in the United Kingdom, and were then sent to Aberdeen to take the relevant degree there. However, as exploration drilling on Block 34 proved disappointing, the MTT graduates were instead employed by Sonangol on other projects. Morten Fejerskov still considers the programme very successful and said that the MTT graduates are now holding important technical and managerial positions in Sonangol (Fejerskov, interview, 2011). Since the oil business is by nature heavily politicized and an oil company's access to exploration licences to a large extent relies on networking and good contacts with decision makers, Statoil can understandably hope to gain advantages in the future from having contributed to the education of core employees in the Angolan national oil company. A likely factor to explain MTT's success is the way the recruitment was conducted from the very first stages. In a country where corruption and nepotism permeates the political and professional culture¹², Statoil was able to insist that personal qualities, not family contacts, would be decisive for recruitment and that an external company would be hired to conduct testing and interviews with each candidate.

¹² Angola is ranked 168th of 178 countries on Transparency International's Corruption Perceptions Index of 2010, available at http://www.transparency.org/policy_research/surveys_indices/cpi/2010/results (accessed 29.06.2011)

As mentioned, Statoil has not yet gained operatorship in any Angolan licence. But regulatory authorities have now expressed that Statoil is a “preferred operator” on a number of blocks about to be opened up for exploration (Larsen, interview, 2011; Fejerskov, interview, 2011). Even though licence awards are now almost exclusively based on how financially competitive the bid is, and bids are made publicly available, several of the Statoil employees I’ve interviewed believe that Statoil’s CSR-driven initiatives for education and capacity building in Angola may have contributed positively. Fejerskov also speculates that a programme similar to MTT might be resuscitated if Statoil were to gain operatorship of an Angolan license (Fejerskov, interview, 2011).

4.3.2. Skills-development and technology transfer programme in Venezuela

Venezuela is an important country for Statoil, as testified by the frequent references it makes on its webpage to the “long-term perspective on its presence”. Currently, though, Statoil’s participation in Venezuelan licences is limited to a 9.67% share in the Petrocedeño extra-heavy crude oil project and the operatorship and 51% share of an exploration licence in the offshore Plataforma Deltana area, where development is stalled pending delimitations of borders between Venezuela and Trinidad and Tobago (Statoil, 2007). 5 of the first 8 returns on a Google search for “Statoil Venezuela” have visibly negative headlines, respectively “Statoil fell short in Venezuela”, “Statoil’s failed strategy in Venezuela”, “Statoil’s Venezuelan adventure comes to an end”, “Statoil’s plan in Venezuela failed” and “Statoil failed in Venezuela”.¹³

Statoil has indeed experienced some problematic years in Venezuela. In 2007, it was forced to reduce its ownership share in Petrocedeño from 15% to the present 9.67% following the decision by president Chávez that the Venezuelan NOC PDVSA should have an ownership share of at least 60% in all licences. Then, in early 2011, Wikileaks cables revealed

¹³ Search conducted 30 June 2011 on Norwegian Google (my translations).

that the president of Statoil Venezuela had expressed strong displeasure over the decision by oil companies Chevron and Repsol to bid for a licence in Venezuela despite an alleged agreement between international oil companies to boycott the bidding round in an attempt to force Venezuelan authorities to offer better terms (Dommersnes, 2011). The revelations prompted a negative media cycle with less than subtle accusations of bullying behaviour by Statoil.

Challenges on the operational front notwithstanding, Statoil has contributed to a skills-development and technology transfer programme in Venezuela since 2005. In many ways, the project resembles the MTT and ANHEI programmes in Angola, in that it brings together a local and a foreign university – the Universidad Simón Bolívar (USB) and NTNU, respectively – and in that it aims to strengthen local capacities and provide a future recruitment base for Statoil. Similarly, sales or transfers of specific technologies do not occur within the programme; rather, it has involved training of university professors, conducting a series of workshops for practicing engineers from the national oil company and governmental agencies, as well as more motivational work inspiring young university lecturers. Finally, a large group of engineers have become specialists through the project. Professor Michael Golan has been the project manager from the NTNU side and says that what is actually being transferred is a mixture of scientific knowledge, industrial practices and experiences, modern engineering working processes, technology teaching skills and teaching material (Golan, correspondence, 2011). As of March 2011, 30 students have graduated from USB with Master's degrees in petroleum-related subjects, assisted by Statoil and NTNU in finding topics for their master thesis.

Skills development as described above is a way for Statoil to gain, or rather retain, a foothold within Venezuela, which must be said to be a country of vital strategic importance for any actor wishing to play a role in the global oil industry over the next decades. Although

estimates vary, Venezuela is definitely among the top five to ten countries in the world measured by remaining oil reserves.¹⁴ Since a lot of this oil is found onshore, Venezuela is also a country where Statoil could have a lot to learn in terms of technology. Politically speaking, however, the Venezuela run by socialist president Hugo Chávez has proven to be a hard nut to crack by Statoil which, as we have seen, failed in its strategy to force through better terms in a round of bidding for new licences. This stands as a visible sign that the Venezuelan state is confident enough to retain the upper hand in negotiations with the global oil industry.

One possible way for Statoil to gain necessary goodwill in a country determined to use its political machinery as leverage to ensure the maximum rate of return on petroleum resources to the state, would be to play on its role as a state-owned oil company itself and enlist the help of the Norwegian diplomatic service in remaining on friendly terms with official Venezuela. Recalling the way Statoil was set up precisely as a tool to hinder foreign oil companies from extracting oil revenues which could potentially flow to the Norwegian state, such an approach seems sensible at first sight. Both of these strategies are out of reach, however, given that one third of Statoil is privatised and traded on stock markets in Oslo and New York and also knowing that Norway's bilateral relations with Venezuela are substantially less intimate than with other major oil producing countries.¹⁵ After the negative publicity mentioned above, one can only assume that Statoil hopes to use technology transfer and knowledge sharing as a way of bypassing strained political relations and accumulate the goodwill which is vital for any hope of gaining operatorship of licences in the future.

¹⁴ The United States Energy Information Administration lists three different sources for information on global remaining oil reserves on www.eia.gov/emeu/international/oilreserves.html. Two of the sources place Venezuela's remaining reserves as the 6th largest in the world and the third source puts Venezuela 5th.

¹⁵ In the last five years, Venezuela has received one visit by a Norwegian member of government, namely the Minister of the Environment and International Development. In the same period, ministers and state secretaries of several ministries have paid regular visits to both Angola and Azerbaijan. As for Russia, Foreign Minister Sergey Lavrov famously claimed in 2006 that he has more frequent contact with his Norwegian colleague Jonas Gahr Støre than with his own wife.

4.3.3. Supplier development and strengthening of education in Northwest Russia

In Russia, Statoil owns 24% of Shtokman Development AG (SDAG), which is the operator of the giant gas field Shtokman in the Barents Sea, currently scheduled to commence production in 2016 (SDAG, 2011). The field itself is located several hundred kilometres offshore, and the logistical support facilities are to be concentrated in Northwest Russia in and around the cities of Murmansk and Arkhangelsk. This is also the area where the bulk of Statoil's CSR programmes are located.

Statoil's CSR efforts in Northwest Russia are concentrated on three aspects: Environment, supplier development and education, of which supplier development and education are the most relevant for this thesis. Part because of geographical conditions and part because of political requirements for local content, development of the Shtokman field is contingent on a reliable base of local suppliers. But since the industries in Northwest Russia have little experience in supplying petroleum companies, it is in Statoil's own interest to contribute to advances in this field, as noted in its sustainability report of 2008:

Investing in a competent, local supply network will lower costs and reduce project risks in addition to ensuring greater local participation in project benefits.

We are working to develop the local supply industry and private sector in north-western Russia, drawing on our experiences from the Snøhvit and Ormen Lange developments in Norway (Statoil, 2008c).

In addition to the general, and somewhat vague, notion of "capacity and skills-building", the suppliers development programme in practice consists of mapping, identification and pre-qualification of potential Russian suppliers, and also assisting local suppliers in organising themselves in industry associations (Statoil, 2008c). Within education, Statoil works with universities in Murmansk and Arkhangelsk to strengthen their curricula in petroleum related sciences, as exemplified by the establishment of a Bachelor of Business

Administration at the Pomor State University, focusing on petroleum management, developed in cooperation with NTNU and partially funded by the Norwegian Ministry of Foreign Affairs. Statoil has also helped set up a technology transfer programme between the University of Stavanger and the Arkhangelsk State Technical University (Statoil, 2008b). According to Benedikt Henriksen, Russia has solid competences in onshore petroleum technology, but lags behind when it comes to offshore technology. As a contribution to filling this knowledge gap, Statoil helped put up 8 new subjects at local universities.

Although one might expect that local authorities would warmly and uncritically embrace any CSR initiatives as a free opportunity for growth in the region, it was far from evident that Statoil's projects would go down well with regulators and stakeholders in Russia, according to Benedikt Henriksen. Business and politics is closely intertwined in Russia, and it would not have been possible to start any project without official sanction. Prior to project initiation, Statoil therefore entered a Memorandum of Understanding (MoU) with authorities in the Murmansk and Arkhangelsk areas where the broad outline of the proposed CSR efforts was described. Contacts also had to be established with politicians linked to the federal government, including the Duma. For the CSR programmes to be effective, it was of vital importance that they not be seen as simple "greenwashing" or strategic positioning. That is why Benedikt Henriksen is still careful to underline that

our CSR strategy and our CSR policy as formulated on the corporate level is the reason why we do this. Through CSR projects you want to give something back to the society you're a part of. We are an important part of society, especially at the regional level, because projects like ours potentially employ thousands of people (Henriksen, interview, 2011).

As to the effectiveness of the CSR programmes in promoting Statoil's business case, it is again difficult to affirm exactly which factors were decisive in the decision of Russian authorities to invite Statoil to take part in the development of Shtokman. But the decision was

made well after the programmes were initiated, and it *could* therefore be claimed that they played a role in conveying a sympathetic image of Statoil. Based on experience from teaching a course on petroleum and society in Arkhangelsk in the framework of the Statoil-funded programme, Ryggvik has opined that, compared to oil countries in the global south, Russia is a place where Statoil is less likely to succeed in communicating itself as essentially the extended arm of a benevolent state eager to share its positive experience with the development of a petroleum sector. In Russia, he writes, Norway is first and foremost a NATO member and Statoil first and foremost a company seeking to exploit a share of Russia's natural resources (Ryggvik, 2010: 363). In this line of thinking, the education programmes are even more important as "proof" to Russian authorities of Statoil's good intentions in the region.

As in Angola and Venezuela, the Russian projects do not involve transfer of any specific technology. Indeed, Henriksen seemed to give more weight to the term *exchange of experience*, rather than *technology transfer*: "We tell our Russian friends in a humble way what experiences we've had" (Henriksen, interview, 2011). Thus underlining the need for humility, Henriksen pointed out that Statoil, along with the rest of the Norwegian petroleum sector, has built up excellent competences within offshore petroleum operations. That is useful experience to share with other countries, in particular countries like Angola and Brasil, where a lot of the oil is found offshore, but also Russia, where hopes are high for future development of the Shtokman field.

Located several hundred kilometres offshore and on deep water, Shtokman will in fact be so technologically demanding to develop that participation in the project can be said to be strategically important for Statoil in that it offers unique learning opportunities which can possibly be used to Statoil's advantage in later licensing rounds in Russia. If Statoil can establish a reputation as a qualified actor with experience from challenging developments

within Russia – or even as a benevolent guarantor of increased petroleum-related know-how among Russian students and scientists – it is not unreasonable to expect regulatory authorities to take a favourable view of the company. But as for Shtokman there are major uncertainties about the profitability of the field, given the huge investments required and the volatility of gas prices, and the final investment decision has yet to be made. Russia's prime minister, Vladimir Putin, recently expressed impatience at the progress towards commercial exploitation on Shtokman and urged the project partners to endeavour to start production by the end of 2016 (Bjørsvik, 2011, RIAN, 2011).

Chapter 5: Analysis of empirical findings

5.1. Characteristics of combined ITT and CSR projects

I am attempting with this thesis to direct attention towards the interaction between two business functions and their corresponding academic fields. Even though both fields have been studied extensively, there is a clear deficiency of academic works on how CSR affects ITT and how ITT affects CSR. Moreover, it became evident during interviews with Statoil employees that these questions have yet to be reflected upon within the company as well. An easy conclusion would therefore be to say that CSR and ITT are unrelated and should be treated as the separate tools in the corporate manager's toolbox that they are. I am, however, convinced of the impossibility of saying that CSR and ITT do not relate. My conviction is based first on thematic similarities between the two academic fields, and second on observations on how the two business functions overlap within Statoil.

If we regard the rhetoric of scientific articles from the respective academic fields, they often respond quite directly to challenges highlighted by the other field or, in some cases, they are concerned about the same possible obstacles to success. For example, when Bozeman proposes *economic development* – that a country or region should be better off in the wake of technology transfer – and *human resources* – that the skills of an economy's labourers should be improved – as criteria for measuring the effectiveness of technology transfer, he quite explicitly points out how technology transfer can be seen as a CSR measure in line with McWilliams and Siegel's requirement that CSR should “further some social good, beyond the interests of the firm and that which is required by law”.¹⁶ And when Frynas warns about the temptation to devote too little time to build personal relations between oil companies' CSR staff and the inhabitants of villages targeted for CSR initiatives (2005: 591-592), it is similar

¹⁶ As we have noted, there is no reason to believe that the requirement to cause positive effects beyond the interests of the firm necessarily equates non-compliance with these very interests.

to Reddy and Zhao's concern that "the geographic transfer of technology may be of little use unless the appropriate human resources are simultaneously made available" (1990: 292).

As well as signs of the two academic fields pointing in the same direction, there are also clear empirical examples within Statoil of ITT projects with a visible CSR component and vice versa. To name but one of them, ANHEI can be classified as a CSR project in that it "demonstrate[s] the inclusion of social (...) concerns in business operations and in interactions with stakeholders" (Marrewijk, 2003: 102), all while simultaneously satisfying the definition of ITT as a process in which "science and technology are transferred from one individual or group to another that incorporates this new technology into a new or improved process, product, system or way of doing something" (Singh, 2003: 2). The same compatibility can also be said to apply to projects in Russia and Venezuela.

What, then, do Statoil employees themselves identify as distinct characteristics of projects in which CSR and ITT intertwine, as compared to "pure ITT" or "pure CSR"? Morten Fejerskov found that when ITT projects are linked to CSR, project execution and management is strengthened. CSR is a business tool which is often used in projects where there is a substantial risk of corruption. Hence Statoil's CSR team has developed stringent routines for due diligence, follow-up and reporting, which Fejerskov found to be of benefit to the ITT projects. We have seen other examples of how the CSR sphere is preoccupied with a high degree of reporting and adherence to formal criteria as proposed both internally and by external agents such as the UN Global Compact.

CSR, even though in the long run it is meant to provide returns to a company, is in the first instance about spending a company's resources for the benefit of external actors, be it persons, NGOs or countries. It comes as no surprise, then, that company managers and shareholders will be all the more weary that the resources spent produce tangible results. It also comes as no surprise that oil companies, often subject to criticism for damaging the

environment and turning a blind eye to harmful societal implications of the petroleum economy, have a strong interest in being able to demonstrate how they are taking action “for the greater good”. Compared to pure ITT projects, one should then expect that the planning and reporting of combined ITT and CSR projects is more structured and more observant of specified criteria.

From a somewhat different perspective, Simon Hayes pointed out how it is often more difficult to see “the business case” in ITT projects with a CSR component, in the sense that the objective of creating benefits for the receiving party can overshadow the objective of generating profits for the company itself. According to Professor Michael Golan of NTNU, the most noticeable characteristic of these kinds of projects is indeed the fact that the good of the receiving party is the main driver behind the planning and execution of the programme. He says that NTNU worked completely freely with planning and execution of the programme in Venezuela, and that there were no attempts from Statoil’s side to interfere (Golan, correspondence, 2011). In Northwest Russia, of the more than 50 students who have benefited from stipends financed by Statoil, only 2 have started working for the company. The low recruitment rate is the result of a conscious decision by Statoil to encourage the students to take up jobs in local companies, ostensibly because Statoil is wary about brain-draining the local economy. One should not forget, however, that the final investment decision for the Shtokman project has yet to be made, and that, accordingly, there are still few prospects for long-term secure employment with Statoil in the region.

Because CSR projects usually offer low potential for short-term financial profits, it is possible to imagine that staff working with ITT can become hesitant towards the inclusion of a CSR component in their projects, especially if the company’s performance criteria assign a higher importance to profit generation than to the success of CSR projects. But the “business case” mentioned by Hayes can still be admitted to combined CSR and ITT projects, if one

analyzes CSR on the institutional level as proposed by Hockerts and Morsing, whereby CSR is an instrument companies enact to obtain the necessary goodwill of the surrounding environment or a “license to operate”. Performance on this level will, however, always be very hard to quantify. Moreover, in addition to a potential reluctance among ITT staff towards using their projects to fulfil CSR goals, Statoil’s CSR division has remained absent from several technology transfer or knowledge sharing initiatives which could clearly be said to serve CSR-related purposes. IID, for example, worked independent of interference from the CSR division throughout its existence.

From a CSR perspective, Ilse Castellanos noted how technology transfer allows for a wider impact than other CSR projects:

When you work with technology you are contributing to a nation, to a country, that can apply that technology in many locations. Even if you do it with one university, universities have national scope. If you work with one specific field of the local industry, let’s imagine that we are working on a project with sub-surface, if you share that technology it can be applied to any part of the country (Castellanos, interview, 2011).

Frynas, in his critical article on CSR in the petroleum industry, warned that, because of oil companies’ determined networking with bureaucrats and politicians in powerful positions, “the development priorities pursued by oil companies may be those of specific government officials and not necessarily those of the people for whose benefit the initiatives are ostensibly undertaken” (2005: 584). Along the same lines, Zakariya was critical of the petroleum business’ ability to transfer technology in a genuinely beneficial way:

Petroleum exploration and development contracts with the transnational companies are not, by and large, the most effective instrument for transfer of technology to host countries, not only because the transfer of technology is not the primary goal of such contracts, but also due to the basic divergence of interest of the two parties on this issue (Zakariya, 1982: 221).

These risks are undoubtedly real; it seems evident that when Statoil initiates technology transfer, it expects, or at least believes, that it will gain goodwill that can later be converted to a favourable position in licensing rounds. But if Castellanos' assumptions about ITT's ability to disperse positive effects across a wider spectrum of the economy are correct, ITT can at least be said to mitigate the risk that CSR initiatives benefit a too narrow group. I have also learnt about an adverse example, where Statoil's CSR division had to persuade a project team to let a technology transfer project go through, even though the project team saw the potential benefits to Statoil as very limited.¹⁷ These two examples illustrate how the coupling of two business functions can attenuate risks and disperse benefits more broadly.

5.1.1. Effectiveness criteria

Having mentioned Bozeman's suggestions for criteria to measure technology transfer effectiveness, it appeared useful to find out which, if any, criteria Statoil uses for the same purpose, and if there are indications that criteria vary depending on whether projects are seen from a CSR or an ITT vantage point. Of the six proposed criteria, "Economic Development" and "Human Capital" seem most relevant for CSR purposes, whereas Bozeman himself remarks that "despite analytical and evaluation difficulties, Market Impact and Economic Development criteria are in most instances the acid test of technology transfer" (Bozeman, 2000: 647).

While Statoil *a priori* has no standardised criteria for measuring effectiveness of projects, the project planning phase usually involves the definition of key performance indicators (KPI), and project evaluation is to a large extent concentrated on determining whether or not KPIs have been attained. On a general note, Ilse Castellanos remarked that "a successful social investment project is one that matches the needs of the affected stakeholders and is according to our standards and our values." She also said that good technology transfer

¹⁷ My source for this information wishes to remain anonymous.

is “to have the technology up and running, run by a local institution” (Castellanos, interview, 2011). Even though this comes very close to the adoption of Bozeman’s “Out-the-Door” criterion, Castellanos’ insistence that the technology should be run by a local institution indicates that Statoil is also concerned with the “Scientific and Technical Human Capital” criterion. Hans-Aasmund Frisak, who also has a CSR-related background, did not mention any specific evaluation criteria, but said that Statoil regards CSR as a competitive advantage, that charity and pure goodwill lie outside the domain of CSR, and that Statoil wishes to make use of CSR to obtain operating licences. It can thus be assumed that CSR projects will be evaluated, implicitly or explicitly, according to the “Political Reward” criterion. Rolf Magne Larsen and Morten Fejerskov speculated that technology cooperation *could* have had a favourable effect on Sonangol’s decision to name Statoil the “preferred operator” on three new fields in Angola, in which case the cooperation would be deemed effective according to the “Political Reward” criterion.

In fact, cooperative projects in which all parties contribute to mutual learning were often emphasised by interviewees as ideal projects. As Hege Ebeltoft explained, “the best cooperation is when you manage to establish projects where both parties learn and develop something together.” When he was involved with the Statoil-Sonangol technology cooperation, Morten Fejerskov experienced demands from senior management to demonstrate tangible results. The demands were met in quantitative terms by counting the number of field trips and seminars conducted, students involved and papers presented; and in qualitative terms by highlighting the outcomes of a project to improve geological understanding through salt tectonic modelling and the personal networks that were created and maintained as a result of the cooperation. Through the cooperation, Statoil was also able to access data otherwise not available. In return, Statoil contributed expertise in 3D visualisation and data interpretation. One of the main achievements of the cooperation was the discovery of an area with

potentially sensitive geological information which could give the two companies a competitive advantage. It is thus possible to deem this project effective according to the “Market Impact” criterion, but also to some extent according to the “Human Capital” criterion, in that Angolan scientists and Sonangol employees learnt about modelling and data interpretation.

Neither Benedikt Henriksen nor Simon Hayes mentioned any specific evaluation criteria, but instead explained quality compliance in more vague terms such as “we follow our gut feeling” or “we talk to people and get an impression that things are going well”.¹⁸ When asked to elaborate, Henriksen’s view on evaluation appeared to a large extent to be compatible with Bozeman’s “Human Capital” criterion. From the beginning, the educational outcome of the projects in Northwest Russia was impeded by the fact that students didn’t speak proper English. After Statoil insisted on interviewing each candidate for the stipend, they were able to assure that the candidate had the necessary language skills, and education outcomes improved. The projects in Venezuela have many similarities with the ones in Northwest Russia, and Professor Golan also said that “Human Capital” is the most fitting of Bozeman’s criteria.

To summarise, the interviewees’ views on which factors make a CSR or ITT project successful indicate that Bozeman’s “Human Capital” criterion is very relevant. But we can also see other effects of combined CSR and ITT projects, such as the potential market impact and political reward which came out of the Statoil-Sonangol technology cooperation. Most importantly, though, since few of the interviewees had their minds made up about specific criteria apart from fulfilment of KPI requirements, there is reason to believe that in practice, Bozeman’s “Out-the-Door” criterion is the most commonly used: A CSR or ITT project will have a tendency to be deemed effective by the very fact that it has occurred.

¹⁸ Hayes later stressed that this is applicable to general quality criteria and *not* to financial and governance criteria, which are rigorously adhered to.

5.1.2. Is CSR always voluntary?

We have seen how several definitions and explanations of CSR include a notion of something being “voluntary”, in the sense that it stretches beyond compliance with laws and regulations (e.g. Marrewijk, 2003, McWilliams and Siegel, 2001). But Statoil’s concept of CSR also includes projects to which it is *contractually* committed. In its annual sustainability report, Statoil publishes financial indicators on how much it has spent on “social investments” in different regions. As is made clear in the report, most of the projects mentioned in this thesis are defined as social investments:

Social investments are used to build local content and capacity, as well as to promote transparent operating environments and respect for human rights so that affected communities can share in the benefits generated by our operations. (...) Our social investment projects involve training and capacity building, including technical training relating to the oil industry, which is seen as a way of build (sic.) competence among local suppliers (Statoil, 2010a).

Hans-Aasmund Frisak explained that when Statoil enters a new country, it often faces requirements by the country’s authorities for a certain amount of local content. Local content typically means hiring a certain percentage of staff locally and using local suppliers and sub-contractors whenever possible. However, when oil and gas are found in poor countries with dysfunctional education systems, insufficient infrastructure and few competent suppliers, hiring and procuring locally can be a major challenge. Vocational training and the training of specialised engineers then presents itself as a win-win situation, where the oil company can contribute both financially and with know-how to increase local knowledge, at the same time meeting its obligations on local content. Frisak brought up the example of Canada, where indigenous peoples are given the opportunity to get vocational training that qualifies them for jobs on Statoil’s sites afterwards. We have already mentioned relevant programmes in Angola, Russia and Venezuela, and similar projects are also found in Nigeria – where Statoil sponsors a project entitled *Enhancing Fabrication Capabilities in the Nigerian Oil & Gas*

Industry, which aims to strengthen Nigerian small and medium-sized enterprises' chances of winning contracts with international oil companies – and in Algeria – where the Statoil-sponsored *Institut Algérien du Pétrole* educates workers for the growing Algerian energy sector (Statoil, 2008a).

Of the NOK 202 million Statoil spent on social investments in 2010, NOK 172 million was voluntary and only NOK 30 million was contractual spending. Relatively speaking, though, contractual projects are remarkably more frequent in Sub-Saharan Africa, where NOK 20 million out of a total NOK 33 million spent were contractual contributions. Frisak speculated that this can be because of these countries' experience with foreign – including Norwegian – development aid (Frisak, interview, 2011). In this line of thinking, African regulators would be more skilled than their peers in, for example, the former Soviet Union at knowing which requirements one can expect to impose on foreign firms operating in the country without the firms pulling out. While it is not immediately clear that experience in receiving development aid should lead to better regulation of business activities, Statoil's CSR activities in Sub-Saharan Africa do illustrate that, regardless of several definitions stressing the need to move beyond compliance with legislation, projects which are born as a result of legal regulations may also be defined by firms as CSR.

5.2. How history influences ITT and CSR in Statoil

I find strong evidence that Statoil employees are conscious about their company's history – and, in a wider perspective, the history of the Norwegian petroleum sector. In most cases, they also have an opinion on real or perceived influences of Statoil's history on its present day-to-day business. After Norway was able to benefit from international know-how and build up a capacity to independently conduct exploration and development of petroleum resources on the Norwegian continental shelf, one could expect two possible paths for Norwegian petroleum companies' entry on the international scene: In one case, companies

could be wary of diluting their expertise by sharing it with competitors and attempt to retain a maximum amount of knowledge within company bounds. In the opposite case, companies could adopt an open approach by using their expertise as a competitive advantage and market willingness to share information as a potential leverage to gain access to new countries.

What I believe to have found is that Statoil has to a large extent taken the second approach. I will not be pretentious about the revolutionary originality of this finding. The Norwegian government encourages all Norwegian businesses to comply with the *OECD Guidelines for Multinational Enterprises*, which stipulate that “enterprises should contribute to the transfer of technology and know-how to host countries and to the development of local and national innovative capacity” (MFA, 2009: 29). Given the Norwegian government’s high ownership interest in Statoil, it would indeed be problematic if Statoil was perceived as protective of its know-how when conducting operations abroad. It is nevertheless worth noting that all the Statoil employees who I interviewed for this thesis expressed enthusiasm for the ability to combine profit making business operations with the dissemination of knowledge in other countries.

As an example, Benedikt Henriksen said that Statoil aims to bring the *Norwegian model* to Russia. What he defines as the Norwegian model is the idea that Statoil’s activities should cause positive effects beyond pure generation of profits for the company. Henriksen pointed to the recent history of the Norwegian coast which, he says, wouldn’t be what it is today if it weren’t for oil and gas. In Northwest Russia, Statoil has helped develop the supplier industry, higher education institutions have realigned their profiles and there have been projects aiming at preserving the environment at sea and on shore. Henriksen also brought up the successful “Norwegian triangle” of suppliers, oil companies and higher education institutions collaborating for the advance of technological development. In Russia,

according to Henriksen, the three elements have been working more separately without bridging. Still, Henriksen was humble about how much Norway can expect to contribute:

We must be aware that we have a relatively short petroleum history. In Norway it has been going on for 30-40 years, whereas in Russia it has been going on for 125 years. But 98% of what happens in Russia happens onshore. We have to be humble and understand that we're not coming into a country which doesn't have a clue about oil and gas; it's simply a matter of a different structure (Henriksen, interview, 2011).

Ilse Castellanos, who is Venezuelan and can therefore to a certain extent be said to provide an outsider's view on the Norwegian petroleum sector, also highlighted the cooperative Norwegian model as an example to bring out to the world:

The beauty of technology transfer is the model that Norway has developed, as far as I understand. The industry works with universities to develop and give solutions to technical problems, and that is the perfect partnership. Because the industries can be focused on developing the core business, and then you have academia helping the industry to give responses to the technical challenges. That's the perfect combination! (Castellanos, interview, 2011)

Still, it should be noted that fruitful university-industry cooperation, far from unique to Norway, is observed in an array of countries, particularly in the Western world. What is often regarded as a specifically successful "Norwegian" triangle, on the other hand, is the cooperation between government, industry associations and labour associations which inter alia is intended to ensure a coordinated and moderate wage growth. To the extent that Statoil adheres to the UN Global Compact's principle on freedom of association and the effective recognition of the right to collective bargaining, it can be said that it aims to export this Norwegian tripartite model.

On the question on whether Statoil's history gives it specific competitive advantages, Castellanos was hesitant. In bidding rounds for licences, the central question is at the end of the day which company can offer maximum returns at the lowest possible cost. Benedikt

Henriksen similarly remarked that “the competition is fierce, and you never get an answer to exactly why you’re awarded licences. But we believe that we’ve been working the right way” (Henriksen, interview, 2011).

In Angola, Statoil has a technical support agreement with Sonangol on the Gimboa field in Block 4/05, where the intention is that Statoil will help Sonangol acquire the necessary competences to independently operate its first deep-water field. At the most, 20 Statoil employees worked for this project, but today only 4 remain, and their functions are all meant to be taken over by Sonangol staff in the near future. The Gimboa example is interesting in that it resembles the arrangements on the Gullfaks and Statfjord fields during the early years of the Norwegian petroleum industry, only with Statoil now acting more as a teacher than as a pupil.

According to Morten Fejerskov, Statoil was asked by Sonangol to assist in developing the Gimboa field after the disappointing exploration drilling on Block 34 which led to the discontinuation of the MTT programme. Because of its good relationship with Sonangol, and in order to demonstrate long-term commitment in Angola, Statoil accepted the request, presumably hoping for future cooperation on other blocks as well. Fejerskov said that there were discussions internally in Statoil on how much knowledge would be shared, and that some technology was retained, whereas management systems were to a large extent shared.

Overall, Fejerskov found that Statoil is “more open than other companies when it comes to sharing”, which he primarily attributed to Statoil’s recent history as a technology recipient. However, Fejerskov also underlined that Statoil does not as of now consider Sonangol as a competitor or threatening rival, but more as an ally. This, he said, may change in the future if Sonangol becomes a larger international oil company. In fact, the tension which Fejerskov thus touches upon can be seen as a red line through the early years of the Norwegian petroleum industry as well. As Engen remarks, “the international oil industry

represented a general challenge for the existing Norwegian industrial structure, while also playing the role of teacher and transmitter of new technology” (Engen, 2009: 204).

5.2.1. Statoil’s capacity and willingness to transfer technology

I have mentioned Wang et al’s theory on how the amount of knowledge contributed by a foreign company is determined by that firm’s *capacity* to transfer and by its *willingness* to transfer. Interviewees for this thesis seem to agree that Statoil has a relatively high capacity to transfer technological know-how, in that it has a sophisticated knowledge base and in that its expatriate employees possess the necessary technical and managerial skills to facilitate transfer. But Statoil’s knowledge base, sophisticated as it may be, covers only certain parts of the petroleum technology spectrum, most notably deep-sea drilling and exploration which Statoil knows well from its home market. Also, as Hege Ebeltoft explained with her cup-and-glass metaphor, Statoil generally does not possess specific technologies, but rather the knowledge of which technologies are best suited for different operational circumstances (Ebeltoft, interview, 2011).

Professor Golan of NTNU, however, takes a somewhat different view. In his opinion, Statoil possesses a lot of valuable transferable technology, but “it has very limited expertise or resources to identify what is needed to be transferred and to solicit the goodwill of the custodians of the technology within Statoil” (Golan, correspondence, 2011). According to Professor Golan, Statoil’s research division in Trondheim, which originally was meant to supervise the technology transfer programme to Venezuela, recognised Statoil’s shortcomings and *therefore* asked NTNU to step in and manage the programme as an independent actor. It is, of course, interesting to take note of the divergence between Hege Ebeltoft as an insider and Michael Golan as an outsider, but at the same time, Professor Golan’s observations are not necessarily valid for other parts of Statoil than the one programme he took part in.

When it comes to the *willingness* of a company to transfer technology or technological know-how, Wang et al suggest that it is contingent on how important the receiving party is perceived by the transferring party, on the ownership structure and on the relationship between the two parties. Interviews revealed that these factors are indeed relevant. We have seen, for example, how Statoil considered a good relationship to Sonangol as an essential demonstration of its long-term commitment to Angola, and therefore decided to take on the task as technological assistant on the Gimboa field. In the cases of Venezuela and Northwest Russia, the receiving party is students and universities more than firms, so the comparison is harder to make. But in both these cases, major local universities are recognised as highly important in developing the necessary knowledge base locally, so that local firms and local workers are able to compete for procurement contracts and jobs in the petroleum industry.

When it comes to the ownership structure, oil and gas fields are almost exclusively developed through joint ventures, as different companies are awarded the rights to purchase a given share in the same field, and the relationship with the partner or partners then becomes a major determinant of willingness to transfer. Turning once again to the Gimboa field for an example, we saw that Statoil's willingness to transfer was strengthened by the fact that it considers Sonangol as an ally rather than as a competitor.

Moreover, it became clear that in Statoil's case, there is also a fourth determinant of willingness to transfer, namely the potential to obtain shared benefits. In Professor Golan's opinion, Statoil as an organisation is not properly geared for technology transfer; technology transfer is not a company reflex (Golan, correspondence, 2011). Therefore, it is necessary to start technology transfer projects by searching for employees with relevant knowledge who are motivated to share their knowledge with a partner institution, and the potential for shared benefits apparently serves as a powerful motivator.

All of the Statoil employees I interviewed stressed the importance of finding a way for both parties in combined CSR and ITT projects to gain useful new insights, so that the projects can be seen as integrated parts of Statoil's business rather than pure philanthropy. In Venezuela and Northwest Russia, Statoil thus has a lot to learn about onshore petroleum operations, and in Angola we have seen how the technology cooperation agreement with Sonangol produced potentially lucrative information which gives the two parties a shared competitive advantage. We can see this fourth determinant as an illustration of what happens when one combines ITT and CSR. To Wang et al, whose article places itself squarely within the academic field of ITT, it was not necessary to specify the requirement to obtain shared benefits, since the mother firm's overarching motivation behind the technology transfer was always to increase its profits. But when adding elements of CSR, representatives of the mother firm, which in this case is Statoil, suddenly feel a need to specify that projects produce benefits for the mother firm as well, because without this specification CSR can easily be confused with charity.

5.3. The Norwegian government: An active owner?

The Norwegian government owns two thirds of Statoil, and with such a high ownership stake, one would not be surprised to learn that the government occasionally attempts to exert influence on the way Statoil conducts its business. Moreover, since 2005, Norway has had a centre-left government which at least rhetorically espouses active state ownership of certain companies. For these reasons, I initially assumed to find evidence of at least a certain degree of government interference in Statoil. Interviews revealed, however, that such interference is almost non-existent. This has got to do, first with the strategic goals that the government has for its ownership of Statoil, and second with the fact that Statoil's CSR and ITT programmes actually stretch further than what is required by government policies, thus eliminating the need for government interference.

A report to the Norwegian Parliament by the Ministry of Trade and Industry on active state ownership explains how the government organises its ownership portfolio in four categories: Category 1 is for companies for which the government has purely commercial purposes for its ownership. Category 2 is for companies with commercial purposes and the added purpose of maintaining strategically important head office functions in Norway. Category 3 is for companies with commercial purposes and other specifically defined purposes, whereas category 4 is for companies with sector political purposes (NHD, 2011). The level of government interference with the management of companies can roughly be said to be ascending with category numbers, meaning that the government is likely to be most directly involved with management of category 4 companies and remain passive to the largest possible extent when it comes to companies in category 1. Statoil is classified as a category 2 company, so the explicit goals of the government's ownership are limited to earning money and assuring that Statoil's head offices remain in Norway.

That being said, there is no reason to conclude that the Norwegian government's approach to ownership is compatible with Friedman's assertion that "the social responsibility of business is to increase its profits" (Friedman, 1970), and thus that social investments and technology transfer are irrelevant to CSR. In addition to the explicit strategic ownership goals, the government has also put forth a number of expectations and recommendations to companies it partly or wholly owns. For example, the ownership report states that Norwegian companies are expected to take a leading role in promoting CSR, and that "a strategic and high quality social responsibility contributes to a strengthening of companies' position and competitive stance in the long term. A state owner with clear expectations in this area will contribute to further professionalise such an effort" (NHD, 2011: 35). It is further noted how a responsible approach to business can reduce risks of undesirable incidents which can weaken the firm's reputation. These remarks suggest that the Norwegian government adopts a

resource-based view of the firm as mentioned by McWilliams et al (2006) and regards CSR as a potentially valuable and inimitable resource firms can use to strengthen their competitive stance.

The Norwegian Ministry of Foreign Affairs has published a report which deals specifically with the topic of CSR in Norwegian companies, with or without government ownership. The report states that the government sees human rights, labour standards and working conditions, environmental concerns, corruption and transparency as central targets of CSR policies. It includes a bullet-point list of expectations to the private sector, which does not explicitly mention social investments or technology transfer. In fact, the report submits few requirements for genuinely *active* measures by companies; rather, it stresses compliance with principles on labour rights, environmental standards, anti-corruption and transparency. Still, the government issues a call on Norwegian companies to, among other things, increase investments in developing countries and “actively recruit staff locally in the host country, encourage the use of local suppliers and use local companies as contractors and suppliers in developing countries” (MFA, 2009: 13). These elements, as we have seen, are central to Statoil’s combined ITT and CSR projects.

All Norwegian companies are also encouraged to comply with the *OECD Guidelines for Multinational Enterprises*. Of the 10 main elements of these guidelines, one concerns science and technology in particular: “Enterprises should contribute to the transfer of technology and know-how to host countries and to the development of local and national innovative capacity. When appropriate, they should perform science and technology development work in host countries” (MFA, 2009: 29). Furthermore, the report demands that “CSR (...) be clearly established as a line management responsibility, and followed up on an ongoing basis by the company’s senior management and board” (MFA, 2009: 7), which is completely in accordance with the way CSR is organised in Statoil.

When it comes to what kind of role government should be expected to play in business, it is noted that government's primary role is to take part in international cooperation and establish and maintain conventions on human rights, labour standards, environment, resource management, taxation, corruption and trade. Since intergovernmental cooperation has insufficient tools to ensure compliance with such conventions in all countries, CSR presents itself as an instrument to fill the holes in government's reach. Still, the report goes to great lengths to alleviate fears of a micro-managing government which interferes in the day-to-day business of state owned companies: "When the state hives off enterprises as private limited companies, public limited companies or state-owned enterprises, they are no longer part of the public administration. This means that the state cannot manage these enterprises by administrative decision" (MFA, 2009: 16). At the limit, it is suggested that government *might* alter the composition of the board of a company which fails to incorporate CSR standards in its business operations.

Having observed how the Norwegian government formulates its policies on CSR and active ownership, we turn now to regard how Statoil employees perceive – or, alternatively, do not perceive – their day-to-day work as influenced by the fact that the government is the majority owner of their company. It has been noted that profit-maximizing firms "often hold quite a contradictory perspective on technology transfer vis-a-vis that of the state, which is presumably seeking more diversified objectives" (Calantone et al., 1990: 34). If this assertion holds true for Statoil, one would expect to learn about employees frustrated by government demands perceived as unreasonable or in conflict with the object of profit maximisation. My interviews have, however, revealed quite the contrary: Statoil employees who work directly with technology transfer and CSR projects reported no government interference whatsoever, and those who are specifically assigned to work with government contacts say that the

government is an interested but completely passive interlocutor on CSR matters and that strategic and operational decisions are left entirely to Statoil's management.

Hans-Aasmund Frisak, who is responsible for the part of Statoil's government contacts which concerns its international operations, interpreted the government's passive approach by the fact that "Statoil is in a different league", in the sense that it does more than what the government expects when it comes to CSR (Frisak, interview, 2011). Government officials are often generalists with limited opportunities to specialise themselves in any given topic, whereas large corporations can afford to employ hundreds of staff who work only on CSR or ITT-related matters. This is one of the reasons why Statoil can remain in the forefront of government regulations and recommendations. As mentioned, Statoil's CSR reporting meets the highest possible standards according to both the GRI and the UN Global Compact indexes, and Statoil promotes the EITI in all countries in which it operates.

Encouraged by its auditor Ernst & Young, Statoil has also taken the initiative to annual meetings with the ownership division of the Ministry of Petroleum and Energy and representatives from the Ministry of Trade and Industry to present the sustainability report. Moreover, Statoil participates several times a year in a dialogue arena under the auspices of the Ministry of Foreign Affairs where corporations meet with bureaucrats and NGOs to discuss CSR policies. As Frisak emphasised, though, all of these meetings take place on a bureaucratic and not a political level, and Statoil has no formal CSR dialogue with Norwegian politicians. This is not to say that politicians are uninterested in CSR. On the contrary, both Hans-Aasmund Frisak and Benedikt Henriksen explained that CSR-related questions are often brought up during their informal meetings with politicians, but Frisak also confirmed that politicians rarely make requests that are challenging for Statoil to accommodate and that technology transfer is rarely, if ever, discussed in such settings.

Professor Golan of NTNU once again provided an interesting vantage point from outside Statoil. In Venezuela, he observed that the driving force behind the technology transfer projects was Statoil, and in particular Statoil's local employees, while the Norwegian government was totally absent (Golan, correspondence, 2011). But he also explained that in Azerbaijan, he and his colleagues worked with the Norwegian ambassador to promote technology transfer and develop a programme along the lines of the inter-university collaboration in Venezuela. In that case, according to Professor Golan, the ambassador was enthusiastic, but Statoil's local CSR branch did not respond positively. Given the positive experience from Venezuela, one could imagine that Statoil's central CSR staff would order, or at least strongly encourage, the Azerbaijani branch to develop a technology transfer programme. However, since CSR is a line responsibility in Statoil, the authority to initiate such projects lies exclusively with the country offices. The Norwegian ambassador to Baku's espousal of a technology transfer programme remains the only example I have come across of government officials attempting to exert influence on Statoil's operations.

Chapter 6: Concluding remarks

6.1. The research questions

We have seen examples of how international technology transfer and corporate social responsibility can combine as academic fields and how Statoil uses these two business functions in an overlapping manner. Even though they overlap within Statoil, however, the company has no specified policies for how, when or indeed why they should be combined, nor are there any ongoing strategic processes in Statoil aimed at developing best practices for the combination of the two. When asked to reflect upon advantages of combining CSR and ITT, Statoil employees with a CSR background tend to think of ITT as a way to disperse benefits more broadly, whereas those with a primarily technology related background tend to appreciate the structured mechanisms for control and reporting that CSR offers.

When attempting to answer the first research question of this thesis, which is concerned with identifying unique features of combined CSR and ITT projects, the term *technology* must be understood in a much wider sense than just physical artefacts. Statoil's technology transfer projects involve knowledge sharing, competence building *and* explaining the functioning of specific pieces of machinery, and they are usually mutual learning processes rather than a one-way transfer of know-how. Provided that one allows for the necessary conceptual flexibility and accepts open boundaries between the terms "knowledge sharing" and "technology transfer", the question can still be answered.

For one thing, employees working with CSR are almost surprisingly eager to underline that CSR is neither altruism, nor charity, but rather a way of seeing social concerns as part of the companies' *core activities* and to create value for external stakeholders as well as for Statoil's own shareholders. Technology – or more accurately technological know-how – is one of Statoil's core strategic assets, so doing technology transfer in a mutually beneficial

way should then equate good non-altruistic CSR. We have also seen how the coupling of one of the two functions with the other can serve as an attenuator of what could be called *intra-team zeal*. A CSR team can be eagerly convinced of the benefits of a project, and fail to realise that the expected positive outcomes may favour an unnecessarily narrow group. An ITT team can be too stubborn in its expectations of immediate benefits flowing back to Statoil, and thus abort a project which could create significant value for external stakeholders.

If we invoke the terminological distinction between strategic, coerced and altruistic CSR (Hockerts and Morsing, 2008), it appears fitting to describe Statoil's approach to CSR as strategic, with certain elements of coercion. In many ways, Statoil uses CSR as a risk management tool, in that it intends for social investments, technology transfer, labour rights and health, safety and environmental standards to mitigate the risks of negative publicity. In a business as heavily politicised as the oil business, a company which is negatively perceived by influential external stakeholders can experience to be left out of licensing rounds and thus effectively out of business. Statoil employees definitely see CSR as a potential competitive advantage. If Statoil can do CSR better than its competitors, they hope, it stands to gain essential political rewards from regulatory authorities. In some cases, Statoil is also coerced into adopting CSR measures, like we have seen most notably in Sub-Saharan Africa where exploration licences frequently come with attached requirements for a certain amount of social investments.

I find hypothesis H1 to be only partially confirmed. Statoil employees do consider ITT an efficient way to meet CSR targets, and they also appreciate the structure and planning that the CSR component often adds to ITT projects. There is, however, no clear strategy within Statoil on how to couple the two business functions.

The second research question sheds light on ways in which Statoil is influenced by its history. First of all, Statoil is used to learning. In terms of technological know-how about petroleum operations it started from next to nothing in the early 1970s and had by the end of

the 1980s acquired sufficient skills to independently conduct exploration, development and operation of oil and gas fields in Norway. In the 1990s, Statoil was the junior member of an alliance with BP, with the objective of acquiring the know-how necessary to operate independently outside Norway as well. While its technological know-how was initially limited, Statoil was, however, backed by a competent Norwegian state bureaucracy with experience in controlling large foreign firms' role in the extraction of natural resources from when Norway developed its hydropower resources in the early 1900s.

Today, Statoil sees technology transfer as a strategic asset, and endeavours to create a narrative of itself as a benevolent partner for other oil companies and a willing contributor of knowledge. The message Statoil attempts to get across to regulators in the countries where it wishes to set up operations can roughly be transcribed as “we have learnt, we know that learning is important, and we are now ready and willing to teach”. Even though there are good strategic and political reasons for Statoil to communicate this kind of story about itself, there is also no doubt that individual Statoil employees are genuinely motivated by opportunities to create shared value and to, through technology transfer, see their company's core business benefit external stakeholders as well. All the interviewees for this thesis seemed very aware of and proud of their company's history and indeed of the Norwegian petroleum history as such.

In Wang et al's terminology, Statoil is both capable and willing to transfer technology, but the capability is limited to certain parts of petroleum technology, and the willingness is contingent on expectations of future political rewards. As for Bozeman's proposed criteria for measuring technology transfer effectiveness, we saw that Statoil employees' reflections around the concept in practice often resembled the “out-the-door” criterion. Still, they also mentioned evaluation along the lines of “human capital”, “political reward” and “market impact” criteria.

On a critical note, it could be claimed that if Statoil was *really* intent on using its history to promote technology transfer, it should establish a central unit with the authority to initiate and oversee ITT projects with a visible CSR component. The unit International Industrial Development was a step in this direction, but it was only given a coordinating role and did not have the power to go against country managers. The principle of decentralisation appears to be strong in Statoil, and it seems unlikely that similar centralising initiatives will be attempted in the near future.

I find hypothesis H2 to be confirmed. Statoil employees are conscious about their company's history and eager to contribute to international technology transfer, albeit with other motives than pure technological altruism.

The third research question is directed at the Norwegian government's real or perceived influence on Statoil in matters related to CSR and ITT. In fact, such influence is practically non-existent. Of the Statoil employees I interviewed, only two had been in direct contact with representatives of the Norwegian government¹⁹, and not one of them had experienced specific suggestions or demands from the representatives. Statoil is engaged in constant dialogue with government officials, both informally and through official networks, but the dialogue seems to take the form of Statoil sharing information, rather than government officials instructing Statoil. Bureaucrats and ministers alike express interest in CSR but are either unwilling to take a more hands-on approach, or – recalling Hans-Aasmund Frisak's observation that Statoil actually has a more sophisticated knowledge of CSR than government officials – simply do not consider it necessary. The coupling of CSR with ITT seems to be completely off the government's radar; no interviewee could remember a government official expressing interest in the matter.

¹⁹ The two were Hans-Aasmund Frisak, who is specifically in charge of government contacts, and Benedikt Henriksen, who works in Russia, a neighbouring country of Norway whose friendship is a central piece in the current Norwegian government's foreign policy.

Such a passive government role may appear surprising, given that 67% of Statoil is owned by the Norwegian state and given that Statoil was originally set up with the purpose of ensuring the maximum rate of returns on petroleum resources to Norwegian state coffers. The Statoil of today is, however, very different from the Statoil of the 1970s. First, it has been partially privatised and the government has explicitly declared that its sole purposes of owning Statoil are to make money and to ensure that strategically important head office functions remain in Norway. Second, Statoil's ambitions are no longer limited to the Norwegian continental shelf but stretch globally.

On a purely speculative note, one could argue that the government exerts influence on Statoil simply by *being* the majority owner and that Statoil would be less concerned with CSR measures if it were fully privatised. The Ministry of Trade and Industry's recent white paper (NHD, 2011) stresses that state owned companies are expected to take a leading role in promoting CSR, and one could hardly imagine that the government would have remained silent if Statoil were to abolish its CSR efforts altogether. CSR, at the same time, is not unique to Statoil but something all the international oil companies have either wanted or felt obliged to integrate into their business operations, so it seems safe to assume that Statoil's CSR programmes are the result of business considerations rather than indirect pressure from its most important owner.

When Statoil expands abroad, it can therefore largely expect the Norwegian political apparatus to give it free hands to stake out its own path based on pure business considerations. However, Statoil and all other international oil companies must navigate a heavily politicized environment in host countries. We have seen how Statoil carefully nurtures its relationship to Sonangol in the hope of future licences, how the problematic diplomatic relationship between Norway and Venezuela creates problems for Statoil there, and how Statoil in Northwest

Russia is completely dependent on a constructive dialogue with politicians in order to conduct their operations.

I find hypothesis H3 to be refuted with regards to bureaucrats and politicians of the Norwegian government, as they do not appear to have specific expectations to how Statoil meets its CSR targets, nor do they appear to explicitly encourage Statoil to engage in ITT. However, I find the hypothesis to be confirmed with regards to regulatory authorities in Angola, Russia and Venezuela.

This assertion deserves a remark, since I have not conducted interviews with representatives of the Norwegian government, and since it is fully imaginable that, on a direct question, they would answer that they do indeed have high expectations to Statoil when it comes to both CSR and ITT. The important observation in this context nevertheless remains that no such expectations are noticed within Statoil and, accordingly, it is valid to assert that the Norwegian government does not influence Statoil's CSR and ITT programmes.

6.2. Methodological remarks

George and Bennett underlined that “case explanations must always be considered to be of a provisional character. Therefore, the (...) conclusions drawn from case study findings will also be provisional” (George and Bennett, 2005: 90). Accordingly, the findings of this thesis should in no way be understood to be of a permanent character. For example, there can be no doubt that the Norwegian government, as the majority owner of Statoil, is legally empowered to instruct Statoil in matters related to CSR and ITT and that, as a consequence, the answer to research question R3 may in the future be of a very different kind. Statoil is also nearing an age when all its employees who already worked for the company in its early years will be retired, and this may have implications for how history influences its attitudes to ITT.

George and Bennett further stress that “an investigator must demonstrate that he or she has seriously considered alternative explanations for the case outcome in order to avoid providing the basis for a suspicion, justified or not, that he or she has “imposed” a favoured

theory hypothesis as the explanation” (George and Bennett, 2005: 91). I hope to have demonstrated the ability to consider alternative explanations throughout the analytical and concluding chapters, for example by admitting that I initially assumed that the Norwegian government would administer its ownership of Statoil much more actively.

I have only conducted research within one firm, and I have used only three of the numerous cases within Statoil which can be said to contain elements of both ITT and CSR. Still, after having received written or verbal input from eight persons with hands-on experience from ITT and CSR projects, one of whom is not a Statoil employee, and after having also to some extent made use of newspaper articles, Statoil’s web pages and, of course, relevant academic background literature, I believe that there is a sufficient amount of diversity in the viewpoints I present for me to be able to conduct a sensible analysis of the empirical findings.

Above all, I hope to have illustrated that it is fruitful to study how international technology transfer and corporate social responsibility interact and affect each other. As academic fields, the two are often concerned with finding solutions to similar problems and as concurrent business functions, they tend to make for a more organised process with more wide-reaching effects than when they are kept isolated. Future studies could advantageously include more than one company, preferably also from more than one country, in order to unveil differences and similarities in how ITT and CSR are carried out. If further qualitative studies repeatedly indicate that the two business functions do have meaningful interaction across a spectre of firms and countries, quantitative methods could be employed to investigate, for example, how many CSR projects include elements of ITT, how the long-term earning potential of a company is affected by determined use of ITT and CSR, or whether the effects on the host community of CSR projects with an ITT component are indeed dispersed more broadly than other CSR projects, as has been suggested in this thesis.

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Interviews

Larsen, Rolf Magne	Statoil Vækerø	23 February 2011
Fejerskov, Morten	Statoil Vækerø	5 May 2011
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Castellanos, Ilse	Statoil Vækerø	13 May 2011
Frisak, Hans-Aasmund	Telephone	26 May 2011
Ebeltoft, Hege	Statoil Vækerø	30 May 2011
Golan, Michael	E-mail correspondence	1 June 2011
Henriksen, Benedikt	Telephone	6 June 2011

Appendix I: Acronyms and abbreviations

AfDB: African Development Bank

ANHEI: Angola-Norway Higher Education Initiative

CSR: Corporate social responsibility

EITI: Extractive Industries Transparency Initiative

ESST: European science, society and technology

GRI: Global Reporting Initiative

IID: International industrial development (formerly a unit in Statoil)

INT: Colloquial designation of what was formerly Statoil's division for international exploration and production

ITT: International technology transfer

KPI: Key performance indicator

LDC: Least developed county

MFA: (Norwegian) Ministry of Foreign Affairs

MNC: Multinational corporation

MTT: Management and Technology Transfer Programme (former Statoil programme in Angola)

NGO: Non-governmental organisation

NHD: Norwegian Ministry of Trade and Industry (Nærings- og Handelsdepartementet)

NOC: National oil company

Norad: Norwegian Agency for Development and Cooperation

NTNU: Norwegian University of Science and Technology

OECD: Organisation for Economic Co-operation and Development

RIAN: RIA Novosti (Russian International News Agency)

SDAG: Shtokman Development AG

STS: Science and technology studies

TCA: Technology cooperation agreement

UAN: Universidade Agostinho Neto, Angola

UNCTAD: United Nations Conference on Trade and Development

UNDP: United Nations Development Programme

UNECA: United Nations Economic Commission for Africa

USB: Universidad Simón Bolívar, Venezuela

Appendix II: Interview guide

Please describe your role and responsibilities in Statoil and your experience with CSR and/or ITT-related projects.

Are you aware of ongoing or finished strategic thinking in Statoil aimed at specifying ways of combining the use of CSR and ITT?

What are the reasons for Statoil to have a CSR policy?

Do you feel demand from external actors to conduct your CSR efforts in a certain way? If yes, from who or from which organisation(s)/institution(s)? *(If the interviewee does not mention it himself/herself, ask specifically about Norwegian authorities, local authorities, NGOs and public opinion)*

What is your definition (or, less formally, your *understanding*) of technology?

Who is the recipient of technology in ITT projects you have been involved in? Public sector? Local NOC? NGO?

Can you try to describe as accurately as possible *what* is being transferred?

What criteria do you use to measure the effectiveness of ITT and CSR projects? *(After the interviewee's initial reflection, present Bozeman's six suggested criteria and ask if any of them fit well with the actual situation in Statoil.)*

How does Statoil's history influence your/your company's views on technology transfer?

How would you describe Statoil's *capacity* to transfer technology?

How would you describe Statoil's *willingness* to transfer technology?

In your view, what distinguishes combined ITT and CSR projects from projects with only one of these components?