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(Energy Industry cases)

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MASTER THESIS

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Sustainable Development”

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AmirSaman Vakili

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Abstract (English)

The term "sustainable development" has been considered a buzzword for many years but, recently, companies and their shareholders have become aware of the impact their activities have on society and have strived to include it into their agenda. This thesis focuses on how companies active in the energy industry have made sustainable development a part of their priorities. In doing this, the thesis lays out the theoretical framework for sustainable development, clearly illustrating why it needed nowadays and then provides examples of such integration by using two case studies, ExxonMobil and the Shell Group.

The first part of the thesis deals with setting up the groundwork necessary to conduct the literature review. It discusses the motivations behind this effort and presents the methodology and research structure used to carry out the objective of this work. The second part analyses the efforts of the two companies in implementing sustainable development and creates the framework needed for the conclusions. The third part of the thesis presents the established framework towards embedding sustainable development in a company's core business values as well as future opportunities for such companies regarding social economic and environmental factors.

Table of Contents

Glossary	9
Abbreviations	11
Introduction	12
Introduction	12
Structure of the Thesis	14
Methodology	17
Overview of the Energy (OIL) Industry	19
Multinational Corporation vs. Small-Medium sized Enterprises	19
International Organizations' purpose	22
Structure of the OIL Business	23
Sustainability Background in Energy (OIL) industry context	24
Next destination for Energy Stakeholders	27
Principles of Sustainable Development and Theoretical frameworks	29
The Principles of Sustainability	29
ESD definition	31
Sustainable Development through innovation	33
Businesses Perspective towards Sustainable Development	37
A Model of Sustainability	37
MNCs perspective towards Sustainability	40
Sustainability implemented in Corporations' Core value	42
Mergers and Acquisitions as MNCs strategy towards Sustainable Development	45
The key principles behind M&A	45
Difference between Mergers and Acquisitions	45
Mergers and Acquisitions Motives	46
Mergers and Acquisitions varieties	48
Sustainable Corporations through M&A strategy Execution	52
Socio-Ecological Transition	52
MNCs' Acquisition strategy toward SD	55
Making Progress: from Sustainability strategy to Execution	56
Acquisition makes opportunities as well as threats	58
Internal challenges	59

Complexity of implementing Strategy	59
Strategic priorities	60
Employees and Performance	60
External Challenges	61
Government intervention	61
Investor Community	62
Consumer and Customer perspective	63
Natural Gas along with renewable energy sources toward SD	65
1. Royal Dutch Shell Corporation	66
Sustainable Development and Shell's Business Strategy	68
Shell acquires Duvernay Oil for US\$ 5.24 Billion (Case-Study)	70
2. ExxonMobil Corporation overview	73
Six Key focus areas in the ExxonMobil strategy (SD implementation)	75
ExxonMobil bets huge on Gas Production (Case-study)	77
The link between sustainability and High performance	81
Conclusion and implications	83
Five Prerequisites of Sustainability Implementation within the energy industry:	84
Bibliography:	89
Appendices:	99
Abstract (German)	102
CURRICULUM VITAE	103

List of Figures:

Figure 1: Thesis Structure	16
Figure 2: Research Methodology (Craig&Douglas 2005, Zikmund&Babin 2010)	18
Figure 3: World Population by 2040 (Source: 2012 ExxonMobil Annual Report, P. 06)	25
Figure 4: Four basic Principles of Sustainability (Robert et. la. 2002, <i>Journal of Cleaner production</i> , 10(3), P. 197-214.)	30
Figure 5: Ecologically Sustainable Development. (Jeroen C. M. Bergh. P Nijkamp 1994, <i>The Annals of Regional Science</i> , 28(1), P. 7-29)	32
Figure 6: Sustainability Policy Model (Blackburn W.R. 2012, <i>The Sustainability Handbook</i> , P. 22-25)	40
Figure 7: Fossil Fuel endurance Graph (Source: <i>The End Of Fossil Fuel</i> , Ecotricity Britain's leading green energy supplier Website, Retrieved May 16, 2014)	53
Figure 8: Performance Gap between "Companies should do" and "my company does" (Source: United Nations Global Compact-Accenture CEO Study 2010, P. 18)	57
Figure 9: Internal and External Barriers that keep CEOs from implementing strategic approach to sustainability. (Source: United Nations Global Compact-Accenture CEO Study 2010, P. 19)	61
Figure 10: Projected Global Energy demand to 2050 (Source: 2012 Shell's Annual report, P. 04)	67
Figure 11: Shell's Exploration Resource Additions (Source: 2012 Shell's Annual report, P. 05)	69
Figure 12: Direct Greenhouse Gas Emission (Source: 2012 Shell's annual Report, P. 32)	72
Figure 13: Flaring in Upstream sections (Source: 2012 Shell's annual Report, P. 32)	72
Figure 14: Energy Mix in 2040 (source: 2012 ExxonMobil annual report, P. 06)	74
Figure 15: ExxonMobil's Six Focus areas of Sustainability. (Source: 2012 ExxonMobil Annual report, P. 09)	76
Figure 16: Regional Water Availability using WBCSD's Global Water tool (Source: ExxonMobil Annual report 2012, P. 20)	77
Figure 17: ExxonMobil and XTO Energy- natural-Gas fields across U.S. (Source: <i>The Wall Street Journal/ Business</i> . Published Dec 15.2009, Retrieved May 21, 2014)	79
Figure 18: Gas Giants in U.S. 2009 (Source: Natural Gas supply Association U.S. Retrieved May 21, 2014)	80

List of Tables:

Table 1: Extract of Article 2 of the Annex of Recommendation 2003 (European Commission, Retrieved April 29, 2014)	21
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Glossary

Acquisition or ‘Takeover’: One company acquiring another. Acquisitions (Takeovers) usually take place by purchasing the targeted company’s shares above current price using different financing methods such as cash payment or/and an exchange for acquirer’s shares.

CHP Generators: Combined Heat & Power (CHP) is a well-proven technology. This technology converts a single fuel such as Gas or Diesel into both Heat and Electricity in a single procedure at the operation platform. CHP has been proven as efficient, operational, and environmentally friendly as well as financially beneficial for different customers by the Generator Associates. (*Appendix 1*)

Competitive advantage: Different feature, special capabilities or even a competitive Marketing-Mix strategy that helps a company gain more consumers or bigger market share compared to its rivals in the same industry.

CO₂-Emission: a colorless, odorless and non-poisonous gas, which is produced by the combustion of carbon as well as burning Oil, Coal and natural Gas for energy usage. CO₂ is also produced from burning wood and waste materials as well as industrial platform’s processes such as cement production. Carbon Dioxide is the largest part of greenhouse gasses in the atmosphere and disturbs the earth’s solar radiation stability.

Core values: The question about today’s and future image of the firm that starts with “How”. The core value of a firm demonstrates a corporation’s vision for the present and future.

Flaring in Upstream: Burning natural gas that cannot be converted or sold at the Crude Oil extraction platforms. It often happens that at the Oil extraction stations, Hydrocarbon gases accompany Oil to the surface. Therefore, if capturing and using it has no economic reason, then burning at the station is a solution and that is called Flaring.

Greenhouse Effect: The natural process in which the sun’s energy is trapped by the atmosphere and it produces a certain degree of temperature to support life on earth.

Greenwashing: The act of misleading customers in terms of the environmentally friendly operations of a company, i.e ‘firm-level greenwashing’, or products or services that have been produced in a natural environment without causing any harm to the

environment, i.e. ‘product-level greenwashing’.

International Organization: Entities that are established based on a formal political agreement between members. The existence of such organizations is authorized by law in their member countries. E.g.: United Nations, OPEC...

Multinational Corporation (MNC): *“Also called transnational corporation is any corporation that is registered in more than one country at a time. Generally the corporation has its headquarters in one country and operates partially or wholly in other countries. Its subsidiaries report to the corporation’s central headquarters. The degree of autonomy in each subsidiary may differ from one MNC to another, based on its strategies”.* (Encyclopedia Britannica, retrieved April 27, 2014)

Renewable energy: Energy production from natural resources that have the capability to reproduce themselves in short time, such as the sun, water, wind and geothermal heat.

Stakeholders: Organizations, communities or groups of interest connected to an organization or company, which impacts them or is influenced by them.

Sustainable Value: Considering socio-environmental factors in a financial analysis and investment decision-making process in a firm.

Abbreviations

CEO – Chief Executive Officer
CHP – Combined Heat and Power
CO₂ – Carbon dioxide
CSR – Corporate Social Responsibility
EMAS – Environmental Management and auditing systems
ESD – Ecological Sustainable Development
FDI – Foreign Direct Investment
GDP – Gross Domestic Product
IEA –International Energy Agency
IMF – International Monetary Fund
IOC – International Oil Corporation
IO – International Organization
IP – Intellectual property
JV – Joint Venture
M&A – Mergers and Acquisitions
MNC – Multinational Corporation
NGO – Non-Governmental Organization
NOC – National Oil Corporation
R&D – Research and Development
SD – Sustainability development
SME – Small & Medium sized Enterprise
SP – Sustainability Principle
TMC – Toyota Motor Corporation
UN – United Nations
WB – World Bank
WBCSD – World Business Council Sustainable Development
WTO – World Trade Organization

Part 1

Introduction

The first part of the research begins with an introduction to the focus point of the thesis and is followed by the research objectives and motivations. The development of a research question based on research objectives is discussed and demonstrated in the first part as well as the graphical illustration of thesis' methodology and research structure.

Introduction

Human beings need vital substances such as food, clean air and water, productive topsoil, physical and mental health, a living environment as well as protection, affection (Manfred A. Max 1989) and other natural factors in order to survive. Studying our ancestors' lifestyle shows that from the beginning, inhabitants of the earth have been trying to fulfill their needs with the purpose of living better and developing their lifestyle. Time passes by and people change their behavior and their attitude toward the basics and it looks like they have become greedy in terms of fulfilling their needs. This attitude has been applied towards different aspects in different situations as well as the human approach towards reaching its survival essentials such as food, water, air, topsoil and other elements based on natural resources. These pressures continue to escalate until nature cannot regenerate itself to respond to human needs, because these sources have been exhausted and damaged faster than they have had a chance to reproduce or recover. On the other side, demand is moving upward and the capacity to supply is declining. Therefore, this could be a clear sign of moving from a sustainable situation particularly in terms of environmental aspects to an unsustainable atmosphere on earth.

From another perspective, fulfilling different portions of the Maslow's hierarchy of needs (1954) has been defined as the initial goal for companies to be profitable in various industries. As Maslow has mentioned, so called "deficiency needs" or "d-needs" have to be met before individuals have higher desires (Maslow. A. 1954). This has been targeted by companies to attract consumers and made them loyal to their brands ever since. Multinational Corporations as well as Small-Medium Sized Enterprises aim

towards these initial needs as their goals and implement them in the company's core-values. From a point of view concerned with sustainability, picturing our society as a funnel, which is getting narrower in time as a result of increasing social and environmental restrictions as well as decreasing natural resources and escalating our levels of consumption and demand, is a warning towards individuals, companies and governments about the unsustainable situation. Therefore, we all have to realize that we cannot live, operate and succeed as we used to, because each individual, organization and corporation as well as government is a component of society. Concerning organizations and companies, they have to operate more strategically in defining their future plan based on their predictions of upcoming market conditions. The industrial World has been trying to develop and expand through different activities, which have to occur through innovative technologies and creative changes to reduce harmful consequences. This would help corporations develop themselves towards sustainability, which our future society will need more than everything else. Consequently, forward-looking corporations could keep themselves from hitting the walls of the funnel and develop their competitive advantage for the future as well as being environmentally friendly. The more individuals and corporations invest in designing a truly sustainable future, the more they will earn profits from the leverage and help themselves as well as others, by guaranteeing a sustainable development of our natural planet. In order to walk through the concept of sustainability, corporations could implement various strategies in their business plan but, as already stated above, innovative patterns and technology oriented tactics would be the most efficient approach for them. In this research, Acquisitions (takeovers) are considered as one of the fastest and most efficient methods to achieve uptrend technologies for MNCs from SMEs in order to not only be sustainable in terms of environmental aspects but also experience financial sustainability.

Therefore, the question guiding our research is:

How could the Acquisition of SMCs assist MNCs towards sustainable development?

The thesis is based on a descriptive research method which aims to understand culture, processes and experiences within MNCs in the energy market. Moreover Insights and visions of MNCs with regard to takeover strategy and degree of innovativeness are

considered through the research as a crucial part of the answer. Therefore, findings are bound to a particular research framework of sustainable development supported by primary and secondary data. The analytical part of the thesis is supported by annual reports of the targeted corporations, relevant journals, previous literature and related information in regard to corporations' approach towards experiencing sustainability. Our main research hypothesis, which has been stated to answer this thesis' research question, is:

Main H: “Multinational Corporations acquire SMCs to progress towards sustainable development ”.

Sustainability in every industry as well as Energy/Oil has to be divided into two parts, products and operations. Product as the first subdivision is concerned with sustainability within the products and the possibility of substituting alternative fuels with fossil fuels for instance in the energy business and Operation as the second subdivision is oriented towards energy consumption, which is essential for operating refineries, emissions and waste. In fact, energy corporations, which are operating green (minimizing emissions and waste) are not necessarily as sustainable in their decisions, production lines as well as their products, as they might declare. In this research, the above-mentioned hypothesis with regard to two different sustainability related aspects has been tested based on previous studies, annual reports and interview outcomes.

Consequently, this thesis tends to mainly answer the research question by testing the main hypothesis based on a descriptive (case-study) method. This research method, as illustrated in figure 2, leads to very precise and specific outcomes as well as determined experiences, opinions and motives and has been chosen to completely cover the thesis topic and by being suitable for the selected industry.

Structure of the Thesis

The thesis contains three main parts. The First part starts with the theoretical aspect, which is concentrated on the Overview of the Energy (OIL) industry, a Sustainable Development definition and its fundamental framework as well as a brief background

review to appreciate why Sustainable Development has gained a lot of attention lately. Looking over relevant literature and mentioning SD principles as well as some of its key aspects in regard to Multinational Corporation strategies towards sustainable development can be expected in this part. Acquisitions (takeover) as a part of MNCs' strategy and how it could be considered a break-even point to sustain a corporation's market-share as well as its competitive situation in the future, is discussed in the first part of this thesis.

The second part of the thesis is focused on the analysis of the theoretical aspects that have been discussed in the first part. Considering the fact that the second part is the analytical part of the thesis, apart from how SD could be achieved by MNCs, this part contains two case studies regarding Multinational Corporations' strategies towards SD that are currently operating in the Energy industry, namely: **Royal Dutch Shell co.** and **Exxon Mobile co.**

Afterwards, based on the case studies of the targeted corporations, theoretical frameworks will be applied to examine how these two Energy Giants operate in terms of being more sustainable not only environmentally but also financially.

Finally, the third part of the thesis contains key findings, discussions, limitations as well as some managerial suggestions. The graphical pattern of the thesis is shown below (Figure 1).

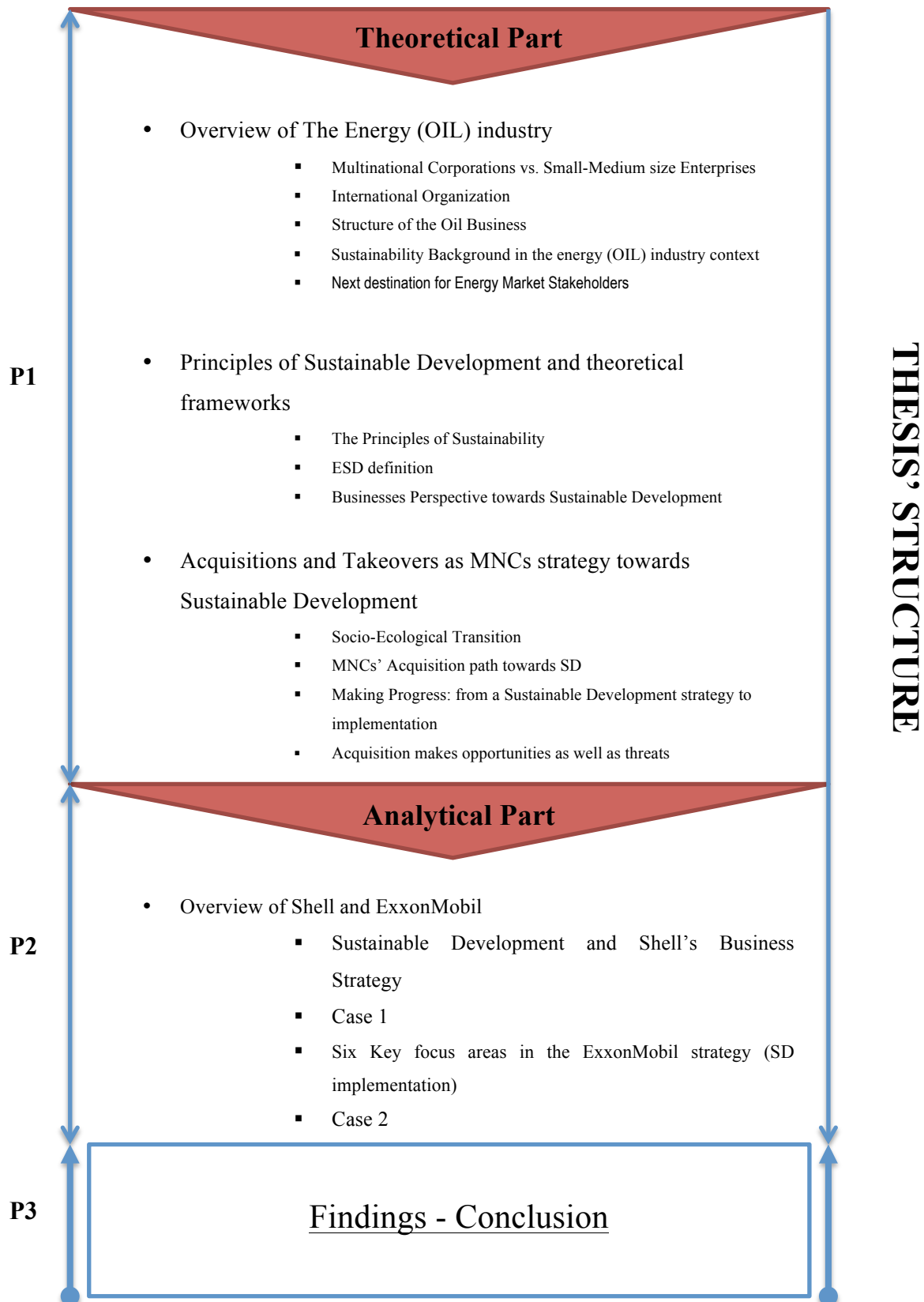


Figure 1: Thesis Structure

Methodology

According to the literature about research methods and different approaches to studying a research question, there are three types of research:

- Exploratory research
- Descriptive research (case study method)
- Causal research

When it comes to developing new ideas or examining uptrend insights, exploratory research is employed to assist researchers in discovering new market opportunities. Descriptive research usually answers, “What is” or “How is” questions about a situation. In other words, this method describes situations, organizations, variables, and individuals in order to characterize the targeted situation by researcher. Causal research, as it might be clear from the name is looking for cause and effects, and tries to find if there are any relationships between different variables and if one variable could influence others. (Craig&Douglas 2005 – Zikmund&Babin 2010)

Considering different research methods cited above, this thesis is categorized as descriptive research, while being focused on Acquisitions (takeovers) as corporation’s strategy towards being market sustainability with an intention to describe Multinational corporations operating in the energy industry and explain their current vision and mission with regards to sustainability issues. According to the thesis’ data source, based on related literatures, primary and secondary data are two types of data sources that could be applied in any research. Primary data refers to the sort of data that has been collected by researcher him/herself and secondary data has usually been collected before for any purpose other than the research for which is going to be used (Craig&Douglas 2005 – Zikmund&Babin 2010). The data that has been used in this thesis was gathered from various sources such as brief interviews conducted by the researcher himself and data collected from annual reports, journals, previous literature, books as well as Internet articles. Even though this thesis started with the intention of gathering primary data based on interviews with R&D managers of the targeted energy corporations, unfortunately, out of many emails and phone-calls made, just one manager

accepted to be interviewed (under certain conditions: nondisclosure of his/her name and his/her company's name in the presentation and the thesis). Therefore, this thesis is based on partial primary and secondary data in an attempt to answer the research question.

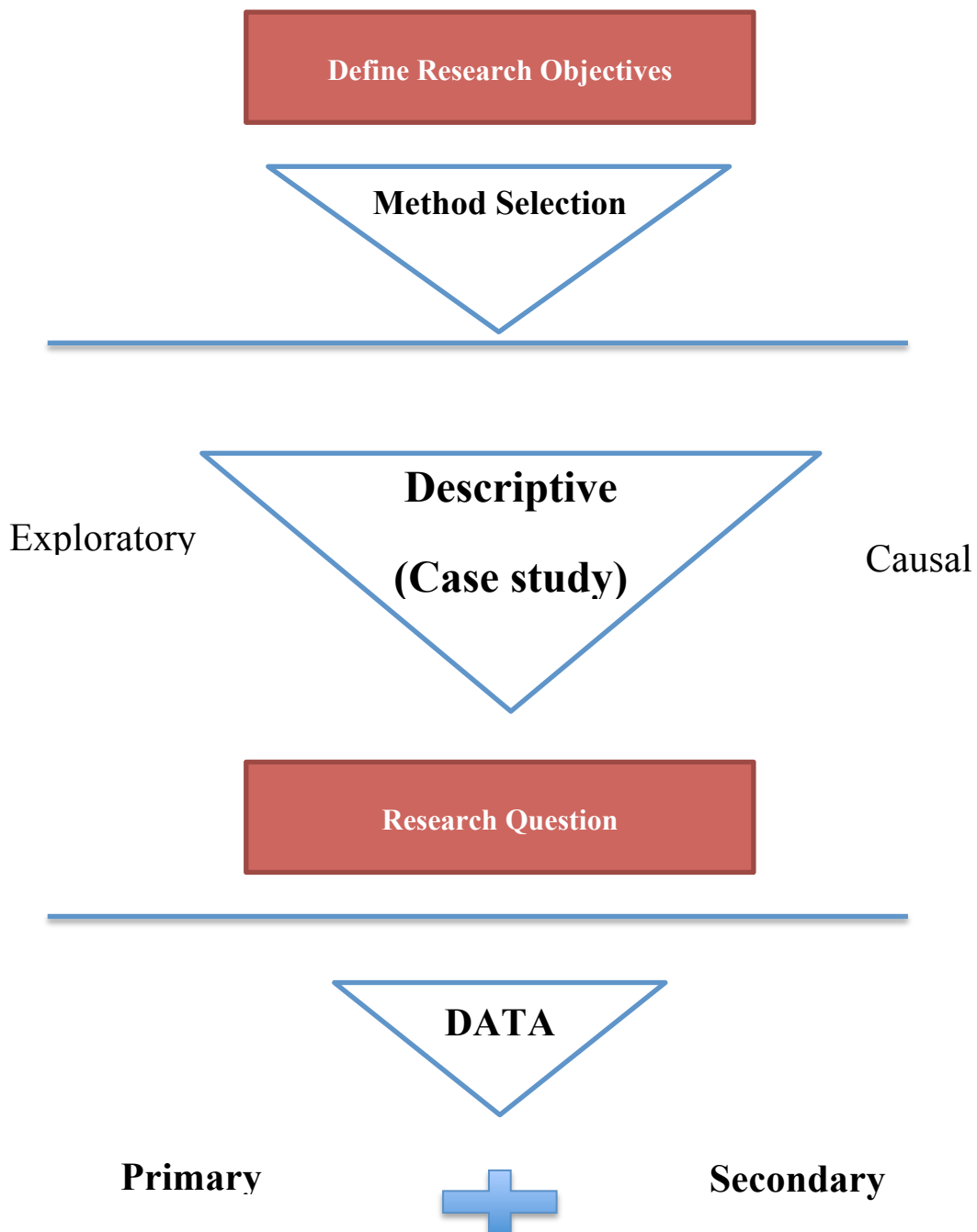


Figure 2: Research Methodology (Craig&Douglas 2005, Zikmund&Babin 2010)

Overview of the Energy (OIL) Industry

Multinational Corporation vs. Small-Medium sized

Enterprises

A short description of MNCs and how they can differ from SMEs would be helpful to understand the text and would make it easier later on when this thesis discusses MNCs and SMEs in the Energy market. Multinational Corporation by definition means “Multinational Corporation (MNC), also called transnational Corporation, any corporation that is registered in more than one country at a time. Generally the corporation has its headquarters in one country and operates partially or wholly in other countries. Its subsidiaries report to the corporation’s central headquarters” (Encyclopedia Britannica, retrieved April 27, 2014). On the other hand SMEs could be defined as “*The category of micro, small and medium-sized enterprises (SMEs) made up of enterprises which employ fewer than 250 persons and have an annual turnover not exceeding 50 million euro, and/or an annual balance sheet total not exceeding 43 million euro*” (Extract of Article 2 of the Annex of Recommendation 2003, Retrieved April 29, 2014) based on new the European Commission definition that has been published in Art.2 (2003). SMEs have initially been defined in 1996 by the European Commission under two different categories, the first one being "small size category" which has less than 50 employees, equal or less to 7 million euros annual turnover and equal or less than 5 million euros annual balance sheet in total, second is "medium size enterprises", where they have less than 250 employees, equal or less to 40 million euros AT and equal or less to 27 million euros annual balance sheet in total. Since 2003, the European Commission decided to change the definition and upgrade it to accommodate certain changes that have constantly been occurring. Therefore, the market situation and developments in price and productivity terms at that time as well as the development of new kinds of corporations that might be hard to fit in any of those pre-defined categories, made the EC fix the definition of SMEs to what is shown in following figure.

Company Category	Employees	Annual Turnover (AT)	Balance sheet Total
Medium-Sized	< 250	≤ € 50m	≤ € 43m
Small	< 50	≤ € 10m	≤ € 10m
Micro	< 10	≤ € 2m	≤ € 2m

Table 1: Extract of Article 2 of the Annex of Recommendation 2003 (European Commission, Retrieved April 29, 2014)

As a result, SMEs have been categorized in three different parts, which means the EC added Micro Enterprises to this definition as well as some changes in annual turnover and annual balance sheet. Therefore, based on the new definition, SMEs with less than 10 employees, annual turnovers equal to or less than 2 million euros and annual balance sheet equal to or less than 2 million, are categorized as Micro SMEs. Enterprises which have less than 50 employees and annual turnover equal to or less than 10 million euros and equal to or less than 10 million annual balance sheet in total, are seen as small category and finally, companies that have less than 250 employees and annual turnovers equal to or less than 50 million euros and annual balance sheets equal to or less than 43 million euros in total will be categorized in the Medium-sized section.

Now that the general definition of MNCs and SMEs has been discussed, having a closer look at the role of these two enterprises' categories in the energy industry is essential. Industrial energy efficiency impacts environmental protection aspects significantly. The IEA in its report estimated that about 75 percent of the world's coal consumption, 44 percent of the natural gas consumption and 20 percent of the world oil consumption has been used for manufacturing activities (WEO.I World Economy outlook. IEA 2004, P. 422). Therefore, it is quite essential for MNCs as well as Small- Medium sized Enterprises due to this consumption rate to embrace energy efficiency in their principles. First, looking at the energy efficiency as a factor which could increase the

firm's profit and could be used as an incentive to adapt energy efficient technologies. Second, by taking environment protection as a core value of the firm and making all parts of the company be loyal to this matter.

Looking at the global energy companies' annual reports in the current situation, economic downturn reduces demand in many developed countries and their markets. Therefore companies and consumers try to find any tools or patterns to run cost reduction procedures as well as focus on the efficient production lines. Even in developing markets, where higher demand for energy is expected, companies are trying to implement cost management tools in order to avoid damages from the current trend of the economy. As Multinational corporations' CEOs already realized more than ever, the connections between business performance and sustainability is crucial. Therefore, it is quite obvious that environmental, social and governance issues are the top concern of Multinational corporations as well as SMEs and there is an understandable belief that it will be critical to MNCs to integrate these issues in their future decision making processes and business values in the forthcoming market due to different aspects.

According to the energy industry and what has to be done from the company's side, it is worth mentioning that Small- Medium sized Enterprises (SMEs) have always been considering as pioneers in innovation and creativity. The biggest question concerning this matter in the energy industry is *How Energy-SMEs can assist the industry in being environmentally friendly?* There are different components that could make a company environmentally friendly, such as controlling pollution, using alternative Energy sources, managing their waste, using bio degradable waste materials, implementing technological improvement, saving energy by applying energy efficiency paths, adopting green technologies and other means. MNCs in the energy market are facing serious and constant need for top talent in the engineering field as well as other related areas. Therefore, these companies decided to focus on investing more in their human resources as well as recruiting younger, fresh high-skilled workers especially in the oil and gas industry. Moreover, it is how these Small-Medium sized enterprises have been born and developed based on young, fresh ideas that attain high-skill.

On the other hand, from the educational point of view, the upcoming trend of renewable energy technology is enjoying the interest of younger talents'. A growing number of

institutions and universities around the world are implementing green industries as well as clean energy in their curriculum to attract more students and meet future market needs of knowledgeable labor force. Now, however, industries face a huge shortage of skilled employers in this section but renewable SMEs filled in the gap and have provided some innovative and creative patterns as well as technologies which are remarkable from the MNCs point of view. MNCs such as OMV that have been operating in the energy market for a long time, have already found out that in order to keep competing in the future market and profit in the current downturn economy, they have no choice but to move towards sustainability and apply sustainable development strategies. SMEs, due to their size and being focused on a specific part of an industry have been on MNCs' top list of attraction in order to inject new innovative technologies in the MNCs' body as well as assisting them to achieve sustainable development as their leverage in the energy market.

International Organizations' purpose

In fact, each member of society has to contribute in order to reduce harmful impacts that might turn our environment into an unsustainable situation. The concept of Public Action has been developed in order to overcome this issue. Domestic Governments and politicians on the one hand and on the other hand corporations, organizations and individuals are all different parts of this public action that influences our environment. Public Action has some additional players when it comes to the international markets. For instance, until the 1960s, Multinational Corporations operated rather independent through their subsidiaries in each host country and each of them was responsible for the specific requirements of its own domestic market. They have headquarters, which are mainly responsible for financial functions and technology transfer as well as export coordination. These corporations were mostly connected to the local government and in terms of legislation and jurisdictions under the control of local commissions and organizations. Due to different reasons, mainly firm's costs and benefits, corporations decided to cross the borders and be multinational which could be considered the starting point of globalization. This fact can clearly be observed in the energy market. Corporations such as oil enterprises have to cross borders to find new resources which are mainly not in their country of origin. Therefore, in time, the corporations' structure

has changed and they became more internationally oriented which in most cases means that these companies are operating in various countries and dealing with millions of customers around the world or in the case of oil companies, exploitation in different countries. The situation made everything complicated, for instance, legislations issues, intellectual property, health related issues, human-law as well as monetary issues and etc. Therefore new conditions have to be controlled by new and powerful organizations, International Organizations (IO) such as the United Nations (UN) and its sub-organizations, the International monetary fund (IMF), the World Trade Organization (WTO) and other related IOs, which have been developed to deal with these cases on an international scale are examples of hundreds of IOs designed to make these issues easier. Thus developing such organizations makes it simple for MNCs to expand and spread across different countries in different continents without being worried about legal issues as well as monetary and financial issues to reduce cost and find new markets. As an example, the International Monetary fund's purpose has been announced as *"The International Monetary Fund (IMF) promotes international financial stability and monetary cooperation. It also seeks to facilitate international trade, promote high employment and sustainable economic growth, and reduce poverty around the world. Created in 1945, the IMF is governed by and accountable to the 188 countries that make up its near-global membership."* (International Monetary Fund annual report 2011, P. 8-10)

Therefore, International organizations as well as domestic governments and individuals and corporations, which operate in a society, have to be concerned about Social issues, environmental issues and how their behavior could affect sustainability in different dimensions.

Structure of the OIL Business

In order to understand what oil and gas corporations are doing and how they operating, it is essential to consider the structure of the oil business. The oil industry consists of three different parts, which are each operating separately as well as together, namely: Upstream, Midstream and Downstream. The Upstream section deals with all exploration and production procedures and related technologies and issues. The

Midstream section is mainly concentrated on the distribution system and how the products from Upstream such as crude oil is transferred to its destination such as tankers and pipelines as the bond between Upstream and Downstream. The Downstream sector includes refining, marketing, commercial and retail distribution such as convenience stores and gasoline stations. As Daniel Yergin (2008) touched upon in his article in the financial Times, corporations that operate in both Upstream and Downstream activities such as corporations studied in this thesis are considered integrated. As already cited, national Oil corporations that are owned by the state account for about three-quarters of the world's oil production but private sector corporations still get positions in the top 10 among all corporations in the energy industry as well as all companies in other industries combined (Yergin 2008).

Sustainability Background in Energy (OIL) industry context

The concept of sustainability has been defined as *“meeting the needs of the present without compromising the ability of future generations to meet their needs”* (World Commission on Environment and Development 1987, Oxford University Press. P.27). In the course of this thesis and based on interviews with different CEOs from different MNCs in the energy industry, a huge shift has been observed from previous researches. (Global Compact survey UN 2007) For many CEOs as well as their corporations, sustainability was just a new concept that could lead to new target groups, which was not that interesting in their point of view at that time. Today, seven years later, sustainability became one of the most vital factors on the top of CEOs' mindset. Looking at the energy market from the suppliers' point of view helps to understand what they are dealing with. Environmental, Social and governance issues are growing constantly and CEOs dealing with these challenges on the one hand and on the other hand being in a competitive market such as the Energy market forces MNCs to look at sustainability as a vital factor for their survival and future market competition. Apart from environmental concern issues, Sustainable development in a business could lead to new markets and sources of demands, bringing up new business models as well as innovative ones, helping the industry to operate more efficiently in terms of costs with even higher quality concern methods. Therefore, taking these benefits into account, it would be sufficient to convince CEOs to drive their corporations from avoiding bad

operations to do something good, not just for the enterprise itself in terms of financial aspects but to society with regard to corporations' social responsibility (CSR).

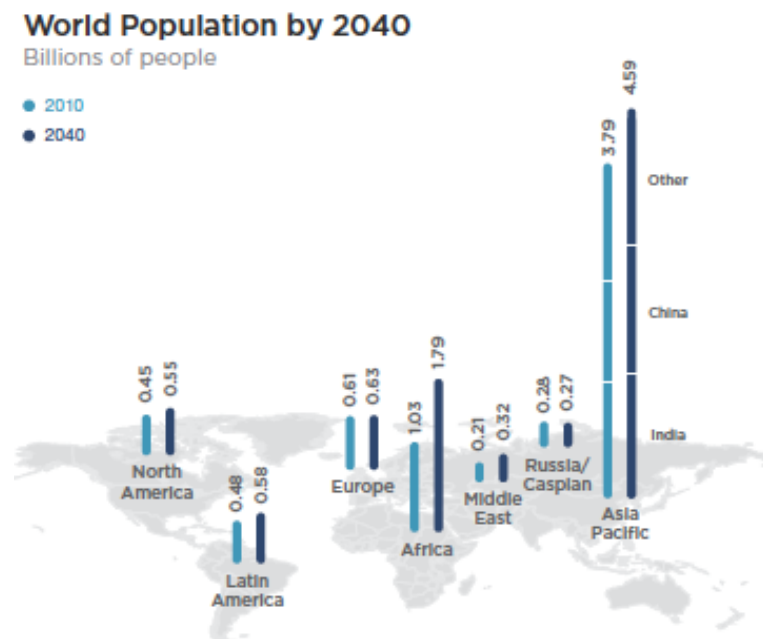


Figure 3: World Population by 2040 (Source: 2012 ExxonMobil Annual Report, P. 06)

Today's Energy industry is facing different difficulties. Limited resources and population changes, which lead to an upshift in demand in this market on the one side and on the other side leakage of trust between Energy companies and national governments, have made this industry be at the point of a truly complex transition. Recently discussed concepts such as wind farms, solar panels on rooftops, biogas plants are just a part of this energy transition. This question still worth asking is that *what does energy transition mean? Why are governments as well as MNCs concerned about this phenomenon?*

To answer all these questions and related ones, we have to study which part of our living conditions needs energy. Transportation, Industry, Households and Trade could be true answers to this question and our main consumption points. Nowadays, we get most of our energy from fossil fuels, but this consumption has initiated huge arguments and discussions for decades. Two of the most important arguments since the beginning of industrialization (1760 to sometime between 1820 and 1840) are the release of large amounts of carbon dioxide, which boosts up green-house effects and heat up our

environment rapidly. As a result, man-made climate changes have been ranked as top list elements, which dramatically change our biosphere and create an unsustainable atmosphere. On the other hand, as already mentioned, fossil fuel due to a high rate of consumption is decreasing rapidly. There are still some locations left to exploit these natural resources but these are truly expensive, unsafe and dangerous for the environment. As a result of industrialization, the rate of CO₂ on the one hand and energy demand on the other hand continue to grow quickly and increase resource scarcity. Although applying new plans in a short term is essential but Nuclear energy as a substitute source is not an ethical and true answer to this issue. The catastrophes, which have happened such as Fukushima have shown us that a nuclear source is entirely against our principles of sustainable development. Therefore companies as well as governments decided to shift towards another kind of evolution in the energy industry. As their first item, they decided to shift to renewable energy sources instead of fossil fuel. Their second item was to implement new technologies and innovations to reduce energy consumption and implement new energy efficiency measures to control demand. Another meaning of energy efficiency is avoiding energy waste from its generator to households or its destination. All these factors and elements can be achieved through transition.

Considering the intricacies of transition in the energy industry, companies understand that the only way to structure an efficient future energy system is implementing sustainability principles within their development strategies. Addressing other issues that MNCs are facing such as inequalities, labor standards, Economic development, Social development, Corruption and human right would not be that difficult to resolve by leading this transition in the energy market towards a sustainable future. Moreover, Sustainable development in the future could be considered as leverage for MNCs and could assist them on their upcoming competitive situation especially in an energy market that has plenty of constraints. One of the reasons for the energy industry being at the point of transition is the growth rate and shifting demand in this market. Projections in the energy section have illustrated that between now and 2030 primary energy demand will grow drastically. This demand shifting has been controlled or even decreased in some developed economies by new environmental regulations as well as innovations such as intelligent infrastructure in order to decrease energy demand (UN

Global Compact 2010). Nevertheless, in developing countries, a high level of the economic growth will always lead to a tremendous rate of increase in energy demand.

Addressing the high level of growth in energy demand will require new and practical approaches to manage an impact such as resource scarcity, emission regulation as well as the intricacies of its supply.

Therefore, as mentioned, due to different events and environmental issues, MNCs in the energy market have been facing a significant reduction in trust within the industry's stakeholders. As one of the CEOs mentioned, in order to reach a successful transition process, Trust is needed. Constructing the future of the energy industry needs to be supported by the Government, Companies, society and individuals. For instance, looking at the Oil and Gas market could help describe the vital cooperation between stakeholders in the energy industry. The 'Easy OIL' period has passed and these natural resources are widely owned by National Oil Companies (NOCs). Close cooperation between government in NOCs' countries and National Oil companies leads to a control of around 70 percent of Oil reserves and 20 percent of Gas reserves in the world (UN Global Compact 2010). As MNCs operating in Oil and Gas markets (IOCs) understand the scarcity of these natural resources, they are trying to explore new ways of cooperation with NOCs to secure their brand as well as their reputation. As a result, IOCs have to discover new approaches for a greater social commitment in local markets, such as sponsoring Social events, educational programs, funding infrastructure projects etc. These activities provide a high degree of social responsibility in a society, which could help IOCs get closer to Local stakeholders and build trust in domestic energy markets in order to operate in the long-term based on successful relationships.

Next destination for Energy Stakeholders

In order to develop sustainability in the energy market, MNCs operating in this industry have to combine different solutions, such as renewable energy sources that have been considered by different players in the Energy market. *“Renewable energy is energy generated from natural sources such as Wind, Sunlight, Water (rain) and Geothermal heat, which are naturally replaced”* (Renewable Energy Policy Network Global Status

Report, 2009). Innovation and technology have been regarded as the most important assets for MNCs to assist their development in today's market. Various corporations such as MNCs and even SMEs are implementing R&D departments to find some competitive advantages in the energy market. Therefore even companies with a low budget will not be able to cut this department's fund since R&D is the brain of the Enterprises' body and they would not be able to survive without the brain working well. As a result, discovering renewable energy sources would not occur without investing in infrastructure improvements such as manufacturing smart grids for a solar energy source. As discussed, innovative technologies play a significant role in the energy market's transition. On the one hand it will help companies boost their technology, find new energy resources and be able to use renewable energy, on the other hand, it could be used as a tool helping society and encouraging NGOs to educate consumers and control demand and make it efficient. Obviously, developing clean energy sources as well as discovering renewable technologies is an enormous opportunity for latecomers or new entrants to gain market share as well as a remarkable tool for existing players to advance their positions. Despite huge investments that energy corporations have made in renewable energy sources, the implications of these kind of investments are still unclear.

Principles of Sustainable Development and Theoretical frameworks

The Principles of Sustainability

As a company or even as an individual, while you understand and define sustainability for the whole biosphere, it is much easier to perceive it in your own context. Afterwards the understanding could gradually help you approach important factors within your situation for being a part of the solution rather than the problem. Initially, the principles of sustainability could be defined as follows: first, materials that we dig out from the earth's crust (mine materials) are wasted or no longer systematically handled as they should be. CO₂ emissions and phosphate lakes are some examples that illustrate our relationship with mine materials, which is such that we allow them to increase and create waste in the system, which is fundamentally unsustainable. The second principle is to prevent the systematic increase in the concentration of chemicals (Robert et al, 2002). Therefore if we manage the chemical usage rate, we could be a part of solution rather than the problem, if not then we will have to face environmental as well as economic consequences. The third principle is society, which operates in such a way that we, as its members are physically destroying the biosphere with instruments as well as some of our inventions for instance encroaching more and more in natural areas by overharvesting them apart from polluting the environment, which has been argued in two first principles. The fourth principle is that in the way we are operating now, trust has been eroded between people and their institutions. Trust is one of the most important elements that need to be developed and a system like this, based on trust, could keep us together. Therefore, at the moment, our society needs a functional social system that could deal with ecological issues now more than ever.

Looking at the human society, as the only wholly owned subsidiary of the Earth environment, could make it clear that companies especially in the energy industry are destabilizing our environment, which will lead to a downturn economy. As a matter of fact, it has been proven by science that we are making our environment unsustainable, which is escalating negatively through time. Therefore, our organizations such as MNCs and SMEs have no choice but to find a new direction to innovate as well as implement

new strategies in order to empower themselves and develop their competitive advantage.

Sustainability in a system means that things can keep going, sustain themselves and continue into the future and go on forever. From the United Nations (UN) prospective, sustainability for a planet means that it can keep doing what it was designed to do, such as provide clean water, fresh air, produce food and let the human society have a high quality of life forever. Conversely, unsustainability defines a situation in which those elements cannot take place. About twenty years ago, Swedish scientists developed a definition for sustainability, which contains four basic principles considered as a care instruction for our planet. This means that human society as a part of the system, which is called planet in this case, has to take care of these principles while being concerned about these principles is fair for the planet and human society as a part of this planet could benefit as well.

The so called care instructions (Four basic principles of sustainability) are as follow, first, reduce our dependence on fossil fuels and heavy metals, second decline our dependence on synthetic chemicals that persist in nature, third, reduce our destruction of nature and fourth, not preventing people from globally meeting their needs.

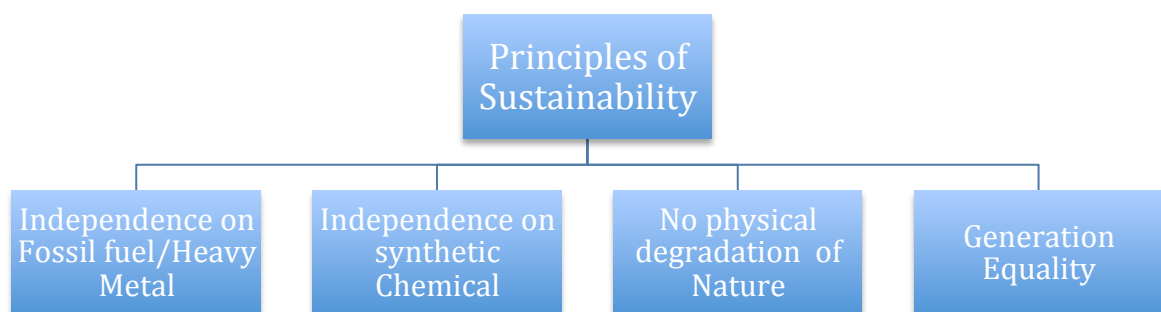


Figure 4: Four basic Principles of Sustainability (Robert et. la. 2002, *Journal of Cleaner production*, 10(3), P. 197-214.)

As cited above, due to a rising population as well as an increase in living standards, demand for services such as clean air, electricity, food and etc. has been grown significantly but Earth's ability to meet all these services is declining because of the way we are living. In our path to prosperity, growth and success, we are damaging the system that we are truly dependent on as a part of it. In another words, we as humans

have become a threat to our own way of life. In order to live sustainable, it is essential to consider those four care instructions and apply them in our way of living at our home and at work. If we become concerned about the environment and take these care instructions into account, we can all appreciate a better quality of life by wasting less, polluting less and improving the Earth's ability to provide us with our essentials.

There is a concept called the Framework for Strategic Sustainable Development (FSSD), developed by professor Karl-Henrik Robert in 2002 based on several literature examples and articles for examining sustainable development within corporations and suggesting strategies as well as managerial decision-making paths so far. In this framework, it has been assumed that Earth (Or the targeted corporation) is a system and, in order to keep this system running well, we need to understand its conditions. As a system component, it has been proven that the Earth itself is a sustainable system until the human society continues to learn and figure out how this system works. Over the past twenty years this system has been threatened by its owners.

ESD definition

Despite our study's concept, which will cover strategic sustainability as an approach for corporations in order to develop different aspects of their operations such as economic, social and environmental aspects, ESD is also crucial as one commonly used concept when it comes to sustainability and SD. *Ecological Sustainable Development* also known as ESD is a combination between environmental and economic factors, which has been considered a vital element in the decision-making procedure. ESD has its own principles and could be achieved by implementing its key factors such as the precautionary principles, namely, if there are serious threats or irreversible damages to the environment, a shortage of scientific certainty, which should prevent environmental degradation. Another ESD principle is inter-generational equity, which means that the present generation should ensure that the health, diversity and productivity of the earth are developed or preserved for future generations, in other words fairness or justice between different generations. Figure six shows how different aspects of *Ecologically Sustainable Development* connect to each other and develop a new concept in their intersections namely ESD.

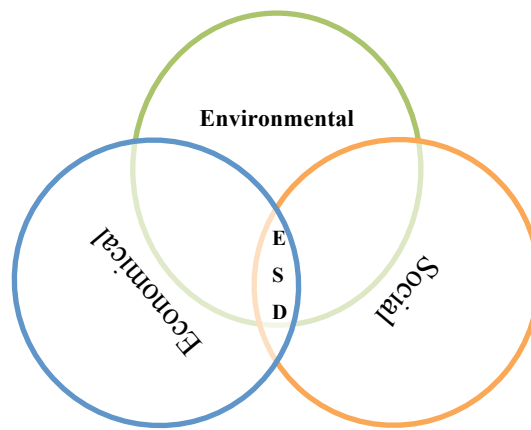


Figure 5: Ecologically Sustainable Development. (Jeroen C. M. Bergh, P Nijkamp 1994, *The Annals of Regional Science*, 28(1), P. 7-29)

The above-mentioned three different dimensions of Sustainable development also known as triple bottom lines should not make sustainable development complex or difficult to implement. In fact corporations have to focus on the two most critical dimensions, which are Social and Environmental then define their strategies based on these two dimensions as well as implement them in the corporations' core value. By having framed social and ecological stability, companies can then earn money and profit from the stepwise approach by applying fair strategies. As easily perceived, money is a tool or means for anything else and has to be used to achieve a sustainable social and ecological situation. From the company's point of view, in order to be competitive in future markets and profit more than its rivals, a stepwise solution has to be considered. Therefore it is essential for companies to look at the gap between social sustainability and ecological sustainability as an opportunity to profit and be creative as to discover their competitive advantage in between these two factors. In this context, sustainability defines a situation, in which we are socially sustainable within ecological restrictions and that is what corporations must be concerned about in order to be profitable and competitive in the future, assuming that a corporation wants to start a production line or offer a service to its customers. It is obvious, a company, which is manufacturing and designing its product so that people, as the social elements, like it and it reduces some misuse in the natural system as well as introducing a nice platform to invest in the future through its value chain, must soon earn a profit. As a result, this could be an opportunity for companies to consider on the one hand and it could guarantee their future stability that leads to sustainable development on the other hand.

Sustainable Development through innovation

The sustainable development definition according to **the World Commission on Environment and Development** report published in 1987 is “*a process of change in which the exploitation of resources, directions of investments, the orientation of technological development and institutional revolution are all in harmony and enhance both current and future potential to meet human needs and aspirations*” (Brundtland Report, 1987. *Environment: Science and Policy for Sustainable Development*, 29/5, 25-29). By digging deeper in this definition, two elements could be discovered which could be considered sustainable development’s core factors. The First factor is conservation as well as staying within ecological limits and the second is the concept of creating welfare for poor people and our generation in future. Nevertheless, it is noteworthy to mention that the definition announced by WCED is criticized in some literatures, which have cited sustainable development as an aspiration, in other words try to address SD as a concept that no empirical evidence has confirmed that it can be done so far. Having considered that some countries in history have succeeded in developing without damaging the environment but by looking at what will happen in future it is an aspiration, which is difficult to reach and in fact there are severe doubts whether it is practicable at all. From the first steps of introducing this concept to the world, many challenges such as ethical, political, economic and legislation issues have occurred. Looking at this concept more fundamentally shows that sustainable development is an ethical issue, which needs to be studied with economical and legal means. Therefore the reason that sustainable development is rather an ethical issue is the rights of the relatively rich people alive today, against poor people alive today and future generation as well as the rights of nature as against humans. From the early seventies, the literature has illustrated human impacts on the environment in order to examine whether the human consumption pattern has developed correctly or not. At that time an equation (below) has been developed which says that the human impact (I) on the environment equals the product of population (P) times Affluence (A) and T, which stands for Technology (Chertow, M.R. 2000). As we all know, global population is growing, although slower than it was but still growing just as fast as affluence is aggregated. This simple fact could be a good answer to ones who think that the only solution to reduce

environmental problems is reducing population growth. In fact by reducing the population growth rate, based on the equation below, on the other hand affluence will be decreased as well (Desmond McNeill speech. 2012).

$$\text{Human (I) mpact on the Environment} = (\text{P}) \text{ opulation} * (\text{A}) \text{ ffluence} * (\text{T}) \text{ echnology}$$

By considering the above-mentioned equation, population is growing as well as affluence, which is undeniable but the only factor that influences human impact on the environment is technology, which has a huge debate going on about its circumstance, if technology can or cannot contribute quite a lot in order to reduce environmental problems which are caused by human impact. Consequently, to find a solution or at least a path to reach sustainable development at its first steps Public Action is needed whilst individual actions do not seem to be sufficient. Therefore, in order to motivate the public to care and be concerned, instruments such as economic instruments are needed. Concerning the third part of this equation, which is technology, MNCs as well as SMEs could be the key participants in this public action that need to be motivated by governmental tax and subsidies. This part is where the governmental sector has to be involved in order to take action and motivate different members of society such as companies and individuals to be concerned about environmental sustainability by implementing innovative patterns such as environmentally friendly consumption paths.

The definition of sustainable development by WCED could be settled into two other main elements, Protection and Creation. As already cited, sustainability is about harmony and balance between different components of our biosphere. Being sustainable could be reached by applying some key factors in a pre-defined framework for a short period but the most important factor in this concept is to find a balance between economy, environment and social issues in long-term. Each of these factors has a separate accurate description in terms of sustainability. An economically sustainable system has to be capable of manufacturing goods and services in a way that extreme imbalances as well as destructions in various sectors such as agricultural or industrial production would not happen as well as production has been continuing such that the governmental and external obligations have been met. Sustainability from an environmental point of view is defined as natural resources not losing their stability,

avoiding exploitation of these resources and discovering new resources as well as renewable resources and implementing innovative approaches to avoid over-harvesting. Ultimately, in order to attain a sustained society, distributional equity, sufficient facilities in a different kind such as healthcare service, education, gender equality and political accountability as well as participations have to be achieved (Jonatha M. Harris, June 2000).

When people or organizations as members of a society want to design sustainable development, they have to ask themselves, what is our role in this organization? Where are we going to be in the future? By asking these questions based on sustainability principles such as no longer contributing to that mine material which is increasing in concentration, nor that chemical, nor encroaching physically on lands and when we based our companies on trust between stakeholders and employees as well as our consumers, organization present themselves such that they will be a part of the solution and earn money this way as well as avoiding bad luck in their industry.

As a company, which is operating between various competitors, it has to be essential to discover a pattern to continue development. In another words, being sustainable could be a challenge for Multinational Corporations especially when it comes to competing in the market and keeping or expanding their market share. Considering a market or an industry, there are various forces that could structure the market as well as influence a company's profitability and shape competition. As Porter mentioned these forces could be: (a) threats of new comers. (b) Competition in current market (c) threats of substitute products or services, (d) bargaining power of suppliers (e) bargaining power of buyers (Porter, 2008). These challenges have to be considered by MNCs due to their size and operation areas. Taking all these elements and threats into consideration and putting them in the MNCs' development equation while bearing in mind that it has to be sustainable, would show us that one other component of this equation is missing.

In today's market, beside all legislations and legal boundaries such as IP (Intellectual Property) rights, license issues, trademark law, etc. companies are still worrying about being copied by their rivals and trying their best to keep their innovative patents as well as technologies classified. Multinational Corporations such as Apple and Samsung have been tackling each other currently in regard to Apple's declaration about several

infringed Apple patents in Samsung's new products. These limitations and boundaries would be difficult to realize when it comes to the IT and technology market, as seen in the long-running Apple and Samsung court case. To keep competitiveness in market from the MNCs point of view, innovation has to be involved. Top business managers and CEOs from different MNCs in various industries have described differences between incremental and disruptive innovation. Indeed, corporate managers are looking to realize what their next disrupting innovation could be in order to leverage their company and use it as their competitive advantage (Knight 2005).

According to the literature, Multinational Corporations have two different approaches to set up their innovation process. First is Top-Down innovation, which is based on the corporation's core values, visions and strategies. Second, the Bottom-Up approach based on employees ideas, which might have a chance to be used in the corporations' decision-making procedure. Different effective factors could influence CEOs in deciding which approach has to be followed inside their corporation but for each of them there are incentives and/or challenges, such as legal factors, political reasons, cultural guidelines as well as governmental incentives, environmental factors (especially in the energy market) etc. As a result MNCs may decide to develop their innovation in-house, within the corporation or they could acquire other companies' technology and innovative tools. As studied in some industries and markets such as the energy market and environmentally concern corporations, there is no relationship between firms that have invested heavily in their R&D department in order to produce innovative technologies in-house and their level of innovativeness (Jaruzelski B, et al. 2011). It means that it is more costly to invest in in-house innovation achievement rather than acquiring SMEs, which are already operating with innovative technologies in their fields. More precisely, innovation could be achieved through external partnerships. There are several types of external partnership which will be defined depending on the industry type, market size and other different factors. Considering Toyota Motors Corporation (TMC) as an example, TMC has acquired many features, technologies and abilities of their products from Small-Medium sized Enterprises (SMEs). Products such as the current Lexus RX model or other, which have had different technologies and features such as hybrid, have been born from TMC's external partnership approach. As a result, it is noteworthy to remark that innovation has to

always be involved if MNCs want to achieve an accurate level of sustainability in their developments and MNCs are looking to find the cheapest as well as most efficient approaches to reach trending innovations.

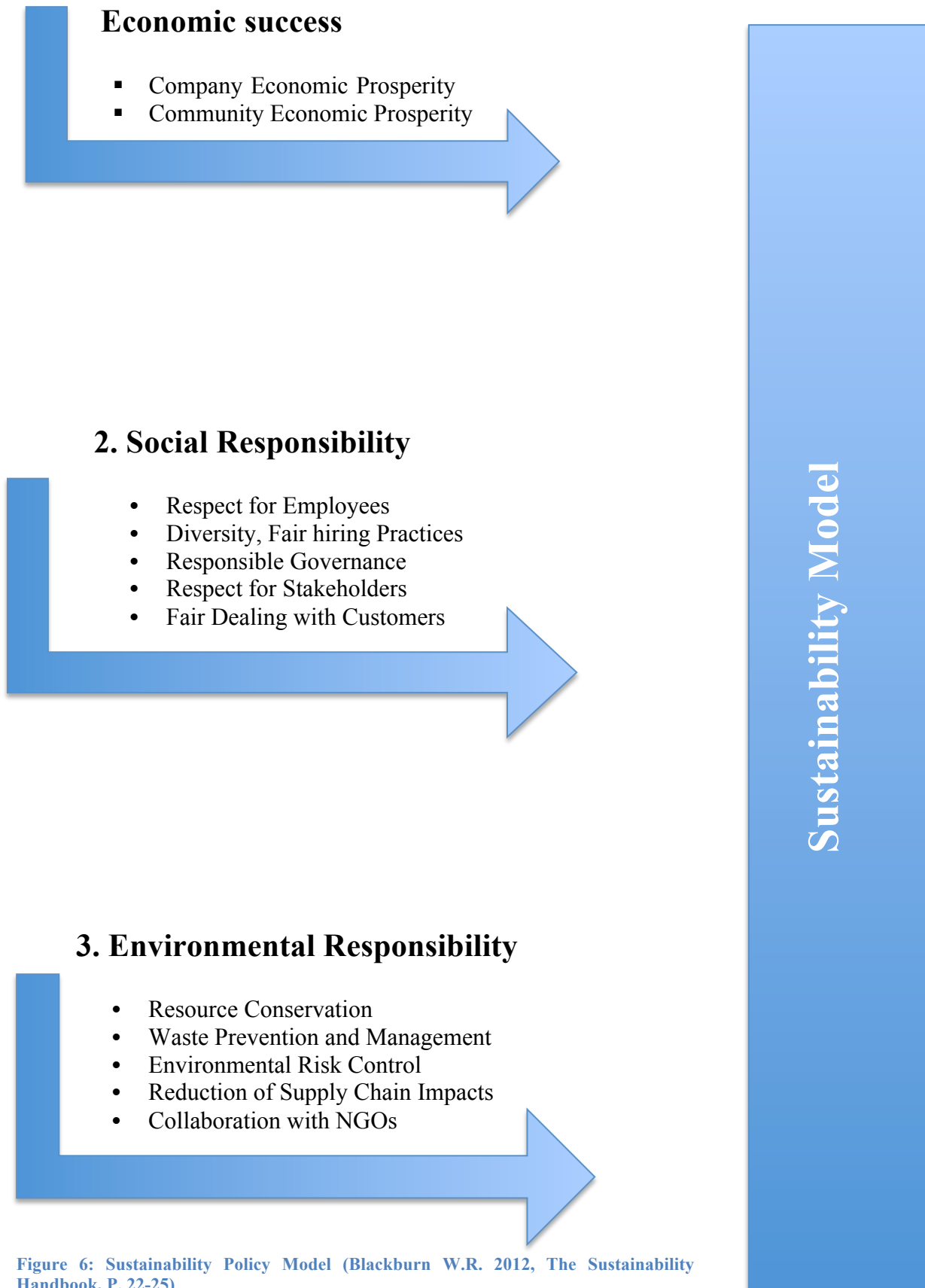
Businesses Perspective towards Sustainable Development

A Model of Sustainability

From the corporations perspective Sustainable development is rather a financial concept than a social one. Jumping into how businesses consider sustainability within their corporations will illustrate four different viewpoints. Cleaner production, engaging in charity related courses of action, greener products, Corporate Social Responsibility (CSR) as well as Environmental Management and Auditing systems (EMAS) are four different business perspectives towards SD. Recently corporations in different industries have tried to change their image, which has been shown by anti-capitalism NGOs to society. Therefore, engaging in different movements that influence both their financial aspects to attract more consumers and be more cost efficient as well as being concerned about social issues, for instance healthcare, has become the top of corporations' priorities. As an example, CSR despite being a self-regulation mechanism has become one of the most important characteristics to be focused on by corporations not only to attract different target groups but to also use as one of corporations competitive factor over the last decade.

All these courses of action, which assume a corporation commitment in sustainability could be summarized in four main visions of performances under a so called Model Sustainability policy (Blackburn, W. R. 2012). First is the *Economic Success* that is defined as using a corporation's resources, mainly financial, wisely. Economic success could be divided into two different prosperities, namely *Company Economic Prosperity*, which is concerns the business situation and how it could survive and grow economically as well as *Community Economic Prosperity* which concerns how our business could help related communities gain and grow. The second vision in the Model Sustainability Policy is *Social responsibility*. Social responsibility itself means that a corporation should respect people and it could be broken down into five different

dimensions. The first dimension is related to employees and how the corporation respects its personnel by compensations, benefits, promotions, training as well as providing work conditions that are safe and healthy. The second dimension, which targets in-house aspects, is diversity and fair hiring practices. The third dimension is responsible governance which is related to how corporations operate in terms of ethical and legal aspects when it comes to controlling the corporation's risk by using economic power. Respecting the corporation's stakeholders is the fourth dimension of social responsibility. Therefore, being transparent, respectful, fair and reliable to a company's local population, investors, suppliers and those who may be influenced by a firm's operation has to truly be considered. The last dimension but certainly not the least important one is being honest and fair with a corporation's customers as well as respecting their critics, comments, ideas and assisting them to feel comfortable and safe with the corporation's products or services. The third vision in the corporations' Sustainability policy model is *Environmental responsibility*. Concerns about how a corporation could impact the environment as well as natural resources positively, if at least by not committing harmful operations and productions could be divided in five different courses of action. First action that has to be considered from corporations is being conservative about our natural resources. Saving our natural resources will help all of us as well as corporations themselves fulfill these resources benefits in long term instead of wasting them. Consequently, reducing corporation waste, which may be generate by their operation as well as production procedure could minimize hazardous environmental impacts. Reduction of supply chain impacts by managing and controlling corporations' environmental effects could not only keep our environment from any harm by being environmentally friendly, but may also optimize companies' financial figure. In fact, companies could collaborate with NGOs and other environmental activists to help and protect our environment as well as natural resources in long-term.



MNCs perspective towards Sustainability

Multinational Corporations by definition are corporations that have their facilities, manufacturing plants and/or subsidiaries as well as other assets in at least one other country than their home. Such enterprises normally have one headquarter as their management center and other factories, production lines or facilities around the globe. S.H Hymer (1976) has developed a unified theory of MNCs' FDI strategy, which became famous as pioneering work regarding MNCs direction towards development (Hymer. S. 1976). Hymer studied MNCs as companies that have gained from vertical integration and market diversification. Multinational Corporations in different industries have developed under various circumstances as well as in different conditions. Different kinds of stakeholders could be involved in MNCs and as mentioned each member of this community plays an essential role socially as well as environmentally. Therefore, the final product is the final destination where sustainability has been implemented in the production procedure. It has been already cited that trust in corporations could lead to financial transparency and give confidence to investors and help managers come up with an appropriate strategic plan to obtain fair-trade, fair wages and a good connection with suppliers. All these factors could lead to a top quality product with lower environmental as well as social impacts. This procedure has to be concluded in such a way that within managers have to implement a culture of quality, innovation and commitment for the value chain. Producing high quality products based on innovation generates customer satisfaction as well as loyalty towards the brand. This pattern could simply assist MNCs in order to improve their opportunities and market share continuously in business as well as in gaining governmental incentives to enhance their position in the market even more. Taking all consequences into account, this approach could help MNCs advance prestige and improve corporate image as well as prompting these internal cultures into the social community, all by implementing sustainable strategies. In terms of MNCs' rivals, sustainable development with its all factors and cultures that it has such as innovativeness and quality will lead to leverage MNCs as well as added-value products in comparison to other competitors in the same market. Consequently, the collaboration of each stakeholder allows the MNC to reduce their costs, risk mitigation, efficiently use the resources and access new markets and

opportunities, developing prestige as well as higher productivity continuously, which could all be summarized in the concept of sustainable development.

The energy industry has been one of the most productive industries that developed different kind of MNCs in different fields. Looking at MNCs operating in the energy industry could make it clear that these companies are totally concerned about sustainability within their procedures. Based on literature, ninety-four percent of the executives surveyed in the energy section mentioned that being sustainable, as a challenge, is either important or very important to them in order to succeed in the future. Moreover, about 68 percent of energy CEOs in comparison to 54 percent of overall industries, have stated that sustainability issues are the most important factors in their industry (Berthon. B. 2010). The literature shows interesting findings that companies, which are operating in emerging markets have much higher interest in implementing a sustainability component within their procedures (Berthon. B. 2010). Many emerging companies are obviously aware of the fact that in order to develop in their various industries, they have to improve and build up their infrastructures on the one hand and on the other hand must promote their social development. Considering building infrastructures based on true goals, companies in the energy industry have recently understood that being sustainable across emerging markets and developing are their only key to being successful in future markets.

Watching the current growing demand in the energy market is one important reason for CEOs in this section to consider different Greenfield opportunities. Fulfilling the market needs on the one hand and being more efficient by applying sustainable strategies and cost efficient approaches on the other hand could be multinational corporations' core value in the existing situation and lead to a successful and profitable future for them as well. Digging deeper in the energy industry, based on UN-Global Compact (2010) records, companies, which operate in renewable energy sources and green energy sections, consider sustainability far more essential -91 percent- in comparison to Oil and Gas CEOs -62 percent- due to being more innovative and environmentally friendly. As stated, innovation is a key factor of being sustainable in a market. Therefore it is quite clear that corporations, which are operate in renewable or green energy source fields, must look at sustainability differently and more consciously than the others. The downturn in the Global economy has been affecting Multinational corporations from the

beginning until now, but the critical question here is “*Does the financial crisis undermine MNCs commitment to sustainability?* ”. According to a UN Global Compact report (2010), 72 percent of the CEOs in different industries have stated that by facing a downturn economy, they decided to invest even more than before in sustainability, which is shown in different corporations’ behavior towards sustainability in comparison to their previous outlook. This fact shows that companies, especially in the energy market, are no longer looking at sustainability as a marketing initiative but as an integral factor to insure their future position in a market.

Sustainability implemented in Corporations’ Core value

The four sustainability principles according to Karl-Henrik studies based upon four major activities have already been cited. These principles could have been stated by individuals as well as corporations. It took scientists quite some time in the sustainable development field to define what this concept actually means. Darkness could be an example for the definition of sustainability, where the definition of darkness is the absence of brightness. Therefore, the term sustainability was irrelevant until humanity began to imbalance the biosphere and its system. Thus, in order to describe sustainability within a system we have to look and measure what can destroy or make this system unbalanced and then try to avoid it. By observing many errors and failures within the system and studying them, we can now summarize all these factors into four basic principles that have been changing our biosphere into an unsustainable situation.

Multinational corporations as well as Small-Medium sized Enterprises are involved in a society, which on the one hand are the cause of unsustainability in our biosphere and on the other hand will be affected sooner or later from unsustainability consequences. Today’s markets, in particular the energy market are not what they used to be. Companies find out that, apart from their industry, general problems could impact their behavior in the future. Considering a natural resources concern, fossil fuel emission, air and water pollution, every company has to play its role correctly and precisely as a part of this society.

MNCs or SMEs have to make better and efficient bottom-lines by understanding and implementing sustainability better. First step for a corporation to start being sustainable

is that the CEOs understand why they need sustainability, realize benefits of sustainable corporation and how it could help them stabilize their situation in a market. It is essential to convince top-managers in companies to think about sustainability as a framework that is not a marketing leverage toll but that could help each part of an organization be built on sustainable strategies and help to earn profit based on their constant pattern. In order to reach a certain level of sustainability all parts of the organization such as top managers, middle managers, employees, workers, etc. have to come together and apply various brainstorming sessions. In these sessions it has to be clear for each member of the company that she or he is part of a huge change in the organization that is going to last for a long time in the company's history. The organization staff should sit together and come up with different kinds of solutions and possibilities for the future disregarding how much has to be spent on this or how expensive these ideas could be. After having the brain storming session and making a list of all aspects and ideas that have any kind of impact on the organization's future, it is time to pick ideas or elements that could be launched relatively early, like teaching staff about sustainability issues. This framework will lead the organization to first be concerned about being sustainable and second get all personnel together as a part of the platform by which they can launch further movements that they have listed as future possibilities. Eventually, they are moving in the right direction through a sustainable atmosphere that leads to a long-term concept of sustainable development.

Consequently, at this time when Multinational corporations as well as SMEs are facing difficulties such as shortage in their raw material resources or on the other hand competition gets tough in different markets, it will be a truly smart move to think out of the box and apply sustainable strategies as the company's future leverage across any industry. By understanding the importance of these aspects, it is not enough to just apply some sustainable elements but it is needed to implement sustainability in the company's core value and make it essential and obligatory to consider and be loyal to by the companies' stakeholders. This will help organizations come up with totally new solution to problems that could be highly resource efficient and better for their customers as well. This pattern is not only good for CEOs, who are concerned about biosphere rescue and climate change, but applying sustainable strategies will assist organizations in having sustainable profit and keeping their market share as it is if not

enlarging it. As an example, Ikea has changed its logistic pattern by applying sustainability in its strategies as well as its core value. Therefore, for instance, instead of using trucks to transport IKEA products to different destinations from manufacturing platforms, they used their own train line across Europe, which links all manufacturing platforms and distribution stations as well as warehouses together and then from the closest stations they hire trucks to pick up those products and split them between end users. Eventually by implementing this strategy in their logistic path, they pay much less than before for their transportation, which is cost effective and products can be delivered right on time if not faster to their destination. Therefore, applying sustainable strategies as corporations' core value will transform and influence various departments and develop different frameworks inside the company to bring competitive advantage as well as developing leverage for the corporation's market situations.

Mergers and Acquisitions as MNCs strategy towards Sustainable Development

The key principles behind M&A

The logic behind a merger or an acquisition is to integrate two companies in order to increase shareholder value above the sum. In other words, M&A has to conclude in a more valuable company than the two individual companies (Vennet, R. V.1996).

M&A often happen when time is tough for corporations. In these situations, the target companies will agree to be acquired at a time that the only way to survive is integration or collaboration. In other cases, strong companies or MNCs purchase other companies to gain competitive advantage in the market as well as cost-efficient corporations to develop and expand efficiently. Particularly in foreign market entry decision-making procedures, corporations are looking for SMEs in a target market to enhance their market share and achieve new customers. Considering the fact that Mergers and Acquisitions usually come together but they have some differences that it will be discussed shortly.

Difference between Mergers and Acquisitions

Although Mergers and Acquisitions are always mentioned together and used, as is they were synonymous, these two terms are not totally the same as each other. Acquisition defines the moment when a corporation takes over another and announces itself as the new owner of the target company. In this case, the acquirer swallows the business and the target company does not exist anymore. This type of purchasing will lead to buying all assets, stocks, property and employing the acquired corporation.

On the other side of the equation, Mergers occur when two corporations usually of about the same size, decide to join together and operate as a single new company rather than operating and governing individually (McClure, B. 2009). The term “merger of equals” usually refers to this kind of integration. For instance ExxonMobil corp. in the energy industry, as cited in next chapters, was known as the largest merger ever

undertaken in the history of the energy industry. Two corporations called Exxon and Mobil have merged together and developed a new corporation called ExxonMobil. This merger concludes in the world's second largest company in market value and the fourth largest corporation in market sales (Forbes, The World's Biggest Public Companies. Retrieved May 13, 2014). Particularly, many acquisition or mergers are announced as “mergers of equals” to prevent negative connotations from both sides.

Whether an integration procedure is proclaimed as a merger or an acquisition really depends on how the purchasing procedure has been conducted. Moreover, the difference between Mergers and Acquisitions will be reflected in the target corporation's CEO, employees and shareholders reaction to the procedure (McClure, B. 2009). In other words, a deal that has happened in a friendly atmosphere and both CEOs are interested in such a collaboration is called merger but when the deal has happened without the target corporations' desire, it is called acquisition. Furthermore, in an acquisitions procedure unlike a merger, one firm is buying another and no exchange of stock and consolidation as a new company is involved.

Regardless of the integration's label, all mergers and acquisitions have common aims and motives.

Mergers and Acquisitions Motives

As cited above, an acquisition differs slightly from a merger, however similar to mergers; acquisitions are also applied to bring some positive outcomes to both corporations. Four main reasons why companies implement M&A strategies are (McClure, B. 2009):

Economies of Scale:

Quantity and cost are always related to each other meaning that whether goods are purchased in a small or a large scale, it could affect price and save costs for the corporations. Therefore the inverse relationship between quantity of a product manufactured and per-unit fixed costs (in some cases variable cost as well) is the logic behind Economies of Scale (Auerbach, A. J. 2008). By applying Mergers or

Acquisitions between two firms, corporations can reduce their costs. For instance, after Acquisition the new born corporation will place a bigger order in equipment and office supplies, which makes the firm capable of negotiating prices and conditions with different suppliers and reducing the cost (Coyle, B. 2000).

Acquiring new technology:

In all industries as well as in the energy industry corporations need to be competitive in order to keep their market-share and satisfy their customers. As mentioned in the thesis' experimental part, MNCs especially those are operating in energy industries implement M&A strategies to acquire smaller companies that achieve unique technologies (McClure, B. 2009). By acquiring related or unrelated SMEs, a larger corporation can maintain and develop competitive advantages (Coyle, B. 2000). The fact that acquisition strategies assist companies in maintaining competitive technologies will be shown in the third chapter of the thesis.

Enhancing market-share and new opportunities:

M&A strategy may help companies reach new markets and introduce new opportunities in different industries. As a result of a merger, companies' marketing and distribution channels will provide new demands and customers for both corporations. On the other hand acquisitions may support small corporations in gaining industry visibility in the market and increasing their revenue. New markets mean new demands, new customers and will ultimately return revenue growth (Coyle, B. 2000).

Reducing employers:

Besides all other cost reduction consequences that a merger or an acquisition could deliver, dropping staff members after integration is one of the major challenges (Coyle, B. 2000). In fact, staff reduction would become one of the M&A motives when CEOs consider all the costs saved from allocating a sufficient number of employers in accounting, marketing and other departments and increasing productivity as well (Auerbach, A. J. 2008).

Mergers and Acquisitions varieties

Many types of M&A have been done across different industries particularly in the last decades. Whether these integrations were successful or not, depends on various factors but contingent on which type of corporations are involved and how the amalgamation procedure applies, M&A possess different names. In this part of the thesis, a few types of M&A will be discussed to clarify some of the common terms in such procedures.

Horizontal Merger:

A type of merger that often occurs between two corporations at the same level in the same industry. The integration of Daimler-Benz and Chrysler is a well-known example of two huge corporations, operating in the same industry and competing with each other. Such a kind of amalgamation usually happens among huge competitors in industries with fewer corporations. Corporations involved serve the same market and will sell the same products in the same industry. Consequently, this type of mergers lead to shared products or markets by direct competitors.

Vertical Merger:

Vertical mergers usually happen between a customer and a company or a supplier and a corporation seeking integration. In other words, vertical mergers occur between corporations, which are not necessarily in one industry and/or not producing the same product or offering the same services. Imagine a chocolate company acquires a milk production company. This would be an example of the producer that acquires the supplier and it shows how vertical mergers work. Disney and Pixar is considered as a famous and prominent vertical integration example. On January 24, 2006. The Walt Disney Company and Pixar Animation Studios (run by Steve Jobs) announced a merger agreement, which took place on May 5th, 2006. On January 2006, Disney was offering 2.3 shares of its stock for each Pixar share and announced that both corporations agreed on approximately \$7.4 billion as a purchasing price. No doubt that this acquisition has brought many positive points for each corporation such as getting closer to the Apple technology for Disney and being a smart move for Pixar in their competition with huge rivals such as DreamWorks and 20th Century Fox.

Market-Extension Merger:

Market-Extension mergers are often considered as a market entry mode for Multinational Corporations. In fact, corporations that are producing the same products or offering similar services apply such strategies in order to reach other demand sources, new markets and increase their market share among other competitors in the industry. Therefore the logic behind Market Extension mergers is reaching new markets and developing a corporation's revenue by increasing its customers in new markets. RBC Centura's acquisition of Eagle Bancshares, Inc. is an example of a market extension merger (Jordan, M. 2002). Since Eagle Bancshares is one of the biggest banks in Atlanta, and Atlanta is an attractive, deposit-rich market for banks, Royal Bank of Canada Centura decided to extend its market by acquiring Eagle Bancshares. This Market-Extension Merger assists RBC in enhancing its market by adding about 90000 accounts, 283 employees and \$1.1 billion in assets to its portfolio in United States.

Product-Extension Merger:

Product-Extension Merger takes place when two corporations manufacture a product or offer services that are related to each other in the same market. In other words, companies that are looking to get together and develop product-groups that give them the opportunity of a bigger potential consumer and boost their revenue and profit, consider a product-extension merger strategy in their business plan. A recent example is Microsoft Corp. acquisition of Nokia's phone Business. Since Microsoft has been developing smartphone's operation systems and applications for a very long time, it wasn't extremely far from reality that Microsoft would consider developing its own smartphones. After all negotiations regarding the acquisition, Microsoft Corp. announced on Sep. 3, 2013 that it will purchase Nokia for a total of \$7.5 billion in cash (Pitcher, J. Apr 28, 2014. Polygon News, Microsoft completes Nokia acquisition. Polygon. Accessed May 26, 2014). As a result of this acquisition, the Nokia group will be responsible for extended product categories such as Lumia smartphones and tablets, Nokia mobiles, Xbox hardware, Surface, PPI products and accessories. This acquisition is definitely a good example of Product-Extension merger, in which Microsoft Corp extends its product range toward smartphone products and joins a new era of telecommunication by acquiring Nokia.

Conglomeration merger:

This type of merger usually takes place when the integration procedure happens between two companies that do not either sell related products or offer any related services as well as not operating in same markets. In other words, a conglomerate merger is not a Vertical or Horizontal merger but rather a merger between corporations operating in various industries and/or in different geographical regions. Indeed, the reason behind such integrations is diversifying the risk of the parent company and assisting the firm in being less sensible to current market fluctuations in downturn economy situations. Another opportunity that may appear in such mergers is Cross-Selling between corporations since they are not operating in the same market and producing the same products. Sony Corp. in 1989 acquired Colombia Pictures Entertainment Inc. as the American Film and television production firm and Tristar Picture from Coca-Cola. The deal and some other conglomerate mergers assists Sony Corp to move into the media industry. Finally in 1991, Sony Pictures Entertainment was born from all those acquisitions and has developed into this corporation's key media department (Kwak, P. 2011).

In addition to what has been mentioned above, two other types of M&A have been observed in different markets. These two different categories are based on how the M&A procedure is financed; Purchase Merger and Consolidation Merger. A favorite merger for acquiring companies, the purchase merger occurs when a corporation buys another one. The procedure can be done in cash or/and by acquiring shares in the stock market. The acquirer usually prefers this type due to obtaining tax reduction benefits. In a purchase merger, the acquired corporation will operate under the acquiring corporation's name and the name of the acquired firm no longer exists.

Consolidation merger often happens when a brand new firm is born from the integration procedure and all assets and corporations' equipment are combined under the new corporation's name. Such collaborations between corporations lead to introducing a new corporation called consolidation merger.

The reasons, which motivate a corporation to implement M&A strategies in their core business, have been mentioned above. This thesis tries to look at the Mergers and

Acquisitions from a current viewpoint where corporations realize that being profitable and financially successful is not enough to compete in future markets. Other components such as the social and the environmental one have to be embedded along with economic factors and goals in a corporation's core business to support companies' toward Sustainable Development in this new era. In the next chapters, the thesis tries to reveal how Mergers and Acquisitions can support corporations combine economic, social and environmental factors together in their core value as integral parts of Sustainable Development.

Sustainable Corporations through M&A strategy Execution

Socio-Ecological Transition

As already mentioned, sustainability could be defined as a path toward producing more in a way that causes less damages. This interpretation of sustainability has been demonstrated in a concept called “Transition” as one of the most important and revolutionary turning points in the energy market. Transition or so-called Socio-Ecological transition is more understandable by using technological and innovative tools to explain and illustrate how it will work in real situations. The world that we live in, is fundamentally sustainable, which means if we as human-being use the resources correctly it may also remain sustainable, meaning that Nature will reproduce resources that have been used through time. Energy has become one of our essential factors to live on this planet proven by looking at Transportation, Households (Heat and Electricity), Industries as well as the Trade sections considered major consumer sections. Using natural resources such as fossil fuels as the most required resources these days to meet current demand in the energy market has become one of the uptrend topics in nowadays’ broadcasts, educational meetings and conferences. Some scientists as well as corporations are against it and some of them think that it has some good consequences to extract and use fossil fuels, but two common reasons shared between all experts in this field, are Climate Change and Resources Scarcity. As a result, the increasing use of fossil fuels causes CO₂-Emissions as well as Greenhouse Effects that boost the earth’s temperature, which triggers a lot of other side effects on our planet. Furthermore, fossil fuel is finite and we cannot consume it without considering the fact that there is a certain limit for all fossil fuel reserves. Figure 8 illustrates that the Coal deposit, which we know at the moment will only provide us with energy until 2088, the Gas deposit until around 2060 and Oil will last as long as 2050. This information does not mean that in 2088 we will run out of our energy sources, of course not, and until then some other reserves will be found and this could extend this deadline slightly but the fact that these resources cannot last forever still stands.

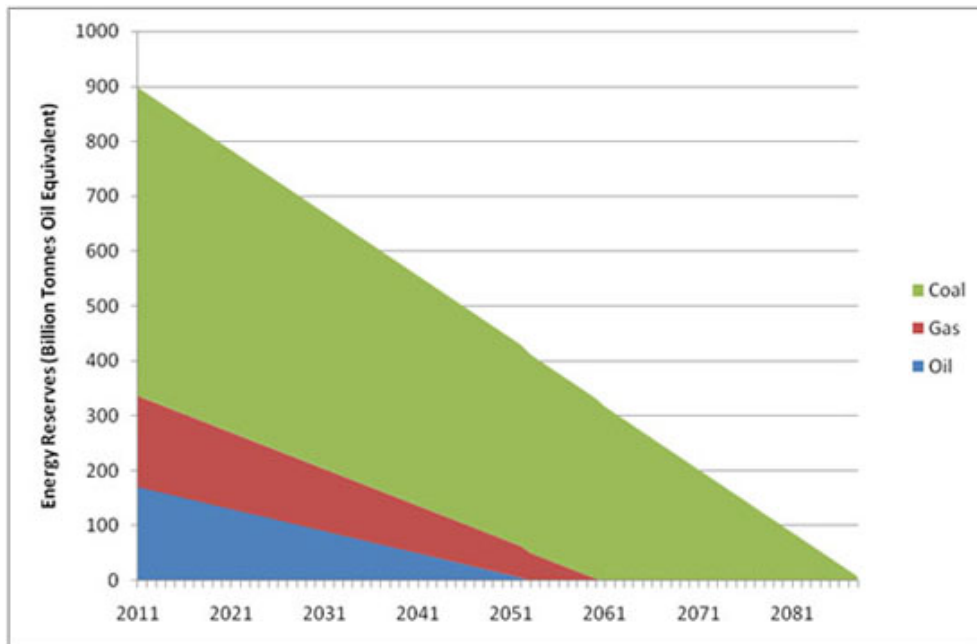


Figure 7: Fossil Fuel endurance Graph (Source: *The End Of Fossil Fuel*, [Ecotricity](#) Britain's leading green energy supplier Website, Retrieved May 16, 2014)

By looking at the market demand it could easily be understood that the proportion of energy demand in the current situation could not be fulfilled with our natural resources in the future and that it might get worst by demanding more and using limited resources such as oil and Gas, which then again could lead to a higher price for Oil and Gas in the future and cause a variety of financial and economic problems for different countries. Therefore, although a massive change in the energy industry is vital but Nuclear energy as a substitute is not the solution based on the world's previous catastrophes such as the Fukushima disaster. The shift from previous energy sources has been called energy Transition. Energy Transition contains two main turns; first a shift to renewable energy sources instead of fossil fuels, second, a reduction in energy consumption by implementing new innovative technologies and energy efficient designs. Basically the transition means replacing fossil fuel with energy resources that could regenerate themselves as they are not limited, such as wind, solar energy, water and the earth's temperature. By applying innovative technologies, these resources can be used not only for huge platforms such as factories and production plants but can even be installed in private houses in smaller scales. Combined Heat and Power generators are good examples for both production plants as well as households. CHP generators can be installed in private places like small houses as well as huge private or public buildings such as libraries, hospitals and have been designed to be utilized in huge factories or

manufacturing plants as well (*Appendix 1*). Wind turbines are another example of power generators toward the energy transition path in the energy industry. Hydroelectric power stations are also considered, where electricity is generated by the power of water pushing turbines and generators producing electricity. Another well-known renewable energy source is solar energy, which has all components of the transition procedure against fossil fuel energy sources. Despite all its limitations and regional restrictions, solar energy is known as being capable of regenerating itself and is unlimited. Solar energy has been applied in two methods, first one has a transmission medium to get heat from solar collectors and make the water inside its reservoir warm (small-scale usage) and on a large scale, concentrated solar power plants produce electricity. Another method is solar photovoltaic, in which sunrays are converted directly into electricity (*Appendix 2*).

Geothermal energy stations can also be planted in regions with high underground temperature. In the Geothermal energy method, special collectors absorb the heat, which will be consumed by households or converted to electricity by generators. Biomass energy can be another energy substitute for fossil fuel. In this case organic waste from animals, agriculture and households or special energy crops can generate electricity or have recently been converted to fuel, which happens through the Methane Gas from the fermentation procedure (*Appendix 3*).

In addition to what has been discussed so far, it is essential to consider that finding new resources or applying innovative patterns to produce energy is not the only goal of the transition path in the energy market. Energy flux is another vital factor in between. Energy runs through various conversion procedures and in each part of this conversion energy is lost, therefore technologies and innovative paths could be useful here to increase energy efficiency by minimizing these losses. A closer look at electricity usage in households may expose numerous energy loss points. Therefore educating consumers and teaching them how they should consume energy in a way that, on the one hand, avoids energy losses and on the other hand lowers energy bills, as a consumer is needed. Despite all these facts and different patterns of being efficient in an energy market, reaching these goals still faces some huge challenges, from huge Multinational Corporations and energy Cartels, which are not willing to reduce their own revenues by helping nature, to individual household energy consumption attitudes, where too much

energy is wasted. Therefore the only way to make this dream happen is “Public Action”, which means each individual besides how much energy they are consuming now, must try to optimize their consumption in their work as well as their houses and on the other hand governmental restrictions or/and incentives for individuals as well as corporations can help the transition movements accelerate.

MNCs’ Acquisition strategy toward SD

It has already been cited that based on previous studies, IPAT (Commoner 1972; Ehrlich 1971) the formula shows that environmental impact (I) can be controlled by implementing innovative and efficient technologies, because on the one hand, population growth could not be stopped (although the rate has been slowed down but still upward trend) and on the other hand affluence has been developing with population growth. Therefore the only clear choice from this perspective is technology and innovation. In that context, if we assume each part of the equation has its own weight on the result (I), technology and innovation can be expected to obtain the highest weight as well as degree of effect on the environmental impact (I). The thesis is focused on innovativeness and technology in MNCs as a result of acquiring new companies i.e. Takeovers. According to the literature, the acquisition process consists of three stages, Identification which is the first stage of the selection of appropriate companies, Evaluation which is considered as the second part of the selection stage and Incorporation which is the final stage where the integration has to proceed (Slowinski et al. 2000). CEOs in various industries said that acquisitions can be essential to implementing sustainability within a corporation (Stainslaw 2011). There are five different motives that can push MNCs to consider acquisitions within their strategies (Goedhart et al. 2010). These five drivers could be also considered the results of successful acquisition and reformulated as follows: I) improving the performance of the targeted company; II) balancing the production capacity in an industry; III) creating a market access for a company’s product; IV) Acquiring skills and capabilities faster and cheaper (outsourcing); V) finding SMEs at the early stage and targeting them as well as supporting their strategies and businesses. From a sustainability perspective, the last three motives that have been cited above assist MNCs to find a correct direction toward sustainable development. Based on what has been described above as the successful

acquisition results, Multinational corporations should be assured that an acquisition procedure has to be continuous as long as it is beneficial for both parties (Christensen and Raynor 2008). Ecomagination is one of the best examples of how acquisitions and investing in SMEs could turn MNC from not just operating profitably but into operating green and environmentally friendly. The Ecomagination program has been conducted by a 120 years old Multinational Corporation (GE) in about ten years through acquisition and takeovers and concluded with over 350% investment increase in six years considered as one of the Conglomerate Mergers' examples (Hart et al. 2006).

Acquiring Small–Medium sized enterprises is considered as an opportunity for MNCs to gain innovative technologies and achieve new uptrend paths toward sustainable development. This means that by acquiring appropriate firms, MNCs on the one hand gain the opportunity to be present in new markets as well as avoid any kind of environmental related violation by implementing innovative and sustainable strategies in their decision-making procedure. The third part of the thesis, the empirical part, will go through case studies, in which corporations like the Shell group and ExxonMobil embed sustainability by applying acquisition strategies within their core businesses.

According to what has been cited as an example of acquisition, General Electric's Ecomagination program has been focused on external investment and acquiring various green businesses. Such investments by MNCs' and decision-making strategies could be accused of *Greenwashing*, if decisions and investments are not made by strategic guidelines and sustainability isn't considered. Based on various case studies, sustainability activities and sustainable strategies have unfortunately not been appreciated by corporate decision-making procedures in the current situation (Bonn and Fisher 2011), which could lead to failures in investments as well as corporate strategies and cause serious damages in the MNCs' business plan.

Making Progress: from Sustainability strategy to Execution

Last UNGC-Accenture report has shown that sustainability is truly essential for corporations and CEOs consider it as one vital factor in their vision toward a corporation's future. The report has illustrated that although the ambition of

implementing sustainability in the energy industry is universal but CEOs in the energy section companies still face significant challenges when it comes to embed sustainable strategies into their organizations' core business.

The UNGC-Accenture report 2010 revealed that CEOs know that in most parts of their corporations truly implemented sustainability is an idea to be reached in the future and is not considered in current operations and strategies. Previous studies have shown major differences between what CEOs think about sustainability and how they actually perform in their corporations. Based on the UNGC-Accenture report, 96 percent of energy executives mention that they believe sustainability should be implemented in their core business but only 68 percent said such integration already exists in their corporation (UNGC-Accenture Report 2010). As a result, it has to be cited that the performance gap has been observed in earlier studies surveyed in the energy industry. The difference between what CEOs of corporations think should be done and the reality about how they are actually performing at the moment is called “Performance Gap”. The performance gap can be still observed in Figure 9 from the UNGC-Accenture CEO study 2010 by asking CEOs “*What their corporations should do in future, besides what they have already done?*”.

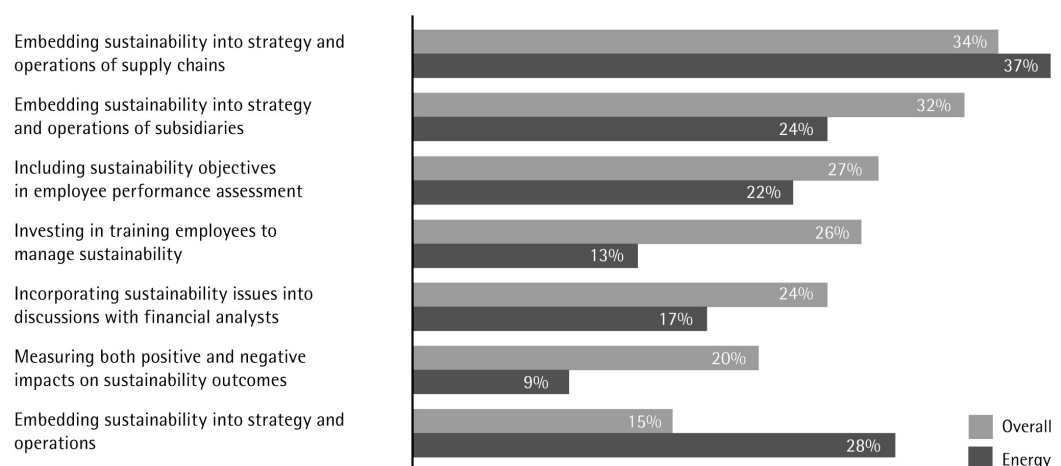


Figure 8: Performance Gap between “Companies should do” and “my company does” (Source: United Nations Global Compact-Accenture CEO Study 2010, P. 18)

In the report, CEO’s have been interviewed about important factors such as Supply chain, Operations of subsidiaries, Employee performance assessment, training employees, financial analysis as well as corporations’ strategy and operation itself that

have to be inspired by sustainability activities in future. As illustrated above, embedding sustainability into the strategies and operations of companies' supply chains has been ranked as the most important factor from the CEOs' perspective. Moreover, CEOs in the energy industry as well as overall seem to have different viewpoints about embedding sustainability into the strategy and operation of the corporation itself. Whereby 28 percent of energy corporations' CEOs believe that such strategies have to be implemented into the corporations' core business but just 15 percent of other industries' CEOs agree with this point. As a consequence, based on the UNGC-Accenture report 2010 CEOs of energy corporations need to be enlightened and understand how sustainability implementation could improve different sections of their corporation.

Apart from the performance gap, which has been observed from previous studies as well as this thesis' findings in the energy market, MNCs face different issues and challenges such as internal and external challenges to integrate sustainability strategies and activities within the core business.

Acquisition makes opportunities as well as threats

The logic behind the fact that small companies sometimes prefer to be acquired and some MNCs are willing to buy related or in some cases unrelated SMEs could differ across various industries. Since this thesis has chosen the energy industry as an investigation market area, later on, based on two case studies, one of the main reasons that makes Multinational Corporations in Oil/Gas industry (Energy industry) consider acquisition in their strategies and business plans will be discussed. Therefore in order to touch upon sustainability oriented strategies, which have been considered in different markets especially in the last decades, companies may decide to acquire another firm that might bring the opportunity to create value for the acquirer due to synergies between divisions. Moreover, as cited, Economies of Scale is one of the major reasons which leads to cost reductions by acquiring another company. Alternative reasons that can lead to positive impacts on a firm's path towards SD is Economies of Scope, where firms can share or acquire other companies' competencies as well as infrastructures, etc. that relates to value chain sharing, name, branding, contents and etc.

Although in many takeovers and integrations, economies of scale and economies of scope have been seen as vital reasons or commanding incentives but as far as most of the current cases, particularly in the tech market, the crucial benefit from acquisitions comes from creating knowledge flows that integrate the capabilities of the acquirer and target firms in effective ways (Coyle, B. 2000). Therefore, unique technologies as well as specific knowledge invented and designed by small firms have been considered strong acquisition incentives especially in IT and Oil and Gas market recently (energy industry) (McClure, B. 2009).

M&A in theory could lead to one plus one is equal to three, sounds good but in the real world things can go off-center. Indeed, plenty of mergers and acquisitions do not operate well and could not satisfy expectations. Those who support a M&A strategy and believe that implementing such approaches will cut costs and increase earnings should consider the fact that it may sound simple but in a real situation, internal and external implementation issues may occur and cause the procedure to fail .

Internal challenges

In order to implement and execute business plans that integrate sustainability within a corporation's core business, CEOs face a number of internal issues. Considering the energy market as an emerging market with high volatility, the key question for a CEO is how he/she could embed sustainability into daily performances in a way that boosts productivity within the corporation. This means CEOs have to find a path to balance and prioritize various objectives and initiatives to push sustainability into their corporation's core business without causing any serious problem within the organization's structure.

Complexity of implementing Strategy

Based on previous studies (UNGC-Accenture report 2007-2010), conducted regarding CEOs reactions towards sustainability strategies, energy CEOs report that the most significant difficulties in integrating sustainability within a company is the complexity that accompanies implementation across various strategies and functions. Finding the

best strategy to fulfill various aspects of integrating sustainability in a company's core business has to be time consuming, costly and needs experience to deal with all possible challenges of the managerial aspect.

Strategic priorities

Another internal issue that could be considered a significant barrier to sustainability implementation are Strategic Priorities. Although there is a huge interest to apply sustainability within the business core of companies, CEOs are still struggling to address sustainability as an integral factor in corporations' core business. Based on a UNGC report, despite the CEOs, especially those in the energy section, concern about implementing sustainability within their strategies, in many corporations, sustainability may be considered separately as an individual strategy itself rather than being embedded across all functions and strategies as a method.

Employees and Performance

As already mentioned, sustainability leads to sustainable development which needs to be started by every individual. If each of us starts to be concerned about the future and how we are influencing our lives, then we can embed sustainability into our life step by step. The same case applies for corporations. In order to apply sustainability within a firm, people and employees, managers and CEOs have to learn how they could impact the organization by doing well and right. Studies show that about 79 percent of Energy corporations' CEOs are already investing in training programs for their employees and managers to address sustainability issues. Therefore, in order to embed sustainability within a firm, CEOs have to be concerned about the right knowledge, attitudes, skills and behaviors of firms' personnel and educate them regarding the sustainability implementation method in their core business.

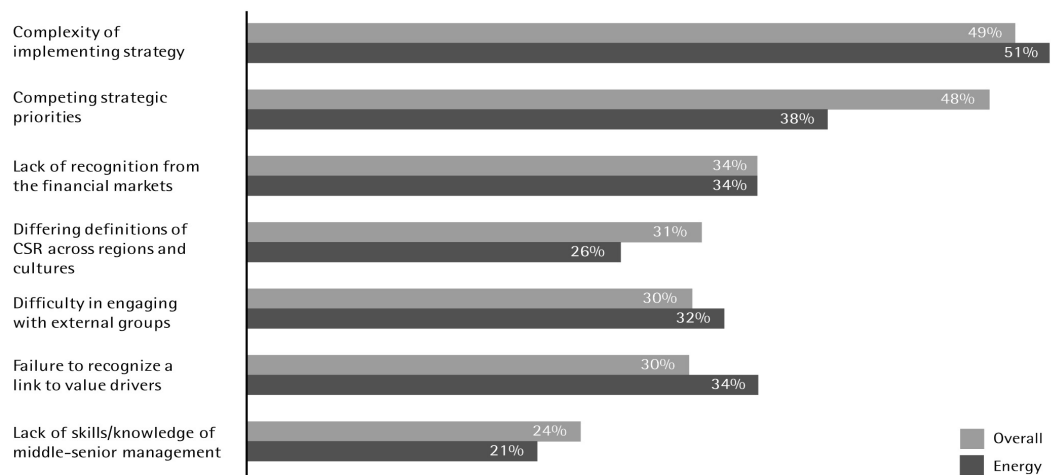


Figure 9: Internal and External Barriers that keep CEOs from implementing strategic approach to sustainability. (Source: United Nations Global Compact-Accenture CEO Study 2010, P. 19)

External Challenges

In addition to struggling with internal issues of embedding substantiality within firms' core business, CEOs in prior surveys have been asked if any external factors could also be considered as barriers towards the sustainability implementation procedure from their standpoint. Based on previous literature regarding this matter, CEOs believe that there are some barriers in the external environment that are prohibiting them from adopting sustainability strategies within a firm. Since this thesis focuses on the energy market, the most relevant factor in this case would be the role of business stakeholders such as governments, regulators, investors and consumers.

Government intervention

The energy market has been dealing with regulatory uncertainty through time and has been wounded several times by bad decisions, which were made by different governments. Since the energy market is an international market it has also been impacted by fluctuations in the international market, therefore CEOs in the energy market articulated the necessity of clearer regulations and standard policies in order to help them overcome different circumstances within the international situation. Uncertainty about market regulations and policies brought up questions such as *"Should the government play a role in the Energy market? Does Government intervention make sense in the current situation?"* On China's stock market, 80% of the market

capitalization is made up of state-controlled companies, in Russia it is 60% and in Brazil it is 35% (The Economist. December 17. 2011). From the world's top 25 oil companies, 18 are nationally owned (Tordo, S., Tracy, B. S., & Afraa, N. 2011). Previous studies have shown that just 45 percent of companies in the Oil and Gas sector would welcome government intervention to inject sustainability in the market. By far, 82 percent of clean energy CEOs can't think of any improvement for the clean energy industry without government intervention. These numbers could illustrate those clean energy corporations that are mostly developing new technologies and innovations as their core business need for governmental support in order to compete with giant market players. Whether a corporation operates as a clean energy firm or a huge Oil and Gas Company, there are still some regulatory issues in the domestic and international rules. Therefore it has to be considered that Global markets need global solutions to create a wide playing field for multinational corporations. As a result of global expansion, in which energy companies have a great share, energy corporations have to expand in international fields to pursue new energy sources as well as new customers. Consequently, it has to be mentioned that although Multinational Corporations in the energy sector have obeyed international regulations, they could be limited by their own governments in some cases, which shows government involvement in those countries could be helpful for clean energy corporations in driving sustainability and developing their technologies on the one hand and on the other hand tied the hands of MNCs operating in the international Oil and Gas .

Investor Community

Another part of the corporation's stakeholders is made up of investors. Prior Studies that have focused on investor community as a key player in sustainability implementation decisions, show that the lack of interest in embedded sustainability benefits and the issue of understanding sustainability as a general concept are common reasons that sustainability is not taken into their valuation models. However, CEOs understood that the power of the financial market could perhaps get investors' attraction and be the strongest driver towards sustainability integration in a corporation's core business from an investor's point of view. As Paul Polman, CEO of Unilever,

mentioned, *“the financial community is increasingly looking at companies and rewarding those that think smartly about their use of resources”*.

Consumer and Customer perspective

CEOs in various industries are facing a critical question on whether their customers will accept pay-offs of potentially higher prices in exchange for more sustainable energy sources used by the corporation or not. One recent Accenture research study (Accenture, “the New Energy World – The Consumer Perspective” 2010), based on 9000 surveyed customers in the energy sector, mentioned the fact that although the majority of consumers agree by switching to energy providers which offer products and services with less carbon emission to avoid environmental consequences but most of them still are concerned about their energy bills. Therefore studies’ outcome show that the price elasticity in the energy market is still high and people care more about saving money than saving the environment. Therefore, the answer to that critical question with regard to the common understanding of people about sustainability will be negative. Nevertheless, consumer education and communication regarding the fact that sustainability could lead to tangible benefits for individual consumers and demonstrate short-term and long-term gains for those End-Users, would change this current trend and change the answer of CEOs’ to the question. Benefits such as cost saving, local employment and reduced carbon emissions would be some incentives for consumers to become more concerned about sustainability implementation by firms. Apparently, corporations should also reflect upon the fact that in some cases consumers misunderstood the difference between sustainability concern issues and lowering energy consumption. Therefore CEOs have to be aware about this paradox and try to eliminate the belief and replace the idea that sustainability is not about less consumption but about the efficiency of End-Users’ energy consumption.

The last point but not the least are the cultural differences in various markets and countries. Whether a corporation wants to apply a M&A strategy to bring sustainability within its core business or wants to convince its customer that sustainable production and operation will bring positive results to the community, cultural differences can definitely impact the procedure. For instance, as the Daimler and Chrysler merger case has shown the cultural differences are important. In fact, in case of Mergers and/or

Acquisitions, cultural differences are always relevant. When two firms from different countries or even when two companies operating in one country are targeted, often quite disparate organizational culture has been seen. In order to merge or acquire another culture some important factors have to be considered. For instance a pattern, in which combining elements of two different cultures has been reflected, management styles, products etc. Different experiences and case studies have shown that adapting to the destination firms' organizational culture is difficult, costly and in some cases, not possible.

Natural Gas along with renewable energy sources toward SD

Before moving to the next chapter of the thesis, it is absolutely essential to describe Natural Gas as a partner for the renewable energy sources' towards SD. Natural Gas can be used safely and flexibly as well as being environmentally friendly. The fact that there is no shortage for this resource at least for over a hundred years has made this natural resource more and more promising for energy corporations. The reason that natural Gas has been isolated for many years is that the cost of extraction and production was too high and no technologies were developed in this section. The current energy market due to advanced technologies such as drilling and innovative paths of extracting as well as searching for alternative resources, has realized how profitable and efficient natural Gas could be. Therefore many energy corporations have started developing technology and finding new patterns to produce natural Gas and introduce it as an alternative energy source as well as a future substitute fuel. Many SMEs operate in this section and have developed technologies that attract MNCs as well. Since natural Gas has been considered as a clean and flexible alternative energy source along with renewable energy sources, it can be considered one of the sustainable development drivers. Multinational corporations in the energy industry such as ExxonMobil and the Shell Corporation have seen the new trend in the energy market and began to expand their market share in the natural Gas market. However, since many SMEs already operate in the natural Gas market and have gained huge experience in this section, acquisition will be the best strategy for MNCs to obtain technologies and innovative patterns from these companies in order to gain market share and not be left behind as soon as possible. The next chapter will explain how two natural Gas acquisitions by two giant energy corporations have happened. Acquisitions, apart from all short-term benefits such as developing cost efficient operations and possessing new technologies, have been helping companies move toward sustainable development in long term.

Part 2

1. Royal Dutch Shell Corporation

By having about 87000 employees in 70 different countries, Shell is known as a global energy and petrochemical group and one of the key players in the industry. As described above in the different sections in Oil/Gas industry, Shell is also present in the Upstream and Downstream sections as well as the innovative and technology department.

Upstream:

Shell's upstream consists of two different organizations, one is Upstream International and the other one is Upstream Americas. Upstream organizations as cited before deal with finding new reserves, extracting crude oil and Gas, the liquefying procedure and transporting crude Oil and natural Gas. This section usually operates based on Joint ventures by the National Oil Corporations (NOC) as well as organizations in charge, which are often run by governments.

Downstream:

Organizations, which operate in the downstream sector usually deal with manufacturing, supplying and trading Oil/Gas as well as their products in the worldwide market. Petrochemical sections as well as all retail and commercial sales should be run from this section as well as related organizations.

Projects & Technology:

The project and technology section and related organizations are known as Shell's heart. This section's vital responsibility is to pump new technologies and innovative patterns into different projects in order to increase productivity as well as reduce their costs. This section will also support the Upstream and Downstream section in technical fields by using technological tools.

Shell cites the corporations' approach in the energy industry as help for meeting the world's rising demand in the energy section meet in a responsible way (Shell's annual report 2012, P. 2-3). Shell's priorities are investing in and focusing on safe operation methods, building trust within the organization or the corporation's neighbors and reducing harmful impacts on the environment.

Estimates show that the world's population is increasing and by the year 2050 will be above 9 billion. Putting all other components aside, this increase will heavily drive up world energy demand. Therefore, rising global demand and limited natural resources made corporations and stakeholders seriously consider other energy resources to support global demand and avoid any economic instability due to energy shortage. According to Shell's research, with governmental support, energy from Solar, Wind, Hydro-Electricity and Biomass could increase to 30% by 2050 (Shell's annual report 2012, P. 4). By 2050 fossil fuel will meet 65% of the energy demand and Nuclear energy will still be a part of the equation in this scenario (Shell's annual report 2012, P. 4). Figure 11 below illustrates the global energy demand by 2050 and how it will be supported by different portions of various resources.

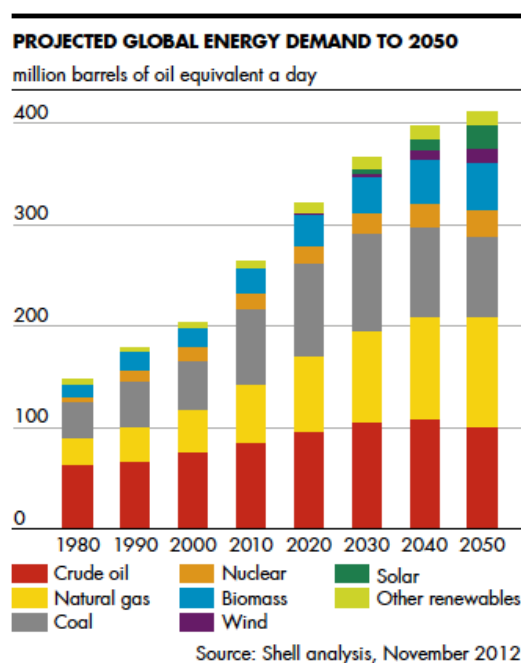


Figure 10: Projected Global Energy demand to 2050 (Source: 2012 Shell's Annual report, P. 04)

Studies show that by 2050, urbanization will increase by 50%, which means 75% of people will be living in cities (Shell's annual report 2012, P. 4-5). This increase will boost pressure on natural reserves since energy demand will increase and proves the fact that close cooperation between urban planners, governments and corporations, is needed, I. e. Public Action.

In this aspect, Shell's R&D division in China has joined the state-run Development Research Center to monitor and analyze China's mid- and long-term energy strategy. The same scenario will take place in Singapore in order to improve city management for the future and work on livable cities of the future (Shell's annual report 2012, P 4-5).

Sustainable Development and Shell's Business Strategy

As mentioned in previous chapters, environmental and social pressure makes a funnel where governments, Corporations and individuals cross. Shell Corporation as one of the huge stakeholders in the energy industry tries to balance its short- and long-term interests. In fact, Shell Corporation attempts to imbed social, environmental and economic considerations into its business strategies, which helps them achieve their results on time and minimize the environmental and social impacts of their projects.

Focusing on Natural Gas production:

Looking at Natural Gas as a fuel substitute to coal and fossil fuel has been counted as a huge step forward for Shell towards a Sustainable future. Many countries, which were concerned about their CO₂ Emission, replaced their fossil fuel or Coal with Natural Gas which has reduced their CO₂ Emission in power plants for their electricity generating procedure. Based on the 2012 annual report, Shell produced Natural Gas almost as much as Oil and plans to improve and develop their Natural Gas resources in the future. Figure 12 shows the Corporation's Natural Gas exploration development path as well as Shell's actions in the 2009 economic crisis, which caused a huge jump in the Oil price and led to Shell's focusing even more on natural resources as their alternative energy source. Therefore Shell Corp is not only concerned about environmental aspects but

also implements such strategies to survive that crucial economic crisis in 2009 and is still competitive between among its rivals.

Shell's estimation shows that global demand for Natural Gas will increase by 60% by 2030 from its level in 2010 (Shell's annual report 2012, P.5). Therefore the corporation's strategy to meet global demand and not be left behind in energy industry is projected in their investment strategies in 2013. Shell has invested around 33\$ billion in 2013 of which 80% has been allocated to Oil and Gas exploration and production operations. The company's expectation shows that in the next four to five years, production will increase to 4 million barrels of Oil equivalent a day, which shows a 23% increase from Shell's production in 2012 (Shell's annual report 2012, P.5).

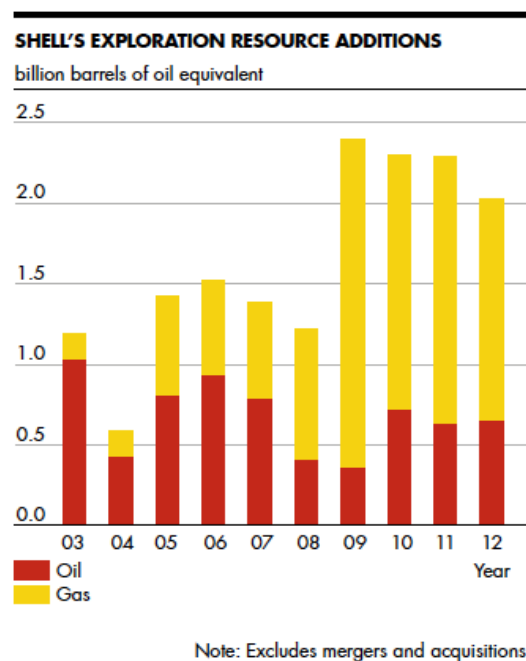


Figure 11: Shell's Exploration Resource Additions (Source: 2012 Shell's Annual report, P. 05)

Technology and Innovation:

Innovation and advanced technologies have been considered a vital aspect for Shell's development pattern and strategy during its decision-making procedure. Exploring cleaner as well as more efficient technologies can be one of the major competitive advantages for any corporations especially in high-tech oriented industries. Therefore,

the Shell group, like other competitors in this market considered technology and innovation among their top priorities. Investing 1.3\$ billion in 2012 in Shell's R&D sections, which was the highest between other international Oil and Gas companies, can prove the fact that the Shell Group is always concerned about being a market leader (Shell's annual report 2012, P. 35). Shell's annual report also shows that in the last five years this corporation has invested 2.2\$ billion in developing alternative energy sources, carbon capture and storage as well as CO₂- decreasing research and operations.

Shell acquires Duvernay Oil for US\$ 5.24 Billion (Case-Study)

On July 14th, 2008 Bloomberg news announced that Duvernay Oil Corp. was acquired by the world's second-largest energy company, Royal Dutch Shell Plc. The C\$ 5.27 billion (US\$ 5.24 billion) acquisition has helped the Shell Corp. expand gas production and acquire technology to reach the Western Canada reserve. As a result Duvernay shareholders have received C\$ 83 for each share, which was a 42 percent premium above the closing price on July 11th 2008.

Duvernay has about 100 employees and was established in 2001 as its spokesman, Scott Kirker, said. The Duvernay acquisition was the biggest Oil and Gas deal of 2008 for the Shell group that showed how serious CEOs and decision-makers in the corporation were to develop their Gas production sections and increase the market share announced in Shell's annual report for 2012 as 3% of the world's Gas production. Gas production already mentioned, is considered a part of the corporation's sustainability strategy. Duvernay oil production consists mostly of gas and is more than 25000 barrels of Oil a day. Shell's considered at the time that the equivalent of 25000 barrels a day will increase in 4 years through the implementation of technology and innovative projects referred to as tight-Gas projects in rock formation in the Sedimentary Basin, Western Canada. Another reason that confirms Shell's movement towards sustainability by using strategies such as acquisition is that apart from the rock formations project in Western Canada, shale deposits in northeastern British Columbia, which contains about 37 cubic feet Gas, have been considered as a part of Shell's future operation plan. At that time, acquiring Duvernay Corp was Shell's largest deal since April 2007, when Shell aimed to acquire a 22 percent share in Shell Canada Ltd. with an acquisition budget of C\$ 8.21

billion. Shell's acquisition led to Duvernay rising 40 percent on the Toronto Stock Exchange (TSE), which was the largest shift in one day since the company started trading in February 2004 and about 10.7 million shares exchanged which was 26 times greater than the average daily volume over last six month. According to data gathered by Bloomberg, Duvernay's production consists of 89 percent Gas and just 11 percent crude Oil, which totally make sense to consider as the corporation's accelerator towards being sustainable, by shifting to Natural Gas extraction.

By acquiring corporations like Duvernay and focusing on huge investments, Shell Corp. has proven that maintaining improvements in the company's safety record, reducing harmful impacts on the environment and generating more jobs and business opportunities are the future paths that will assist the company in reaching a sustainable development in the long-run and be economic, environmentally and socially responsible in the short-run. Figure 13 and 14 demonstrate how Shell reduced its direct Greenhouse Gas Emission level as well as Flaring in the upstream section to reduce CO₂ equivalent and prevent harmful impacts on the environment from 2003 to 2012 by applying strategies toward SD such as acquiring alternative energy sources.

DIRECT GREENHOUSE GAS EMISSIONS

million tonnes CO₂ equivalent

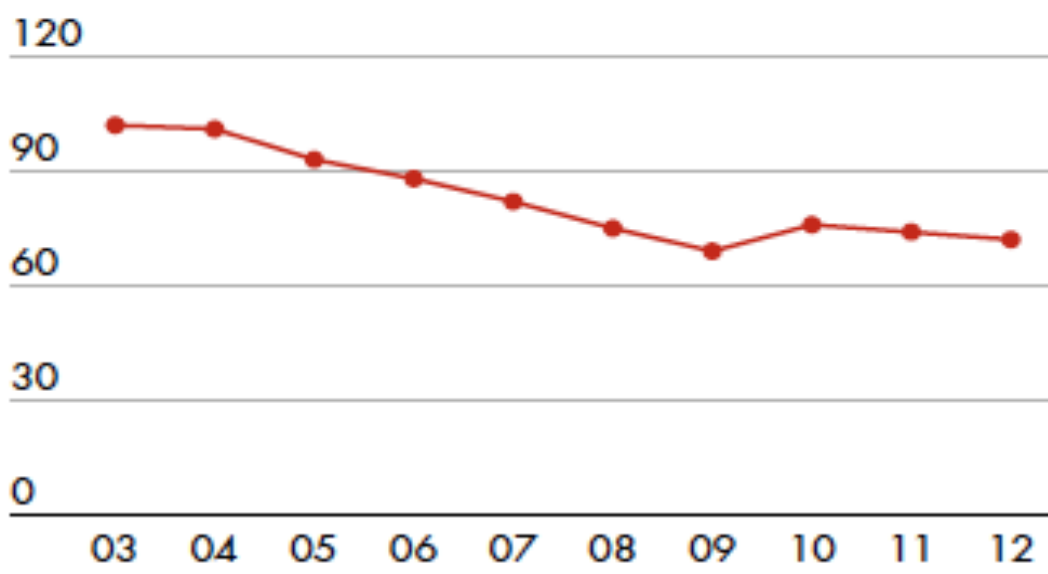


Figure 12: Direct Greenhouse Gas Emission (Source: 2012 Shell's annual Report, P. 32)

FLARING - UPSTREAM

million tonnes CO₂ equivalent

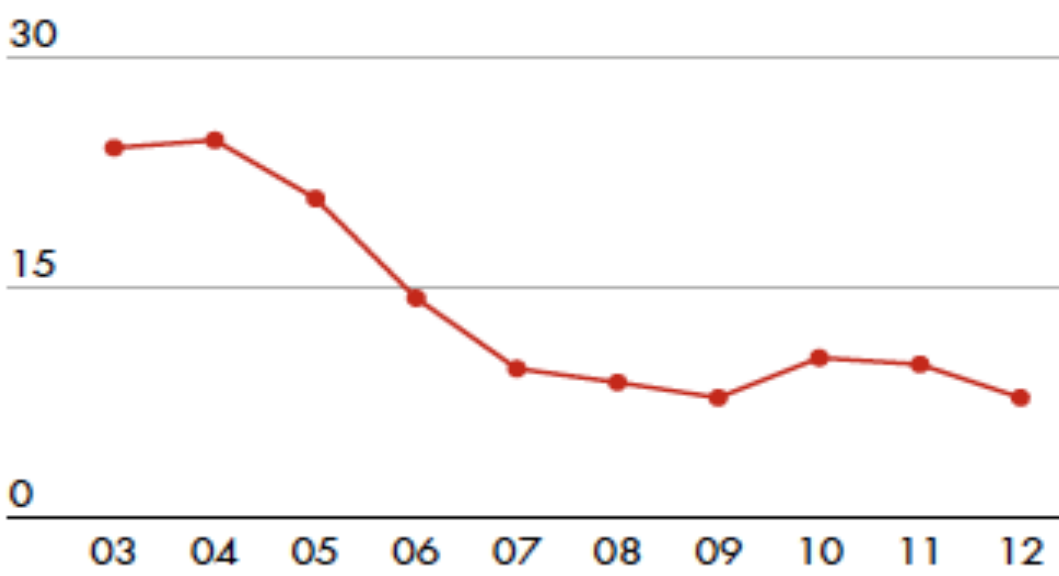


Figure 13: Flaring in Upstream sections (Source: 2012 Shell's annual Report, P. 32)

2. ExxonMobil Corporation overview

Another corporation, which has been operating in the Gas and Oil industry for a long time and is also known as the world's largest publicly traded oil and Gas Company is ExxonMobil. ExxonMobil's 2012 annual report shows that the corporation's global economic contribution in capital and exploration expenditures is about \$40 billion, shareholders distribution around \$30 billion, government tax and duties \$102 billion and production, manufacturing and office expenses about \$49 billion (ExxonMobil 2012 Annual Report, P. 4). ExxonMobil has understood through time that besides fulfilling a global energy demand, there are also many responsibilities to shareholders, neighbors, customers and communities. These considerations, the acquisition of technical expertise and employees as well as financial strength assists ExxonMobil with the long-term investment value and in developing competitive advantages to its rivals.

As touched upon in previous chapters, the ExxonMobil Corp like the Royal Dutch Shell Corp consists of three sections. Namely:

Upstream:

The upstream section in ExxonMobil is geologically and geographically diverse. Exploring and producing in 36 countries, with production platforms in 23 countries and sales of natural Gas in 33 countries illustrates how important and huge the upstream part of ExxonMobil is. The Corporation's portfolio shows that 1 million net Oil-equivalent barrels per day could be expected by 2017 (ExxonMobil 2012 Annual Report, P. 4).

Downstream:

ExxonMobil owns interests in 32 refineries in 17 countries as mentioned in the 2012 annual report of this corporation and as the largest global refinery supplies fuel, lubricants and other valuable products from its platforms and production units around the world. By selling 6.2 million barrels of petroleum products per day, ExxonMobil is a market leader of high technology in the refinery sector and a leading supplier of asphalt in the market (ExxonMobil 2012 Annual Report, P. 4).

Chemical:

Another section in which ExxonMobil is a market leader, is the chemical industry. Based on the 46 wholly owned and joint-venture production platforms located in various countries across the globe, ExxonMobil is the largest producer of plastics and polymers, basically polyolefin as well as one of the largest producers of basic petrochemical building blocks (ExxonMobil 2012 Annual Report, P. 4-5). For instance ExxonMobil produces enough diesel each day to support transportation shift 2 million tons of goods by trucks from New York to Los Angeles.

ExxonMobil in its corporation's 2012 annual report explains that by 2040 (Figure 15), conventional crude oil will supply just about 55 percent of the world's liquid fuel and the rest will be supported by deep-water, unconventional Oil and natural gas liquids as well as biofuel. Therefore, such estimations need to get support from technology developments and innovation patterns in exploring new resources.

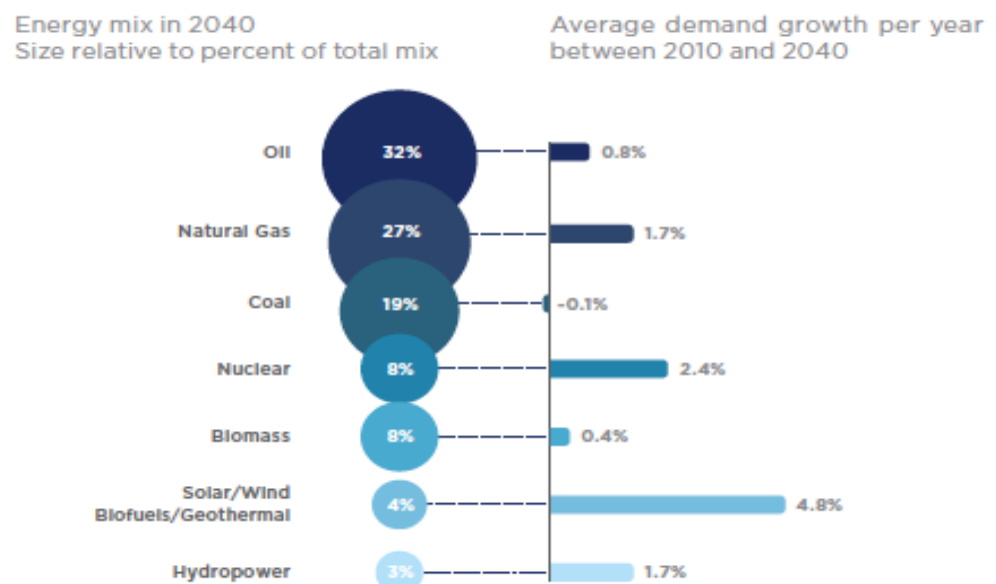


Figure 14: Energy Mix in 2040 (source: 2012 ExxonMobil annual report, P. 06)

Six Key focus areas in the ExxonMobil strategy (SD implementation)

By looking at the corporation's portfolio, ExxonMobil has illustrated its mission and vision as being responsible to the global energy demand in order to improve the standards of living for people across the world as well as satisfying its shareholders. As already mentioned, based on the corporation's reports, the size and scope of the company's operation is huge and varies from one region to another one. Therefore, ExxonMobil tries to become a part of local communities and economies where it operates. By creating investment opportunities, jobs and bringing technology and education to those regions, it contributes to the world's sustainable development path. The corporation staff and its executives believe that by doing good and helping communities improve and develop themselves, economies could be improved and consequently they will also benefit from the sustainable world. In fact, ExxonMobil is engaged to overcome challenges in the economic, social and environmental sectors so that future generations may benefit from the same green environment and sustain economies as well as societies, if not better then at least as well as the one we are living in today. Figure 16 demonstrates Six Key Focus areas that Rex W. Tillerson, chairman and CEO of ExxonMobil, touched upon. These focus points are about how ExxonMobil contributes within different societies as well as managing the impact of the company's operation on the Environment and local economies.



Figure 15: ExxonMobil's Six Focus areas of Sustainability. (Source: 2012 ExxonMobil Annual report, P. 09)

In regard to what has been cited above, ExxonMobil based on its 2012 annual report, operates in various projects with different priorities. Some have finished and some are still running to fulfill the corporation's environmental, social and economic responsibilities. For instance, in terms of social and environmental performances, since 2002 ExxonMobil has engaged in a project aiming to reduce Oil spill on land and in water, by addressing mechanical integrity and human factors, decreasing it by 37 percent since 2002. Increasing the corporation's know-how about water status and ExxonMobil's operational sites' concentration on water pollution consequences has led to the World Business Council Sustainable Development (WBCSD) project called global water tool ("Freshwater management" ExxonMobil Corp website, Accessed May 28, 2014). Figure 17 shows regional water availability that is based on 108 major operating platforms, about 25 percent of these operating regions may have some degree of water scarcity. As a result, ExxonMobil decided to collaborate with local governments and communities to overcome this issue and focus on water supply resources in each operation platform to develop an Environmental Business Plan.

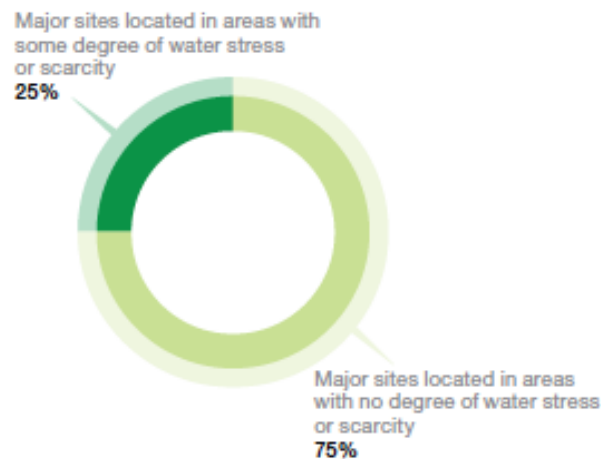


Figure 16: Regional Water Availability using WBCSD's Global Water tool (Source: ExxonMobil Annual report 2012, P. 20)

Contributing different local universities at the sites where ExxonMobil operates help this company to not only be responsible socially but also by using native talents to overcome issues that might assist the corporation environmentally as well as economically. A cooperation between Qatar University and ExxonMobil in the research that addresses Qatar's necessity to boost water resources could be a proper case of ExxonMobil contribution to local communities. Professor Sheikha Abdulla Al Misnad, Qatar University President, mentioned that this research underwrites the objectives cited in the Qatar National Vision 2030 and this country's national development strategy 2011-2016. Therefore such examples will verify that ExxonMobil's future Business-Plan is engaged with sustainability activities in order to be economically, environmentally and socially responsible, i.e. Sustainable Development.

ExxonMobil bets huge on Gas Production (Case-study)

In mid-2010, ExxonMobil's bet on a deal proved that Natural Gas will play a crucial role in fulfilling the world's future energy demand. Placing \$41 a billion bet on acquiring XTO Energy Inc shows that one of the world's biggest Oil and Gas producers has considered alternative energy sources to operate environmentally friendly as well as respond to future requests in the industry. After 1999 the megadeal between Exxon and Mobil created one of the world largest players in the field. The XTO Energy Inc acquisition, in 2010, was the second major deal within the industry. For ExxonMobil,

the world largest publicly traded Oil Company; acquiring XTO means that the corporation expects its market-share and crucial role in the petroleum business to wane soon. Moreover, the XTO acquisition improves ExxonMobil's capabilities due to new technologies and innovativeness in exploring Natural Gas in dense rock formations around the globe.

The fact that national Oil producers often do not like to split the profits of the remaining domestic Oil resources with foreign companies and other energy sources facing environmental constraints creates high demand in the market for natural Gas. As Rex Tillerson, ExxonMobil's Chairman and Chief executive, touched upon, Natural Gas has an advantage over other fuels in terms of price and carbon emissions. The International Energy Agency (IEA) data shows that Oil accounted for 36% of the global energy mix in 2000 and that percentage only decreased 2% in seven years. On the other hand, Natural Gas fulfilled 21% of the global energy mix over the same period of time but since 2007 IEA expects that each year gas demand will grow 1.5%. ExxonMobil, due to its various mergers and acquisitions strategy through time expects to become the largest gas producer in the U.S. and one of the largest players in the world. ExxonMobil's strategy of contributing more in the natural Gas business is based on executives' mindset that natural Gas is cleaner, more economical and can be found in the U.S. (national resource). Therefore this strategy could assist ExxonMobil in moving towards sustainable development in the domestic market. Introducing Natural Gas from ExxonMobil as an alternative energy source impacts society by offering new domestic jobs in U.S. as well as being cost efficient in comparison to other resources for both producers and end-users and last but not the least, being environmental friendly by producing lower carbon emissions (CO₂). As a result of such strategies, three main components of the Sustainable Development procedure have been covered by ExxonMobil Corp through the time, despite some disobedience. Figure 18 illustrates that ExxonMobil developed the corporation's natural Gas fields across United States by acquiring XTO Energy Inc.

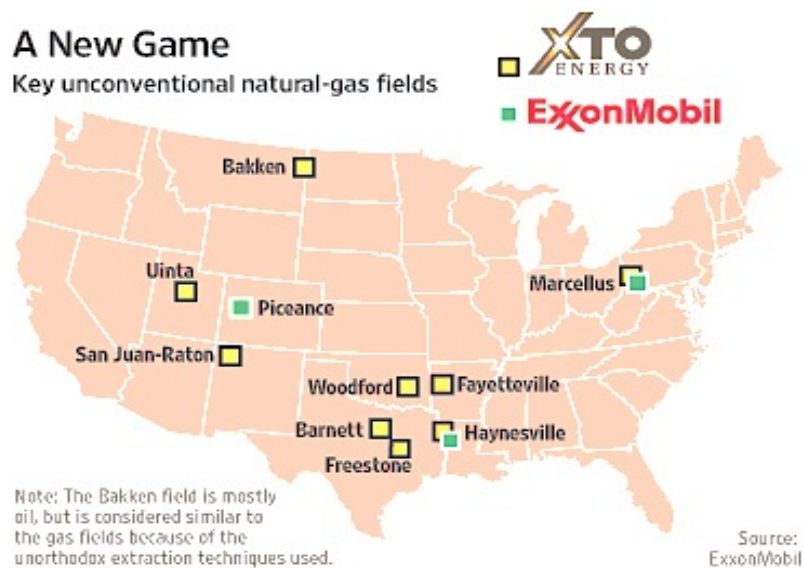


Figure 17: ExxonMobil and XTO Energy- natural-Gas fields across U.S. (Source: The Wall Street Journal/ Business. Published Dec 15,2009, Retrieved May 21, 2014)

According to ExxonMobil's estimation, the integration of these two companies increases to about 8 million acres of land above unconventional natural Gas. Beside all domestic investments from ExxonMobil such as the XTO acquisition, the corporation tries to extend its resources among Oil companies towards more market share in the Natural Gas industry around the world. Investing in the Gas export development project in Qatar as well as in various SMEs acquisitions across the world in order to obtain technologies required for natural Gas extraction is considered as one of the main strategies of ExxonMobil towards sustainability. Figure 19 shows that XTO Energy was the third supplier between ten U.S. Natural Gas giants in 2009 but ExxonMobil was the ninth player in this field, which supports the acquisition taking place.

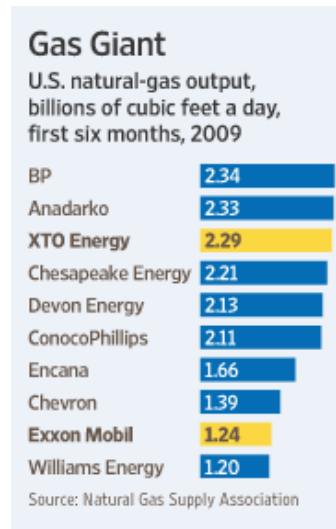


Figure 18: Gas Giants in U.S. 2009 (Source: Natural Gas supply Association U.S. Retrieved May 21, 2014)

Since the purchase was completed, the fall in natural Gas prices has hurt XMO (the acquired XTO). The CEO recently mentioned that the payback for this acquisition would take longer than initially expected. Consequently, it can be said that apart from some issues of bad timing for the acquisition as well as the drop in natural Gas prices, XTO energy acquisition by ExxonMobil can still be considered as one of the biggest movements from such a corporation toward Sustainable Development as well as an interest in its economic, social environmental role.

The link between sustainability and High performance

In order to conclude the experimental part of the thesis, based on what has been discussed in the previous chapters, the future cannot be created just by good ideas and regulatory input but rather by the innovation and technology invented by SMEs and MNCs. Basically, corporations, which are capable of pushing the boundaries and try to understand and communicate connections with core business challenges and opportunities will be successful in embedding sustainability activities. Embedding sustainability within the core business by applying innovative patterns and inventing technologies can be achieved in different ways: in-house or out-sourced. This means that apart from the patterns a corporation is looking for when it comes to sustainability implementation, they either have to develop technologies and innovative paths in-house or they acquire other SMEs or corporations which already possessed that technology. As a result, most energy corporations consider acquisition as a solution due to it being more cost efficient and having the quick integration pattern it needs. The question, what does a high-performing company in the energy industry look like, can be answered if corporations pass the challenges of integration and acquisitions.

Many game-changers in the energy industry are operating in such a way that the supply should be diverse and they have to position themselves in new markets i.e. demand. As an example, *Iberdrola*, the second largest utility supplier in Spain and one of the largest corporations in Europe, is one of the innovators in the energy industry. Huge investments and putting a lot of effort in being the leader in renewable energy platforms as well as applying sustainability at the core of the company's strategy show that *Iberdrola's* CEO and executives are considering pushing the corporation to gain sustainable development in the future. *Iberdrola* saw the results two years after implementing new strategies and the impacts of operating in the renewable energy section were noticeable (*Iberdrola corporate website*, Retrieved June 12, 2014). As already mentioned in previous chapters, technology and innovation application is the only solution for players in the energy industry to cut costs and move toward market growth. Companies like Royal Dutch Shell and ExxonMobil have been recently committed to different green energy platforms, programs and technology developments. Acquisitions like those already mentioned in the case studies above show that these

giants in the energy industry are concerned with being sustainable and have understood the benefits of being sustainable as not just being environmentally friendly but also being cost efficient and more profitable.

As a result, considering alternative energy sources such as Natural Gas (Case studies), renewable energy sources as well as being efficient in current operations can be the starting point for Energy Corporations to be involved in the sustainability movement. Technology and innovation assists corporations in discovering new patterns as well as making the current operations efficient and considering the solution to accelerate the sustainability path for MNCs especially in the energy industry.

Part 3

Conclusion and implications

The thesis has examined how MNCs in the energy market could behave in the global situation towards achieving sustainability. Moreover, it has revealed that many changes have happened during last decade in regard to sustainability issues and how energy corporations are looking at the concept these days. Multinational corporations' CEOs and other executives realized that sustainability principles have to be implemented in their corporations' strategies. Nowadays, corporations do not consider sustainability a marketing feature to attract more customers or conquer niche market but they believe that the next era will be the era where sustainability is embedded in companies' core business and can be tracked from the internal operations of a corporation to the supply chain and its subsidiaries.

Based on case studies, literature reviews and theoretical findings, this research has identified five principles that it considers to be the research question's answer as well as the thesis' conclusion. The crucial role of technology and innovation in the energy industry has been considered as the major reason why corporations in this industry are looking at acquisitions as a company "must-have" strategy to not only expanding their businesses but also achieving sustainability more efficiently and quickly. Obtaining solid technologies and innovative patterns in the energy sector- Downstream, Midstream or Upstream- such as technologies that discover and extract Gas, cover transporting and refinery procedures or constructing renewable plants, as alternative energy resources towards a sustainability implementation in the market, have to be done quick and efficient. Quick because of the competitive situation that dominates the energy market and efficient because corporations do not want to spend time and money in-house to achieve these technologies and sources, therefore it has to be cost efficient as well as lower-risk to acquire SMEs in order to bring all requirements to the corporation at once. In fact, one of the fastest and most efficient paths towards sustainability in the energy industry is acquisition and energy corporations in particular realized that future competition without sustainability implementation within its

strategies is impossible. Therefore, the five-principle framework has been developed in this thesis to accelerate the transition toward fully integrated sustainability in the core business of a Multinational Corporation as well as answering the research question of this thesis. Furthermore, CEOs and Multinational Corporations' executives can adapt this framework within their corporations in order to facilitate the sustainability implementation procedure in the company's core business and driving strategies towards sustainable development in the future.

The following framework has been established to clarify MNCs path towards sustainability and show how these corporations can adapt their strategies in such a way that it helps them achieve sustainability in social, economic and environmental factors (UN Global Compact 2010).

Five Prerequisites of Sustainability Implementation within the energy industry:

The sustainability framework or so-called five main “must-haves” that assist corporations in sustainability integration are:

1. Clarifying and Collaborating in the regulatory environment

Providing an informal situation between stakeholders, policymakers builds trust as well as reduces uncertainty. This can overcome some of the challenges that might happen in a regulatory environment. As already cited, the role of government policy in the energy industry stresses the corporations' engagement and makes intervention a necessity in order to shape the market's future. In fact, closer cooperation between policy makers, regulators and companies, which already feel and are challenged by the pros and cons in the market could reduce future consequences as well as allow the real players to engage in their own future. On the other hand, collaboration could not be achieved and be efficient without trust between stakeholders. National governments on the one side as major regulators and corporations on the other side as real players in the market

have to rebuild trust between them in order to facilitate this process and collaborate in the climate beyond lobbying and any interventions. Consequently building trust and developing standards that assist the collaborative climate between stakeholders would be expected in this step.

2. *Educational reform and Generating new mindsets between game-changers to insert sustainability oriented strategies into the Core-Businesses*

Previous studies have shown that about 89 percent of the CEOs from MNCs in different industries realized that education and business schools should start embedding sustainability concerned issues and topics within their curricula and get together with corporations in order to examine all theoretical aspects regarding sustainable development in the real world (UN Global compact report 2010). Energy corporations are suffering from a lack of expertise and experienced workers as well as talents, which are familiar with the concept of sustainability and how it can be embedded in a corporation's core business. This situation has changed during the last decade. On the one hand, corporations decided to educate their employees and executives to understand sustainability concepts and how important it is to be involved in their decision-making procedure as well as investing in universities and various business institutes in order to attract more students and young talents to this concept by allocating funds and scholarships. Therefore the current trend of collaboration between universities and corporations, will assist corporations in gaining young talented experts in the near future.

3. *Financial reforms and transparency between decision-makers and investor communities with regard to Sustainability activities within a corporation*

One of the most important factors in implementing sustainability is the absence of the investor community. 91 percent of CEOs in the energy sector have mentioned that in order to reach a tipping point in sustainability, corporations must describe to investor communities how sustainable strategies can impact their investment positively (UN Global compact report 2010). Therefore engaging investors in corporations' strategies and decision-making procedures could help them realize how sustainability could be useful for corporations financially. However, companies which want to inform their investors about their decision-making and sustainability implementation results have to become proficient at measuring and monitoring the impact of the applied sustainability activity on core business factors such as risk management, a corporation's reputation, revenue growth and cost reduction. Eventually, by using these methods CEOs and executives could make sustainability activities more understandable for the owners and investor community as well as educating them in upcoming trends.

4. *Redefine the corporations' value*

It took a long time and high costs until corporations and their CEOs as well as executives believed that the definition of valuation has been changed in market. In other words, today's world attitude has changed corporations' point of view about valuation. Basically CEOs and executives are not just looking for profit and loss entirely but rather consider the positive or negative impacts that their products or services could have on society and the environment. In fact, what defines the valuation of a company is how it can combine economic performance with social and environmental factors and create sustainable development in the end. Nowadays, corporations' CEOs realize that being successful in a market does not only mean tracking low-asks and high-bids and being concerned about the cost of energy or raw materials but they understand that the brand value is absolutely different and more difficult to be achieved. Thereby, researchers and surveys show that

being successful in a market, especially the energy industry needs a structuring of effective performance management not only on tangible components such as water, carbon, Oil/Gas and waste emission but also on intangible assets such as trust, value of reputation, customer relations and satisfaction etc.

5. *Educating customers and shaping their attitudes to ask for sustainable products and services*

The CEOs of energy corporations admitted that the most crucial point toward implementing sustainability in their corporations' core business is getting consumers to ask for sustainable products and differentiate between unsustainable and sustainable providers in the energy sector. It is still unclear from the customer's point of view what exactly could be changed when they switch to a sustainability concerned energy provider and previous studies have shown that the consumers (end-users) in the energy market are still very much price sensitive. The price elasticity in the energy market could make it harder to adapt sustainability activities and strategies within corporation transactions because end-users are still more concerned about their energy bills rather than the environment and other sustainability implementation benefits. However, many corporations in the market have begun strategies in order to shape consumers' taste and preferences for sustainable product and services. This thesis also mentioned some of the corporations' strategies in the experimental part that shows companies like Royal Dutch Shell and ExxonMobil are also concerned about consumer behavior and reaction, when they implement sustainability oriented strategies within their core businesses. Consequently, it seems like in the future market, a corporation which is capable of engaging customers in its efforts to generate a sustainable market, will have the edge and competitive advantage in an era where greater transparency is essential.

According to the case studies and the literature review that has been conducted in this thesis, a new era of sustainability in which corporations face new opportunities as well as challenges, is expected. On the one hand the importance of applying sustainability within corporations in the energy industry can be observed but on the other hand the increased complexity of sustainability activities drives corporations into a new and unclear territory. Realizing current the situation and adapting corporations' strategies towards sustainability activities as well as educating employees and executives to reform the mindsets can help the energy market take steps towards sustainable development in the future. Moreover, these steps will not only assist companies in creating more sustainable economies and societies but also provide corporations with an edge and competitive advantage in order to successfully operate in the future market between their rivals. As leading players in the energy industry are considering the transition toward a different energy market which contains sustainability features, issues and challenges appear. In fact, corporations cannot keep operating using their traditional factors such as efficiency and cost controlling system but they have to be involved in business networks with their customers and be more collaborative with governments, regulators and other stakeholders in the industry. In addition to being more cooperative and making various business related networks, energy market players have to accelerate the switching procedure to sustainability activities by applying different strategies. This thesis has considered the "Acquisition strategy" as one of the most efficient strategies that assist MNCs in driving the corporation towards sustainable development.

Bibliography:

- + Anand, J., Capron, L., & Mitchell, W. (2005). Using acquisitions to access multinational diversity: thinking beyond the domestic versus cross-border M&A comparison. *Industrial and Corporate Change*, 14(2), 191-224.
- + Applying the ABCD Planning Method. *The Natural Step*. <http://www.naturalstep.org/en/abcd-process> (accessed 14 Feb 2014).
- + Articles of Agreement of the International Monetary Fund, Adopted at the United Nations Monetary and Financial Conference, Bretton Woods, New Hampshire, July 22, 1944. Entered into force December 27, 1945.
- + Auerbach, A. J. (Ed.). (2008). Mergers and acquisitions. University of Chicago Press.
- + Auerbach, A. J. (1988). Introduction to "Corporate takeovers: causes and consequences". In *Corporate Takeovers: Causes and Consequences*, 1-8. University of Chicago Press.
- + Bateman, B., & Thomas, N. (2006) Environmental Sustainability . *MONDAQ*
- + Berg, C. (2008). The importance of customers in Mergers and Acquisitions. Doctoral Thesis, 91-120.
- + Bernd W. Wirtz (2006), Handbook Mergers and Acquisitions Management
- + Berthon, B. (2010). A new era of sustainability UN Global Compact-Accenture CEO Study 2010. Global Compact Leader Summit, New York, USA.
- + Biomass one of the latest sources of renewable Energy. (n.d.). Retrieved May 17, 2014, from <http://cleangreenenergyzone.com/biomass/>
- + Black, S. (2008). Freeman Hospital CHP scheme. *Freeman Hospital CHP scheme presentation* . Lecture conducted from Dalkia, .
- + Blackburn, W. R. (2012). The complete management guide to achieving social, economic and environmental responsibility. The sustainability handbook.
- + Blackburn, W. R. (2012). The Sustainability Handbook: "The complete management guide to achieving social, economic and environmental responsibility". Published by Earthscan in the UK and USA. Chapter 2.

- + Bonn, Ingrid, & J. Fisher. (2011). Sustainability: the missing ingredient in strategy. *Journal of Business Strategy*. Emerald Group Publishing Limited 32 (1). 5-14.
- + Bowen, Harry; Wiersema, Margarethe (2008): International and Product Diversification: their Interrelationship and Impact on Firm Performance. Discussion Paper 2009- 04: McColl School of Business, 1-49.
- +Bresman H., J.Birkinshaw, R.Nobel (2010).Knowledge transfer in international Acquisitions. *Journal of international Business studies*.
- +Bresman H., J.Birkinshaw, R.Nobel (third Quarter 1999). Knowledge transfer in international Acquisitions. *Journal of international Business studies*.
- + Burton, I. (1987). Report on Reports: Our Common Future: The World Commission on Environment and Development. *Environment: Science and Policy for Sustainable Development*, 29(5), 25-29.
- + Cesar L. França, Kate Maddigan, Kyle White (2006). Sustainability Opportunities and Challenges of the Biofuels Industry. School of Engineering, Blekinge Institute of Technology Karlskrona, Sweden.
- + Chen, L. (2014). The World's Largest Companies: China Takes Over The Top Three Spots. Forbes. Accessed May 21, 2014.

<http://www.forbes.com/sites/liyanchen/2014/05/07/the-worlds-largest-companies-china-takes-over-the-top-three-spots/>

(accessed 21 May 2014).
- + Chertow,M. R. (2000). "The IPAT equation and its variants". *Journal of Industrial Ecology* 4 (4): 13–29.
- + Christensen, C. M., & Anthony, S.D. & Roth, E. A. (2004). Seeing What's Next: Using the Theories of Innovation to Predict Industry Change. *Boston: Harvard Business School Press*.
- + Christensen, C.M., & Raynor, M.E. (2008). Buying resources, process and value. May 5, 2008 Forbes.

http://www.forbes.com/2008/05/05/microsoft-yahoo-google-lead-clayton_in_cc_0505claytonchristensen_inl.html (accessed 3 Feb 2014).

- + COMMISSION RECOMMENDATION (2003/361/EC) of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises - REACH Compliance - www.reach-compliance.eu -. (n.d.). Retrieved April 29, 2014, from <http://www.reach-compliance.eu/english/REACH-ME/engine/sources/regulations/launch-2003-361-EC.html>
- + Commoner, B. (1972): The Environmental Cost of Economic Growth. Population, Resources and the Environment. Washington, DC: Government Printing Office, 339–363.
- + Coyle, B. (Ed.). (2000). Mergers and acquisitions. Published by Global Professional.
- + Craig, C.S. & Douglas, S.P. (2005). International marketing research. (3rd Edition). John Wiley & Sons, Ltd.
- + Desai, M.A.; Foley, F.; Hines jr., J. (2008): Capital structure with risky foreign investment. In: *Journal of Financial Economics*, Vol. 88, 534 – 553.
- + Donald M. DePamphilis (2010) Mergers, Acquisitions, and Other Restructuring Activities (Fifth Edition), College of Business Administration, Loyola Marymount University, Los Angeles, California. Pages 3-46.
- + Ehrlich, P. & Holdren, J. (1971): Impact of Population Growth. *Science* 171: 1212–1217.
- + Ehrlich, P.R. & Ehrlich, A. H. (1972): *Eco-science: Population, Resources, Environment*. San Francisco: Freeman.
- + Extract of Article 2 of the Annex of Recommendation 2003/361/EC.
- + Fisher, J., & Bonn, I. (2011). Business sustainability and undergraduate management education: An Australian study. *Higher Education*, 62(5), 563-571.
- + Forbes. (n.d.). The World's Biggest Public Companies. Retrieved May 13, 2014, from <http://www.forbes.com/global2000/list/>
- + Freshwater Management.(n.d.). Accessed May 28, 2014, from <http://corporate.exxonmobil.com/en/environment/environmental-performance/freshwater-management/overview>

- + Ghosh, D. (2011). Approach to energy efficiency among micro, small and medium enterprises in India: Results of a field survey. *UNIDO - DEVELOPMENT POLICY, STATISTICS AND RESEARCH BRANCH WORKING PAPER 08/2011*. Retrieved February 12, 2014, from http://www.unido.org/fileadmin/user_media/Services/Research_and_Statistics/WP082011_Ebook.pdf

- + Goedhart, M. & Koller, T, & Wessels, D. (2010). The five types of successful acquisitions. Perspectives on Corporate Finance & Strategy. McKinsey & Company. 2-7.

- + Goklany, I. M. (2009). Have increases in population, affluence and technology worsened human and environmental well-being. *The Electronic Journal of Sustainable Development*, 1(3), 15.

- + Gold, R. (2009). Exxon bets big on Gas with deal for XTO, The Wall Street Journal/ Business. Published Dec 15.2009, Retrieved May 21, 2014, from <http://online.wsj.com/articles/SB10001424052748704869304574595710440167>

- + Gray, B., & Stites, J.P. (2013). Sustainability through Partnerships: Capitalizing on Collaboration. Network for Business Sustainability. Retrieved from: nbs.net/knowledge

- + Hanna, A. & Lacy, P. (2011). Towards a New Era of Sustainability in the Energy Industry. UN Global Compact-Accenture.

- + Hart, S. L., & Milstein, M. (2006). In search of sustainable enterprise: The case of GE's Ecomagination initiative. 1(1) 36-43.

- + Hart, Stuart L. 2011. Creating a Culture of Sustainability. Written and presented by Stuart L. Hart. Cornell University, The Johnson School Center for Sustainable Global Enterprise. Webinar. <http://www.youtube.com/watch?v=DEHCJKeNnA8>. (accessed 15 April 2014).

- + Haspeslagh, P.C. & D.B. Jemison, (1991). Managing acquisitions: Creating value through corporate renewal. *New York: The Free Press*.

- + Hitt, Michael et al. (2006): International Diversification: Antecedents, Outcomes, and Moderators. In: *Journal of Management*, Vol. 32(6), 831-867.
- + Hollensen, S. (2007). *Global Marketing: a decision-oriented approach*. Pearson Education.
- + Hunt, J. W. (1990). Changing pattern of acquisition behavior in takeovers and the consequences for acquisition processes. *Strategic Management Journal*, 11(1), 69-77.
- + Hymer, S. (1976). *The international operations of national firms: A study of direct foreign investment*. Cambridge, MA: MIT press, 14, 139-155.
- + Iberdrola Sustainability. (n.d.). Retrieved June 12, 2014, from <http://iberdrolarenewables.us/sustainability.html>
- + Ike Mathur, Manohar S, Kimberly C. G, (2004): Multinational Diversification and Corporate Performance, In: *European Financial Management*, Vol. 10(3), 439–464.
- + INTERNATIONAL ACADEMIC SYMPOSIUM (Jan2013). ENERGY SUSTAINABILITY AND COMPETITIVE MARKETS. *Universitat de Barcelona*. Barcelona, January 29, 2013.
- + International Monetary Fund (1944). *Articles of agreement of the International Monetary Fund*. Washington, D.C.: International Monetary Fund, 2011.
- + Jaffe, A., & Soligo, R. (2007). *The international oil companies*. James A. Baker III Institute for Public Policy of Rice University.
- + Jaruzelski, B. & et al. (2011) The Global Innovation 1000: Why Culture Is Key?. *Strategy+Business Magazine*, (65), Winter 2011. 2-16.
- + Jensen, M. (1986). The takeover controversy: Analysis and evidence. Harvard Business School. *Midland Corporate Finance Journal*, 4(2).
- + Jones, A, (2013), Apple-Samsung patent battle heads for next round, *The wall street journal tech* (seen Nov. 2013)
- + Jordan, M. (2002). RBC Centura aims high with Eagle Bancshares - Atlanta Business Chronicle. Widgets RSS. Accessed May 26, 2014, from

<http://www.bizjournals.com/atlanta/stories/2002/06/03/newscolumn3.html?page=all>

- + Karim, S., & Mitchell, W. (2004). Innovating through acquisition and internal development: A quarter-century of boundary evolution at Johnson & Johnson. *Long Range Planning*, 37(6), 525-547.
- + Khanna, Tarun; Palepu, Krishna (2000): The Future of Business Groups in Emerging Markets: Long – Run Evidence from Chile. In: *The Academy of Management Journal*, Vol. 43(3), 268 – 285.
- + Klein, Peter; Lien, Lasse (2009): Diversification, Industry Structure, and Firm Strategy: an Organizational Economics Perspective. In: *Advances in Strategic Management*, Vol. 26, 289–312.
- + Kogut B.(1988). Joint ventures: theoretical and empirical perspectives, *Strategic Management Journal*, 9: 319-322.
- + Kwak, P. (2011). Companies that did a conglomerate merger. eHow. Accessed May 26, 2014. http://www.ehow.com/info_8411907_companies-did-conglomerate-merger.html
- + Lacy, P., Cooper, T., Hayward, R., & Neuberger, L. (2010). A new era of sustainability. UN Global Compact, Accenture.
- + Laszlo Tihanyi, David A. Griffith, Craig J. Russell (2005). The Effect of Cultural Distance on Entry Mode Choice, International Diversification, and MNE Performance: A Meta-Analysis. *Journal of International Business Studies*, Vol. 36, No. 3, pp. 270-283. Published by: Palgrave Macmillan Journals.
- + Li, D. D.; Li, S. (1996): A theory of corporate scope and financial structure. In: *Journal of Finance*, Vol. 51, 691–709.
- + McClure, B. (2009). Mergers and Acquisitions. . Accessed May 21, 2014, <http://www.investopedia.com/university/mergers/mergers1.asp>
- + Mankiw, N. Gregory and Whinston, Michael D. (1986): "Free entry and social inefficiency". *Rand Journal of Economics* Vol. 17. No. 1. pp. 48-58.
- + Maslow, A (1954). Motivation and personality. New York, NY: Harper. 236.

- + Mathur, I., & Singh, M., & Gleason, K. C. (2002). The evidence from Canadian firms on multinational diversification and performance. *The Quarterly Review of Economics and Finance*, 41(4), 561-578.
- + Max-Neef M. A. & Elizalde, A. & Hopenhayn, M. (1989). Human scale development: conception, application and further reflections. New York: Apex. Chpt. 2. "Development and Human Needs", 18.
- + McNeill, D. (2012). "What is sustainable development?" Centre for Development and the Environment, University of Oslo.
- + McClure, B. (2009). Mergers and Acquisitions. . Accessed May 21, 2014, <http://www.investopedia.com/university/mergers/mergers1.asp>
- + Mitchell John V. (2002). A New Political Economy of Oil. Royal Institute of International Affairs, Chatham House, London. *The Quarterly Review of Economics and Finance* 42. 251–272
- + Moffatt, I. (2000). Ecological footprints and sustainable development. *Ecological Economics*, 32(3), 359-362.
- + Multinational corporation (MNC). (2014). In Encyclopaedia Britannica. Accessed from <http://www.britannica.com/EBchecked/topic/397067/multinational-corporation>
- + Murali, Chari; Sarv, Devaraj; Parthiban, David (2007): International diversification and firm performance: Role of information technology investments. In: *Journal of World Business* 42, 184–197.
- + MYERS JAFFE A. WALLACE S. JAMES A. BAKER (2007). THE INTERNATIONAL OIL COMPANIES. Prepared in conjunction with an Energy Study sponsored by JAPAN Petroleum Energy center and the James A. Baker III institute.
- + Nair, C. (2014, January 13). Any plausible pathway to sustainable development must involve the state. Retrieved April 7, 2014, from <http://www.theguardian.com/sustainable-business/blog/pathway-sustainable-development-involve-state-governance>

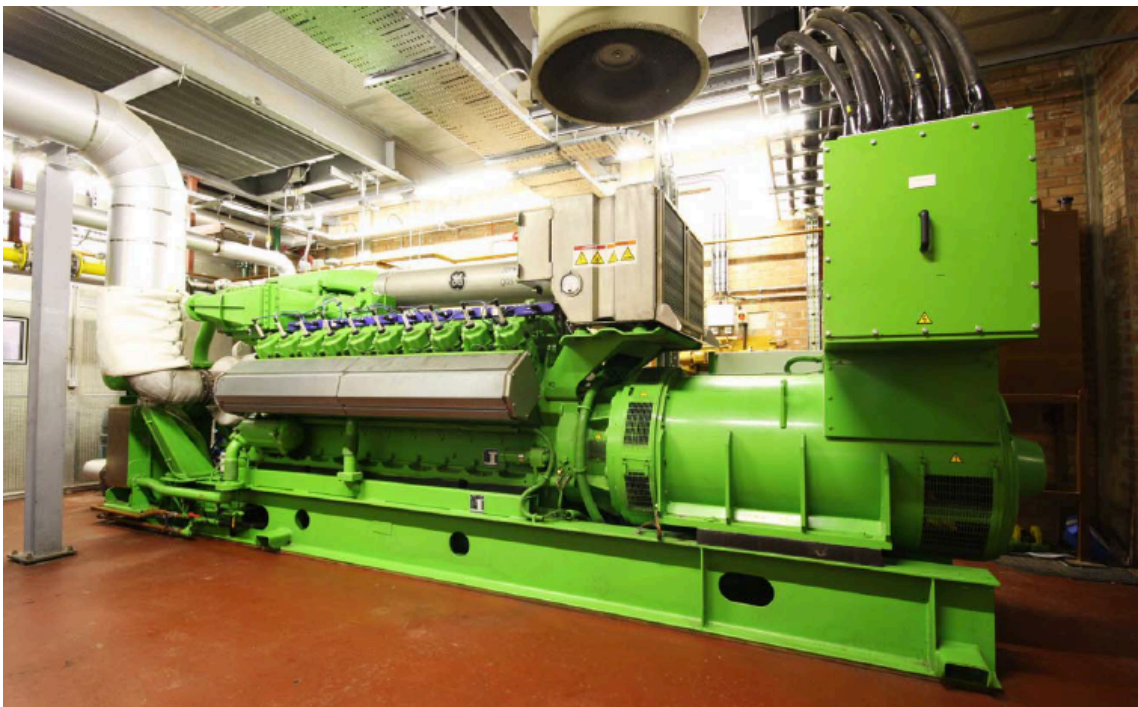
- + Photovoltaic Module | Photovoltaic Array Software | Solar Panel Software | Wind Solar Energy Software | ETAP. (n.d.). Retrieved April 17, 2014, from <http://etap.com/renewable-energy/photovoltaic-101.htm>
- + Piscitello L. (Politecnico di Milano) & L. Rabbiosi.(2003). KNOWLEDGE TRANSFER IN CROSS BORDER ACQUISITIONS.
- + Pitcher, J. (2014). Microsoft completes Nokia acquisition. Polygon. Accessed May 26, 2014. <http://www.polygon.com/2014/4/28/5660266/microsoft-completes-nokia-acquisition>
- + Pogutz, S., & Micale, V. (2011). Sustainable consumption and production. *Society and Economy*, 33(1), 29-50.
- + Porter, M. E. (2008). The five competitive forces that shape strategy. *Harvard business review*, 86(1), 25-40.
- + Puranam, P. (2001). Grafting innovation: The acquisition of entrepreneurial firms by established firms.
- + Rapoza, K. (2011). In emerging markets vs. developed Mmarkets, EMs Win. Available at: <http://www.forbes.com/sites/kenrapoza/2011/08/09/in-emerging-markets-vs-developed-markets-ems-win/> [Accessed: 20 Feb 2014].
- + Ravenscraft, David J. and Scherer, F.M. (1987): "Life After Takeover". *Journal of Industrial Economics*. Vol. 36. No. 2. pp. 147-156.
- + Renewable Energy Policy Network Global Status Report, (2009)
- + Robèrt, K. H., Schmidt-Bleek, B., Aloisi de Larderel, J., Basile, G., Jansen, J. L., Kuehr, R., ... & Wackernagel, M. (2002). Strategic sustainable development—selection, design and synergies of applied tools. *Journal of Cleaner production*, 10(3), 197-214.
- + Saha, P. K. (2013). Strategic sustainability through a product development tool. *Green Design, Materials and Manufacturing Processes*, 209.
- + Schweitzer, D. (n.d.). Oil Companies and Sustainability: More than Just an Image?1-46.
<http://deepblue.lib.umich.edu/bitstream/handle/2027.42/77607/dschwei.pdf>

- + Singh, Manohar; Wallace, Davidson, Suchard, Jo-Ann (2003): Corporate Diversification Strategies and Capital Structure. In: *Quarterly Review of Economics and Finance*, Vol. 43, 147 – 167.
- + Slowinski, Gene, Stanton S.A., Tao, J.C., Miller, W. & McConnell D. P. (2000). Acquiring external technology: 29-35.
- + Sonia G. Lloyd (2008), Knowledge Transfer in Acquisition of a Small Hydrology Business.
- + Stanislaw, J, A. (2011). Great Game 2.0 - The race for clean energy. Washington, D.C.: Deloitte Center for Energy Solutions.
- + Tallman, Stephen; Li, Jiatao (1996): Effects of International diversity and Product Diversity on the Performance of Multinational Firms. In: *Academy of Management Journal*, Vol.39 (1), 179 – 196.
- + The Editors of Encyclopædia Britannica. (n.d.). Multinational corporation (MNC) (business). Retrieved April 27, 2014, from <http://www.britannica.com/EBchecked/topic/397067/multinational-corporation-MNC>
- + The Economist. (2011) The Company that ruled the waves. 2011, December 17. Accessed May 27, 2014. <http://www.economist.com/node/21541753>
- + The End Of Fossil Fuels. (n.d.). Retrieved May 16, 2014, from <http://www.ecotricity.co.uk/our-green-energy/energy-independence/the-end-of-fossil-fuels>
- + The Funnel–Society is being squeezed. *The Natural Step*. <http://www.naturalstep.org/the-funnel> (accessed 14 Feb 2014).
- + Tomas Jandik and Raja Kali (2009). Legal Systems, Information Asymmetry, and Firm Boundaries: Cross-Border Choices to Diversify through Mergers, Joint Ventures, or Strategic Alliances. *Journal of International Business Studies*, Vol. 40, No. 4, pp. 578-599. Published by: Palgrave Macmillan Journals.
- + Tordo, S., Tracy, B. S., & Afraa, N. (2011). National Oil companies and value creation. Issuu. Accessed May 27, 2014. <http://issuu.com/world.bank.publications/docs/9780821388310>

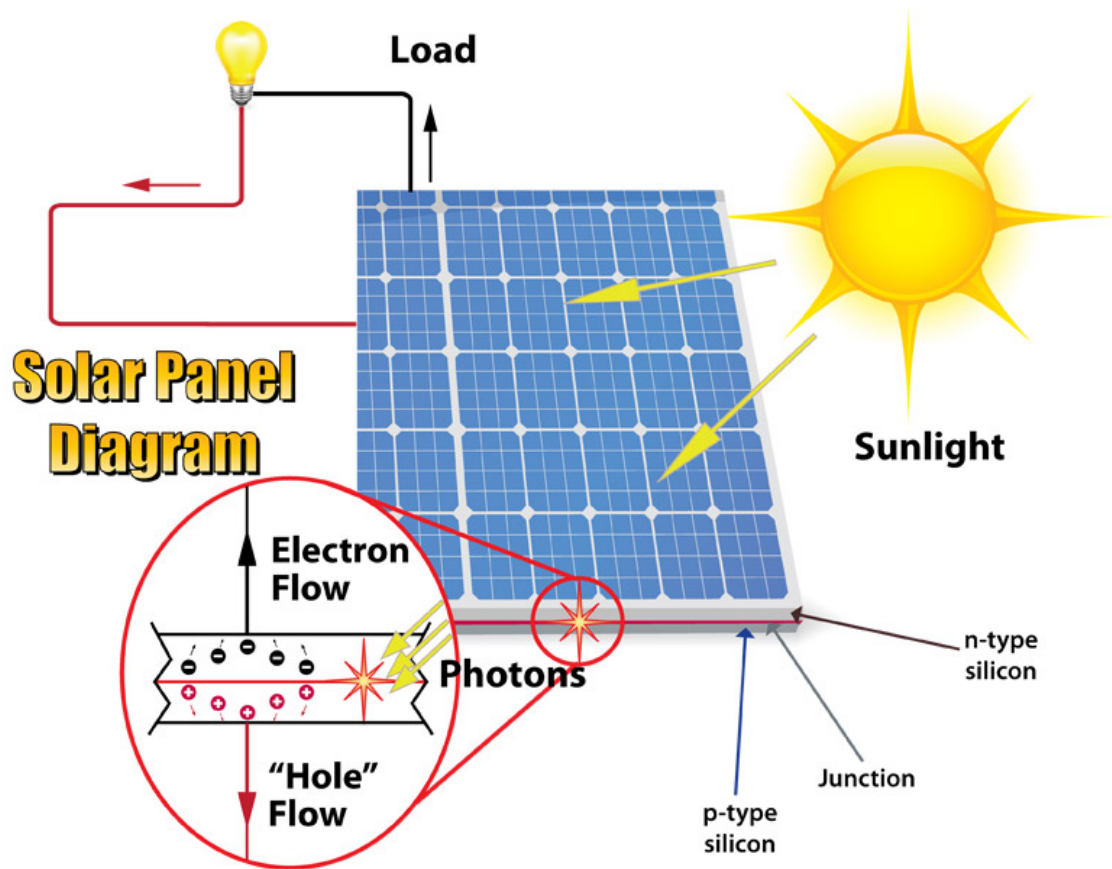
- + Van den Bergh, J. C., & Nijkamp, P. (1994). Modeling ecologically sustainable economic development in a region: a case study in the Netherlands. *The Annals of Regional Science*, 28(1), 7-29.
- + Vennet, R. V. (1996). The effect of mergers and acquisitions on the efficiency and profitability of EC credit institutions. *Journal of Banking & Finance*, 20(9), 1531-1558.
- + Vivoda, V. (2010). International oil companies, US Government and energy security policy: an interest-based analysis. *International Journal of Global Energy Issues*, 33(1), 73-88.
- + WEO, I. (2005). World energy outlook 2004, P. 422 .
- + World Commission on Environment and Development (1987). Our Common Future. Oxford: Oxford University Press. 27.
- + Zejan, Mario C. (1990): "New Ventures or Acquisitions. The Choice of Swedish Multinational Enterprises" *Journal of Industrial Economics*. Vol. 38. No. 3. pp. 349-355.
- + Zikmund, W. G.& Babin, B.J. (2010). Exploring marketing research. 10th International Edition. *South-Western, Cengage Learning*.
- + Yergin, D. (2008). Oil has reached a turning point. *Financial Times*. 28.

Appendices:

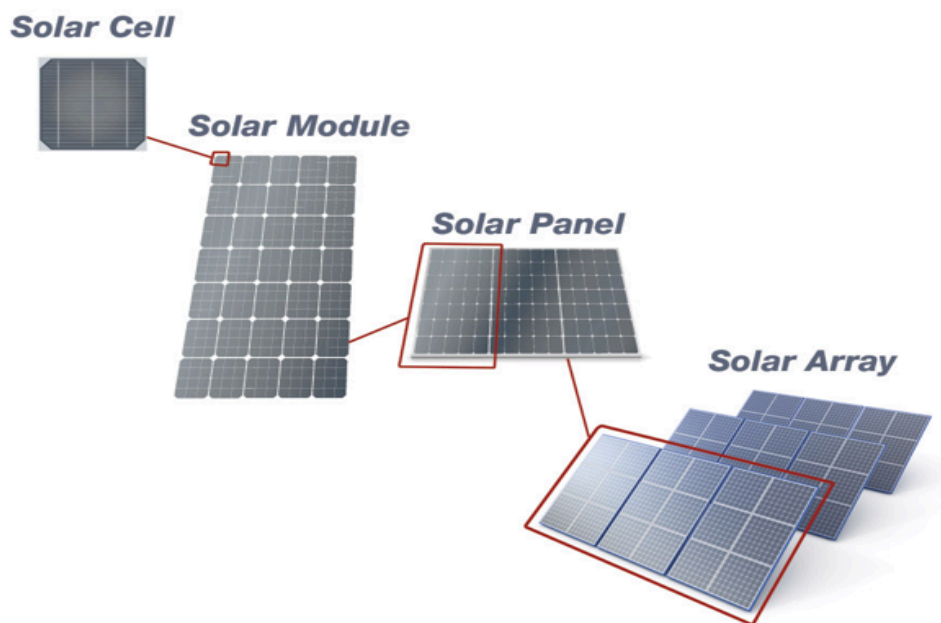
Appendix 1: *CHP Units* (Source: Black, S. (2008). *Freeman Hospital CHP scheme*)



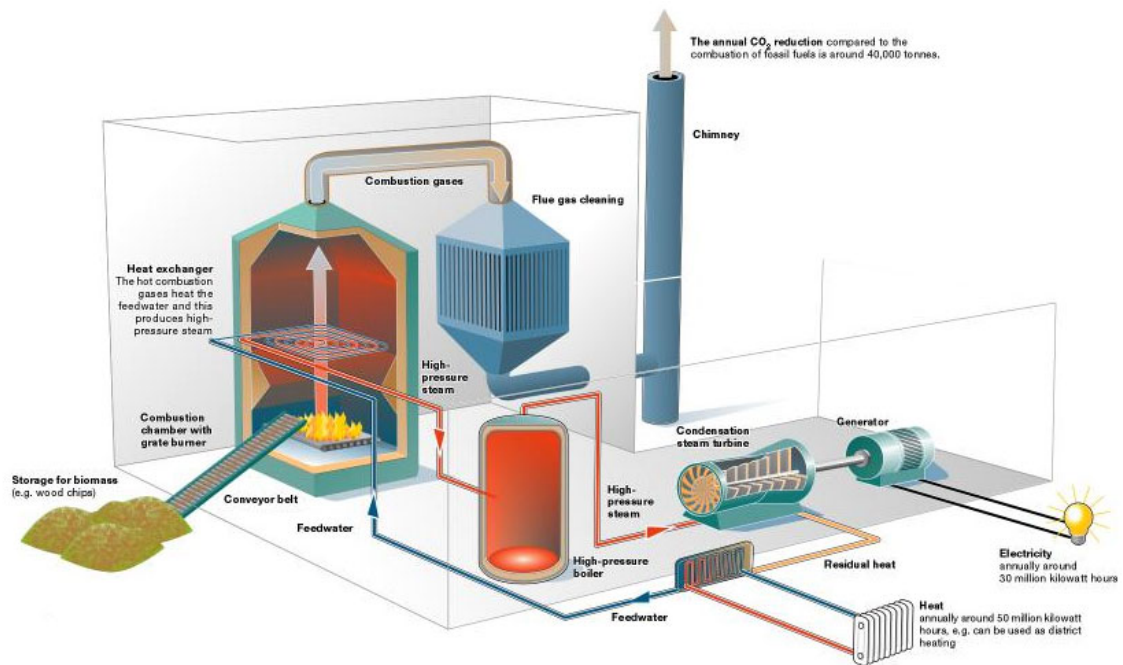
Appendix 2: Solar Photovoltaic Diagram (Source: ETAP powering success website, Retrieved April 17, 2014)



Solar Panel breakdown: (Source: ETAP powering success website, Retrieved April 17, 2014)



Appendix 3: Biomass Energy Diagram, in which the Methane Gas from the fermentation procedure produces electricity. (Source: Biomass one of the latest sources of renewable Energy. Retrieved May 17, 2014)



Abstract (German)

ZUSAMMENFASSUNG

Der Begriff "Sustainable Development" wurde als ein Modewort für viele Jahre, aber in letzter Zeit, Unternehmen und ihren Aktionären bewusst geworden, die Auswirkungen ihrer Tätigkeit auf die Gesellschaft und haben uns bemüht, in ihre Tagesordnung zu setzen. Diese Arbeit konzentriert sich auf, wie Unternehmen in der Energiebranche aktiv gemacht haben nachhaltige Entwicklung(Sustainable Development) einen Teil ihrer Prioritäten. Dabei legt die These aus den theoretischen Rahmen für eine nachhaltige Entwicklung(Sustainable Development) und verdeutlicht, warum es heute notwendig und gibt Beispiele für eine solche Integration mit Hilfe von zwei Fallstudien, ExxonMobil und Shell-Gruppe.

Der erste Teil der Arbeit befasst sich mit dem Aufbau der Grundlagen notwendig, die Literaturrecherche durchzuführen. Es werden die Motive hinter diesen Bemühungen und stellt die Methodik und Forschungsstruktur verwendet werden, um die Durchführung der Ziel dieser Arbeit. Der zweite Teil analysiert die Anstrengungen der beiden Unternehmen bei der Umsetzung einer nachhaltigen Entwicklung und schafft den Rahmen für die Schlussfolgerungen benötigt. Der dritte Teil der Arbeit stellt die etablierten Rahmen zur Einbettung der nachhaltigen Entwicklung(Sustainable Development) im Kerngeschäft Werte eines Unternehmens als auch Zukunftschancen für ein solches Unternehmen in Bezug auf sozioökonomische und ökologische Faktoren.

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