



Norwegian School of Economics and Business Administration  
Master Thesis in International Business  
Advisor: Professor Siri Pettersen Strandenes

# **Can a *proactive approach* to environmental challenges prove a competitive advantage in the maritime industry?**

*The case of the Wilh. Wilhelmsen Group  
and the car carrier industry*



**Ronny Waage**  
**Bergen, December 2009**

This thesis was written as a part of the Master of Science Program at the Norwegian School of Economics and Business Administration. The institution, the advisor, and the sponsors are not - through the approval of this thesis - responsible for the theories and methods used, nor results and conclusions drawn in this work.

## **ABSTRACT**

Services offered by the world's ship owners and maritime transportation companies have made free trade possible, and along with the developments in movements of goods across world markets there has been a significant contribution to globalization. Globalization, while integrating world economies, societies and cultures has also blurred the lines of responsibility for environmental damages incurred along the way. The maritime industry has long been hiding behind the fact that it is the least polluting mode of international transportation, and in comparison with alternatives such as truck, rail or air transport, it is. However in today's increasingly environmentally conscious society where international regulations are also becoming ever stricter, many ship owners are waking up to a new dawn, and shipping players everywhere are noticing theirs is no longer a sufficient strategy.

There are three clear strategies for players in the shipping industry to take, they are outlined as follows:

- One strategy shows players trying to avoid compliance who then often end up paying costly regulatory charges;
- Another strategy is basic compliance but only with the minimum requirements;
- The third strategy is to go above and beyond both existing and expected laws and requirements.

This thesis is concerned with determining whether or not pursuing the third strategy with regards to the environment, will result in a competitive advantage.

## ACKNOWLEDGEMENTS

This thesis was made possible through the contribution, motivation and inspiration of those around me. There are many people to whom I wish to address these next few lines and I have done my best to include all of those who have contributed to my work and research.

First of all, I want to thank my thesis advisor, Siri Pettersen Strandenes, for guidance and feedback provided along the way, Inger Stensaker for her contribution to my interview guide, and Anne Liv Scrase and Norges Rederiforbunds Fond ved NHH for the financial support which has enabled me to attend inspiring conferences and conduct the majority of the interviews in person.

Furthermore, I am very grateful for all the help from the Wilhelmsen Group. I would especially like to thank Per-Kristian Knutsen, Kirsten Haune and Nils-Petter Dyvik for their interest in my project and for putting me in contact with Benedicte Gude and Petter Jønvik who have been of great assistance to my research. I would also like to thank Simen Røgeberg of Wilhelmsen, Melanie Moore of WWL, Hanna Behrens of NSA, Tom Gosselin of DNV and Jessica Battle of WWF for their input and participation in the interview sessions.

In addition, I would like to thank my former colleagues of KGJS and the WFP for their input and suggestions, my fellow members of YoungShip and STG for many interesting debates and inspiring events, and my good friends for hosting me during my travels and interviews; Ole Martin, Jon Rasmus, Bernhard and Sebastian, thank you for your hospitality.

Last, but surely not least, I would like to thank Aniela, my best friend and partner. You have been my motivator, my comforter and a source of inspiration over the past few months. Thank you for all your help with the planning, research and proof reading for the thesis, and for putting up with me for the duration of this process. This would not have been possible without you. Thank you!

Bergen, December 2009

Ronny Waage

## TABLE OF CONTENTS

1	INTRODUCTION .....	10
1.1	Purpose for Thesis.....	10
1.2	Why the Wilh. Wilhelmsen Group?.....	10
1.3	Problem Scope .....	11
2	BACKGROUND .....	13
2.1	The Maritime Industry .....	13
2.1.1	Operations .....	13
2.1.2	Pricing and competition.....	14
2.2	Regulation and Operational Framework .....	15
2.2.1	The Regulators .....	15
2.2.2	Existing Regulations.....	19
2.2.3	Expected Future Regulations.....	21
2.3	Environmental Issues and Challenges.....	22
2.3.1	Future trends in marine pollution .....	24
3	CASE .....	28
3.1	The Wilh. Wilhelmsen Group.....	28
3.1.1	History .....	29
3.1.2	Corporate Structure and Operations .....	29
3.1.3	Strategy and Philosophy.....	32
3.1.4	Approach to CSR and Environmental Issues .....	33

3.1.5	Stakeholders .....	35
3.2	The Car Carrier Industry .....	38
3.2.1	Competitors .....	39
4	LITERATURE REVIEW .....	44
4.1	Corporate Social Responsibility.....	44
4.1.1	The CSR Debate.....	45
4.1.2	The CSR Pyramid.....	46
4.1.3	A Criticism of CSR and Carroll's View.....	49
4.2	CSR and competitive advantage .....	51
4.2.1	CSR and financial performance .....	51
4.2.2	Competitive advantage.....	52
4.2.3	Implementation of CSR.....	53
4.2.4	Corporate Environmental Responsibility.....	55
4.3	Theoretical models.....	56
4.3.1	Porter's five forces model .....	57
4.3.2	Generic strategies .....	58
4.3.3	Resource Based View.....	59
5	METHODS .....	61
5.1	Research Design.....	61
5.2	Data Collection .....	62
5.2.1	Interviews .....	62
5.2.2	Secondary Sources .....	64
5.3	Methodology for Data Analysis.....	66
5.4	Credibility of Findings.....	66

5.5	Limitations of Research Methods .....	67
6	ANALYSIS AND DISCUSSION.....	69
6.1	The car carrier industry .....	69
6.1.1	Porter Five Forces analysis.....	70
6.1.2	Car Carrier Industry: Competitive Situation .....	75
6.1.3	Sources for competitive advantage.....	77
6.1.4	Comparison of the Players .....	79
6.1.5	Incentives for going green .....	82
6.2	Wilhelmsen in Focus.....	85
6.2.1	WWs approach to environmental issues .....	86
6.2.2	WWs performance and industry position.....	88
6.2.3	WWs competitive advantages .....	89
6.3	Drawing parallels .....	91
7	CONCLUSIONS, IMPLICATIONS AND DIRECTIONS FOR FUTURE RESEARCH. 92	
7.1	Conclusions and Implications .....	92
7.2	Directions for Future Research .....	94
8	REFERENCES.....	96
	Appendix 1: WW corporate structure .....	105
	Appendix 2A: Overview of world car production .....	106
	Appendix 2B: Production of cars and motor vehicles 2007 .....	107

Appendix 2C: Production of cars and motor vehicles 2008 .....	108
Appendix 3: World Car Carrier Trade .....	109
Appendix 4A: Brief introduction of the interviewees.....	110
Appendix 4B: Brief introduction of other stakeholder representatives .....	111
Appendix 5: Interview Guide.....	112

## **FIGURES**

Figure 1: Based on presentations by Fürstenberg (2007) and WW (2009) .....	23
Figure 2: Projected CO <sub>2</sub> emissions (Freidrich et al. 2007, data from EC COM (2005)).....	25
Figure 3: Projected SO <sub>x</sub> emissions in Europe (Freidrich et al. 2007, data from EC COM (2005)).....	26
Figure 4: Projected NO <sub>x</sub> emissions in Europe (Freidrich et al. 2007, data from EC COM (2005)) ....	26
Figure 5: Emissions from shipping (Freidrich et al. 2007, data from EC COM (2005)).....	27
Figure 6: Worldwide operations of the WW Group (WW website, 2009).....	30
Figure 8: The pyramid of CSR (Carroll, 1991: 42).....	48
Figure 9: Traditional view of business strategy and social responsibility (Husted & Allen, 2001) .....	51
Figure 10: Integrated view of business and social strategy (Husted and Allen, 2001).....	52
Figure 11: Porter's five forces model, as presented by Notes Desk (2009).....	57

## **TABLES**

Table 1: General overview of individuals interviewed for study.....	63
Table 2: Comparison of the players in the car carrier industry; compiled by the author (2009).....	80
Table 3: WW's Competitive Advantage Analysis .....	90

## Abbreviations

ACEA	European Automobile Manufacturers' Association
AFS Convention	International Convention on the Control of Harmful Anti-Fouling Systems on Ships
ARC	American Roll-On Roll-Off Carriers
BWM Convention	International Convention for the Control and Management of Ships' Ballast Water and Sediments
CER	Corporate Environmental Responsibility
CFP	Corporate Financial Performance
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide
CSR	Corporate Social Responsibility
DNV	Det Norske Veritas
EC	European Commission
EMSA	European Maritime Safety Agency
ENDS	Environmental Data Services
EU	European Union
EUKOR	EUKOR Car Carriers
HAL	Hoegh Autoliners
HC	Hydrocarbons
Hong Kong SRC Convention	Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships
HR	Human Resources
IACS	International Association of Classification Societies
ICCT	International Council on Clean Transportation
ILO	International Labor Organization
IMO	International Maritime Organization
ISM	International Safety Management Code
ISO	International Organization of Standardization
K Line	Kawasaki Kisen Kaisha
LCTC	Large Car and Truck Carrier
MARPOL	International Convention for the Prevention of Pollution from Ships



MOL	Mitsui O.S.K. Lines
NGO	Non Governmental Organization
NHH	The Norwegian School of Economics and Business Administration
NOx	Nitrogen Oxide
NOK	Norwegian Kroner
NSA	Norwegian Shipowners' Association
NYK Line	Nippon Yusen Kabushiki Kaisha
OICA	International Organization of Motor Vehicle Manufacturers
PCC	Pure Car Carrier
PCTC	Pure Car and Truck Carrier
PM	Fine Particle Matter
P5F	Porters Five Forces Model
RBV	Resource-Based View
SOx	Sulphur Oxide
SWOT	Strengths, Weaknesses, Opportunities, Threats
UECC	United European Car Carriers
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Convention on Trade and Development
UNFCCC	United Nations Framework Convention on Climate Change
US	United States of America
USD	United States Dollars
VOC	Volatile Organic Compounds
VRIO	Value, Rarity, Imitability, Organization
WBCSD	World Business Council for Sustainable Development
WMS	Wilhelmsen Maritime Services
WW	Wilh. Wilhelmsen Group
WWF	World Wide Fund for Nature (formerly the World Wildlife Foundation)
WWL	Wallenius Wilhelmsen Lines

# 1 INTRODUCTION

## 1.1 Purpose for Thesis

*The sea, the great unifier, is man's only hope. Now as never before, the old phrase has a literal meaning: we are all in the same boat.*

(Jacques Yves Cousteau, 1981)

Although climate change and the environment have been reinstated on the social agenda with the high profile “An Inconvenient Truth” and Al Gore’s subsequent Nobel Prize, the debate surrounding pollution from shipping is not new. Pollution from the shipping industry has been a debated issue for the past 30 years (Gerdes, 2004). However, submitting to the renewed emphasis on the behaviour and responsibility of multinational companies, this thesis looks into how shipping companies approach Corporate Social Responsibility (CSR) and the environmental challenges that draw from the impact of human consumption.

Despite the excuses that the maritime industry has been using to avoid large scale operational changes, stakeholders are now drawing attention to the need for a new environmentally-centric strategy. Additionally, increasing attention from both media and the public on the sheer scope of operations within the maritime industry is raising the pressure among industry players to improve environmental performance (Watson, 2004).

This growing environmental focus is why the maritime industry linked with CSR and environmental sustainability has been chosen as the object of study. In light of these issues becoming even more salient in the future, the main research question is as follows:

*Does going green provide a competitive advantage for players in the car carrier segment, either in terms of market position, finances or reputation?*

## 1.2 Why the Wilh. Wilhelmsen Group?

I have chosen the Wilh. Wilhelmsen Group (WW) as a case study because of their strong values to do business in a way with as little negative impact to the environment around them as possible.

Resultantly, WW are amongst the leading green maritime players in Norway and the world. With a deeper look into how WW manages to justify their green investments, I seek to expose whether their proactive environmental strategy is able to provide them with a competitive advantage.

### **1.3 Problem Scope**

The primary goal of this paper is to determine whether a proactive approach to environmental issues in the maritime industry can be defended given the lack of regulations, limited power of the regulators, complexity of the industry, and apparent lack of commitment to the environment that we find in the industry today.

Considering the differences between the many diverse and highly specialized segments in the maritime industry, I have chosen to limit my studies to the car carrier segment. The term car carrier in this study is used in reference to the different vessels in the industry. The study will focus on the transportation of passenger cars and in doing so will not include other types of cargo. The use of a smaller sample size will help facilitate a more thorough and concise investigation within the realistic scope of a thesis study. Both the car carrier industry and types of cargo will be looked at more thoroughly in Chapter 3.

Following the lead research question of whether going green provides a competitive advantage for players in the car carrier segment in terms of market position, finances or reputation-, the below sub-questions will be addressed to further investigate whether such a proactive approach has any impact on the car carrier companies. The sub-questions have been divided into three groups.

#### *1 Understanding the car carrier segment and its players*

- What is the current market situation in the car carrier segment? In other words, how is the power distributed between the different stakeholders and what are the basis for competition?
- How do the different players in the car carrier segment carry out their corporate social responsibility? More specifically, how are they involved in environmental sustainable activities?
- From the point of view of both the industry players and other stakeholders; what are the incentives for going green?

- Are there differences in opinion among the different stakeholders?

## 2 *Looking more specifically at Wilhelmsen*

- In the case of WW, is their approach to the environment proactive? And if so, is this a deliberate strategy from their side?
- Is it possible to link WW performance and industry position to their CSR and environmental policies?
- What are the competitive advantages of WW? And how does “environmentally proactive” score compared to the other competitive advantages?

## 3 *Additional questions related to implications*

- From the research and findings in this study, can any parallels be drawn to other maritime segments where WW has a strong position?
- Can we draw any parallels to the maritime industry as a whole?

These questions form the basis for the analysis in chapter six and will be addressed throughout the paper. Questions in the first section address the market situation and competition in the car carrier segment where WW is one of the major players. Questions in the second section focus more specifically on WW as a company and identify how WW perceives their position and approach to CSR and environmental sustainability. Finally, questions in the third section look at the possible implications of the study.

## **2 BACKGROUND**

This section seeks to provide the reader with the necessary knowledge of the maritime industry and the operational framework under which the maritime service providers conduct their daily operations. It also strives to provide a background of environmental challenges the industry is facing today. Understanding how the industry is built up, what their operational requirements are and how they impact the environment is essential for fully understanding the paper.

### **2.1 The Maritime Industry**

The maritime industry is among the most global industries in the world; and of vital importance to modern society (Komar and Hoffman, 2002; Grammenos, 2002). Falling under the maritime industry umbrella, many various segments and sectors of transportation are found. These sectors are comprised of tank, bulk, container, and specialized vessels, and these vessels operate in a diverse range of waters including rivers, lakes, seas and oceans (Stopford, 2009). According to Stopford (1997), the main purpose of the maritime industry in recent centuries has been to supply goods and commodities to every corner of the planet, and the single most important element of this industry is its global reach.

#### ***2.1.1 Operations***

There are many ways in which a maritime service provider can choose to structure and register its operations, and therefore the incredible flexibility of players in the maritime industry makes it very difficult to regulate (Stopford, 1997). Further, elements vital to organization of the maritime industry include: tax havens for company registration, flags of convenience for vessel registration, international markets for vessel insurance and classification and the international labor market (Stopford, 1997). These elements are not permanent however, and changes with regards to moving from one tax haven or convenient flag state to another is quite easy. This also makes the maritime industry one that is very mobile, and internationally dispersed in both management and operations. These elements contribute to making the maritime industry complex, and illustrate the difficulty of regulating or supervising activities. This already challenging industry is further complicated as there is no single international organization that regulates all the elements of business involved in maritime operations (Stopford, 1997). Although the International Maritime Organization (IMO) bridges this gap

somewhat, it is still not comprehensive enough in its span to simplify regulation, especially with the many local regulations enforced by countries, states and ports. Regulation and regulators will be further elaborated upon in the following section.

Some of the critical issues which stem from tax havens, flags of convenience, international markets for vessel insurance and classification are that many of the preferred registries are those which are often hesitant to sign and implement IMO regulations relating to operations, crewing and the environment. Furthermore, although many individual operations and countries of ownership have signed environmental agreements, there is little or no effect on a shipping company's operations as long as its ships are registered under a flag of convenience wherein the flag belongs to a more lenient set of regulations. According to Gupta and Lad (1983), the above occurrences identify the need for an industry to self-regulate, an issue that this study will return to both in the section on regulation later in this chapter and in the literature review.

### ***2.1.2 Pricing and competition***

In many of the different segments in the maritime industry, there is close to perfect competition. Common to these markets is that the providers of transportation services are plentiful and the services they supply are very similar. On the other hand, many buyers also demand this transportation service, which leads to prices for the services being regulated by market forces (Stopford, 2009; Negbennebor, 2001). This is the case in most of the markets for trading of oil and dry bulk where no single supplier or buyer has any significant market power (Stopford 2009). Because of this competitive framework, the price received for services is regulated by the market thus making it impossible for any single player to obtain a higher price than the others (Negbennebor, 2001).

Recalling the previously discussed competitive nature of the industry and price standardization, we see that the incremental cost incurred by introducing higher environmental standards than the competition would likely result in these costs being covered by the company directly as opposed to being in part transferred onto customers (Negbennebor, 2001). All else being equal, this will result in the company at hand not meeting its economic responsibility since profits will be lower than those of the competition (Carroll, 1991). This can also be interpreted as there not being any incentives for more environmental concern with the current industry situation.

## **2.2 Regulation and Operational Framework**

In the nineteenth and twentieth century, international shipping was free to develop under the concept of “freedom of the seas” (Van Dyke et al. 1993). This development allowed the maritime powers and private corporations to establish their own rules and regulations and set the standards for operation that suited them. The marine powers developed these rules of the game based on the incorporation of different international conventions, and this framework was provided mainly by the seats of management for the companies and flag registries (Amrahamsson, 1977). Not much of this has changed in the past thirty years, although many new regulations have been incorporated and regulatory bodies established.

### ***2.2.1 The Regulators***

Stopford (1997) speaks of three regulatory regimes in the maritime industry which have distinct yet overlapping areas of responsibility; this group is comprised of classification societies, flag states and coastal states. Other regulatory bodies exist, and they include the IMO, the International Court of Justice, the International Labor Organization (ILO), the European Maritime Safety Agency (EMSA, a body of the European Commission), and the United Nations Convention on the Law of the Sea (UNCLOS) (Stopford, 2009). Each of the major three regulators will be discussed in turn, while the other regulatory bodies will also be looked at although in less detail individually.

#### ***2.2.1.1 Classification Societies***

Classification societies are independent non- commercial organizations which are concerned with standards of vessel construction and ship maintenance (IMO, 2004). As such, classification societies make rules for construction and maintenance and issue class certificates reflecting ships’ compliance with their rules. The certificates are issued based on technical pre-construction approval of building plans and construction surveys, and are renewed based on regular maintenance surveys throughout the lifespan of the vessel. Classification societies were originally established by marine insurers to verify minimum requirements for safety for the vessels qualifying for insurance. Today the role of classification societies is much more encompassing, but the main goal is still to promote safety by developing classification standards based on progress in naval architecture and marine engineering (IMO, 2004). Despite their evolution and developments, classification societies still provide the

essential classification certificates required to obtain insurance on vessels. The certificate is also a guarantee for the industry that a vessel is properly constructed and in good condition (Stopford, 1997). The ten leading classification societies are members of the International Association of Classification Societies (IACS), an organization that works with technical support, compliance verification and research and development (IACS website, 2009). IACS, through its members and classification standards, cover more than 90 per cent of the world's cargo carrying tonnage (IACS website, 2009). One well known example of a classification society is Det Norske Veritas (DNV).

#### *2.2.1.2 Flag states*

According to Stopford (1997: 423), a flag state is described as: “the primary legal authority governing activities of merchant ships in the state in which the ship is registered.” A flag state in practical terms refers to the regional authority exercising regulatory control through inspection, certification, and issuance of safety and pollution prevention documents. Flag states are responsible for legislation on both the commercial and operational performance of the ships that register with them. They are also the main participants in the development of international laws through treaties or conventions as coordinated by the IMO. Examples of such treaties or conventions are MARPOL and UNCLOS, and these will be discussed in the next section on current legislation.

As per recent statistics, the five most popular flag states are Panama, Liberia, Greece, Bahamas and Marshall Islands; this is based on their more liberal regulations (UNCTAD, 2008). Panama alone is the flag state for almost one quarter of the world fleet measured in dead weight tonnage (dwt) (UNCTAD, 2008). Looking at the list of which states that control the largest part of the world fleet (also measured in dwt), we see that the top five are Greece, Japan, Germany, China and Norway, with Greece as the only country included in both lists, and with Greece and Japan together controlling almost one third of the world fleet even though a minority of their vessels are registered in their own registries. In the case of Japan less than eight percent of their fleet is registered under Japanese flag (UNCTAD, 2008). This helps illustrate the complexity of the industry with regards to regulation, as it shows how commonly flags of convenience are used (ships are registered under certain flag states and controlled by other states). The name refers to a state or country which operates an open registry service such as Panama or Liberia, and often uses this registry as a source of income for the state. These registries vary with regards to the terms and conditions offered, and since there is no standard



requiring adoption of international legislation, some flag states have the reputation of being more liberal than others. What is common for open registries is low (or no) tax on profits, complete freedom with regards to crew recruitment, considerable freedom over corporate activities, and often limited requirements to comply with safety standards (Stopford, 1997). On an interesting note, flags of convenience have also been called “flags of non-compliance” in the past by the World Wildlife Foundation (WWF) due to their history of not complying with international laws and legislation (Battle, 2009).

#### *2.2.1.3 Coastal States*

The coastal states include all states and countries with a coast line, also including rivers and major lakes. In accordance with UNCLOS, these coastal states have the right to regulate ships operations in their territorial seas. As a result, the legislation from these states has been significant in the areas of safety and pollution (Stopford, 1997). The main resource for coastal state control is port state control, where government agencies control the ships that trade in their ports; mainly with regards to safety compliance. This is often done in cooperation with the classification societies, as they are the other regulatory body concerned with ship safety (Stopford, 1997). The second area where coastal states have had an impact is in terms of pollution regulations. A concrete example of this impact is the US Oil Pollution Act of 1990 which arose as a response to the public concern after the grounding of the Exxon Valdez in 1989 (Wright, 1996). The Oil Pollution Act of 1990 regulates responsibility in the occurrence of oil spills in US territorial waters. The EU has also introduced several new and stricter regulations on maritime operations (European Parliament Directive 2005/35/EC, 2005), which have been followed up by the introduction of punishments for breaking the regulations (European Journal, 2009). As a last example, Norway has introduced taxation of nitrogen oxide (NO<sub>x</sub>) emissions in Norwegian territorial waters as a part of their goal of reducing the country’s total emissions of NO<sub>x</sub> (Norwegian Maritime Directorate, 2007). In many cases, the introduction of local legislation can be interpreted as a response to the slow and bureaucratic processes of the IMO, which is the main legislative body for international maritime legislation (Fürstenberg, 2007).

#### *2.2.1.4 The International Maritime Organization*

The main regulating body of the maritime industry is the International Maritime Organization (IMO) which is a specialized organization of the United Nations (UN). The IMO currently has 169 members

and three associate members, which are simply territories controlled by other IMO members (IMO website, 2009). Voting power in the IMO is based on the amount of dwt registered in each state, and this framework leads to unequal distributions of power with popular flag states being the most powerful. When the IMO passes a new regulation it needs to be ratified by a certain amount of member states and a certain percentage of the world fleet tonnage before it comes into effect (IMO website, 2009). The resulting effect is a slow and often biased system laden with bureaucracy which has in many cases led to the development of local legislation more stringent than that of the IMO. It has also resulted in industry standards that are higher than those of the IMO (Mitropoulos, 2005). To illustrate, the current industry average sulphur level in bunker fuel is 2, 7 per cent, which is substantially lower than the current IMO requirement of 4, 5 per cent (Pappos & Skjølsvik, 2002). Legislations passed by the IMO will be further discussed in the section on current regulation.

#### *2.2.1.5 Other regulatory bodies*

As mentioned above, other regulatory bodies in the maritime industry which merit note are the ILO, the EMSA, and UNCLOS. These are discussed in turn below.

The ILO is the main regulatory body for working conditions onboard ships operating worldwide. They cooperate with the IMO in the implementation of legislation for the relationship between crew and shipowners (Stopford, 1997). Unfortunately, the power wielded by the ILO is limited by the fact that implementation of legislation is not obligatory in flag states, and progress as such is hindered because several of these are not concerned with ILO legislation in the least (Stopford, 1997).

The EMSA is in charge of following up the legislation regarding maritime operations and transportation passed by the EU in the EU territorial sea (EMSA website, 2009). The EMSA functions more like a coastal state regulatory body than an international regulatory body, although it in fact does represent the European Union. As a result, EMSA has a more international scope than local state governments which also makes it more influential (EMSA website, 2009).

UNCLOS is the convention that regulates the elements of maritime operations which are controlled by local government regulations, and which elements follow the legislation of flag states or the IMO (Stopford, 2009). The purpose of UNCLOS is to regulate all ocean space, including ownership of the sea (which includes definitions of territorial sea and exclusive economic zones), the right of passage,

and the ownership of the seabed (hereunder rights to any values discovered in the continental shelf). UNCLOS was first called in 1958 although it was only first adopted in 1982. It has since this time been reviewed and changed several times (Stopford, 1997).

Another international governing body that is expected to have an impact on the maritime industry is the United Nations Framework Convention on Climate Change (UNFCCC). The UNFCCC is holding a conference in Copenhagen in December 2009 which is expected to introduce restrictions on carbon dioxide (CO<sub>2</sub>) emissions from vessels; although it is still not clear exactly how these regulations will be enforced (IMO website, 2009). The conference was not completed when this thesis was printed. The maritime industry, along with the airline industry, is currently the only industry whose emissions have not been included in the Kyoto protocol of 1997 (Danish Ministry of Climate and Energy website, 2009). The IMO is among the organizations representing the maritime industry at the UNFCCC conference this year (IMO website, 2009).

Lastly, there is an International Court of Justice which provides advisory rulings on shipping issues despite the fact that these rulings have no binding legal effect (Stopford, 1997).

### ***2.2.2 Existing Regulations***

In addition to the regulations mentioned above, there are also many IMO conventions (which have been passed and have entered into force) focused on maritime safety and pollution prevention. The focus of this study is the International Convention for the Prevention of Pollution from Ships (MARPOL) which is the major IMO convention regulating environmental issues in shipping (Stopford, 1997). It will also touch upon some of the more recent developments in international environmental legislation in the maritime industry.

#### ***2.2.2.1 MARPOL***

MARPOL was originally designed to minimize the pollution of the seas, including exhaust pollution, dumping and oil. It was adopted in 1973, modified by a protocol in 1978 and it came into force in 1983 (Stopford, 1997). Several annexes have since been added to the original convention including; Annex I on Prevention of Oil Pollution, Annex II on Noxious Liquid Substances carried in Bulk,

Annex III on Harmful Substances carried in Packaged Form, Annex IV on Sewage, Annex V on Garbage, and Annex VI on Air Pollution. These annexes have contributed to the increased importance of MARPOL in maritime environmental regulation. To become party to MARPOL, a state must adopt annexes I and II. Annexes III-VI are voluntary and need not be adopted. By November 2009, MARPOL (Annex I/II) has been ratified by 150 states representing 99.14 per cent of the world tonnage (IMO website, 2009). It is also expected that Annex VI on Air Pollution will be revised in the future to include any new requirements on the maritime industry proposed at the 2009 climate conference in Copenhagen. The annex has already been revised several times, each revision further tightening the requirements and limitations (IMO website, 2009). In October this year, IMO agreed on a 0.5 per cent limit on sulphur in bunker fuel by 2020 (ENDS Report 399, 2008). It is the responsibility of the flag state to ensure that a vessel complies with MARPOL standards, and the states that have signed the convention are also responsible for implementing MARPOL in their national legislation, which then again will be followed up by the port authority's (Stopford, 1997).

#### *2.2.2.2 Other environmental legislation*

In recent years, several new conventions have been developed. One such convention is the International Convention on the Control of Harmful Anti-fouling Systems on Ships (AFS Convention) which was adopted in 2001 and entered into force in 2008. The AFS convention prohibits the use of harmful organotins, a chemical compound based on tin with hydrocarbon substituents, typically used in anti-fouling paint on vessels (Thoonen et al. 2004). Just like organotins, the AFS convention seeks to prevent other harmful substances from being used in the future development of anti-fouling paint (IMO website, 2009).

Another important convention is the International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention) adopted in 2004. By November 2009, 18 states representing 15 per cent of the world fleet will have ratified the convention (IMO website, 2009). In order to come into force, the BWM Convention must be ratified by 30 States representing at least 35 per cent of world merchant shipping tonnage. This figure illustrates the amount of time required to change rules through the IMO system, where it may take as long as two decades to

implement a single convention. Furthermore, conventions are also introduced step by step after they have come into force, further lengthening the process with another 10-20 years (Stopford, 1997).

The last convention to be mentioned is The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships (Hong Kong SRC Convention) which was adopted this spring. It has yet to be ratified by any state, but is expected to have a great impact on working conditions for employees in ship recycling yards and on environmental impacts of ship recycling when it first comes into force (IMO website, 2009).

### ***2.2.3 Expected Future Regulations***

Reports by DNV and the IMO expect future regulations in the short term to include stricter versions of existing legislation, regulations on emission to air and ship recycling. Additional regulations on ballast water, sulphur oxide (SO<sub>x</sub>), NO<sub>x</sub>, and hazardous material (ship recycling) are also expected to come into force. Requirements demanding identification of ship recycling yards, increased fines for environmental pollution, requirements on environmental reporting and a need to improve infrastructure for waste reception facilities are also expected as deterrents from environmentally detrimental behavior (Fürstenberg, 2007). Although the EU and California are expected to continue to speed ahead of the IMO with their regulatory schemes, the IMO is also expected to agree on energy efficiency standards for new vessels by end 2009, as well as guidance on efficient shipping operations (ENDS Report 402, 2008). According to the European Commission (EC), unless the IMO is able to agree on how to tackle their CO<sub>2</sub> emissions, shipping will be included in EU emissions trading, (aviation is already included as of 2012) (EC COM 433, 2008). The EC believes that transport prices should reflect the actual cost to society, including environmental impacts (EC MEMO/09/16, 2009).

In the longer term, regulations on such issues as particle matter (PM), black water, grey water, and vessel speed are also expected, together with requirements for the use of non-toxic coatings and alternative propulsion systems (Fürstenberg, 2007; IMO website, 2009). According to a publication by the Norwegian Ministry of Foreign Affairs earlier this year, it is expected that the Norwegian government will introduce mandatory reporting on CSR and environmental performance by all listed companies (St.meld. nr. 10, 2009). This will have an impact on the many maritime companies listed on the Oslo Stock Exchange.

These expected changes in regulation, combined with the increased media attention on environmental issues and the slow nature of the IMO and similar organizations may lead to an increase in the importance in CSR, and subsequent introduction of self-regulation in the maritime industry.

While the slow process in the IMO and other regulatory bodies has been said to increase the importance of CSR, this same slow process can mean that some players take an easy or complacent approach to CSR considerations, especially if they have a short-term view on their operations. Players with a long-term strategic view on their operations however, will often take a proactive perspective and self regulate judging that that it is more costly to wait until the last moment with implementation of environmental solutions (Gude, 2009). Also, the increased media focus means the pressure on the industry to self-regulate grows based on the risk of negative media attention should they not implement more environmentally friendly solutions. This again can lead to damages to company reputation. Through this we see the direct connection between a slow IMO process and the way it has potential to create an incentive for a proactive approach on CSR activities and self regulation.

### **2.3 Environmental Issues and Challenges**

*Although shipping is generally recognized as the most efficient form of commercial transport in terms of CO<sub>2</sub> emissions, the large scale of the industry means it is still as substantial contributor to total greenhouse gas emissions.*

(Robertson, 2009: 10)

The maritime industry is responsible for approximately four and a half per cent of the world's total CO<sub>2</sub> emissions (ENDS Report 398, 2008). This figure is projected to grow as emissions from the global fleet are expected to increase over the next two decades (DK Group, 2007), an issue that is further elaborated upon in the section on future trends in marine pollution. According to the EU Ship Emissions Assignment Report, EU flagged ships emitted significantly more CO<sub>2</sub> than was recorded in terms of EU aviation (DK Group, 2007). Interestingly, as mentioned in the previous section, the shipping and the aviation industries are the only two industries not yet included in the Kyoto agreement, thus excluding themselves from CO<sub>2</sub> reduction requirements (Harrison, 2009). As previously mentioned, both shipping and aviation industries are expected to be included in the Copenhagen agreement however; a change that may have large wide ranging impacts for maritime companies (Harrison, 2009).

According to a report published by Environmental Data Services (ENDS) based on data from the European Sustainable Investment Forum and analysts Trucost, financial investors in maritime companies are now finding themselves exposed to a new element of risk; the legislation aimed at reducing maritime pollution. Investors are now calling for increased disclosure on how the maritime industry is managing its environmental impacts (ENDS Report 410, 2009). This is an important element of this study as it may increase the pressure on companies to implement CSR and take a more proactive approach to environmental issues.

The environmental impacts of shipping are not limited to CO<sub>2</sub> emissions. As is illustrated in figure 2.1 below, an oceangoing vessel contributes to pollution and emissions through:

- exhaust gases
- ballast water
- waste delivered ashore
- hazardous materials disposal
- sewage and garbage
- bilge water
- anti fouling paints
- oil spills
- operational accidents

Figure 1 illustrates the impact area of each pollutant respectively and I will here briefly describe the impacts of these different pollutants.

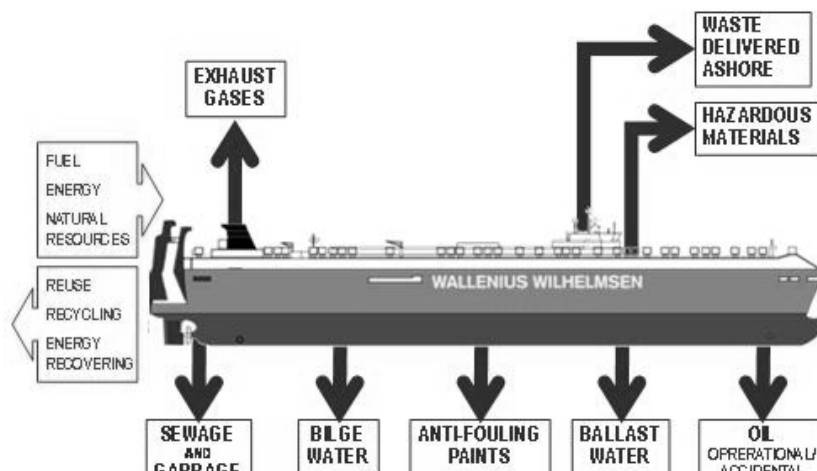


Figure 1: Based on presentations by Fürstenberg (2007) and WW (2009)

Exhaust gasses refers to; SO<sub>x</sub>, NO<sub>x</sub>, CO<sub>2</sub>, carbon monoxide (CO), fine particle matter (PM), volatile organic compounds (VOC's) as well as hydrocarbons (HC) (Freidrich et al. 2007). Even though shipping is less polluting than alternative modes of transport, it is still a major source of air pollution. The industry is responsible for 8 per cent of SO<sub>x</sub> emissions and 15 per cent of emissions of NO<sub>x</sub> worldwide, as well as a large amount of PM. According to a report by ENDS; "research suggests that air pollution from shipping will cause 80,000 premature deaths per year from heart and lung disease by 2012" (ENDS Report 395, 2007: 45). Shipping is also responsible for releasing 1.12 billion tonnes of CO<sub>2</sub> into the atmosphere each year, making up 4, 5 per cent of the global total (ENDS Report 398, 2008). CO<sub>2</sub> contributes to climate change, SO<sub>x</sub> and NO<sub>x</sub> both contribute to acidification, and NO<sub>x</sub> additionally contributes to eutrophication (an increase in the concentration of chemical nutrients in an ecosystem which can result in severe reductions in water quality, fish, and other animal populations (Whiteside, 1983)).

These exhaust gases (SO<sub>x</sub>, NO<sub>x</sub>, CO<sub>2</sub>, CO, PM, VOC's, HC's) have also been linked to smog and ground level ozone, and the separate emissions to sea (such as sewage and garbage, bilge water, anti-fouling paint, ballast water and oil (both operational and accidental)) have tremendous impacts on the marine environment in the oceans of the world (Fürstenberg, 2007). In terms of emissions to sea, ballast water can transfer organisms between the oceans of the world and lead to disturbances in biodiversity, while toxic substances in anti-fouling paint affects many marine species, leading to deformations and other problems (Fürstenberg, 2007; WWF website, 2009).

Some of these sources of pollution are now being regulated, by both the IMO on an international level, and on local level in Europe and the US. Despite these positive steps, waiting for large scale legislation to come into force is still a very long term and time consuming process, and it does not seem sufficient for maritime companies to just wait for the legislation to come into force. This again points towards an increased importance of self-regulation.

### ***2.3.1 Future trends in marine pollution***

Research in the field of maritime pollution is growing substantially as the focus on climate change and global warming is increasing. According to DNV, separate studies suggest that maritime CO<sub>2</sub> emissions are thought to be higher than previously expected, and are forecasted to rise by as much as 75 per cent in the next 15 to 20 years if world trade continues to grow with no action taken



(Fürstenberg, 2007). At current there are approximately 20,000 new ships on order, and even though the current financial crisis has lead to the cancellation of some of these, a substantial increase in CO<sub>2</sub> emissions is still expected (Fürstenberg, 2007). A report by the International Council on Clean Transportation (ICCT) further confirms this predicting maritime CO<sub>2</sub> emissions will reach 9 per cent of total world emissions by 2050 (Freidrich et al. 2007). Their predictions are illustrated in figure 2.

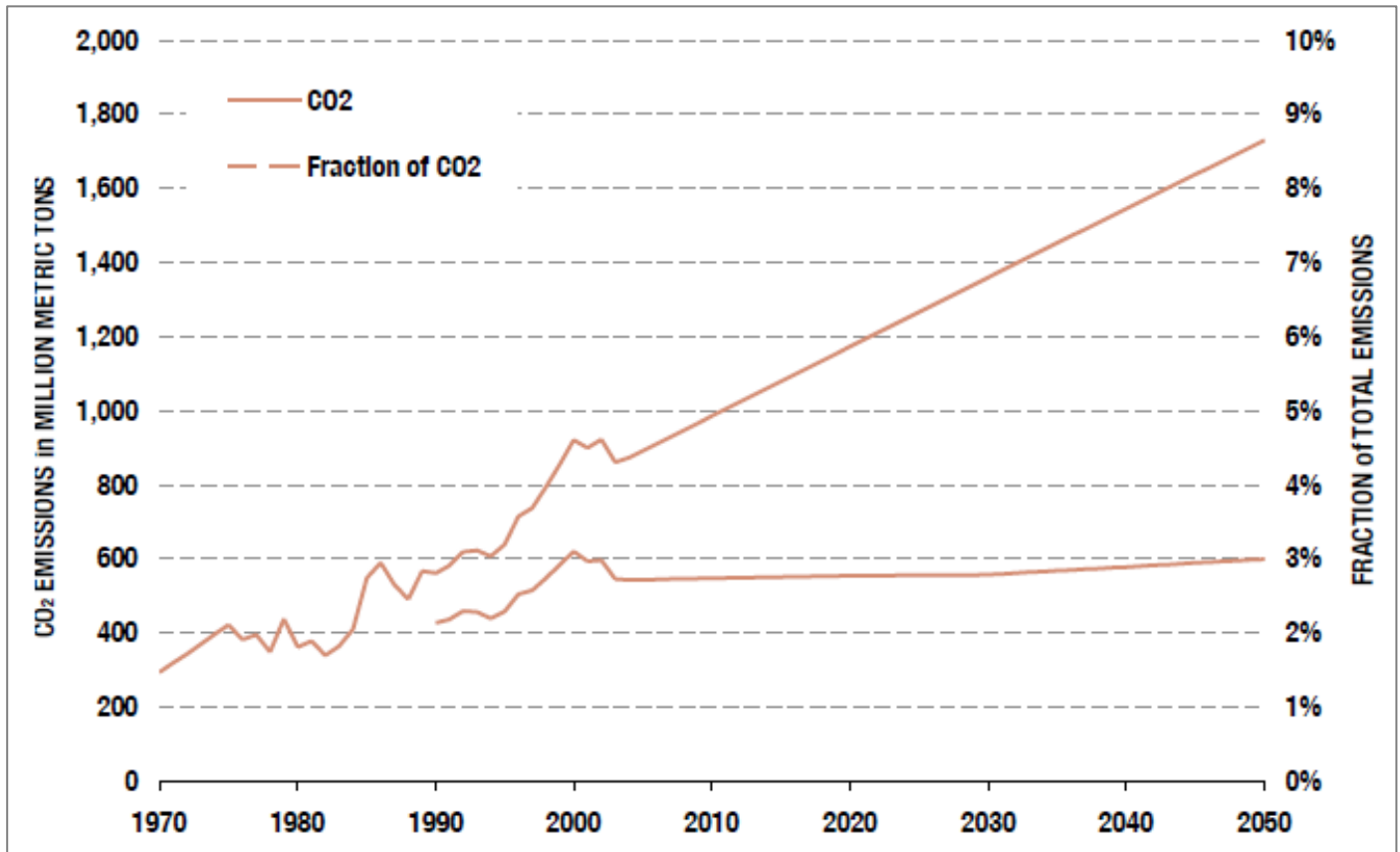


Figure 2: Projected CO<sub>2</sub> emissions (Freidrich et al. 2007, data from EC COM (2005))

The same report also shows that SO<sub>x</sub> and NO<sub>x</sub> emissions from shipping are expected to grow substantially by the year 2030 (Freidrich et al. 2007). All the while, emissions from land based transportation alternatives are expected to decrease with surpassing land based transportation as the biggest source of SO<sub>x</sub> and NO<sub>x</sub> emissions in Europe by 2020 (worldwide figures not available) (Freidrich et al. 2007). This is illustrated in figures 3 and 4.

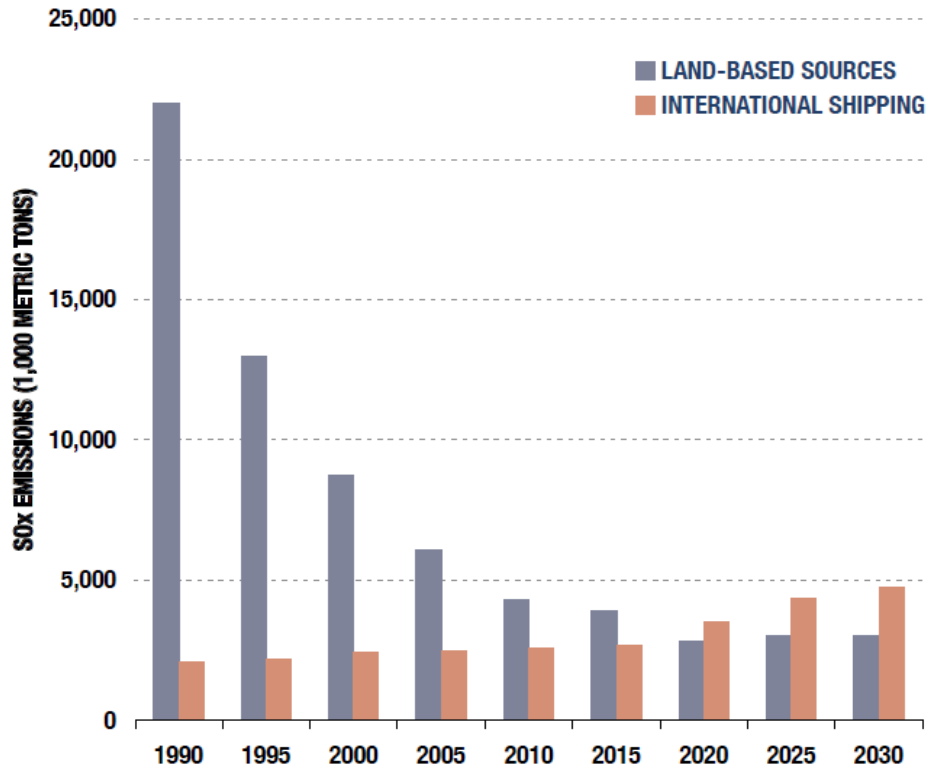


Figure 3: Projected SOx emissions in Europe (Freidrich et al. 2007, data from EC COM (2005))

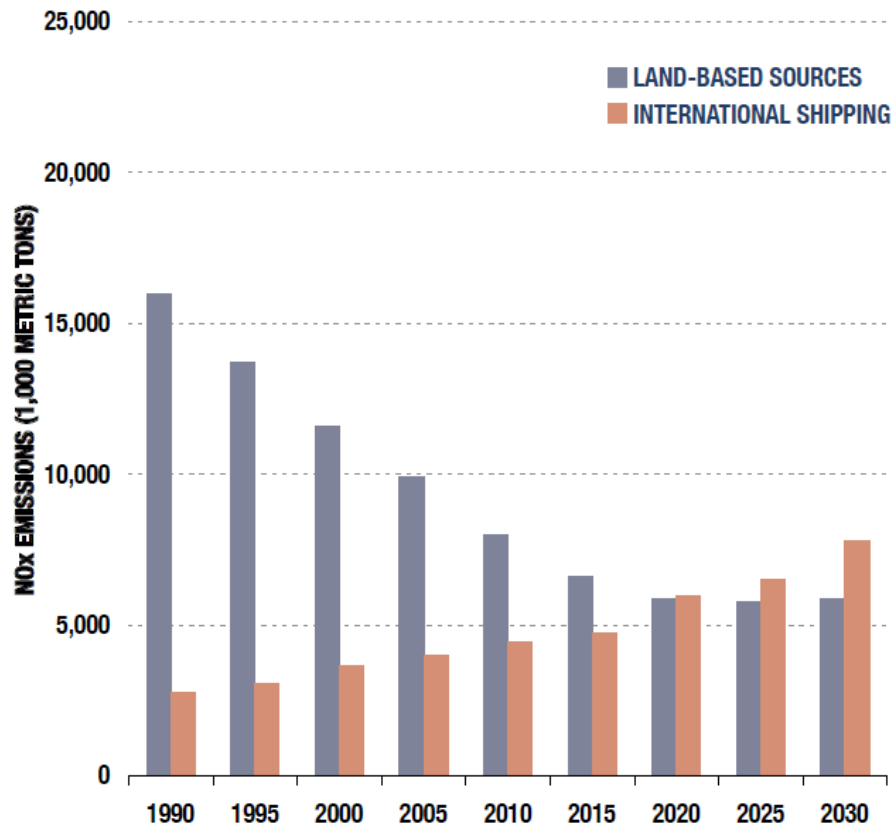


Figure 4: Projected NOx emissions in Europe (Freidrich et al. 2007, data from EC COM (2005))

In their 2007 report, the ICCT also show the future development of worldwide emissions of sulphur dioxide (SO<sub>2</sub>, a type of SO<sub>x</sub>) and NO<sub>x</sub>, along with emissions of CO, PM and HC, which is illustrated in figure 5 (Freidrich et al. 2007).

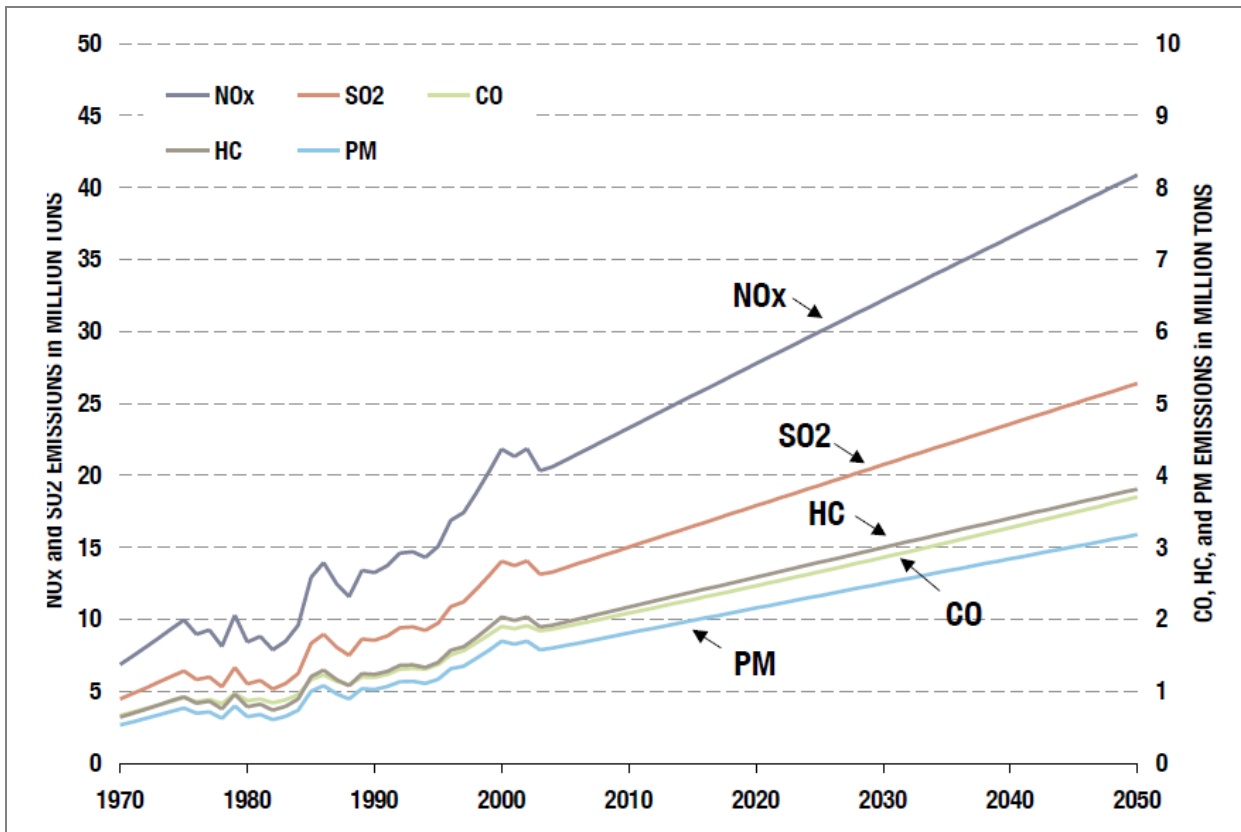


Figure 5: Emissions from shipping (Freidrich et al. 2007, data from EC COM (2005))

The illustrations in these figures help demonstrate some of the tremendous challenges facing the industry today as they show a substantial growth in emissions, in many cases a doubling or more of the current levels. This shows that there is still a long road ahead before reaching a sustainable level of emissions from maritime transportation.

### 3 CASE

The Wilh. Wilhelmsen Group is considered a leading company in the maritime industry and this chapter will introduce the company history, CSR strategy and corporate structure. Further, it will provide an overview of their subsidiaries and stakeholders. Since this thesis study mainly deals with the car carrier segment, WWs Shipping division will be at the center of this case presentation.



#### 3.1 The Wilh. Wilhelmsen Group

*I feel proud to say that Wilh. Wilhelmsen was early to recognize the importance of increasing the focus on clean shipping. We are determined to remain in the forefront.*

Ingar Skaug, Group CEO, Wilh. Wilhelmsen ASA, 2009

WW is a leading player in the maritime industry and one of Norway's most international companies. They operate an international conglomerate of shipping services, logistics and maritime operations with an operating revenue of USD 2 billion (WW Annual Report, 2008). In 2008, WW transported about five million cars and more than 12 million cubic meters of high and heavy cargo. WW has 14400 employees in its wholly-owned companies, and 18 800 employees when including their joint ventures. The WW network includes more than 450 offices in 75 countries when joint ventures are included (WW Annual Report, 2008). The head office is situated in Lysaker just outside of Oslo, WW is listed on the Oslo Stock Exchange and as of November 20<sup>th</sup> 2009, the company had a stock market value of over 4,5 Billion NOK which is equivalent to 800 Million USD using the exchange rate of the day<sup>1</sup> (Oslo Stock Exchange website, 2009).

---

<sup>1</sup> Exchange rate at November 20<sup>th</sup> 2009; 1 USD = 5,62 NOK

### ***3.1.1 History***

WW was founded in Tønsberg, Norway in 1861. Since the beginning of the 1900s it has been one of the major players among Norwegian maritime companies. Involved in liner operations for over 100 years, they were operating one of the world's largest liner fleets in 1961. That year also coincided with their 100 year anniversary. Throughout the seventies WW were among the frontrunners in the development of new, large-scale ro-ro vessels (roll-on, roll-off, which makes reference to all cargo being rolled or driven on and off the vessels), while at the same time pursuing close cooperation with other maritime companies in both development and operations. This is a strategy the company has followed throughout their time and one that has proven very successful (WW website, 2009).

WW entered into car transportation in the 1980s, but this did not become the main focus of their shipping operations until the acquisition of Norway America Line in 1995. Over the past decade, WW have formed profitable partnerships in all of their business segments. In 1999 Wallenius Wilhelmsen Logistics (WWL) was formed together with Swedish shipowner Wallenius Lines. In 2002, the Korean EUKOR Car Carriers (EUKOR) was established after WW took control of Hyundai Merchant Marine's car carrier division. Both WWL and EUKOR have remained important elements of WW's shipping and logistics services since these integrations. Other success stories are the development of the agency chain Barwil, and the ship management/consultancy Barber International, which are both fully owned and operated by WW. Lastly, WW acquired Unitor (a Norwegian ship services company) in 2005 to strengthen their position in the maritime services segment and further develop Wilhelmsen Maritime Services (WW website, 2009).

In 2008, WW rebranded Barwil, Barber, and Unitor with the group name and logo. This was done as part of the group's strategy to strengthen the Wilhelmsen identity and become the recognized leading global provider of maritime services (WW website, 2009). 2008 was a significant year because it was also the year when WW chose to move their maritime operations to Malta thus avoiding the changes in the Norwegian tax scheme implemented that year (Nordahl et. al, 2008).

### ***3.1.2 Corporate Structure and Operations***

WW is divided into three main divisions; Shipping, Logistics and Maritime Services. Wilh. Wilhelmsen ASA is the mother company which manages and supervises the worldwide operations. A

better understanding of the organization can be gained by referring to Appendix 1, which contains an overview of WW's corporate structure. WW is both a broad and complex organization, and is considered a full service operator in the maritime industry. WW provides complete ocean transportation, logistics and supply chain management solutions along with a wide range of maritime services to all corners of the planet (WW website, 2009). This is further illustrated in figure 6 which shows a map of WWs worldwide operations.

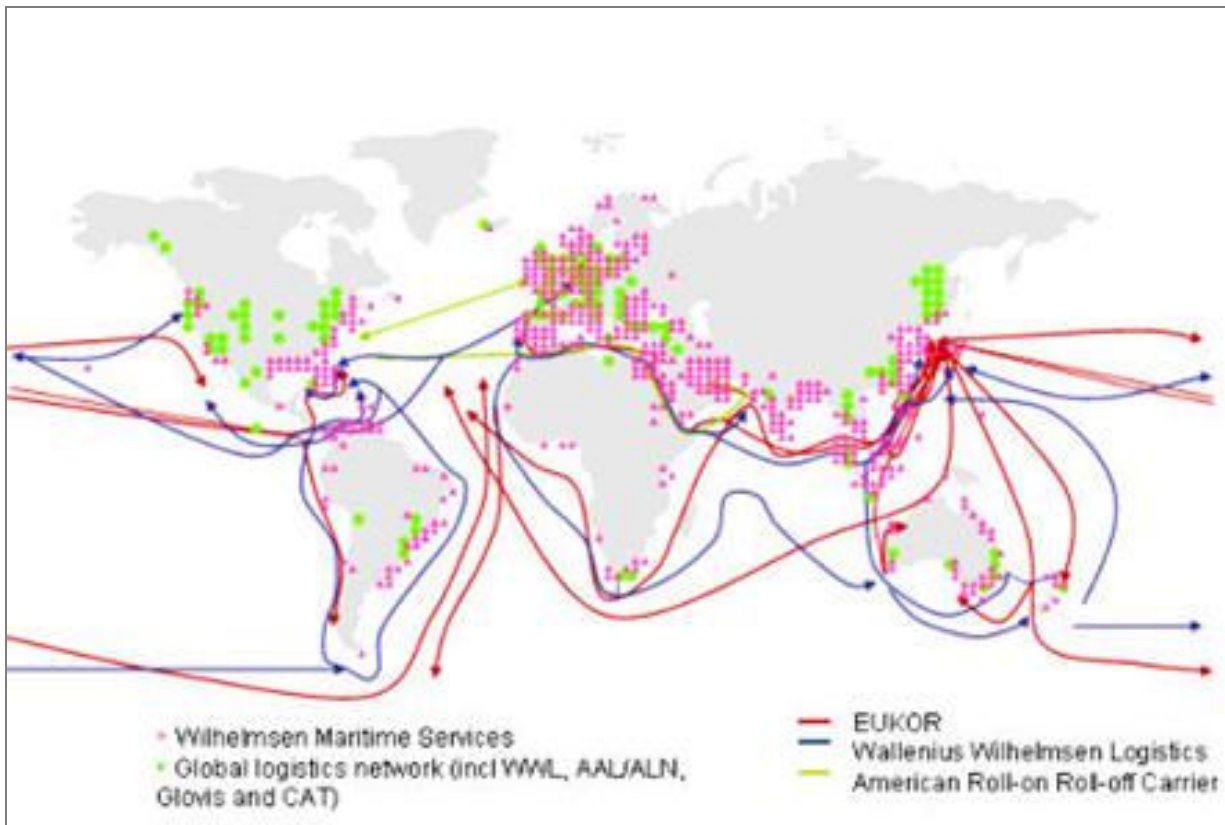


Figure 6: Worldwide operations of the WW Group (WW website, 2009)

### 3.1.2.1 Shipping

WW is market leader for the transport of rolling cargo (car carrier segment) and their operations are considered to be within advanced industrial shipping requiring complex logistical solutions. The WW group controls 150 car carriers and ro-ro vessels in their worldwide operations. Additionally, they have a newbuilding programme which projects 40 vessels to be delivered in the four-year period from 2007 to 2011 (WW website, 2009).

The shipping division of WW consists of four different companies. WWL, EUKOR and American Roll-On Roll-Off Carriers (ARC) operate in the car carrier segment while Wilhelmsen Marine Consultants operates as a maritime consultancy. WWL and EUKOR provide services within ocean transportation, supply chain management, terminal services, inland distribution, and technical services, while ARC focuses only on ocean transportation. Wilhelmsen Marine Consultants covers areas such as ship design, new-building, conversion, and project management (WW website, 2009).

ARC is a provider of rolling cargo ocean transportation and transports mainly US cargo between the east coast of the United States and Europe or the Middle East. They have a market share of 1 per cent in the market for car transportation (WW Annual Report, 2007). ARC is jointly owned with Wallenius, and both companies hold a share of 50 per cent (WW website, 2009).



WWL is the main ocean transportation company under the WW umbrella and was established in 1999 as a joint venture with Wallenius. The company management is shared between Lysaker and Stockholm, which reflects the 50/50 share of ownership (WWL website, 2009). Although WWL is not a listed company, it still ensures there is a vast amount of information about its operations, strategy and performance available to the public. WWL provides global factory-to-dealer transport solutions for the automotive, agricultural and construction equipment industries. They specialize in supply chain management solutions, including inland distribution, terminal handling, ocean transportation and additional technical services (WWL website, 2009).



EUKOR was established in 2002 when WW (in cooperation with Wallenius, Hyundai Motor Company and Kia Motors Corporation) took control of Hyundai Merchant Marine's car carrier division. WW and Wallenius own 40 per cent each, while Hyundai have the remaining 20 per cent of the shares (WW website, 2009). EUKOR is one of the leading car carrier companies in the world and operate 90 vessels worldwide. With a base in Seoul, Korea, their main customers are Hyundai and

Kia, yet they offer ocean transportation and integrated logistics services to a broad range of clients worldwide both through their own network and in cooperation with WW (EUKOR website, 2009).

### *3.1.2.2 Logistics*

WW has a goal of providing their clients with complete supply chain solutions; from factory to dealer. This complete service makes their logistics division an important part of the WW family (WW website, 2009). The logistics services offered by the WW logistics division include supply chain management for vehicles, terminal services, technical services and inland distribution. These services are mainly handled by WWL and EUKOR. In terms of additional logistics solutions, WW owns a 15 per cent share in the Korean logistics company Glovis, which handles all of the previously mentioned services as well as air freight services and ocean freight forwarding (WW website, 2009).

### *3.1.2.3 Maritime Services*

Wilhelmsen Maritime Services (WMS) is a wholly-owned subsidiary of WW. Through their global network, WMS offers products and services to a large share of the maritime industry. They serve ships at 2200 ports in 115 countries through Wilhelmsen Ship Service, while Wilhelmsen Ship Management handles crewing and management of 310 vessels and a pool of 8600 seafarers. Included in WMS we also find Wilhelmsen Ship Equipment and Wilhelmsen Marine Engineering, along with many other minor companies serving the maritime industry within such areas as insurance, marine fuels, financial transactions and marine training (WW website, 2009).

### **3.1.3 Strategy and Philosophy**

WWs corporate philosophy believes in empowering its employees and focuses their resources towards being an innovative, learning organization (WW website, 2009). It is through significant innovative contribution from their employees that WW believes they will achieve their main competitive advantage in meeting the needs and wants of their customers (Gude, 2009). WW has an in-house management school, extensive training programs for its employees, and they also host entrepreneurial courses and competitions to encourage innovation. In addition, WW invest in the development of new environmental solutions and products, both directly through company investments and take-overs, and



indirectly through their philanthropic investment fund “The Orcelle Fund”, which is named after the WWL concept vessel Orcelle (Gude; WW website, 2009). The fund was established in 2007 using prize money from the Thor Heyerdahl International Maritime Environmental Award for their environmental efforts (Moore; WWL website, 2009).

The strategy of WW supports this corporate philosophy in its entirety. According to information gathered from the WW website; the company’s strategy is to shape the maritime industry. This is a concept which is described by the following:

*Shaping means being a pioneer. It means willingness to lead. It means maximizing every opportunity to innovate and meet the ever-changing needs and expectations from our stakeholders. It involves risk to go where others have not been. It means accessing and freeing up the creative potential in each of our thousands of employees. People, who are willing to step up, contribute and take responsibility – people who want to be shapers. Our vision is an expression of our desire to be top in expertise, best in operations and best in the marine environment.*

(WW website, 2009)

WW lives out their strategy through the way they are always seeking to be frontrunners with respect to environmental issues and through leading by example. They also do this through the previously mentioned efforts to develop and educate their employees, including both onshore personnel and crew (Gude; Moore; WW website, 2009).

### **3.1.4 Approach to CSR and Environmental Issues**

Since WWs shipping operations is the main focus of this study, this section looks more detailed at the CSR and environmental initiatives of WW in addition to that of both WWL and EUKOR.

#### **3.1.4.1 Wilh. Wilhelmsen**

Based on the information provided on their website, WW takes a long-term strategic view on environmental issues rather than limiting their environmental perspective to regulatory compliance (WW website, 2009). The company is also quite clear that the company’s purpose as such is to create value for their owners, and that green initiatives must be value-creating in order for WW to go ahead

with them (Gude, 2009). This is also specifically stated in their view on CSR, which is stated on their website as:

*The WW group's most important contribution to accepting social responsibility is to conduct its business well in accordance with the international and national regulations which govern its operations. That creates value for society.*

(WW website, 2009)

In their Annual Report for 2007 WW states that their focus on reducing emissions has led to a significant positive impact on the marine environment (WW Annual Report, 2007). At the same time it is also mentioned how through their own efforts towards reducing emissions, WW are developing solutions, products and services to help their clients worldwide to improve their environmental performance as well, thus generating opportunities for financial gain for the company (WW Annual Report, 2007). The groups' description of social responsibility includes:

*Financial performance, the working environment and occupational health, organizational and expertise development, security, the natural environment and initiatives aimed at the local communities in which the group conducts its business.*

(WW Annual Report, 2008)

This helps illustrate how broadly WW portrays their responsibility and indicates the different elements that need to be considered both in their daily operations and strategic planning.

#### *3.1.4.2 Wallenius Wilhelmsen Logistics*

WWL is recognized for its many green initiatives and its position as a forerunner in the environmental field. It has won several international awards for its efforts (WWL website, 2009). To illustrate this leading position in environmental strategy, WWL have a low sulphur fuel policy, the goal of which is to keep the sulphur level below 1,5 per cent in the fuel they use on their vessels (Gude, 2009). According to Moore (2009), WWL maintained a sulphur fuel level of 1,3 per cent in 2007-08. It was through WWL that the WW concept ship "Orcelle" (portrayed on the front page of the thesis) was developed as a visionary vessel for the future, coinciding with WWs goal of an environmentally friendly ocean transportation industry with zero emissions to sea, air and land (WW website, 2009).

WWL publishes an annual report on their Environmental and Social Responsibility, which is their equivalent to CSR reporting. Since the company is not publically listed, they have fewer requirements on publication but chose to do so as part of their strategy on being open and working towards a greener maritime industry (WWL website, 2009; Moore, 2009). WWL also cooperate with WWF International as a part of their goal to sustain a healthy marine environment through actively reducing their operational impact (WWL website, 2009). This leadership is further evident through the following quotation from Rasmus Hanson, CEO of WWF Norway.

*Not all companies have the courage to lead by example. That's where companies like Wallenius Wilhelmsen Logistics are more important than they realise. WWL set a groundbreaking example so that other companies will dare to follow.*

(WWL Environmental and Social Responsibility report, 2007)

#### 3.1.4.3 EUKOR Car Carriers

With a goal of maintaining an eco-friendly policy and minimizing their environmental impact, EUKOR works to reduce their fuel consumption and use low sulphur fuel, in addition to purifying bilge water, manager their ballast water and on-board waste in the least harmful way possible (EUKOR website, 2009). According to Gude (2009), EUKOR have a policy of maintaining a sulphur level below 2, 5 per cent in all fuel they use. EUKOR is not a listed company and does not publish annual reports or individual reports on CSR or environmental issues. They clearly state their policies on CSR and environment, but do not inform in detail about their work in these areas. Their certifications are listed on their website, and these are similar to those of their competitors. In 2009, EUKOR were awarded the Seoul Welfare Award for their CSR activities (EUKOR website, 2009).

#### 3.1.5 Stakeholders

In any international business operation, many stakeholders will be involved in the operations of a company or business. The internal stakeholders include both the owners and employees of WW and their subsidiaries which have already been described in the previous sections. To provide a better overview of the external stakeholders involved in WWs operations, the study introduces some of the stakeholders most relevant for this paper. These include; non-governmental organizations (NGOs) as

represented by WWF International; ship classification societies and CSR and environmental consulting firms represented by DNV; industry organizations represented through the Norwegian Shipowners' Association (NSA); Norwegian and international authorities; and the car producers who are the main customers of WWs shipping services. As already mentioned in the limitations, it has for various reasons not been possible to establish contact with all of these stakeholders. Those stakeholders with whom contact has been established are therefore the main focus of the stakeholder overview, and it only briefly includes the others along with a short section on minor stakeholders. In the case of Norwegian and international authorities, it is important to note that they are stakeholders mainly through their role as coastal states and flag states. This area is covered under the regulatory bodies and existing regulations described in the Background in Chapter 2.

#### *3.1.5.1 Det Norske Veritas*

DNV is a foundation and one of the major players in the classification society business worldwide. They mainly serve the maritime transport and energy sectors, but are also involved in other industries, such as aviation, automotive, and information technology. In addition, they are one of the largest providers of consulting services and technical solutions towards CSR and environmental work in the maritime industry (DNV website, 2009). It is this prominent position that makes them a very interesting organization and stakeholder.

#### *3.1.5.2 The Norwegian Shipowners' Association*

The NSA is a national organization representing the maritime industry in Norway in negotiations with the government and labor organizations (such as the ILO), in addition to legal support on these and other issues (NSA website, 2009). The NSA also works towards a greener maritime industry, mainly through their cooperation with Norwegian authorities and representation in the IMO (Behrens, 2009). As the main representative organization for the fifth largest nation with regards to control of gross tonnage, they have an important position and substantial negotiating power on the international arena (Behrens, 2009; UNCTAD, 2007). They are also in the forefront with regards to environmental ambitions and have launched a zero emission vision for the industry (Grieg, 2008; NSA website, 2009).

### *3.1.5.3 The World Wide Fund for Nature*

The WWF is an international NGO based in Switzerland, but it has representation on local levels in many countries worldwide. A leading environmental NGO, the WWF works for the preservation of nature, wildlife and the oceans. WWL cooperate with, and are also the lead sponsor for a WWF International project for the conservation of the world's oceans called WWF High Seas Conservation Programme (Battle; Moore, 2009). Through this project, the WWF cooperate with other stakeholder groups, some of which are the IMO Marine Environment Protection Committee, working groups for Ballast Water, Air Pollution from Ships, and Special Areas and Particularly Sensitive Sea Areas. They are also heavily involved in issues regarding the Arctic Seas and fisheries (Battle, 2009; WWF International website, 2009).

### *3.1.5.4 Car manufacturers*

In the car carrier industry, car producers are WWs main customers. The car manufacturing industry has undergone substantial consolidation in the past 20 years and today consists of mainly large and complex consortiums producing several different car brands under one corporate umbrella (Harbour, 1999). Appendices 2A, 2B and 2C provide statistics from the International Organization of Motor Vehicle Manufacturers (OICA) and the European Automobile Manufacturers' Association (ACEA) on worldwide car production for the years 2007 and 2008. Car manufacturing is a complex industry, and has production taking place all over the world, with North-America, Asia and Europe as both main production sites and main markets (ACEA, 2007; OICA, 2009). The statistics also show that the top five car manufacturers are Toyota, General Motors, Volkswagen, Ford and Honda, which also singlehandedly account for almost 48 per cent of world production (OICA, 2009). Finally, despite the large number of car producers in the world, it is the top 15 car manufacturers which account for over 82 per cent of world production (OICA, 2009).

### *3.1.5.5 Other stakeholders*

Other stakeholders include ship financing banks, shipbrokers, suppliers of services to the maritime industry, oil companies supplying vessel fuel, and crewing companies. These are also worth mentioning but will not be considered in this study. Crewing companies are not that relevant to a

study of WW as they mainly handle their crewing in-house thus crew will be considered an internal stakeholder along with other employees (Gude, 2009). Car importers can also be considered important, but they mainly do their business with the car producers or their sales agents and get the cars delivered to them. They are, in that sense not directly involved in the transport arrangements, only in the receiving of the cars at final destination (Gude; Moore, 2009).

### **3.2 The Car Carrier Industry**

The car carrier industry is one of many different, highly specialized segments in the maritime industry. It consists of several major players with global operations serving the car manufacturing conglomerates.

In March 2008, WW controlled approximately 27 per cent of the market through their subsidiaries (EUKOR 14, WWL 12, and ARC 1 per cent), followed by the three Japanese carriers Kawasaki Kisen Kaisha (K Line), Nippon Yusen Kaisha (NYK), and Mitsui O.S.K. Lines (MOL) with between 13 and 18 per cent each, and Hoegh Autoliners (HAL) with 8 per cent (WW Annual Report 2008). Together, these six companies control 80 per cent of the world market for ocean based car transportation. In intra-European trade we also find smaller players such as United European Car Carriers (UECC) of Norway and the Grimaldi Group of Italy, both with approximately 5 per cent of the world market each (WW Annual Report, 2008). According to statistics by MOL, the world car carrier trade total in 2008 was 13,5 million cars transported (MOL website, 2009). The main car export nations were Korea and Japan, which accounted for approximately 67 per cent of all car carrier business (MOL website, 2009). These data can be further referred to in appendix 3.

An element that makes the car carrier segment stand out in comparison to other segments such as dry bulk or crude oil is its oligopolistic nature, and thus the limited service providers in the market. There are also very few customers in this market; limited to the few major car manufacturers accounting for the majority of the car carriers business (Bruåsdal, 1993). It is necessary to note again that the study is limited to the car carrier industry and car manufacturers, thus it does not include the movement of trucks, buses and other high and heavy rolling cargo.

On another note, the car carrier industry can be described as oligopsonistic from the car manufacturer perspective. It is important to distinguish between an oligopoly (few major suppliers) and oligopsony, which, according to Bashkar et al. (2002), is classified as few major buyers setting the prices in the market, and where suppliers have to accommodate these prices by cutting costs in their operations. In an oligopsony, suppliers do not have any power over the price (Bhaskar et al. 2002). This situation has a major impact on the power distribution in the car carrier industry, and is something that will be examined in more detail in the Analysis and Discussion chapter, Chapter 6.

In the car carrier industry we find several different types of ro-ro vessels, including Pure Car Carriers (PCC), Pure Car and Truck Carriers (PCTC) and Large Car and Truck Carriers (LCTC). The common denominator for these is that they are all based on rolling cargo that is rolled on and rolled off the vessels in port. Prior to the development of rolling cargo vessels, cars were transported on bulk vessels and other non-specialized ships with many service providers in the market (Bruåsdal, 1992). After PCCs entered the market in the 1970s and 1980s, it was difficult for the smaller providers to remain competitive. PCCs were only able to transport cars and could not transport very many other types of cargo. This meant that they often had to travel empty on the return-leg of their journey, leading to an increased requirement for differentiation and economies of scale in the industry (Bruåsdal, 1993). As a result, many mergers in the industry forced smaller players out of the market which had a hand in forming today's oligopoly (Bruåsdal, 1993). Later, the development of the PCTCs and LCTCs led to increased flexibility for the car carrier companies as they were able to transport more diversified cargo and reduce the amount of empty journeys. Despite these developments, consolidation in the market had already taken place by the time they became available, and therefore the small group of players available in the industry today has prevailed (Bruåsdal, 1993).

### ***3.2.1 Competitors***

This section provides a brief description of WWs competitors in the car carrier segment, hereunder; NYK, MOL, K Line, and HAL. Each description is divided into two parts, with the first paragraph giving an introduction to the company and the second paragraph providing insight to their efforts and viewpoints on CSR and environmental issues.



NYK Line is a part of the NYK Group, a Japanese conglomerate listed on the Tokyo Stock Exchange. NYK Line has a broad range of maritime operations, including global logistics, international marine transportation, cruises, terminal and harbour transport, shipping-related services, and real estate, in addition to several other minor business areas (NYK website, 2009). The company was founded in Tokyo in 1885 and has more than 130 years of experience in the maritime industry. Their car transport business is included in the Global Logistics Division of NYK and operates 113 vessels (of which 48 are wholly-owned) with a carrying capacity of 1, 76 million dwt. In 2008 they carried 6, 14 million car equivalent units (ceu) (NYK Annual Report, 2009). No specific economic figures are listed for the car carrier department, however there are some greater general figures provided as part of the bulk division, which accounts for 42 per cent of the company's operating revenues in 2008. (NYK Annual Report, 2009).

As part of their environmental strategy, NYK launched the NYK Super Eco Ship 2030 this year, a concept ship for the future which promises a 69% reduction in emissions to air compared to similar size vessels today. The vessel is a container ship, as this is an important element of NYKs operations. NYK has a further goal of reducing their emissions by 50% by 2010 through emission reduction programmes on all levels of their organization, and also through the NYK Cool Earth Project (NYK CSR report, 2008). Similar to WW and WWL, they publish a CSR report every year. They are also involved in in-house development of environmental solutions, and cooperate with external stakeholders to reduce their impact on the environment (NYK website, 2009). According to the information provided on their website, NYK started this work later than WW and WWL however seem to be stepping up their environmental efforts as reflected with their new concept ship. Information about their environmental operations and engagement in CSR is easily available on their website and they have an open publication policy (NYK website, 2009).





Founded in 1884 as Osaka Shosen Kaisha (OSK Lines), MOL is the second of the Japanese players in the car carrier segment. Similar to their Japanese competitors, MOL is also involved in a broad range of transportation services, including bulk carriers (operating the world's largest fleet), tankers, LNG carriers, car carriers, container ships, logistics, ferries and coastal liners, cruise ships, and other associated businesses serving the maritime cluster. With respect to car carriers, MOL has a goal of developing safe, reliable and eco-friendly operations (MOL website, 2009). MOL operates 85 car carriers and in 2008, transported 2, 55 million ceu with their car carrier division. This accounted for 11 per cent or USD 150 million of their total revenues in 2008 (MOL website, 2009; MOL Annual Report, 2009).

Using information from a substantial section on CSR and Environmental Protection on their website, MOL describe themselves as: “A Shipping Corporate Group that is friendly to the Oceans and the Environment” (MOL website, 2009). In 2000 MOL implemented an environmental management policy for their operations, and in 2005, was the first Japanese company to entered into the UN Global Compact for CSR and environmental reporting (MOL website, 2009). They make themselves additionally transparent by publishing an annual Environmental and Social Report.

MOL is involved in several projects within environmental protection, including operating only double hull tankers, ballast water treatment, processing of bilge water and waste oil, and safe disposal of onboard waste. For 2010, they have set a goal of a 10% reduction in CO2 emissions compared to their 1990 level. They are also listed on the major Social Responsibility Investment indexes, such as the Dow Jones Sustainability Index and the FTSE4 Good Global Index (MOL Environmental and Social Report, 2008). Information on their CSR and environmental activities is easily accessible on their website and they have an open information policy with all of their stakeholders (MOL website, 2009).



K Line is the third of the three Japanese conglomerates operating in the car carrier segment. In addition to rolling cargo, they are also involved in several elements of maritime operations, including container ships, dry bulk carriers, terminal operations, and warehousing, LNG carriers, tankers, overland transportation, container repair, shipping agent services, and logistics solutions. They operate 92 vessels (1, 28 million dwt) of which 36 are wholly-owned. In 2008, K Line transported 3,1 million ceu, and the car carrier business alone drew in a revenue of USD 550 million (K Line Annual Report, 2009). The car carrier segment falls into K Line's Bulk Division, which again accounts for 33 per cent of total annual revenue (K Line Annual Report, 2009). They are managed from Tokyo and listed on the Tokyo Stock Exchange with no controlling owners (K Line website, 2009).

According to their annual Social and Environmental Report, K Line has a green management policy with an environmental charter guiding their operational activities. They have also constructed and implemented an Environmental Management System and are involved in different activities for environmental preservation, including cooperation with NGOs on research, and CSR and environmental issues (K Line Social and Environmental Report, 2008). Information about their environmental initiatives is easily available on their website under their section on CSR and they have an open information policy (K Line website, 2009).



## HÖEGH AUTOLINERS

HAL are jointly owned by the Höegh family of Norway, through their ownership in the holding company Leif Höegh & Co, and the Maersk Group of Denmark (HAL website, 2009). This joint venture took place in 2008 after HAL took over the Maersk car carrier fleet in exchange for a Maersk share of 37,5 per cent in HAL (Bjørndal, 2008). HAL operates 70 car carriers worldwide and transports approximately 2 million ceu (HAL website, 2009). Even though they are not a publically listed company, they publish an annual report. From this, it is possible to see that their reported total revenues were at USD 1,4 Billion for 2008, and this was all related to their car carrier operations. Unlike WW, HAL entered the new Norwegian Tax Scheme and have since moved their maritime operations from Bermuda to Norway (HAL Annual Report, 2008). They operate on a port-to-port basis (different from WWs factory-to-dealer-operations) and have a strategy focusing on “high quality, efficiency and core competence development... limiting their impact on the environment and conducting business in a socially responsible way” (HAL website, 2009).

HAL have an open communication policy and report on social and environmental issues through the publishing of an annual Environmental Performance report (HAL Environmental Performance report, 2008). They operate according to the triple bottom line principles (economic, social and environmental reporting) and state that that in order to be sustainable in the long-term they must “strive for economic growth, environmental improvements and social responsibility” (HAL website, 2009). Non-financial stakeholders are taken into account in their business decisions, and they cooperate with the World Business Council for Sustainable Development (WBCSD) where Westye Höegh, Chairman of the Board at Leif Höegh & Co, is a member of the WBCSD council. They also cooperate with several NGOs including WWF Norway on environmental issues (no relation to WWLs cooperation with WWF International), and the Red Cross through ro-ro transportation in relation to relief operations (HAL website, 2009). HAL also work actively in shaping the regulations of the industry and support environmental R&D (HAL Environmental Performance report, 2008).

## **4 LITERATURE REVIEW**

### **4.1 Corporate Social Responsibility**

The power of multinational corporations has grown tremendously over the past years, where many companies have annual budgets and profits larger than that of many countries. This has led to a growing expectation for companies to take more responsibility for their actions and engage in socially responsible activities (Smith, 2003). Managers today are increasingly aware of the high profile of CSR, and this trend continues to increase in importance in business worldwide (Snider, Hill et al. 2003).

There are countless definitions for corporate social responsibility (CSR). McWilliams and Siegel (2001:117) describe CSR as “actions that appear to further some social good, beyond the interest of the firm and that which is required by law.” A point worth noticing is that CSR is more than just following the law (McWilliams & Siegel, 2001). Alternately, Frooman (1997:227) states that CSR is: “An action by a firm, which the firm chooses to take, that substantially affects an identifiable social stakeholder’s welfare.” According to these definitions, a socially responsible corporation should adopt business practices and activities that go beyond the minimum legal requirements and contribute to the welfare of its key stakeholders. In a slightly different perspective, CSR centres on the relationship between business and society, and focuses on how businesses behave towards their key stakeholders. These stakeholders include employees, customers, investors, suppliers, communities, and special interest groups (Hick, 2000). Also, often carrying several terms, CSR has also been known as corporate responsibility, corporate citizenship, responsible business, sustainable responsible business (SRB), business ethics, corporate accountability, and sustainability and corporate social performance.

Finally, Calveras et al. (2007) refer to CSR as self-regulation of negative externalities, which describes CSR as an alternative to formal regulation. Their study is supported by Albareda in her 2008 article where she explains how CSR has developed as an informal type of regulation, and is mainly driven by major multinational corporations (Albareda, 2008).

### 4.1.1 *The CSR Debate*

The image of CSR today has been shaped by the ongoing discussions shaped by the longstanding debate between the views of Friedman and Freeman. The CSR debate refers to whether companies actually have a social responsibility beyond their bottom line, and in simple terms discusses whether the business of business is really just business.

In his popular article called *The Social Responsibility of Business is to Increase its Profits*, (1970). Friedman argues:

*There is one and only one social responsibility of business – to use its resources to, and engage in activities designed to, increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud.*

(Friedman, 1970: 6)

With this statement, Friedman asserts that the pursuit of economic self interest leads to efficient markets, as long as legal and ethical boundaries are respected. This is consistent with the views of Adam Smith, the founder of modern economics (Hoas and Madigan, 1999). Furthermore, Friedman takes a principal-agent viewpoint on corporate executives, describing them as the agents working for the principals (the shareholders), and whose responsibility is to accommodate their desires for the company (Friedman, 1970). This means that in Friedman's view, allocating company funds for other purposes than maximizing shareholder value can be considered financial mismanagement. Friedman also makes the claim that decisions regarding charity are the responsibility of government and taxes, not that of companies (Friedman, 1970).

On the opposing side of this debate is R. Edwards Freeman asserting that business is more than just business. In 1984, Freeman launched the "stakeholder perspective on strategic management" in his publication *Strategic management; a stakeholder approach*. Freeman describes a stakeholder as "any group or individual who can effect or is affected by the achievement of the organization's objectives" (Freeman 1984 in Dentchev 2005:40). Friedman's perspective is challenged with Freeman's stakeholder theory, claiming that a business is responsible for more than profit maximization for its shareholders. Freeman argues that:

*Stakeholder theory begins with the assumption that values are necessarily and explicitly a part of doing business. It asks managers to articulate the shared sense of the value they create, and what brings its core stakeholders together. It also pushes managers to be clear about how they want to do business, specifically what kinds of relationships they want and need to create with their stakeholders to deliver on their purpose.*

(Freeman et al. 2004:364)

It is clear from this statement that Freeman's view argues that businesses is more than just business, and as such is responsible for more than profit maximization for shareholders.

#### **4.1.2 The CSR Pyramid**

Following the debate on CSR, where Friedman and Freeman's views have been the two main points of view, theorist Archie Carroll created a perspective where a company's economic purpose was combined with its social purpose. This construct describes a relationship between business and society, and provides a more specific definition of CSR revealing that "the social responsibility of business encompasses the economic, legal, ethical, and discretionary expectations that society has of organizations at a given point in time" (Carroll, 1979: 500). Each of these levels will be looked at more closely.

Economic responsibility is described as producing goods and services that consumers need and want, while simultaneously making an acceptable profit in the process. In many cases, theorists refer to CSR as simply an idea that business has a responsibility that goes beyond just creating economic value; and where society and companies are expected to attend to non-financial issues on a larger scale than ever before ((Pruzan in Crane et al. 2008; Porter, 2009). However, with Porter's definition encompassing "attending to non-financial issues", non financial issues must be appropriately defined. Some of these issues are therefore a companies' impact on the environment, work safety and environment, business ethics, corruption, employee health and benefits, human rights, reduction of pollution, interaction with voluntary organizations or NGOs, and interaction with the local communities.

Legal responsibility involves a "social contract" between the business entity and society, whereby the company is expected to pursue its economic mission within the framework of the law.

Ethical responsibility involves those activities which are expected by society or alternately, prohibited by societal members although they are not concrete parts of law. These responsibilities reflect a concern for what employees and other shareholders regard as fair.

Lastly, philanthropic responsibility encompasses corporate actions which are in response to an expectation from society that “businesses be good citizens such as engaging in programs to promote human welfare and goodwill” (Carroll, 1991).

It is increasingly stakeholders who require companies to go beyond the notion of strategic philanthropy. Investors want to see financial gains from their firms’ investments in CSR initiatives. Governments have been known to require large companies to conduct business in ways that make significant contributions to national and regional social and economic development (O’Brian, 2001). Non-governmental organizations (NGOs) and other civil society groups have demanded that companies adhere to very high standards that protect the environment and human rights as well as provide resources to local communities (Reich, 1998).

It is interesting to note how the role of CSR in the 21st century has evolved from a purely philanthropic view; to the way activities pursued by any company today create external social value while reinforcing the bottom line. Essentially, CSR has evolved from philanthropy to a focus on the way a company constructs and positions itself in society (Carroll, 1991).

The excerpt from the World Business Council for Sustainable Development website below perfectly illustrates the interconnectedness of the four levels of CSR through economic, legal, ethical and philanthropic responsibilities.

*Corporate Social Responsibility is the continuing commitment by business to behave ethically and contribute to sustainable economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large.*

(WBCSD website, 2009)

Along with a more specifically articulated definition of CSR, came the model based on Carroll’s four part conceptualization of CSR (figure 8). In his 1991 article, Carroll argues that CSR as a concept

makes reference to a company's responsibility to society as a whole, and to be a true CSR firm it should "strive to make a profit, obey the law, be ethical, and be a good corporate citizen" (Carroll, 1991: 43).



Figure 8: The pyramid of CSR (Carroll, 1991: 42)

In Figure 8, Carroll's pyramid is divided into four different categories of responsibility of social business performance; economic, legal, ethical and philanthropic. The four categories are not mutually exclusive as they are interdependent, and a business will always have to meet at least two of the category requirements at the same time. This is reflected by a company having to consider their legal responsibilities parallel to their economic responsibilities when planning a business decision (Carroll, 1991).

As we have seen, the responsibility of a company according to Friedman is to maximize profits through the production of goods and services that their customers either need or want (Friedman, 1970). As the main foundation for business, this is also the base of Carroll's pyramid. Legal responsibilities are the next building block Carroll makes in his pyramid. They can be seen as a type of social contract between business and society where the company has to comply with rules and regulations of national and international law. According to Carroll, these laws can be considered a



codification of society's ethics; what is considered right and wrong. The next building block is comprised of the ethical responsibilities of a company. Ethical responsibilities including norms, standards and expectations which reflect concern for customers, employees and shareholders. In simple terms, Carroll describes the ethical responsibilities as an obligation to do what is right, just, and fair. The final building block of the CSR pyramid is the philanthropic element. This entails a company's responsibility to be a good corporate citizen by contributing resources to the communities in which it operates. It also involves improving the quality of life of its stakeholders, yet Carroll points out that in an ethical or moral sense, this is not expected (Carroll, 1991). He also notes that the three bottom building blocks of the pyramid address the issues that Friedman includes in his definition of CSR; economics, legalities, and ethics (Carroll, 1991). Since Carroll's pyramid includes a fourth element; the philanthropic responsibility, it can be considered an attempt to combine the views of Freeman and Friedman. As we have seen, Freeman believes that a company has a philanthropic responsibility, an idea that is rejected by Friedman. The ability to combine the two views, along with its strong position in the CSR makes Carrolls model relevant to an understanding of the debate on CSR, which is the reason why it is included also in this study.

#### ***4.1.3 A Criticism of CSR and Carroll's View***

As we will see in a later section of the literature review, some researchers argue that CSR can be a means to create competitive advantage. Additionally, despite this study being focused mainly on the possible positive outcome of CSR, some criticisms of the current views on CSR will also be introduced in this section.

Haigh and Jones are among the researchers who disagree with the view of CSR as the answer to a company's responsibility to be a good corporate citizen. Where Porter (2002) suggest that business is motivated in terms of increased competitiveness and argues that CSR is a means to create a competitive advantage; Haigh and Jones (2006) claim that firms often implement CSR activities only as a competitive move, which means that there is legitimate reason to believe that their position in the market will be worsened without CSR.

They believe CSR should be seen as a reaction to several different pressures that can either be overlooked or overcome without a company having to implement a CSR strategy (Haigh & Jones, 2006). According to Haigh and Jones, the pressure to be involved in CSR is likely to come from six

different factors. These factors include; internal pressure (managers need to see a possibility for economic returns to implement CSR), external pressure (companies implement CSR only as a response to their competitors action), investors (majority of them do not exert pressure on companies to be involved in CSR), consumers (not very likely that consumers can be depended upon to promote the outcome of CSR), government regulation (taxes are placed on pollution, yet the cost of ensuring compliance is high), and NGOs (the main drivers behind CSR initiatives) (Haigh and Jones, 2006). This view points towards CSR as a result of external pressure from external stakeholders forcing it to adopt a CSR strategy.

It is important to note that much of the criticism towards CSR is countered by Husted and Allen (2000). In an article where they address the issue of whether or not it is ethical to profit from CSR strategy, they conclude that “as with any instrument, social strategy can be used in ways consonant with the demands of ethics” (Husted & Allen, 2000: 29). Husted and Allen’s most salient response to elements of criticism towards CSR comes from Friedman’s (1970) statement that “business is ill-equipped to solve social problems”, and infer that a company is more likely to create value from a social project which is highly related to its own core business because it has specific knowledge to solve that particular problem (Husted & Allen, 2000). It has furthermore been claimed that CSR strategies can in some cases undermine democratic processes. Husted and Allen state that this problem can be solved if governments use fiscal or legal policies to direct philanthropy towards specific problem areas (Husted & Allen, 2000).

Having looked at the development of CSR theory, criticism of the many theories, and both the historic and current views in the CSR research field, the paper now moves to the possible positive outcomes of CSR strategies and a proactive approach to environmental issues. Obtaining a competitive advantage is seen as the main positive outcome of this approach and the linkages between CSR and competitive advantage will thus be addressed next. Elements such as value creation, financial performance, and environmental strategies will be discussed within the frameworks of CSR. Implementation of CSR is also an issue that will be described here, as it is relevant in the analysis of the current CSR and environmental strategies and publications in the car carrier industry today.

## 4.2 CSR and competitive advantage

Carroll's model is a basic model for CSR, and other researchers have used it as a basis for modification of the stakeholder perspective. In the section on CSR and financial performance below, a model that integrates business strategy and social strategy with competitive advantage and increased financial performance will be introduced.

### 4.2.1 CSR and financial performance

In their 1998 research paper, Husted and Allen recommend companies to allocate company resources to long-term social objectives in order to create a competitive advantage. They further develop this idea in their article published in 2001, where they explore the conditions that contribute to a positive relation between CSR and corporate financial performance (CFP). In this study they develop a model of CSR strategy, with the expectation that such a strategy will contribute to a competitive advantage for the company (Husted & Allen, 2001).

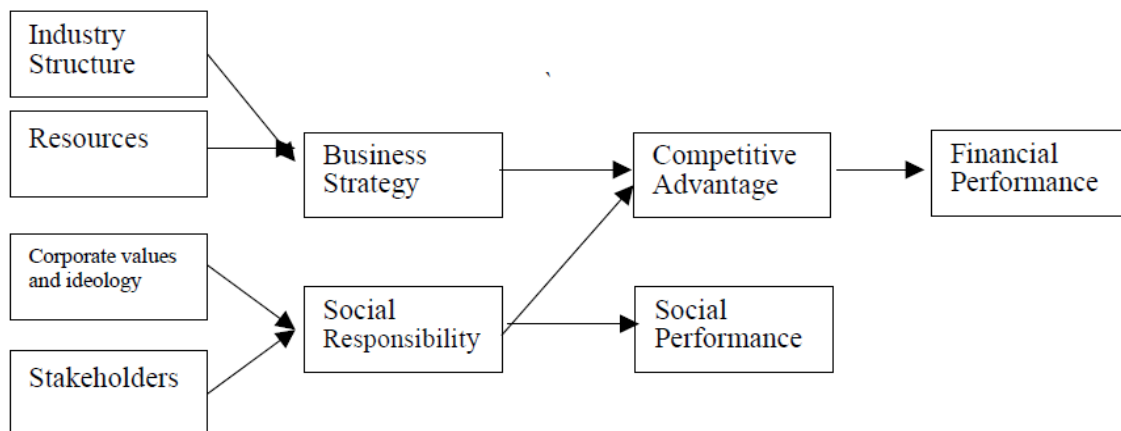


Figure 9: Traditional view of business strategy and social responsibility (Husted & Allen, 2001)

In this model, Husted and Allen first demonstrate the traditional view that social strategy and business strategy are separate (figure 9). The model shows that industry structure and resources are the main factors affecting business strategy, while corporate values and ideology and stakeholders are the main factors affecting social responsibility. There is no connection between business strategy and social responsibility in this model, but rather social responsibility is seen to have an impact on competitive

advantage in a later process. In this model, competitive advantage is still rooted in business strategy. The model also focuses on financial performance with social performance only being affected by social responsibility (Husted & Allen, 2001).

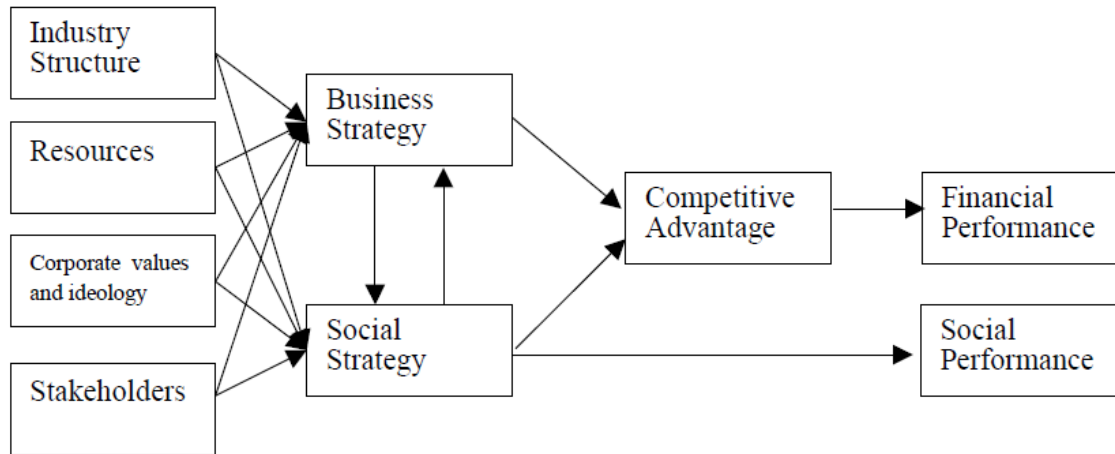


Figure 10: Integrated view of business and social strategy (Husted and Allen, 2001)

In their second model in figure 10, Husted and Allen integrate business strategy and social strategy together, and blur the origin of competitive advantage. This model also serves to emphasize social performance alongside financial performance (Husted and Allen, 2001). Husted and Allen describe the need for a connection between business and social strategy which leads to competitive advantage and increased financial performance. This integrated model shows not only how the interconnection between business strategy and social strategy contributes to competitive advantage, but it also shows how social strategy alone can lead to increased social performance. Interestingly, Husted and Allen (2001) continue to view these two strategies as separate and do not integrate CSR with the rest of the business strategy.

#### 4.2.2 *Competitive advantage*

According to Michael Porter, competitive advantage “arises from discovering and implementing ways of competing that are unique and distinctive from those of rivals, and that can be sustained over time” (Porter, 1996 in Dentchev 2005: 60). One way of understanding competitive advantage is by applying

the resource based view (RBV); which is also known as the VRIO framework. The resource based view is a construct which infers a firm can outperform its competitors through the possession of a valuable, rare, non-substitutable and inimitable resource or capability (Barney, 1991). For a closer look at the RBV, refer to section 4.3: Theoretical Models.

According to the RBV, the possession of a valuable, rare, non-substitutable and inimitable resource or capability will reveal a competitive advantage which will allow for superior financial performance of the company in question. Although it has been said that a competitive advantage can render increased financial performance, it is important to note that this is only one of several possible results of obtaining a competitive advantage. Other results include increased market share, increased customer loyalty, strengthened company brand, and improved environmental performance (i.e. reduced environmental impact) (Barney, 1991). Additionally, although competitive advantage may be gained by the use of the VRIO framework, this advantage will not necessarily be sustainable. Due to dynamic market forces which will be better identified through Porter's 5 Forces and a term he coins hypercompetition, D'Aveni (1994) asserts that a *sustainable* competitive advantage may not actually be possible.

Another research study that examines the relationship between CSR and competitive advantage is one carried out by Dentchev (2004), where it is questioned whether a company's corporate social performance (CSP) can contribute to competitive advantage. Dentchev's model builds on that of Husted and Allen, and examines corporate social strategy, showing a causal relationship between CSP and various elements within an organization. Dentchev follows up his original study and exposes that CSP can have both positive and negative impacts on the competitiveness of an organization (Dentchev, 2005).

#### **4.2.3 Implementation of CSR**

Porter and Kramer (2002) argue that CSR will have the most advantageous effect if it is implemented in correspondence with the company's core business. This view is also supported by Burke and Logsdon in an article where they conclude that CSR programs can provide organizations with strategic benefits even when these cannot be measured as providing specific contributions to the bottom line (Burke & Logsdon, 1996). Sounding much like Freeman in their conclusions, Burke & Logsdon (1996) propose that CSR can be considered strategic when it "yields substantial business-

related benefits to the firm, in particular by supporting core business activities” (Burke & Logsdon, 1996: 496).

Next, Porter and Kramer (2002) also look at CSR from the Freeman point of view, referring to CSR in terms of corporate philanthropy, and discussing how proper implementation can contribute to a competitive advantage by improving competitive context. Porter & Kramer (2002) define competitive context as the business environment in which the company operates; a field in which the company has unique expertise. This view is further elaborated upon in their statement that:

*Philanthropy can often be the most cost-effective way for a company to improve its competitive context, enabling companies to leverage the efforts and infrastructure of nonprofits and other institutions.*

(Porter & Kramer, 2002:9)

According to Porter and Kramer (2002), a company’s philanthropy can be tested by questioning whether the organization would pursue a specific social change or CSR strategy even it was not published, as such a test will show the value of the company’s philanthropy. Examples of this type of corporate philanthropy or CSR include, as an example, the funding of local schools to increase availability of skilled workers, an approach that is common in the maritime industry with educational facilities for crew training (Porter & Kramer, 2002; Stopford, 2009).

In their more recent article *Strategy and Society; the link between Competitive Advantage and Corporate Social Responsibility* (Porter & Kramer, 2006), the theorists move away from their focus on corporate philanthropy and address CSR as a concept for building competitive advantage. They introduce the idea of shared value which they define as “a meaningful benefit to society that is also valuable to the business” (Porter & Kramer, 2006: 11). The article follows up on this definition with the claim that “the mutual dependence of corporations and society implies that both business decisions and social policies must follow the principle of shared value” (Porter & Kramer, 2006: 11). Porter and Kramer also suggest that “a company must integrate a social perspective into the core frameworks it already uses to understand competition and guide its business strategy” (Porter & Kramer 2006: 12). This is concurrent with the view of Burke and Logsdon. Porter & Kramer (2002) also believe that CSR will become more an even more important element of corporate strategy in the future, and as

such recommend companies to focus on corporate social integration, rather than CSR. They assert that working together with society is preferable since society and business are mutually dependent on positive futures (Porter & Kramer, 2006).

Based on the above evaluation of CSR implementation, it can be concluded that in order for business to implement a CSR strategy, a consistent strategy must be in order provide the company at hand with a competitive advantage in the competitive context (Porter & Kramer, 2002). Once strategy can provide a competitive advantage in the competitive context, then implementation will lead to the creation of shared value where both the company and society benefits (Porter & Kramer, 2006).

#### ***4.2.4 Corporate Environmental Responsibility***

CER is defined as including “environmental commitment and awareness, stakeholder engagement, measurement, reporting and auditing, transparency, commitment to continuous improvements, and going beyond compliance” (Raynolds et al. 2005: 12). Since this study is focused more on the environmental elements of CSR than the social elements, the concept of CER is highly relevant.

Empirical work in the area of CER suggests that companies with high environmental performance tend to be profitable (King & Lenox, 2001). This is supported by Russo and Fouts (1997) who conclude that it pays to go green. Additional empirical evidence for this relationship is supported by Wahba (2008) indicating that the market compensates those companies that care for their environment. This is again reflected by CER having a positive and significant impact on company value (Wahba, 2008).

There is also a debate as to what drives CER, and a study by Dummett (2006) identifies the main driver for CER as government legislation or the threat of government legislation. This result is also supported by other studies (Emtairah et al. 2002; Husted, 2003). A surprising discovery in this study was that a high level of support from business leaders corresponded to increased government intervention encouraging or forcing companies to engage in CER, mainly in the form of legislative policies (Dummett, 2006). This reliance of business on government can possibly be seen as an indication of business leaders wanting a level playing field worldwide in terms of governmental legislation and operational framework (Behrens; Gude; Battle, 2009). Other drivers for CER that

business leaders see as relevant include cost savings, protection or enhancement of brand, avoiding risk or response to an accident, and pressure from consumers (Dummett, 2006).

While obtaining a competitive advantage was not among the criteria studied by Dummett in his 2006 study; Cook (2003) links CER to competitive advantage in his article *Who Cares Wins*. Cook finds that companies are increasingly recognizing that they can gain competitive advantage by actively responding to stakeholders' expectations for environmental performance (Cook, 2003). According to Cook:

*Issues that many managers think are soft for business, such as environment, diversity, human rights and community, are now hard for business. They are hard to ignore, hard to manage and very hard for businesses that get them wrong ... managed well, these issues can be a source of competitive advantage.*

(Cook, 2003: 43)

This quotation reflects a very changing business landscape with hard drivers and soft drivers being equally important. When CSR and CER are substantial enough to affect competitive advantage without involving harder forces, this reflects the high priority of society and stakeholders. Throughout the discussion in this chapter we have first seen the introduction of CSR as a concept and its evolution over time. We have seen research link CSR to financial performance, financial performance and social performance, and we have seen CSR come together with competitive advantage. Finally, the recent concept of CER has also been introduced and concurrently linked to competitive advantage. Before moving on to the analysis and discussion, the next section briefly introduces the analytical methods used in the study.

### **4.3 Theoretical models**

In addition to the main theoretical elements of CSR and Competitive advantage, there is also a need to include an introduction to the theoretical models used when analyzing the industry, internal and external environments and strategy which should hopefully lead to a competitive advantage. These theoretical models are: Porter's five forces, Porter's generic strategies, and the resource-based view. These three models will be helpful tools in analyzing the car carrier industry and WW, and in



identifying the possible competitive advantages arising from a proactive approach to environmental issues.

#### 4.3.1 Porter's five forces model

Porter's five forces model (P5F) is a framework for analyzing the forces that affect the competitiveness and attractiveness of an industry. Created by the strategy guru Michael Porter in one of his earlier articles "*How competitive forces shape strategy*", the five forces were intended as a strategic tool for identifying different microeconomic forces that affect a company's ability to serve its clients and make a profit (Porter, 1979). In the P5F, industry attractiveness makes reference to the intensity of competition and hence overall industry profitability. An unattractive industry therefore will be characterised by one or more of the forces increasing competition and hence driving down the profitability in the industry. The theoretical concept of *perfect competition* will result in the least attractive industry. Alternately, just because an industry is attractive does not mean that all players in that industry are equally profitable. The P5F model allows for the possibility that one company uses its core competences to obtain a competitive advantage, thus outperforming its competitors. Porter (1979) also emphasizes the importance of defining the boundaries of the industry you wish to study before initiating the analysis.

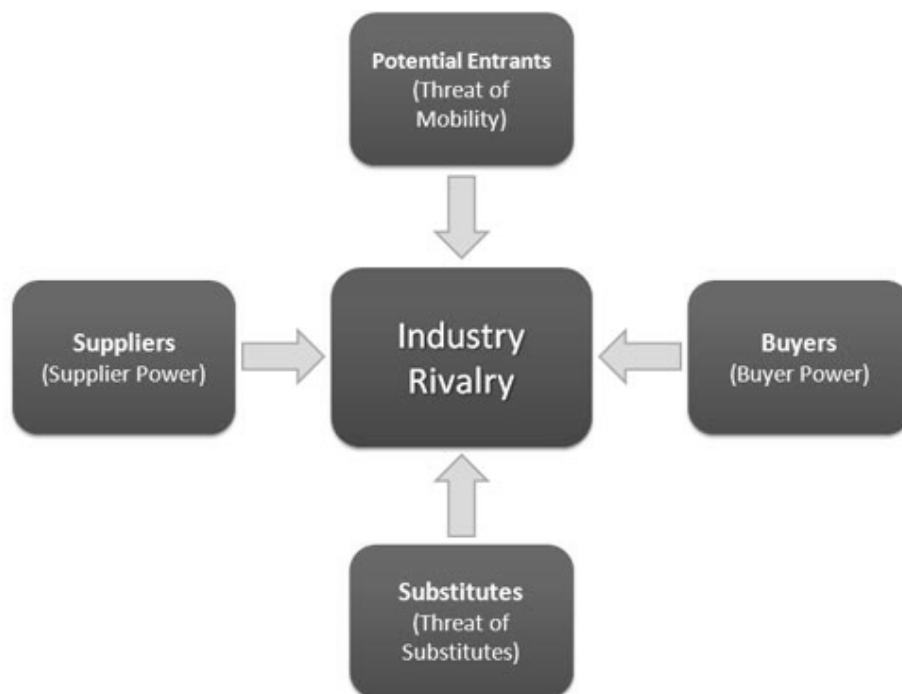


Figure 11: Porter's five forces model, as presented by Notes Desk (2009)

The five forces analyzed under a P5F are; threat of substitute products; threat of new entrants; internal rivalry among existing players; bargaining power of suppliers; and bargaining power of buyers (Porter, 1979). These forces and their interrelations are illustrated in figure 11.

The P5F model is commonly used by strategic consultants as the basis for strategic analyses of industries. It can also be used by strategic business managers to better understand the industry situation in which their company operates. The P5F analysis is often followed by other strategic models developed by Porter such as the concept of generic strategies, and it also provides useful input for a SWOT analysis. Both of these will be discussed below.

Criticism of the strategy includes its assumption of a perfect market and its simple form. In a perfect market there is no regulation, but when regulation is introduced the model loses some of its potential to provide strategic insight. The fact that it is a simple model often results in it being less useful for complex industry situations. In such industries the analyst will need to limit the focus of the study which can result in important elements not being considered (Recklies, 2001).

#### **4.3.2 Generic strategies**

In his book "*Competitive strategy: Techniques for analyzing industries and competitors*" published in 1985, Michael Porter introduced three general strategies that companies can use to obtain and "maintain" a competitive advantage. Porter defines the three strategies in a two-dimensional model, outlining strategic scope and strategic strength, with the first dimension as the demand-side dimension and the second dimension as the supply-side dimension. The three generic strategies which arise from this model are cost leadership, differentiation, and market segmentation. Cost leadership and differentiation are the most commonly used strategies. The goal of implementing one of these generic strategies is to obtain a sustainable competitive advantage (Porter, 1985).

Following a cost leadership strategy involves delivering the same services as competitors but at a lower cost. A differentiation advantage is obtained through providing a better and more extensive service than the competition. These two strategies provide positional advantages for a company, either in price or service. The third strategy is to obtain a competitive advantage through focusing on a specific and narrow segment of an industry, usually on a local level, which Porter refers to as market segmentation (Porter, 1985).

Porter's generic strategies have been modified by Treacy and Wiersema in an article where they introduce three value disciplines that can contribute to the creation of customer value and competitive advantage. These disciplines include operations excellence, product leadership, and customer intimacy (Treacy & Wiersema, 1993). The generic strategies model is criticized by researchers such as Miller (1992) and Bowman (2008) for being limiting in its scope, inflexible, and not specific enough in its approach to strategy.

### **4.3.3 Resource Based View**

As described in the section on competitive advantage, the resource based view (RBV) is a helpful tool used by business leaders and strategists to determine and evaluate their company's strategic resources. Used in combination with the P5F to determine the competitive situation in an industry and the potential sources for competitive advantage, the RBV can be used to evaluate these sources to determine whether they can contribute to a sustainable competitive advantage (Barney, 1991). A common problem with many forms of competitive advantage is that they cannot be sustained indefinitely. To be considered for a sustainable competitive advantage, the RBV requires that a resource be heterogeneous in nature and not perfectly mobile (Barney, 1991). Barney defines a resource as "firm resources include all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc; controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness" (Barney, 1991: 101). To evaluate the resources, the RBV makes use of the VRIO framework:

*Value* – A resource must enable the company to initiate a value-creating strategy, either by reducing its own weaknesses or by outperforming its competitors. In other words, a resource must be valuable (Barney, 1991).

*Rarity* – For a resource to be valuable it must by definition be rare (Barney, 1991).

*Imitability* – To be a source of competitive advantage, a valuable resource must be controlled by only one company. This can be a source of sustainable competitive advantage if competitors are unable to perfectly duplicate this specific resource, A resource can lead to sustainable competitive advantage if the source is in-imitable (Barney, 1991).

*Organization* – This element questions whether the company is organized, ready, and able to exploit a resource or capability to obtain a competitive advantage (Barney, 1991).

In addition to satisfying the VRIO framework where the organization is able to exploit a resource that is valuable, rare, and in-imitable, it is equally important that the resource is *non-substitutable* (Barney, 1991). According to Barney “if competitors are able to counter the firm’s value-creating strategy with a substitute, prices are driven down....resulting in zero economic profit” (Barney, 1986: 1233).

For a resource to be a possible source of sustainable competitive advantage, the RBV model requires it to fulfill each of these five requirements. If these are fulfilled, the resource will be a valuable resource that is not perfectly imitable and that cannot be substituted without great effort (Barney, 1991). This will allow the company to sustain above average returns (Barney, 1991). According to Conner and Prahalad (1996: 477), knowledge-based resources are “the essence of the resource-based perspective”. In other words, the main resource for competitive advantage will often be the knowledge and skills of the organization.

The main criticism towards Barney’s RBV model is that it is close to impossible to find resources which satisfy all of the requirements, especially in the long term (Priem & Butler, 2001).

## 5 METHODS

### 5.1 Research Design

The research design for the thesis study can be summed up as qualitative exploratory with a cross sectional case study. This will be elaborated upon as follows. A qualitative thesis was pursued based on the lack of adequate quantitative metrics available to reflect whether or not incentives for going green exist in the maritime industry, and to ascertain if in going green a company can obtain a competitive advantage. Furthermore, this is the most suitable method for the paper because it is through qualitative research that various methods of collecting information can be applied. The qualitative style allows me to collect, analyse and interpret data subjectively, which is a more suitable way to interpret CSR data in this study (Ghauri & Grønhaug, 2005).

The manner in which data can be collected can be classified by two dimensions: extensive versus intensive (many variables, many units), and descriptive, exploratory or causative. (Ghauri & Grønhaug, 2005) In the case of the Wilhelmsen case study, the research question undertaken is exploratory because it sets out to provide insights into an issue as opposed to identifying the reasons for why something is happening (descriptive research) or determining causes from effects (causal research).

In addition to identifying type of thesis, there is also a need to identify the time horizon which the research will represent. There are two types of time horizons which are typically utilized. The first time horizon is commonly referred to as cross sectional, which means a snapshot in time type. The alternative is a long term time horizon called a longitudinal case study. This takes substantial time from the start to the end; yet is stronger based on its capacity to track developments over time. (Ghauri & Grønhaug, 2005; Saunders et al. 2007). Due to the natural time constraints a thesis poses, I have chosen to follow a cross sectional time horizon method.

## **5.2 Data Collection**

Data collection was based on both primary and secondary sources. Primary data was collected through the use of semi-structured interviews with representatives of several stakeholders, and to get a more complete understanding of the case in question. Since pursuing exploratory research relies heavily on secondary sources such as literature, data, informal discussions, formal interviews, focus groups, projective methods, case studies or pilot studies, it was important to review many of these sources. Secondary data has been used to substantiate and supplement the collected data, and it has been gathered from sources ranging from scholarly journals to official company literature. The extent of the study includes analysis of official company documents in addition to other relevant data. I collected data over a period of five months. The interview processes and data from the interviews were compiled by me, and data was recorded using a tape recorder and notes to ensure accuracy and understanding. A more comprehensive description of both primary and secondary sources is provided below.

### **5.2.1 Interviews**

Semi-structured interviews were used as the primary source of data. The interviews lasted between one and two hours each and were conducted with stakeholder representatives. Two shorter follow up interviews were also conducted to get supplementary answers on certain specific areas, such as Human Resources and maritime operations. Interviews were recorded and detailed notes were taken. Semi-structured interviews were used because their open framework allows for focused, conversational, two-way communication (Ghauri & Grønhaug, 2005). They are guided by the interview guide prepared beforehand. Interviews were performed with five people, three of whom work for the WW Group of companies and two other representing other stakeholders.

A short overview of the interviewees can be found in table 1 on the following page. A further background for each of the interviewees is provided in appendix 5.

<b>Interviewee</b>	<b>Company Represented</b>	<b>Position</b>
Benedicte Gude,	Wilh. Wilhelmsen ASA	<i>Communications Manager</i>
Simen Røgeberg	Wilh. Wilhelmsen ASA	<i>HR Specialist</i>
Melanie Moore	Wallenius Wilhelmsen Logistics (WWL)	<i>Head of Global Environment and Quality Management</i>
Hanna Lee Behrens	Norwegian Shipowners' Association	<i>Director, Environment &amp; Innovation</i>
Jessica Battle	World Wide Fund for Nature (WWF International)	<i>High Seas Communications Officer</i>

*Table 1: General overview of individuals interviewed for study*

In addition to the above interviewees, three other representatives from the industry were interviewed; Per Kristian Knutsen and Petter Jønvik of WW and Tom Gosselin of DNV, who contributed to additional insight into both the company and CSR, work in the maritime industry.

The interviews provided valuable insight into WWs operations worldwide, environmental challenges in the industry and industry views on incentives and environmental issues, along with other CSR issues. The data obtained was also critical for getting insight into what the industry and other related stakeholders think to see whether or not there really was a difference in the way they view environmental issues. One should expect a difference in perspective and point of view based on the very different interests the many stakeholders represent, ranging from owners and operators to NGOs.

#### *5.2.1.1 Interview*

#### *Guide*

An interview guide was created in cooperation with Professor Inger Stensaker at NHH to simplify the semi structured interview process. This standardized interview guide also allowed for the many in-depth interviews to be carried out in a consistent manner allowing valuable information to be gathered

from these interviews. In qualitative research, the interview guide is a critical tool since it lists the dimensions and themes one seeks to cover in the study and where these elements include potential pre determined follow-up questions (King 2004). The interview guide which was used in my interviews was put together based on a theoretical background and framework. It included both some general introductory questions and more specific and in depth questions on several pre decided topics. The interview guide was written in English; however the interviews with Norwegian interviewees were carried out in Norwegian. This allowed for a more natural and relaxed atmosphere when both persons present were Norwegian. The interview guide can be found in appendix 6.

#### *5.2.1.2 Interview arrangements*

Initial contact with WW was initiated in the fall of 2008, at an early stage of the thesis writing process. Through networking at a shipping conference in Bergen, contact with several representatives of WWs management was established which allowed for further thesis cooperation and interview possibilities. Through this network, I was set up with the names of several interview candidates in WW. My first conversation with Ms. Gude took place in December 2008 over the phone, and in February 2008 I had the first meeting with her and Mr. Jønvik at the WW head quarters in Oslo. The interviews themselves were conducted at a later stage, when more data had been gathered and literature reviewed. The interview guide was also produced in this period. Due to busy schedules for some of the interview subjects, the final interviews were not conducted until the end of May 2009. After analyzing the interviews and making some changes to the theoretical elements of my thesis, some additional information was necessary. This was gathered through informal email and telephone correspondence with some of the WW representatives in the fall months of this year. The interviews themselves were primarily conducted at the WW head office, yet due to limitations in both time and finances, two of the interviews were conducted over the phone. All interviews were taped for the duration, and field notes were additionally taken.

### **5.2.2 Secondary Sources**

#### *5.2.2.1 Scholarly Journals*

Several scholarly journals within both the maritime industry and corporate social responsibility were accessed and analysed in the period from April to November 2009. This was done to provide a further



understanding of these two areas and the interconnections between them, and to find possible studies done on this area in the past. ProQuest and EBSCO Host were the two main databases used for researching articles. The maritime industry is a heavily researched industry, but since environmental issues in shipping can be considered a fairly recent research field, fewer articles are available on this subject. Extrapolation was applied using articles from other industries along with more general articles, with an aim of drawing possible parallels to the maritime industry.

#### *5.2.2.2 Company websites and annual reports*

The websites of several WW companies were used to access information and publications by WW, WWL and other subsidiaries. Annual reports and annual CSR reports were also used. The websites and reports of WWs competitors were also used to do a comparison on how CSR and environmental efforts are published and used in company presentations and advertisements. Finally, the websites of car producers and car importers/retailers were used to evaluate to which extent green transportation and logistics is an element in their corporate message.

#### *5.2.2.3 Official company literature*

Publications both for internal and external use were made available from both WW and WWL, providing further insight into how they value environmental issues and how these are approached and how the company's efforts are communicated, both to employees and external people.

#### *5.2.2.4 Newspapers, articles and other publically available information*

This element was used to gather external information on how this issue is perceived, and to see how companies profile themselves in the media regarding environment and corporate responsibility issues. It was also used to gather information on other elements of the environmental challenges currently existent in the world in general and in the maritime industry in particular. In addition to this, statistical studies by Norwegian research company Argentum and German shipping bank Hypo Vereinbank were used to back up the study with statistics in the field of CSR and the maritime industry.

### **5.3 Methodology for Data Analysis**

Data was analyzed using a matching technique where the combination of the audio notes, field notes and the transcribed notes were matched with regards to answers; looking at similarities and differences in the replies. The matching was mainly done in relation to each question that was answered by all interviewees. Grouping in this manner allowed for a more reliable comparison and use of the data in the analyses and discussion. In the cases where additional information was obtained from informal follow up questions, this data could not be compared to that of other interviews and was used as a backup source of information rather than the main information body. This was also the case in the individual interviews. Information that could not be fully ascertained from the interviews was guaranteed using an extrapolation technique with secondary sources. This was necessary due to the limited scope of stakeholders that were available for interviews which required information on competitors and the industries to be obtained elsewhere.

### **5.4 Credibility of Findings**

According to Saunders (2002) “attention has to be paid to two particular emphasis on research design; reliability and validity” (Saunders, 2002: 149). Reliability refers to how consistently data collection techniques and analysis procedures evoke similar findings. Some threats to reliability include subject or participant error or bias and observer error or bias (Saunders, 2002). Next, validity ensures that the findings actually represent what was being measured. Several threats to validity include history, testing, instrumentation, participants dropping out of the study and maturation (Saunders, 2002). An element that is important for any study is that of generalisability or “external validity”, which concerns whether the findings may be equally applicable in other research settings. Given the resources, it is important to test for external validity. In the case that it is not possible to test for external validity or generalisability, it is important to be mindful of avoiding generalizations.

A specific limitation to be aware of in our study is that of reliability, which concerns the bias of the findings. Since a governing limitation in this study is reliability based on the limited group of stakeholders interviewed, care and attention has been applied throughout the study to avoid participant

and observer biases. A more thorough observation of how reliability is limited in this study follows in the next section.

## **5.5 Limitations of Research Methods**

When the study of this topic was first initiated, a goal of involving all stakeholders relevant to WW and the car carrier industry was set. This was done to create the broadest picture possible of how green strategies and environmental focus are seen by parties involved and ensure reliability and validity. Dialogue has not been possible to establish with all stakeholders as originally intended, and although various, some of the reasons are difficulty in reaching the right people, physical distance to stakeholders, and contract confidentiality.

In order to get the most comprehensive look possible at the current market situation, access to statements and information from WW's competitors would have been beneficial. Regrettably contact with the competitors proved difficult and as such, information and statement from them is limited. In the case of the Japanese players (described in chapter three), distance and complex corporate structures have been the main challenges. As for the other European players, time challenges have reduced the opportunities for contact along with a shift in their focus to core business due to the financial situation have limited further conversation with them.

It is likely that closer contact with the above mentioned stakeholders and industry players would have provided closer insight into how much emphasis is put on environmental issues in the maritime industry in general and more specifically in the car carrier segment. Information from the car manufacturers would have been especially valuable since they are the buyers of the transportation services offered by the car carriers and also hold the bargaining power in the industry (this will be elaborated upon in chapter six). Since such information was not possible to gather, the analysis is not as comprehensive and unbiased in the insight it provides into the forces shaping and influencing the industry as a 360 degree perspective would allow for. Lastly, due to restrictions in time and due to the scope of this master thesis, a clear choice on just one sector of the maritime industry has had to be made. Specifically, this focus lies on one major player in the car carrier segment, and because this one player is a complex full service provider of maritime transportation services, the scope of the study

also had to be narrowed down to one exact service. Therefore, WWs shipping activities in the car carrier segment will be examined. The company structure and their subsidiaries are further elaborated upon in the case presentation in chapter three.

The amount of players examined in the car carrier industry has also been scaled down to a select few. The industry has six major companies which account for a large share of total transport. The scope of the car carrier industry has been limited to consider solely international players that transport cargo worldwide. WWs subsidiaries and their operations will be used as a case to illustrate the research findings. Lastly, although WW refers to the car carrier segment as the rolling cargo segment, for thesis purposes, the term car carrier has applied throughout to ensure consistency.

Interviews with a broader base of stakeholders in WW operations would have likely ensured higher reliability and validity of the analysis. In future research on this field, interviews with the stakeholders not reached would be recommended to remove any biases created in this study.

## 6 ANALYSIS AND DISCUSSION

The bases for the analysis and discussion include information obtained both from the interviews, along with information from several secondary sources as listed in Chapter 5. The structure of the analysis and discussion is based on the research questions and theories introduced in Chapters 1 and 4. The chapter is divided into two main parts, with the first looking at the car carrier industry and the second looking more specifically at WW.

### 6.1 The car carrier industry

In this section the current market situation in the car carrier segment is evaluated with a specific look into how the power is distributed between different stakeholders. Additionally, the basis for competition is discussed.

Reverting back to the lead problem outlined in the first chapter, we recall asking whether going green provides a competitive advantage for players in the car carrier segment in terms of market position, finances or reputation. The below sub-questions will now be addressed to concretely investigate whether the suggested proactive approach is desirable.

Beginning with the first set of sub questions, which seeks to provide an understanding of the car carrier industry and its players, this section specifically answers the following.

- What is the current market situation in the car carrier segment? In other words, how is the power distributed between the different stakeholders and what are the basis for competition?
- How do the different players in the car carrier segment carry out their corporate social responsibility? More specifically, how are they involved in environmental sustainable activities?
- From the point of view of both the industry players and other stakeholders; what are the incentives for going green?
- Are there differences in opinion among the different stakeholders?

The following sections ranging from Porter's 5 Forces (6.1.1) to the Sources of Competitive Advantage (6.1.3) will look closer into the first sub question where it identifies the current market situation in the car carrier segment. It will identify how the power is distributed between the different stakeholders and will outline specifically the basis for competition.

Sections 6.1.4 Comparison of the Players takes a detailed look on how different players in the car carrier segment carry out their corporate social responsibility, and how they are specifically involved in environmental sustainable activities.

Finally, section 6.1.5 on Incentives for Going Green highlights the incentives for going green from the perspective of both the industry players and other stakeholders; and discusses the differences in opinion that may exist.

### ***6.1.1 Porter Five Forces analysis***

Use of the P5F model in this analysis helps display the market situation in the car carrier industry. It identifies the buyers and suppliers, the different elements that affect competition, and who holds the bargaining power in the industry. An important element of P5F is identified in Chapter 4 as it establishes a clear limitation on which industry analyzed. As the industry in this case is limited to "international maritime car transportation using car carriers", it includes the six players who have worldwide operations and together account for close to 80 per cent of the market share. The players introduced in the Case Chapter are WWL, EUKOR, NYK, MOL, K Line and HAL are hereafter referred to as the car carriers. Other minor carriers are not included in the analysis because they operate in limited geographical areas and are not considered direct competitors to the worldwide operators. The analysis is structured in accordance with the five forces identified by Porter, starting with threat of substitutes. The findings of the P5F are summarized in the section on competitive situation.

#### *Threat of substitutes*

There are several alternatives to car carrier transport, including air, train, and truck transport for cars. These can all be considered as potential threats to the established car carriers. This is especially salient

in intra-European, intra-American and intra-Asian trade, where train and truck transportation can be seen as a legitimate threat. However, both train and truck transport for cars alternatives pollute more than ocean transport when pollution per car equivalent unit (ceu) transported is measured. As shown in the background chapter, shipping is the most environmentally friendly option for transportation when compared to its alternatives. On some distances however, truck or train transportation are the only alternative, as many factories are located far from the oceans of the world. This is especially relevant for many factories in Germany and the United States, yet on the long haul distances evaluated in this analysis, neither of these are viable options that can compete with the car carriers. This is mainly due to their limitations in capacity and the fact that they are land based. Air transportation is also not a realistic alternative as very few cars can be transported in an airplane making this both an uneconomical alternative where pollution per ceu is very high.

Vessel alternatives other than specialized car carriers include container ships, which are a threat to other industries such as reefer trade with their use of reefer containers (Stopford, 2009). This, is also not a very viable threat seeing how transporting such large amounts of cars in containers will be highly inefficient compared to the capacity and efficiency of today's car carriers. The players can also face competition from bulk vessels in the transport of certain types of high & heavy equipment, but that is less relevant for this study, as it does not consider the high & heavy element of the car carrier business. To conclude, the threat of substitutes is low and does not have any significant impact on the attractiveness or competitiveness of the industry.

#### *Threat of new entrants*

The threat of new entrants is the second element of P5F and considers the barriers for entry into the car carrier industry. As we have seen in Chapter 3, the players use highly specialized vessels for the transportation of cars. These are expensive and take a long time to build, two factors which both are strong barriers for entry. Another barrier for entry is the close cooperation between car carriers and car producers. The barriers to entry for new entrants are made even higher with the fact that players often operate terminals or handle the entire supply chain for their clients. Establishing such relationships require both time and close cooperation, while the establishment of terminals and integrated supply chains come at a very high cost and simply often not possible for new players.

All of these factors point towards high barriers of entry into the car carrier segment. Another possible threat is for the local players such as UECC, Grimaldi or ARC to establish themselves as global players. This is also not considered to be very likely, since as we have seen in Chapter 3 both UECC and ARC are owned jointly by other players. By going global, UECC and ARC would be cannibalizing the market share of their joint owners- a move which would not be popular, if even allowed. Grimaldi is considered the only real threat, yet they are involved in many other types of maritime services in addition to car carriers. The car carrier sector of their business accounts for only a minor share of their operations. It is also hard to determine whether they have the financial backing to increase their market share in the car carrier segment or expand into the global market.

This part of the analysis shows that there are many high and well engrained barriers to entry in the car carrier industry. This makes the threat of new entrants quite low, and this has an insignificant effect on the competitive situation in the car carrier industry.

#### *Bargaining power of suppliers*

Suppliers in the car carrier industry include, among others; shipyards constructing the vessels, suppliers of vessel equipment, suppliers of bunker fuel and other oils, ship chandlers, crewing companies, suppliers of weather services, and ports or terminals. Since the majority of these different suppliers serve the whole maritime industry, they do not have any specific dependence on the car carrier segment. There is also strong competition among them as there are many buyers and suppliers of each different service. Prices of the different services are controlled by market forces and suppliers thus cannot pressure the players on a price basis.

Several of the players considered in the study including WW have their own maritime service companies. Ship management and crewing is often handled by the companies themselves which limits the bargaining power of these entities. With regards to terminals, these are often controlled by the players themselves. To summarize, the bargaining power of suppliers seems to be low, which does not impact the competitive situation.

#### *Bargaining power of customers*

The service referred to in this study is defined as the transportation of cars worldwide using specialized car carriers. The buyers of this service are car manufacturers who need their cars



transported from factory to market. As we have seen in Chapter 3, cars are often produced far away from the delivery market, which is especially the case for Asian manufacturers and their worldwide markets. Appendix 3 illustrates the strong position of the Asian markets with Korea and Japan accounting for almost 70 per cent of world car exports. As mentioned earlier in the report, the car manufacturing industry has undergone large structural changes in the past 20 years leaving only a few large conglomerates producing the majority of the cars in the world. These account for almost all business for the car carriers. Manufacturers often are flexible with regards to location of their production facilities, and have throughout periods of structural change established themselves in many continents. This is further confirmed by the industry statistics in appendices 2A, 2B and 2C. Flexibility of production facility location further strengthens the bargaining power of the buyers as they have the option of moving their production closer to their markets if the cost of transport becomes too high. This option has not been considered in detail due to limitations in time and access to data. As a limited group of customers accounting for all business for the car carriers, car manufacturers have substantial power in contract negotiation. This confirms the oligopsonistic competitive situation where car manufacturers set the price in the market. This is additionally affirmed by Gude and Moore (2009) in the interviews and points towards an oligopsonistic competitive situation with car manufacturers setting the price in the market.

It is worth mentioning that the low threat of substitutes can be considered a limitation in the bargaining power of buyers as they have few alternatives to car carriers for moving their goods to the market. Only in the intra-continental trade is there an option for car manufacturers to choose substitutes to car carriers. Another element limiting the power of the buyers is the integrated supply chain services that the car carriers offer. This further increases the car manufacturers' dependence on the car carriers and thus strengthens the negotiation position of the car carriers.

Even though there is an element of interdependence in the industry studied, with both manufacturers and transporters having a certain amount of power, the power of the buyers is considered the stronger of the two as they are free to choose their preferred carrier. This is also evidenced through the stakeholder interviews, and points towards the buyers having high bargaining power as they are free to choose their preferred carrier. According to Gude (2009), contracts for transportation are normally for shorter periods of time, such as 1-5 years and then they are re-negotiated. At these negotiations, it

is the car manufacturers who have the upper hand, and are free to choose any car carrier for the next contract.

With their highly specialized vessels and costly terminals and organizations, there are also high barriers to exit from the car carrier industry. This is a factor that further strengthens the car manufacturers bargaining power as the car carriers do not have the option of carrying very much different cargo onboard their vessels. In the Case Chapter, Chapter 3, Bruåsdal (1993) correlates a partial increase in flexibility with the introduction of the PCTC and LCTC vessels. This is because PCTC and LCTC vessels can also transport trucks, buses, rail carts, and other high and heavy rolling cargo. This can have an impact on the bargaining power of car carriers as they now have more flexibility with regards to the cargo they transport. This element of transportation has been left out of this study, but is worth mentioning as it is still a factor that should be considered towards the industry.

An examination of the industry points towards both manufacturers and transporters having bargaining power in the car carrier industry.

#### *Internal rivalry in the industry*

Market shares vary from 8 to 18 per cent for individual carriers and this indicates that none of the six main players in the car carrier industry have a majority market share. In addition, the previous section established car manufacturers as having the bargaining power in the industry. These two elements point towards an intense rivalry among the players.

The purpose of Porter's analysis of internal rivalry in an industry is to discover the possible sources for obtaining a competitive advantage present in that industry. As we have seen that prices must be controlled by car manufacturers, car carriers need to compete on other elements than the price of their service.

According to Moore and Jønvik (2009), car carriers generally compete on the quality of their services instead of following a price competition strategy. This includes the quality of both crew and equipment; the scope of their services which incorporates their logistics offerings and supply chain solutions, port handling, and inland distribution; punctuality in their regular trades; and company reputation. All of these elements affect their attractiveness to buyers. CSR and CER have also been

mentioned as growing in importance for the quality, scope, and reputation of their services (Moore; Gude, 2009).

From this, several issues can be derived. There is strong competition in the industry and price is not among the main factors of competition. In addition, companies mainly compete on the quality and scope of their services, along with their reputation. This is also why a company's approach to CSR and CER is seen to be a potential resource of competitive advantage for car carriers.

### ***6.1.2 Car Carrier Industry: Competitive Situation***

Summarizing the findings of the P5F, several conclusions can be drawn. Among the findings in the analysis, we noted a limited threat of new entrants with high barriers to entry, a limited threat of substitutes, limited bargain power from the supplier side and quite high bargaining power from the buyer side. This, combined with no single player having a controlling share in the market, leads to an intense rivalry among the different players in the car carrier segment. These situations are all further confirmed by the interviews performed with different stakeholder representatives (Moore; Gude; Jønvik, 2009), who pointed out the main areas in which the car carriers compete. Price was found not to be an important element of competition as it is controlled by the car manufacturers. In this respect, the interview sessions also proved valuable in confirming the findings with regards to which areas are competitive in the car carrier industry. The players compete on issues such as the quality and scope of their services; punctuality; and company reputation. In addition, CSR and CER were mentioned by the interviewees as having a growing importance for the quality, scope, and reputation of their services (Gude; Moore, 2009). Finally, long term customer relations were mentioned as another important factor (Moore, 2009).

Lastly, the introduction of the players in Chapter 3 shows that they all make a profit on their car carrying businesses. This can indicate that the car manufacturers are not able to pressure the price down to a breakeven level and may reflect the partial negotiating power of the car carriers. However, the interviews pointed out that that a substantial part of the revenues come from offering extra services such as integrated supply-chain solutions and not from the ocean transportation itself (Gude; Moore, 2009). HAL is still a profitable player even though they only offer port-to-port services, but this may be related to their lower costs with running a less complex operation than their competitors.

Referring to Porter's generic strategies introduced in Chapter 4, the study points towards a strategy of diversification as the best and probably only strategic option for the car carriers. This is because with bargaining power in the hands of the buyers, and having car carriers earning small margins, the players do not have same opportunity to compete based on price differentiation. Because the six players considered in this study all operate worldwide, a focus strategy is also not a realistic option since this would require a niche type concentration which is generally not congruent across geographical borders. Even though a focused strategy can be niche in other ways than just geographically, such as adapting itself to the specific demands of a specifically positioned buyer, this does not seem to be the case in the competitive situation in the car carrier industry.

As was mentioned in Chapter 3, five of the players offer integrated supply chain solutions, handling transportation from factory to dealer with HAL as the only exception. HAL pursue a pure port-to-port strategy, which could possibly be seen as a focused strategy. However, this points more towards being their approach to a differentiation strategy, and not necessarily a focused one.

In the case of local players such as UECC and Grimaldi, it seems probable that more of a focused strategy is pursued, providing them with certain advantages in the intra-European trades. Wallenius and NYKs joint ownership in UECC can also be considered as these two players pursuing a more focused concept as part of their shipping portfolios. They may be doing this in an attempt to obtain an advantage in the European short-sea market for car transportation. The same may also be true in case of ARC and the transportation of US military equipment, though in this specific case it is also a requirement that all cargo be transported on US registered vessels with US crew. The WW and Wallenius ownership in ARC can thus be seen as a purely strategic move to have access to the lucrative market for military rolling cargo (WW website; ARC website, 2009).

Another conclusion that can be drawn is that the industry, with its fierce competition, established players, and low margins, is not a very attractive industry to enter if one is considering entering from the point of view of an external shipowner. This is worth mentioning even though it is not a focus of this study, but is more established as a thought for future research in this field.

### *6.1.3 Sources for competitive advantage*

With the help of the interviews and the P5F it is possible to further elaborate on the different competitive elements present in the car carrier industry. As was illustrated in the literature review, the purpose of the P5F and generic strategies models is to establish which potential sources of competitive advantage exist in an industry. This analysis will now focus on the main sources for competitive advantage derived from the P5F which have been identified as quality of service, scope of service, company reputation and customer relationship. These are all elements of differentiation which is in accordance with the conclusion that the players need to pursue strategies of differentiation to compete in the car carrier industry.

As the P5F has demonstrated, the competitive landscape in the car carrier industry is not very inviting. Despite the barriers and boundaries that exist, there are sources of competitive advantage to be found. These sources have been identified using a combination of the P5F and stakeholder interviews. The sources of competitive advantage are outlined below but it is important to note that in section 6.2 on WWs competitive advantage we will cross-reference these sources with the Resource Based View (VRIO framework) outlined in the literature review.

#### *Quality of service*

Quality of service is a substantially sized area in which competitive advantage can be obtained. It includes the quality of crew, quality of equipment and vessels, and quality of the customer service offered to the clients (Moore, 2009). Moore and Gude (2009) also brought up reliability and efficiency as important elements in the quality of service. To obtain a competitive advantage in the area of quality of service, and specifically reliability and efficiency, a company will have to offer a tangible quality difference in relation to the competition. This can be done through outdoing the competition in terms of offering more experienced or better trained crew, newer and/or more specialized vessels, or a better track record in delivering on time (sooner) with better product handling.

#### *Scope of service*

Scope of service is another area where competitive advantage can arise, and it spans services that go beyond that of pure ocean transportation of cars. Scope of service includes additional services such as

terminal handling, inland distribution, and complete logistics and supply chain solutions. These are solutions where car carrier companies operate the entire supply chain from factory to dealer. In addition to offering the services themselves, it is important to offer superior quality in the additional services offered to clients to obtain a competitive advantage. Additional services are important sources of revenue as they tend to be more specialized and tailored to individual clients' needs than ordinary ocean transportation.

### *Company reputation*

A third source of competitive advantage in the car carrier industry is *company reputation*, which is intangible but cannot be overlooked as a success factor. It is important to maintain a company reputation, if not work to continually strengthen it in order for long term success through longer term contracts and closer working relationship with car manufacturers. This is a small and rather transparent segment which is often based on media images and word of mouth, yet a bad reputation can have serious implications on a company's ability to obtain contracts with car manufacturers (Moore, 2009). Reputation is also closely related to the other areas because quality of service, scope of service, and customer relationship can all have an impact on company reputation and vice versa. Other issues with an impact on reputation include financial performance, reliability, and social and environmental performance. This makes company reputation an important area where a proactive approach to environmental challenges may lead to a competitive advantage.

### *Customer relationship focus*

The final element that can lead to a competitive advantage in the car carrier industry is *customer relationship focus*. This element is closely related to the previously mentioned sources of competitive advantage, especially in the case of scope of services. It has become a strategic issue for several players in the industry to provide complete logistics and supply chain solutions to their clients because through providing superior supply chain solutions to their customers, it is possible to establish a closer relationship with them. A car carrier company can obtain a competitive advantage over their competitors through a consistently prioritized customer relationship which ensures loyalty. Such additional services increase the bargaining power of car carriers since a focus on the customer relationship also increases the manufacturer's loyalty and trust to the specific car carrier. According to

Gude, these additional services can also contribute to longer term contracts, which secure increased financial stability for car carriers (Gude, 2009).

A strong environmental focus and a proactive approach to environmental issues can be related to all of the four different sources of competitive advantage. These different competitive advantages will be addressed in detail when doing a further assessment of WW and their competitiveness.

In the next section the different approaches to CSR and CER in the car carrier industry will be illustrated through a comparison of how the different players profile and promote themselves. The bases for comparison are the websites of the different players, their annual reports, CSR reports, media publications and elements from the interviews.

#### ***6.1.4 Comparison of the Players***

As mentioned earlier in the introduction to this chapter, this section will discuss how the different players in the car carrier segment carry out their corporate social responsibility. It will also take a specific look at how these players are involved in environmentally sustainable activities.

To begin, it is even on a very basic level that we notice the approaches to CSR and CER varying among the different players. The disparities are great, with some players considering these areas as part of the core strategy and operation and prioritizing them highly, while others view CSR and CER as more of a minimalist approach. The similarities and differences among the different players are the focus of this section; however, it may be helpful to recall company descriptions and remember the overall CSR strategies pursued by these companies. For this, we can refer to the Case chapter, Chapter 3. The main elements from chapter 3 are summarized and are compared in table 2 below.

COMPANY	REQUIREMENTS											
	ISO 14001 CERTIFIED	LISTED ON STOCK EXCHANGE	OWNERSHIP STRUCTURE	ESTIMATED MARKET SHARE	CAR CARRIER SHARE OF TOTAL	CSR OR CER ON FRONTPAGE	CER POLICY	CSR POLICY	ANNUAL CSR/ CER REPORT PUBLISHED	DEVELOPING ENVIRONMENTAL SOLUTIONS IN-HOUSE	CONCEPT VESSEL	COOPERATION WITH NGOs/NPOs
WWL	YES	NO	50/50 WW & WALLENIOUS	12 %	100 %	YES	YES	YES	YES	YES	YES	YES
EUKOR	YES (1996)	NO	40 WALLENIOUS, 20 KIA &	14 %	100 %	NO	YES	NO INFO	NO	NO INFO	NO	NO INFO
NYK	YES (2002)	YES	NO MAJOR OWNERS	13-18%	33% (TOTAL BULK)	YES	YES	YES	YES	YES	NO	YES
K Line	YES	YES	NO MAJOR OWNERS	13-18%	NO INFO	YES	YES	YES	YES	NO INFO	NO	YES
MOL	YES	YES	NO MAJOR OWNERS	13-18%	11 %	YES	YES	YES	YES	YES	YES	YES
HAL	YES	NO	HOEGH, 37,5 % MAERSK	8 %	100 %	NO	YES	YES	YES (2001)	NO INFO	NO	YES

*Table 2: Comparison of the players in the car carrier industry; compiled by the author (2009)*

- All the players are ISO14001 certified. This is a voluntary certification guaranteeing that they have implemented environmental management standards. According to the International Organization for Standardization (ISO), the aim of the ISO 14001 standard is to decrease the pollution and waste a business produces and to reduce the environmental footprint of the business (ISO website, 2009)
- All the players have established policies on CER or environmental issues and publish these on their websites. This can possibly be related to specific requirements in their ISO 14001 certifications.
- The majority of the players have established CSR policies. EUKOR is the only company that does not offer specific information in this area on their website, nor do they publish any reports
- Five out of six companies have CSR or CER as one of their main focus areas on their website front-page. EUKOR is the exception in this case since their policies on CER are more difficult to locate



- Five out of six companies publish annual reports on CSR/CER. EUKOR is the only company that does not do this
- Five out of six companies offer complete logistics and supply-chain solutions to their customers, HAL is the only exception.

When looking more specifically at the differences between the different players, we see that the stock-listed companies (MOL, NYK and K Line) along with WWL have the strongest focus on CSR/CER. This is evident both on their websites and in their annual and CSR/CER reports. They publish substantially more information about their performance and initiatives than EUKOR and HAL. Neither EUKOR nor HAL are listed on the stock exchange, so they have fewer requirements on publication than MOL, NYK and K Line. This may partially explain their limited reporting. WWL is the only non-listed company that has a substantial focus on environmental issues and CSR.

WWL, NYK and MOL all work to develop in-house solutions to deal with environmental challenges and also publish substantial amounts of information about their initiatives on their website and in annual CSR/CER reports. Such solutions include, among others; ballast water treatment systems, scrubbing systems, and more dynamic hull designs.

Three of the players have developed environmentally friendly concept vessels for the future, but WWL stands out as the only company having developed a futuristic car carrier. MOL and NYK have chosen instead to focus on developing environmentally friendly container vessels, as this is a critical area of the business for them. To further differentiate itself, WWL's concept vessel Orcelle is the only one of these future vessels that promises zero emissions to both ocean and air. All three companies see their vessels as futuristic and have placed their realization in the year 2030 or later.

The car carrier business accounts for 100 per cent of the revenue for the three Scandinavian-controlled companies (WWL, EUKOR and HAL). This includes additional services. In the case of the three Japanese conglomerates, this percentage is substantially lower. Based on these figures, we note that the Scandinavian-controlled companies' are dependent on the car carrier segment. There is a similarity among companies where all companies are owned by maritime holding companies also involved in other areas of maritime business. WW represents the biggest of the three holding companies. Leif Höegh & Co and Maersk, the owners of HAL are similarly involved in a wide range of services (Leif Höegh & Co website; Maersk website, 2009)

To conclude, the study shows substantial differences among how the different players in the car carrier segment carry out their corporate social responsibility. We note that the listed companies (MOL, NYK and K Line) have a strong focus on both CSR and CER, with MOL standing out as the greenest of the three. WWL is also in a category of its own as it is the only non-listed company that is also heavily involved in CSR and CER. This makes WWL stand out in comparison with the other five as going above and beyond in this area. HAL and especially EUKOR seem to have less of a focus on CSR and CER, and this is visible through the minimal extent to which information about their efforts is published.

There are clear differences between the different players. It has also become clear that the different initiatives have been initiated at different points in time, and WWL stand out as a forerunner when initiation dates are examined.

#### ***6.1.5 Incentives for going green***

Recalling that this section discusses the incentives for going green, we specifically look into what these incentives are as per the various perspectives ranging in the industry. Furthermore, considering these perspectives, this section will highlight some differences among popular stakeholder opinion within incentives for environmentalism in the car carrier industry. The incentives that will be outlined in this section are first mover advantage, increased company reputation and brand strength, higher value of services offered, differentiation from competition, and pure financial incentives.

Interviews with several different stakeholders have revealed that there are in fact incentives to go green. Although there was no dominating opinion among specific incentives for going green, there were fair similarities and differences across the sample group. When interviewing a group including both industry representatives and NGOs, it is almost expected to receive different views incentives from going green business and from NGO's. The NGOs do not have the same need to occupy themselves that much with the bottom line of the company, as their main focus is on external issues. In the case of the WWF International, their main focus is that of the environment. The differences in opinion among the different stakeholders are also addressed towards the end of this section.

The interviewees all agreed that the opportunities that came with staying ahead of government legislation were an incentive for going green. According to Behrens, Moore and Gude (2009), staying

ahead of legislation contributes to making the organization better prepared to meet the regulations in the future both financially and operationally. This again can lead to the company obtaining a first-mover advantage or competitive advantage over their competitors (Moore, 2009).

External stakeholders Behrens and Battle spoke of the increased attractiveness of the company as an important incentive. They have noted going green as an investment in company reputation, and mainly indicate this in relation to external company investment. Behrens (2009) also mentioned that financial institutions are beginning to include companies' environmental profiles as criteria for obtaining loans. The WW representatives brought up the increased attractiveness of the company as an incentive, but saw this more from the operational viewpoint. Moore (2009) pointed out that WWL was undergoing an increased focus on environmental issues from their customers, and saw this as an opportunity to win customers and strengthen their brand. Røgeberg (2009) notes the increasing importance of company reputation, and connects this to an environmental focus in the recruitment of new employees. This is a growing trend and is something that WW focuses on in their recruitment campaigns.

Similar to the company reputation incentive is one that can work as a way of hedging against media risk or reputational risk. Both Gude and Behrens clearly express this as a being of increased importance to the maritime companies today, as there has been an increasing media focus on environmental issues. With the rapid transmission of news worldwide, an accident in any location in the world is known worldwide within minutes. Gude suggests that implementing CSR, CER and generally becoming more environmentally friendly in company operations is advantageous from a communications point of view. This is because being recognized as responsible and environmentally friendly throughout operating history can help minimize the reputational downturn should there be an environmentally focussed accident in the future. Such a long term positive reputation would still not prevent the negative media attention from coming as a reaction, however could limit some of the worse accusations (Gude, 2009).

Another element brought up as an incentive for going green are the opportunities created in increasing the value of the services offered to customers. Moore (2009) speaks of two different elements as they relate to increasing the value of services offered to customers. The first element is noted as providing additional services in areas such as measuring environmental impact and limiting environmental

impact in the manufacturers supply chain; and the second is noted as increasing the value of services by ensuring an environmental approach at no added cost. Battle draws attention to increasing value to the service offerings as well when she suggests the establishment of a market niche as an incentive to go green. As the only NGO representative interviewed, it is likely the perspective of Battle is more optimistic and even wishful. It is unfortunately not possible for business to use hope as a basis for investment. In accordance with the views of Friedman, Freeman, Carroll and Porter, it is necessary to reiterate the importance of a company in making profit.

Next, Moore (2009) suggests that since the main areas of competition are on quality and price (cost, time, reliability and efficiency), and these are areas where the competition has strong positions, an incentive to go green would be increased customer value through offering a differentiated service. We can use WWL as an example, as they differentiate themselves from the competition by offering a more environmentally friendly service than is available from most others.

For the companies there is also a purely financial incentive for going green. According to Moore and Gude, there is a great cost saving potential in reduced fuel consumption. Reducing the consumption of fuel also automatically leads to reduced emissions, thus it creates a win-win situation for the company. With a need to keep a tight look at their financials, especially in the financially challenging market we see in 2008 and 2009, the opportunity to combine cost savings with being more environmentally friendly is a very strong incentive for going green.

A final incentive listed by the interviewees is the expected future profit opportunities that arise from developing in-house solutions for handling the environmental challenges. By investing in development today and being proactive, a company can reap future benefits when it happens that they are ahead of legislation (Moore; Gude, 2009). According to Gude, WMS are currently developing solutions for ballast water management along with several other solutions. WMS have estimated this market to have a value of several billion USD. These solutions will be introduced in the next section looking more specifically on WW and what they are doing with regards to environmental challenges.

As we have identified in this section, there are substantial differences between how different stakeholders regard incentives to go green. Although they all agree on the existence of various incentives for a more proactive approach to environmental challenges, their views are affected by the organisations they represent. Representing WW and WWL, Gude and Moore focused more on the

opportunities for obtaining contracts, cost savings, and profit opportunities as important incentives to go green. Behrens, representing the legislators and classification societies, focused on the opportunity of staying ahead of legislation, along with company reputation, and attractiveness for investors. Battle, representing the NGO WWF International had a more marketing focused view, pointing out the opportunity of being greener than competitors as a possible incentive. She believed this could lead to increased market share for the players.

If possible to summarize the incentives to go green, all the stakeholders have one thing in common. That is that the incentives noted as important by the majority of stakeholders, coincide with the issues found to be sources of competitive advantage in the car carrier industry analysis. Increasing the value of the services offered to the competitors is consistent with offering a superior scope of services, just as is developing in-house environmental solutions that can be offered to the customers. This element can increase the quality of the services offered as they will become more environmentally friendly with less emissions. Similarly, increased attractiveness of the company can be related to both company reputation and customer relationship, and these are advantageous in keeping customers and obtaining new contracts. Additionally, hedging against reputational risk and media risk can also both strengthen company reputation and be valuable to the customer relationship and scope of services.

To conclude, the main incentive for going green in the car carrier industry is really just to obtain a competitive advantage. This is further discussed in the section on WW, as an analysis of their competitive advantages.

## **6.2 Wilhelmsen in Focus**

In this section, the study looks specifically at WW and examines their approach to CSR and CER. This is concurrent with the second sub-question. The study examines whether WWs approach is truly proactive, and if so, if that is a deliberate strategy from WW. It also examines whether it is possible to link WWs performance and industry position to their CSR and CER policies. Lastly, it looks at WWs competitive advantages and how having a proactive approach to environmental issues compares to other competitive advantages identified.

The following sections will individually answer the sub-questions stated in the first chapter: problem scope. Section 6.2.1 on WW's Approach to Environmental issues will focus specifically on whether or not WW's approach to the environment is proactive, and if so, whether it is a deliberate strategy from their side.

Section 6.2.2 WW's Performance and Industry Position, identifies whether or not it is possible to link WW's performance and industry position to their CSR and environmental policies, and finally, section 6.2.3 on WW's Competitive Advantages takes a detailed look into the specific competitive advantages of WW. Also in 6.2.3, we deliberate how being "environmentally proactive" scores when compared with other possible competitive advantages.

### ***6.2.1 WWs approach to environmental issues***

As indicated above, this section discusses whether or not WW's approach to the environment is proactive, and if so, whether it is a deliberate strategy from their side.

WW express a strong focus on environmental issues in all elements of their organization. The background chapter provided a detailed introduction to WW and their approach to environmental challenges and CSR. Combining the analyses in the previous section and the interviews performed, the information available points toward WW having a proactive approach to environmental challenges. Statements from the management, company websites, and interviews also identify WW pursuing a deliberate strategy regarding CSR and environmental sustainability.

The CEO and management levels in WW have clearly stated a goal of staying ahead of competition in the environmental field. We have noted in the Case Chapter, chapter 3, that the actions taken by the company in this field match the company strategy, which also clearly states that they plan to stay in the forefront on this issue. WW have a goal of zero emission to both air and sea, which is consistent with the goal of the NSA. According to Gude, WW are also working actively with Norwegian authorities, NSA and IMO in developing stricter regulations in all areas of maritime operations. "As a global player, they need global regulation and a global operational framework" (Gude, 2009). This means that WW intends not only to stay ahead of current and upcoming regulations, but they will also work actively to ensure stricter regulation- for themselves and their competition. Since WW have a

long-term strategic view on their operations, they see an environmentally friendly approach as an essential part of their strategy (Gude, 2009).

As a short note regarding WW's environmental approach, it is important to state that when evaluating this for WW, we also have taken into consideration WW's subsidiaries. As WWL and EUKOR are the two main focus subsidiaries of WW in this study, this section will peer into the environmental approaches of these. In the previous section (6.1.3) WWL and EUKORs approach to environmentalism were compared against all six car carriers. From the comparison, WWL stood out as the greenest of the different players in the car carrier segment. We recall that WWL was the only company to have developed a zero emissions car carrier for the future "Orcelle", and they are testing and implementing new environmental technology solutions. In addition, WWL are the first company to establish CSR and CER standards and to start publishing reports in this area. They have built up a good reputation as being environmentally friendly, something that according to Moore is also appreciated by their clients. Battle brought up the point that it was Wallenius who first took initiative to the green profile of WWL, and its subsequent strong emphasis on CSR and CER. This indicates that WW was actually not a forerunner to the same degree in the past as they are today, yet they seem to have developed into an organization with a strong focus and emphasis on environmental issues; now parallel to that of Wallenius. Battle confirms that Wallenius has been a trailblazer in CSR and CER for many years.

Next, WWs wholly-owned subsidiary WMS are also actively working towards decreasing emissions and pollution in the maritime industry. They are developing solutions to tackle environmental challenges, which is a strategy that should allow WW to reduce their emissions while profiting from the sale and distribution of these solutions to their clients worldwide.

To summarize, we have seen throughout this section that WW have a proactive approach to the environment. Additionally, it is clear that this is a deliberate strategy from the company, supported on all levels of the organization. WW does not seem to have been equally focused on environmental issues in the past, but the interviews have indicated that different partnerships with Wallenius have lead to the stronger focus on environmental challenges found in WW today. Additionally, even though others are now following their example, it seems as if WW and WWL have been able to obtain a first-mover advantage with their proactive approach.

### **6.2.2 *WW's performance and industry position***

As mentioned in the introduction to 6.2, this section on WW's Performance and Industry Position identifies whether or not it is possible to link WW's performance and industry position to their CSR and environmental policies.

We have established that WW is a frontrunner in the environmental field, compared to their competitors in the car carrier industry. They have positioned themselves as highly environmentally responsible and sustainable, also through the operations of their subsidiaries, such as WWL and WMS. This positioning is positive, because as explained through the interviews, customers are becoming more focused on the green profiles of companies. Additionally, more emphasis is being given to this area in contract negotiation, with new CSR and environmental requirements being continuously added. An example provided by Moore was that WWL had been approached by one of their customers requesting their participation in tracking the carbon footprint of car transportation in the entire transport chain from factory to customer. The company approached WWL stating that they had chosen them from among the competition in the car carrier industry based on their green profile and because they considered WWL to be a sustainable leader regarding the environment. Good reputation was also pointed out as a contributing factor in their choice of WWL as their preferred partner on this project (Moore, 2009). This example goes a long way in building up how WWL's green profile contributes to them being chosen over other players. It may also show that having a green strategy can lead to increased market share in the car carrier segment.

The above discussion and example leads to another discussion surrounding whether or not the competitors can be considered sub-par with respect to environmental approach just because they are not as proactive as WWL. Section 6.1 indicates that many players have a strong and clear focus on the environment, but they may have initiated their efforts at a later stage than WWL. The competition may also be less focused on environmental issues based on the way they market themselves. Regardless, this indicates that WWL has been a first mover with their early focus on environmental issues and strong environmental profile. Their website, along with that of WW and Wallenius, also show that these companies have a stronger focus on environmental issues than the competition. The comparison of these can denote a stronger focus on behalf of especially these two players, although



MOL is not far behind. The remaining companies still have a way to go before they reach the levels of WW, Wallenius, and WWL.

To further examine the possible positive effects of being greener than competition, the study now moves on to analyze WWs competitive advantages, and also compares these to the advantage obtained from being environmentally proactive.

### **6.2.3 *WWs competitive advantages***

Finally, this section on WW's Competitive Advantages takes a detailed look into the specific competitive advantages of WW, where we also deliberate how being "environmentally proactive" scores when compared with other possible competitive advantages. In order to do this, we reflect back on section 6.1 where sources of competitive advantage were identified, and we now connect these to the RBV model introduced in the theoretical framework to ascertain what WW's own competitive advantages are.

In section 6.1.3 we outlined the different sources of competitive advantage that exist in the car carrier industry. These were found to be quality of service, scope of service, company reputation and customer relationship focus. In quality of service we have included quality of crew, equipment, and vessels, as well as reliability and efficiency. Scope of service entails terminal handling, inland distribution, in addition to complete logistics and supply chain solutions. Company reputation and customer relationship focus to not go beyond what their names suggest.

Table 3 below displays the competitive advantages identified within the car carrier industry and cross references them with the VRIO framework to establish which of WW's resources can be seen as a competitive advantage.

	<i>Valuable</i>	<i>Rare</i>	<i>Inimitable</i>	<i>Organization</i>	<i>Non-Substitutable</i>	<i>Sustainable Competitive Advantage</i>
<i>Quality of service</i>	✓	✗	✗	✓	✗	NO
<i>Scope of Service</i>	✓	✗	✓	✓	-	YES
<i>Company reputation</i>	✓	✗	✗	✓	✓	YES
<i>Customer relationship focus</i>	✓	✗	✓	✓	✗	YES

*Table 3: WW's Competitive Advantage Analysis*

As per quality of service, we have noted that this is a valuable resource that the organization is ready to implement, however it is neither rare nor inimitable, and it can be substituted. This results in it not being a source of sustainable competitive advantage.

Scope of service is a valuable and inimitable resource that the organization is ready to implement. Even though it cannot be considered rare, the other three factors is what makes it a sustainable competitive advantage.

Company reputation is an intangible value that is valuable, non-sustainable, and which the organization is ready to profit from. It is neither rare, nor inimitable but still provides a source of sustainable competitive advantage for WW.

The last of the four resources is customer relationship focus. This is valuable, inimitable and the organization is ready to profit from it, yet it is neither rare nor non-substitutable. However, summarizing the score shows that this is another source of sustainable competitive advantage.

WW have sources of sustainable competitive advantage in three different areas. However, it has become clear throughout this study that being environmentally proactive is not necessarily a competitive advantage on its own, but it is more a factor that contributes to strengthening the other sources of competitive advantage. In the case of WW, it is believed that their competitive advantages are obtained through their strong focus on operational excellence and customer intimacy, which are consistent with the theory introduced in the literature review. These competitive advantages are then further strengthened when the green factor is added to the equation, leading to overall superior performance by WW.

### **6.3 Drawing parallels**

This last section of the analysis and discussion looks at any possible parallels that can be drawn, both to other elements where WW have a strong position, and to the maritime industry as a whole.

As was introduced in the Case Chapter, Chapter 3, WW represent a broad organization offering a vast selection of maritime services. Their shipping and logistics divisions are to a large extent integrated through the operations of WWL and EUKOR. The findings of this study on shipping are believed to also apply to the logistics division. Based on the findings, parallels can further be drawn to WWs maritime services division, WMS. They are a strong addition to WWs operations, as they have the opportunity to develop and distribute different environmental solutions. WMS also has a leading position in the maritime services industry.

Regarding the maritime industry as a whole, the interviews have shown that the different stakeholders all focus on the growing importance of CSR and CER, not only in the car carrier industry but also in other sectors of the maritime industry. Being proactive with regards to environmental issues seems to have a positive effect on company reputation, and also helps strengthen its competitive advantages. Through following WWs example, other companies should be able to strengthen their competitive position. However, it is important to consider the fact that the car carrier industry is a niche market with oligopsonistic competition. This is an issue that makes it very different from many of the other segments where we have close to perfect competition, and where low-cost strategies can be pursued.

## 7 CONCLUSIONS, IMPLICATIONS AND DIRECTIONS FOR FUTURE RESEARCH

### 7.1 Conclusions and Implications

The maritime industry has long been hiding behind the fact that it is the least polluting mode of international transportation, and globalization, while integrating world economies, societies and cultures has also blurred the lines of responsibility for environmental damages incurred along the way. Pollution from the shipping industry has been a debated issue for three decades, however, submitting to the renewed emphasis on the behaviour and responsibility of multinational companies, this thesis has looked into how shipping companies approach Corporate Social Responsibility (CSR) and the environmental challenges that draw from the impact of human consumption.

This thesis has also identified three possible strategies for players in the shipping industry to take regarding environmental sustainability and green focus. They range from trying to avoid compliance to going above and beyond both existing and expected laws and requirements. The main reason why we have established the three strategies was to see if applying the third strategy could lead to any competitive advantage as measured using the tools highlighted in our literature review. To recall the main research question from the Introduction, we ask:

*Does going green provide a competitive advantage for players in the car carrier segment?*

Interestingly enough, we have found that a strong environmental strategy alone is not sufficient to contribute to a competitive advantage. Rather, we have found that if players in the car carrier industry do pursue a green profile, then the benefits they reap from doing so can result in strong support for any given competitive advantage. On another note, a competitive advantage could be attainable given that the player had unique resources unlike the competition that were valuable, rare, inimitable and meaningful to the organization. Having such resources would allow the player to differentiate

themselves from the competition, especially if the incumbents based their competitive advantage as they currently do; on the resources of quality of service, scope of service, company reputation and customer relationship.

This study has pursued in depth research through a combination of stakeholder interviews as well as secondary sources. It is notable that there has not been any evidence through the interviews to show that there are more salient competitive advantages among the choice of quality of service, scope of service, company reputation and customer relationship. It has been evidenced from the interviews however that there were clear preferences depending on the type of stakeholder. External stakeholders were more concerned with company reputation, while the internal stakeholders were more concerned with the operational issues, such as the quality and scope of the services issued. In total, the interviews have proved that WW, but specifically WWL is an overall preferred car carrier than the competition. This is likely attributed to the reputation and relationship elements, which indicate that being first in pursuing a strategy, can lead to a competitive advantage through a first-mover advantage.

The study of how a green strategy can support any pursued competitive advantage has been completed following the well practiced Porter's 5 Forces. These forces have indicated that the overall car carrier industry is not an exceptionally attractive industry based on the high barriers to entry, high bargaining power of buyers, low bargaining power of suppliers and low threat of substitutes. Remarkably, while the bargaining power lies in the hands of the buyers, interviews and secondary research has indicated that buyers' expectations for green performance are increasing. Similarly, going green can lead to being the preferred car carrier company, leading to increased business, profits and market share. The internal rivalry is strong and mainly focused on the quality and scope of the car carrier services, along with customer relationship focus and company reputation, since competition does not happen on a price basis.

The findings of this study have implications on the way the industry and others perceive the environmental challenges in the maritime industry today. This paper has attempted to investigate whether a proactive approach to environmental challenges can prove a competitive advantage for companies in the car carrier industry. Its conclusion is that such an approach cannot be considered a competitive advantage as such, yet it goes a long way in strengthening the other competitive advantages of a company. Thus, the main implication is that it displays the positive effects of taking a

more proactive approach to environmental issues, which may be guidance for other companies to follow their example. WW is considered a forerunner on environmental issues in the maritime industry and other companies can learn from their successes and mistakes.

## **7.2 Directions for Future Research**

In this thesis process, I have carried out many interviews with the intention of gauging the robustness of this topic and examining all sides without biases. However, as indicated in the chapter on Methods (Chapter 4), I have not had the opportunity to delve deeper into the car manufacturer layer to analyze the influence they have on the pursuit of green strategies. Future research could follow a very interesting path investigating to what extent car manufacturers (the buyers in the industry) affect the car carriers' competitive advantages, especially in terms of environmental sustainability. Additionally, it could be a very interesting direction for future research to see to what extent car manufacturers provide (or do not provide) incentives for car carriers to have strong green profiles.

Another direction for future research pertains to expanding the study to include stakeholders other than the ones involved in this thesis and other than car manufacturers. A suggested study for the future would include a similar study with regards to competitive advantage and the car carrier industry, but would try to ascertain the extent to which ship financing banks, shipbrokers, suppliers of services to the maritime industry, oil companies supplying vessel fuel, and crewing companies have influence over pursuing a green strategy.

These are valuable stakeholders to integrate into any future study because I did not have the opportunity to conduct interviews on a large scale to ascertain the extent to which all the stakeholders influence the industry and individual players. This was something which had initially been planned as part of this thesis, however due to timing, financial, geographical and access constraints could not be executed. Such observations would be instrumental in exposing and reinforcing a reliable industry dynamic.

Finally, it could also be very engaging and telling to do empirical studies of the impacts of corporate social responsibility on car carrier brand value. This would lead the research in a narrower more

marketing oriented direction. However, it could also be valuable to expand the salience of company reputation and customer relationship focus as competitive advantages.

## 8 REFERENCES

- Albareda, L. (2008). Corporate responsibility, governance and accountability: from self-regulation to co-regulation. *Corporate Governance: The International Journal of Effective Board Performance*; Aug 2008, Vol. 8 Issue 4, 430-439
- Amrahamsson, Bernhard J. (1977) The marine environment and ocean shipping: some implications for a new Law of the Sea. *International Organization*; Spring77, Vol. 31 (2)
- American Roll-On Roll-Off Car Carriers. Website 12.10.2009 < <http://www.arccnet.com/index.htm>>
- Bhaskar, V., Manning, A. and To, T. (2002) Oligopsony and Monopsonistic Competition in Labor Markets, *Journal of Economic Perspectives*, 16, 155–174
- Barney, J.B., (1986), Strategic Factor Markets: Expectations, Luck and Business Strategy. *Management Science*; Vol. 32, (10)
- Barney, J.B., (1991), Firm Resources and Sustained Competitive Advantage. *Journal of Management*; 17, (1)
- Battle, Jessica (2009) Phone-interview with J.B., High Seas Communications Officer, WWF International. 23.4.2009. Zürich, Switzerland
- Behrens, Hanna Lee (2009) Phone-interview with H.B., Director Environment and Innovation, Norwegian Shipowners' Association. 20.4.2009. Oslo, Norway
- Bjørndal, Bente (2008). Høgh-fettere i storhandel. *Dagens Næringsliv* 30.1.2008. Web 8.11.2009. <<http://www.dn.no/forsiden/naringsliv/article1302965.ece>>
- Bowman, C. (2008) Generic strategies: a substitute for thinking. *The Ashridge Journal*. Spring 2008
- Bruåsdal, Olav (1993). *A competitive Norway*. Car Shipping, SNF Report 20.
- Burke, L. and Logsdon, J. (1996). How corporate social responsibility pays off, *Long Range Planning*, Vol. 29 (4), August 1996, 495-502,
- California Environmental Protection Agency Air Resources Board (2009). Web. 20.11.2009 <<http://www.arb.ca.gov/ports/marinevess/marinevess.htm>>
- Calveras, A., Ganuza, J., Llobet G. (2007). Regulation, Corporate Social Responsibility and Activism. *Journal of Economics & Management Strategy*; Sep2007, Vol. 16 (3), 719-740,
- Carroll, A. B. (1979). A Three-Dimensional Conceptual Model of Corporate Social Performance. *Academy of Management Review*, 4(4): 497-505
- Carroll, A. B. (1991). The Pyramid of Corporate Social Responsibility: Toward the Moral Management of Organizational Stakeholders. *Business Horizons*, July-August: 39-48



- Carroll, A. B. (1999). Corporate Social Responsibility: Evolution of a Definitional Construct. *Business and Society*, 38(3): 268-295
- Conner, K.R.; Prahalad, C.K. (1996), A Resource-Based Theory of the Firm: Knowledge versus Opportunism. *Organization Science*; 7, (5)
- Cook S. (2003). Who Cares Wins. *Management Today*. 40-47
- Cousteau, J.Y. (1981) Quoted in *The Ocean: A Perspective*. National Geographic, December 1981. Web 10.10.2009 [http://encarta.msn.com/sidebar\\_761593620/cousteau\\_on\\_the\\_ocean.html](http://encarta.msn.com/sidebar_761593620/cousteau_on_the_ocean.html)
- D'Aveni, Richard (1994.) *Hypercompetition: Managing The Dynamics of Strategic Maneuvering*. New York: Free Press.
- Danish Ministry of Climate and Energy (2009). The Kyoto Protocol. Web. 26.11.2009 <<http://www.kemin.dk/en-US/climateandenergypolicy/unclimateconvention/TheKyotoProtocol/Sider/Forside.aspx>>
- Davis, K. (1973). The Case for and Against Business Assumption of Social Responsibilities. *Academy of Management Journal*, 16: 312-322
- Dentchev, N. A. (2004). Corporate Social Performance as a Business Strategy. *Journal of Business Ethics*, 55(4): 395-410
- Dentchev, N. A. (2005). *Corporate Social Performance: Business Rationale, Competitiveness Threats and Management Challenges*. Doctoral Dissertation. University of Gent
- Det Norske Veritas (DNV). Website 25.5.2009. <<http://www.dnv.com/>>
- DK Group (2007). *Danish marine industry innovators prepare to revolutionize global shipping*. 25 June 2007. Web 2.11.2009
- Dummett, K. (2006) Drivers for Corporate Environmental Responsibility (CER). *Environment, Development and Sustainability* Vol. 8 (3): 375. Web 29.11.2009
- Emtairah, T., Jacobsson, N., Kogg, K., Lissinger, L. and Mont, O. (2002). *Who Creates the Market for Green Products? An Analysis of the Role of Different Actors in Relation to Supply and Demand of Green Products*, Stockholm, Swedish Environmental Protection Agency.
- Environmental Data Services (2007). Lethal effects of ship pollution. ENDS Report Issue 395, News, Pollution & Clean-up, December 2007. Web 20.11.2009
- Environmental Data Services (2008). Shipping's CO<sub>2</sub> emissions on the rise. ENDS Report Issue 398, News, Pollution & Clean-up, March 2008. Web 20.11.2009
- Environmental Data Services (2008). IMO tackles shipping emissions. ENDS Report Issue 399, Policy Briefing, International, April 2008. Web 20.11.2009

- Environmental Data Services (2008). Plan for shipping emissions trading blocked. ENDS Report, Issue 402, Policy Briefing, International, July 2008. Web 20.11.2009
- Environmental Data Services (2009). Pollution risk to shipping investors. ENDS Report, Issue 410, News, Corporate, March 2009. Web 20.11.2009
- EUKOR Car Carriers. Website 4.3.2009. <<http://www.eukor.com/index.jsp>>
- European Automobile Manufacturers' Association (2008) *The Automobile Pocket Guide*. Published by the ACEA. <<http://www.acea.be/index.php/collection/>> Web 21.11.2009
- European Commission COM (2005) 446. *Thematic Strategy on Air Pollution*. Communication from the Commission to the European Parliament and the Council. Published 21.9.2005. Brussels, Belgium
- European Commission COM (2008) 433. *Greening Transport*. Communication from the Commission to the European Parliament and the Council. Published 8.7.2008. Brussels, Belgium
- European Commission MEMO/09/16 (2009). The European Union's maritime transport policy for 2018. Published by the European Commission on 21.01.2009. Web 27.11.2009 <<http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/09/16&format=HTML&aged=0&language=en&guiLanguage=en>>
- European Journal (2009). EU to criminalize ship source pollution. Web 20.11.2009 <[http://europeanjournal.typepad.com/my\\_weblog/2009/09/eu-to-criminalise-ship-source-pollution.html](http://europeanjournal.typepad.com/my_weblog/2009/09/eu-to-criminalise-ship-source-pollution.html)>
- European Maritime Safety Agency. Website 15.11.2009. <<http://emsa.europa.eu/>>
- European Parliament (2005). Directive 2005/35/EC of the European Parliament and of the Council of 7<sup>th</sup> September 2005 on ship-source pollution and on the introduction of penalties for infringements. Brussels, Belgium
- Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Boston, MA: Pitman
- Freeman, R. E., Wicks, A. C., & Parmar, B. (2004). Stakeholder Theory and the Corporate Objective Revisited. *Organizational Science*, 15(3): 364-369
- Freidrich, A., Falk, H., Fatumata, K., and Drew K. (2007). Air Pollution and Greenhouse Gas Emissions from Ocean-going Ships: Impacts, Mitigation Options and Opportunities for Managing Growth. Rep. *The International Council on Clean Transportation*, 2007.
- Friedman, M. (1970). The Social Responsibility of Business is to Increase its Profits. *The New York Times Magazine*, September 13: 32-33, 122, 126
- Froman, J. 1997. Socially irresponsible and illegal behavior and shareholder wealth. *Business & Society*. 36(3): 221-249.

Fürstenberg, Sofia (2007) Presentation on *Shipping & the Environment* by S.F, Consultant with DNV Maritime Solutions at YoungShip Bergen, Norway

Gerdes, L. I. (2004). *Endangered oceans*. San Diego, California: Greenhaven Press.

Ghuri, P. & Grønhaug, K. (2005). *Research Methods in Business Studies: A Practical Guide*. (3rd ed.). Harlow, United Kingdom: FT Prentice Hall

Gosselin, Tom (2009) Conversations with T.G, CSR Consultant, DNV Maritime Solutions, London, UK

Grammenos, Costas Th. (2002): *The Handbook of Maritime Economics and Business*. Informa Professional. London, UK

Grieg, Elisabeth (2008) *Nullvisjonen - utopi eller realisme?* Presentation held by E.G., President of NSA at Bergen Shipping Conference at NHH, 17.10.2008.

Griffin, J. J, & Mahon, J. F. (1997). The Corporate Social Performance and Corporate Financial Performance Debate. *Business and Society*, 36(1): 5-31

Grimaldi Group. Website 15.4.2009 < <http://www.grimaldi.napoli.it/>>

Gude, Benedicte (2009) Interview with B.G., Communications Manager, Corporate Communications, Wilh. Wilhelmsen ASA. 16.4.2009 Oslo, Norway

Gupta, A.K., & Lad, L.J. (1983). Industry self-regulation: An economic, organizational, and political analysis. *Academy of Management Review*, 8 (3): 416-425.

Haigh, M., & Jones, M. T. (2006). The Drivers of Corporate Social Responsibility: A Critical Review. *The Business Review, Cambridge*, 5(2): 245-251

Harbour, Ron (1999). The impact of consolidation. *Automotive Industries*, 179(4): 121

Harrison, Pete (2009). EU wants airlines, ships in post-Kyoto pact. *Reuters* [Brussels] 21 Jan. 2009. Print.

Hick, S. Morals Maketh the Money. *Australian CPA*, Vol. 70:4, 2000, pp. 72-73.

Hoas, David J. and Madigan, Lauren J. (1999). A citation analysis of economists in principles of economics textbooks. *The Social Science Journal*, Vol. 36 (3), 525–532.

Høegh Autoliners (HAL). Website 12.04.2009 < <http://www.hoegh.com/autoliners/>>

Høegh Autoliners Annual Report 2008

Høegh Autoliners Environmental Performance Report 2008

*Hull & Structural Surveys* (2004). Vol. 1. London: IMO Publishing.

Husted, B.W and Allen, D. B. (1998) A model for the formulation of corporate social strategy. Paper presented at the 1998 meeting of the Society for Strategic Management. Orlando, Florida,

Husted, B. W., & Allen, D. B. (2000). Is it Ethical to Use Ethics as Strategy? *Journal of Business Ethics*, 27: 21-31

Husted, B. W., & Allen, D. B. (2001). Towards a Model of Corporate Social Strategy Formulation. Presented at the Social Issues in Management Division, *Academy of Management*, August 2001

Husted, B.W. (2003). Governance choices for corporate social responsibility: to contribute, collaborate or internalize? *Long Range Planning*. Vol. 36 (5)

International Association of Classification Societies (IACS). Website 12.10.2009 <<http://www.iacs.org.uk/>>

International Maritime Organization (IMO). Website 10.3.2009 <<http://www.imo.org/>>

International Maritime Organization. (1973). MARPOL 73/78, *International Convention for the Prevention of Pollution from Ships*

International Organization of Motor Vehicle Manufacturers (OICA) (2009). 2008 Production Statistics <<http://oica.net/category/production-statistics/>> Web 21.11.2009

Jønvik, Petter (2009) Conversations with P.J., Consultant on Shipping and Environment, Wilh. Wilhelmsen ASA 16.4.2009

Kawasaki Kisen Kaisha (K Line). Website 25.4.2009 < [http://www.kline.co.jp/index\\_e.html](http://www.kline.co.jp/index_e.html)>

Kawasaki Kisen Kaisha Annual Report 2008

Kawasaki Kishen Kaisha Social and Environmental Report 2008

King, A.and Lenox, J. (2001). Does It Really Pay to Be Green? An Empirical Study of Firm Environmental and Financial Performance. Stern School of Business, New York

King, N. 2004. Using Interviews in Qualitative Research. In Cassell, C. and Symon, G. *Essential Guide to Qualitative Methods in Organizational Research*. London: Sage

Knutsen, Per Kristian (2009) Conversations with P.K.K., Project Manager, Wilh. Wilhelmsen ASA. 17.4.2009 Oslo, Norway

Komar, Shasi and Hoffman, Jan (2002): *Globalization: The Maritime Nexus*. Informa Professional. London, UK

Leif Höegh & Co. Website 10.3.2009 < <http://www.hoegh.com/hoegh/>>

Maersk. Website 14.11.2009 < <http://www.maersk.com/en/Pages/Welcome.aspx>>

McWilliams, Abigail, and Donald Siegel (2001). "Corporate social responsibility: A theory of the firm perspective." *Academy of Management Review*, 26(1).

Mehta, S. (2000) Market Strategy. Presentation at Sam Houston State University. Web 7.12.2009

Miller, D. (1992), "The Generic Strategy Trap", *Journal of Business Strategy*, No. 13, 37-41

Mitropoulos, E. (2005). Challenges to IMO as the Global Shipping Regulator. Norwegian Shipowners' Association General Assembly. Oslo. 10 Mar. 2005. Address.

Mitsui O.S.K. Line. Website 10.4.2009 < <http://www.mol.co.jp/menu-e.html>>

Mitsui O.S.K. Line Annual Report 2008

Mitsui O.S.K. Line Environmental and Social Responsibility Report 2008

Moore, Melanie (2009) Interview with M.M., Head of Global Environment and Quality Management, Wallenius Wilhelmsen Logistics AS

Morrison, M. (2006) SWOT Analysis, Web 12.12.2009  
<<http://www.rapidbi.com/created/SWOTanalysis.html>>

Negbenbor, A (2001) Microeconomics, The Freedom to Choose. CAT

Nippon Yusen Kaisha (NYK Line). Website 12.4.2009 < <http://www.nyk.com/english/index.htm>>

Nippon Yusen Kaisha Annual Report 2008

Nippon Yusen Kaisha Corporate Social Responsibility Report 2008

Nordahl, A., Heyerdahl, S., Herbern, S.T., Helliesen, M., Aalen, I. (2008). Wilh. Wilhelmsen flagger ut. Published in e24. 18.6.2008. Web 15.11.2009 <<http://e24.no/boers-og-finans/article2491153.ece>>

Norwegian Maritime Directorate (2007). NOx-avgiften. Published 11.4.2007. Web. 20.11.2009  
<<http://www.sjofartsdir.no/no/Regelverk2/NOx-avgiften/>>

Norwegian Shipowners' Association (NSA). Website 4.4.2009. <<http://www.rederi.no/>>

Notes Desk Online Academic Encyclopedia. Website 2.12.2009 <<http://notesdesk.com/>>

O'Brian, Dan (2001). Integrating Corporate Social Responsibility with Competitive Strategy, *The Center for Corporate Citizenship at Boston College*, Boston.

Oslo Stock Exchange. Website; Ticker WWI. Web. 28.11.2009  
<[http://www.oslobors.no/markedsaktivitet/stockOverview?newt\\_\\_ticker=WWI](http://www.oslobors.no/markedsaktivitet/stockOverview?newt__ticker=WWI)>

- Pappos, N and Skjølsvik, K.O (2002). *The European marine fuel market - present and future*. Paper at ENSUS 2002, International Conference on Marine Science and Technology for Environmental Sustainability, November 2002. Newcastle, UK
- Porter, M.E. (1979) How competitive forces shape strategy, *Harvard business Review*, March.
- Porter, M.E. (1985). *Competitive strategy: techniques for analyzing industries and competitors*. Free Press. New York, USA
- Porter, M. E. & Kramer, M. R. (2002). The Competitive Advantage of Corporate Philanthropy. *Harvard Business Review*, 80(12): 56-69
- Porter, M. E. & Kramer, M. R. (2006). Strategy and Society; the link between Competitive Advantage and Corporate Social Responsibility” in Porter, M.E.2009. *On competition*. Boston, USA
- Porter, M. E. (2009). *On competition*. Boston, USA: Harvard Business School Publishing
- Priem, R.L., Butler, J.E. (2001a), Is the Resource-Based Theory a Useful Perspective for Strategic Management Research? *Academy of Management Review*; 26, (1)
- Pruzan, P. (2008). Spirituality as a basis for Corporate Social Responsibility, in Crane, A., McWilliams, A. and Matten, D. (2008). *The Oxford handbook of corporate social responsibility*. Oxford University Press, UK
- Raynolds, M., Jamison, A., Holroyd, P., Veldman, E. and Tremblett, K. (2005). *Defining Corporate Environmental Responsibility*. Report by The Pembina Institute and Pollution Probe. Toronto, Canada. October 2005
- Recklies, D. 2001: Management Models – What they can do and what they cannot do. *The Manager*, 2001. United Kingdom. Web 20.11.2009
- Reich, R.B. The New Meaning of Corporate Social Responsibility, *California Management Review*, Vol. 40:2, 1998, pp. 8-17.
- Review of Maritime Transport 2007*. United Nations Conference on Trade and Development, (UNCTAD). United Nations, New York and Geneva, 2008
- Rhys, Garel (2004). *Which way is the 'auto' business headed?* European Business Forum, (18), 59-60. Web 23.11.2009
- Robertsen, Tonje Lindrup (2009). “Go green today- make a profit tomorrow” (newspaper supplement Green Profit from media planet), p. 10
- Russo, M. and Fouts, A. (1997) A resource-based perspective on corporate environmental performance and profitability. *Academy of Management Journal* 40 (3): 534-559. Web 29.11.2009.

Røgeberg, Simen (2009) Interview with S.R., Human Relations Specialist, Corporate HR, Wilh. Wilhelmsen ASA. 16.4.2009 Oslo, Norway

Saunders, M.N.K, Lewis, P., Thornhill, A. (2007). *Research methods for business students*. Harlow, United Kingdom: FT Prentice Hall

Skaug, Ingar (2009) Interview with I.S., Group CEO, Wilh. Wilhelmsen ASA. Published in the NorShipping Conference Brochure, spring 2009

Smith, N. C. (2003). Corporate Social Responsibility: Whether or How? *California Management Review* 45(4): 52-76.

Snider, J., R. P. Hill, and D. Martin (2003). *Corporate Social Responsibility in the 21<sup>st</sup> Century: A View from the World's Most Successful Firms*. *Journal of Business Ethics* 48(2):175-187.

Stopford, Martin (1997): *Maritime Economics, 2<sup>nd</sup> edition*. Routledge, T&F Group. London, UK

Stopford, Martin (2009): *Maritime Economics, 3<sup>rd</sup> edition*. Routledge, T&F Group. London, UK

St.meld. nr. 10 (2009). Næringslivets samfunnsansvar i en global økonomi. The Royal Norwegian Ministry of Foreign Affairs. Published 23.01.2009.

The Economist (2005). Special Report: Extinction of the predator - The global car industry. The Economist, 376 (8443), 72. Web 23.11.2009

Thoonen, Sander H.L., Deelman, Berth-Jan, van Koten, Gerard (2004). "Synthetic aspects of tetraorganotin and organotin(IV) halides". *Journal of Organometallic Chemistry* (689): 2145–2157. Web 30.11.2009

Topplederundersøkelsen. 2003. *Argument Gruppen*

Treacy, M. and Wiersema, F. (1993). Customer Intimacy and Other Value Disciplines. *Harvard Business Review*, Jan/Feb 1993: 71(1)

UNCTAD (2008). Review of Maritime Transport 2008, by United Nations Conference on Trade and Development (UNCTAD). Published 1.11.2008

Van Dyke, Jon M., Durwood Zaelke, and Grant Hewison (1993). *Freedom for the seas in the 21st century: ocean governance and environmental harmony*. Washington DC: Island.

Wahba, H. (2008) Does the market value corporate environmental responsibility? An empirical examination. *Corporate Social - Responsibility and Environmental Management* 15 (2): 89. Web 29.11.2009.

Watson, T. (2004). Ship pollution clouds USA's skies. *USA Today*. 30.8.2004 Web 1.11.2009 <[http://www.usatoday.com/news/nation/2004-08-30-ship-pollution\\_x.htm](http://www.usatoday.com/news/nation/2004-08-30-ship-pollution_x.htm)>

Whiteside. M. C. (1983). The mythical concept of eutrophication. *Hydrobiologia* 103, 107-111

Wright, Charlotte. (1996) "U.S. environmental legislation and the U.S. tanker industry." *Petroleum Accounting and Financial Management Journal* 15.2: 162-163. Web. 30.11.2009.

Wallenius Wilhelmsen Logistics (WWL). Website. 2.2.2009 <<http://www.2wglobal.com/>>

Wallenius Wilhelmsen Logistics Annual Report 2007 and 2008

Wallenius Wilhelmsen Logistics Environmental and Social Responsibility Report 2006 and 2007

Wilh. Wilhelmsen Group. Website 15.8.2008 <<http://wilhelmsen.com/Pages/wwhome.aspx>>

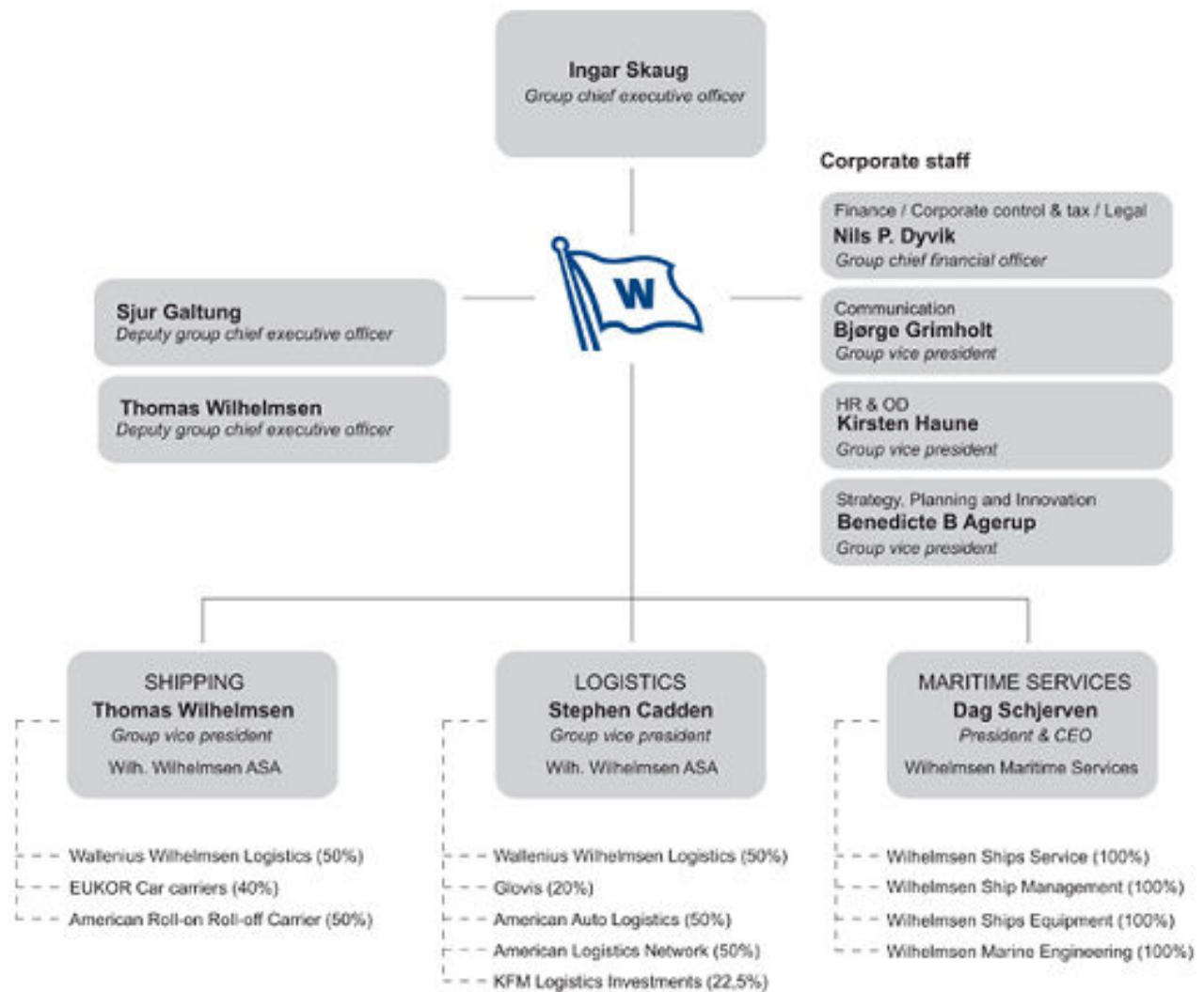
Wilh. Wilhelmsen Group Annual Report 2007 and 2008

World Business Council for Sustainable Development (WBCSD) Website 20.5.2009  
<<http://www.wbcsd.org/templates/TemplateWBCSD5/layout.asp?MenuID=1>>

WWF International. Website 5.3.2009 <<http://www.panda.org/>>



## Appendix 1: WW corporate structure



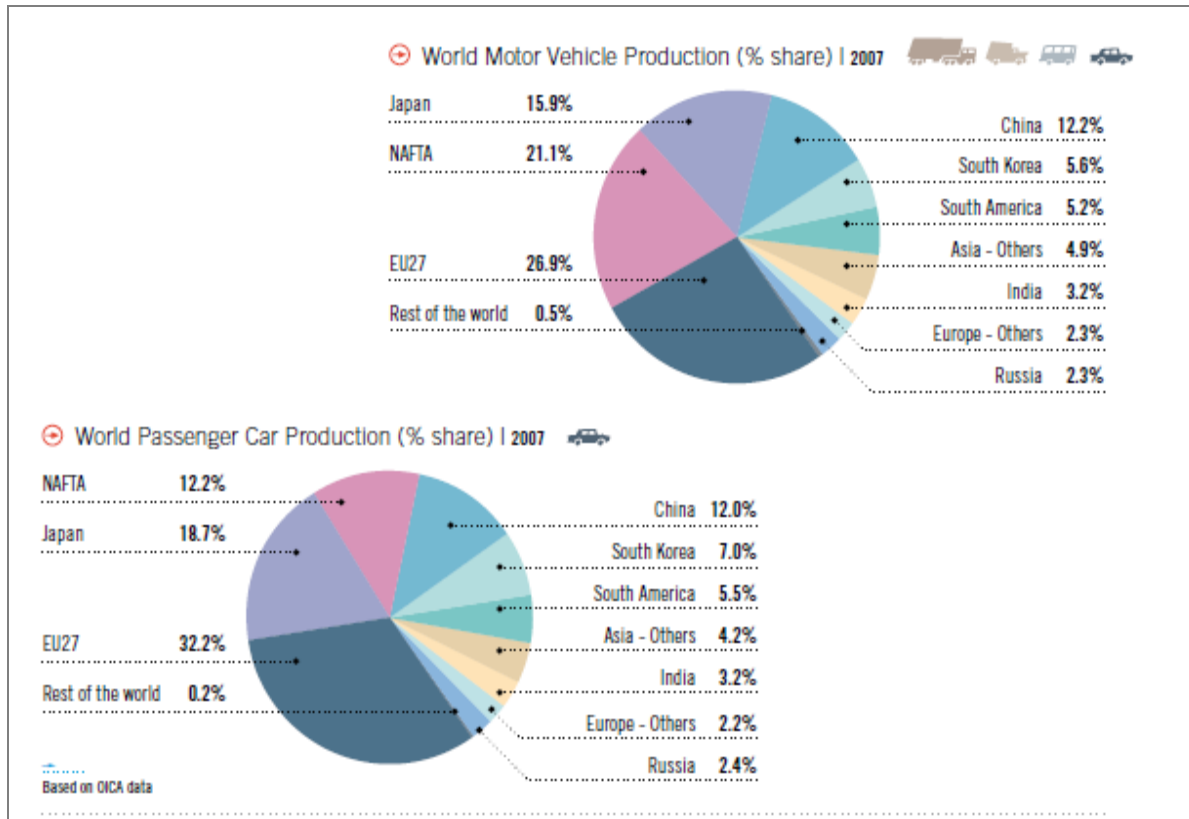
Source (WW website, 2009)

## Appendix 2A: Overview of world car production

Country	Cars	Commercial vehicles	Total	% change from 2007
Total	52,637,206	17,889,325	70,526,531	-3.7%
Japan	9,916,149	1,647,480	11,563,629	-0.3%
China	6,737,745	2,607,356	9,345,101	5.2%
USA	3,776,358	4,928,881	8,705,239	-19.3%
Germany	5,526,882	513,700	6,040,582	-2.8%
South Korea	3,450,478	356,204	3,806,682	-6.8%
Brazil	2,561,496	658,979	3,220,475	8.2%
France	2,145,935	423,043	2,568,978	-14.8%
Spain	1,943,049	598,595	2,541,644	-12.0%
India	1,829,677	484,985	2,314,662	2.7%
Mexico	1,241,288	949,942	2,191,230	4.6%
Canada	1,195,436	882,153	2,077,589	-19.4%
Russia	1,469,429	320,872	1,790,301	7.8%
UK	1,446,619	202,896	1,649,515	-5.8%
Thailand	401,309	992,433	1,393,742	8.3%
Turkey	621,567	525,543	1,147,110	4.3%

*World Production 2008 by country (Top 15 countries). Modified by the author, based on statistics from OICA (2009)*

## Appendix 2B: Production of cars and motor vehicles 2007



Organized by country/region  
 The Automobile Pocket Guide (ACEA, 2008, based on statistical data from OICA).

## Appendix 2C: Production of cars and motor vehicles 2008

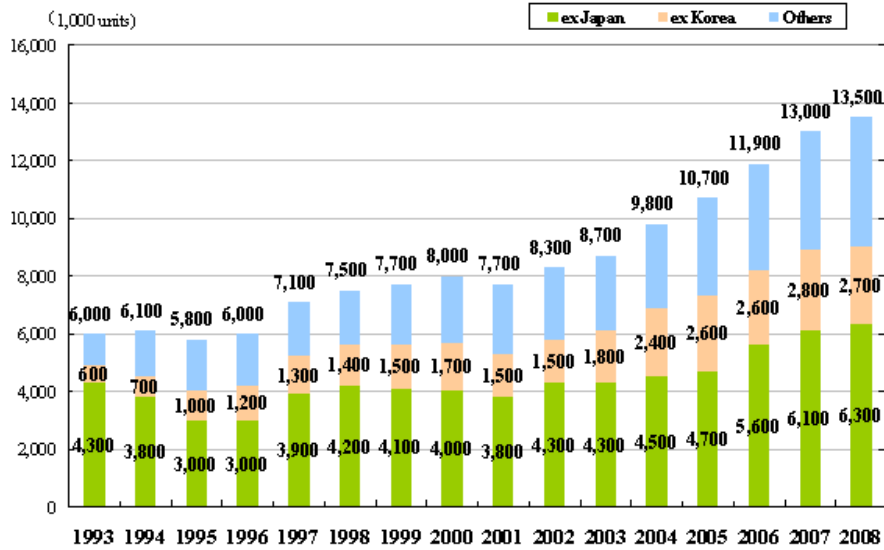
Rank	GROUP	Total	CARS	LCV	HCV	HEAVY BUS
	<b>Total</b>	<b>69,561,356</b>	<b>55,846,163</b>	<b>10,652,432</b>	<b>2,598,495</b>	<b>464,266</b>
1	TOYOTA	9,237,780	7,768,633	1,102,502	251,768	114,877
2	GM	8,282,803	6,015,257	2,229,833	24,842	12,871
3	VOLKSWAGEN	6,437,414	6,110,115	271,273	46,186	9,840
4	FORD	5,407,000	3,346,561	1,991,724	68,715	
5	HONDA	3,912,700	3,878,940	33,760		
6	NISSAN	3,395,065	2,788,632	463,984	134,033	8,416
7	PSA	3,325,407	2,840,884	484,523		
8	HYUNDAI	2,777,137	2,435,471	85,133	151,759	104,774
9	SUZUKI	2,623,567	2,306,435	317,132		
10	FIAT	2,524,325	1,849,200	516,164	135,658	23,303
11	RENAULT	2,417,351	2,048,422	368,929		
12	DAIMLER AG	2,174,299	1,380,091	330,507	395,123	68,578
13	CHRYSLER	1,893,068	529,458	1,356,610	7,000	
14	B.M.W.	1,439,918	1,439,918			
15	KIA	1,395,324	1,310,821	83,159		1,344

*Top 15 producers: organized by manufacturer (OICA, 2009).*

*Note: total refers to total world production*

## Appendix 3: World Car Carrier Trade

### World Car Carrier Trade



MOL internal calculation; excluding CKD

Source: MOL website, 2009

Note: The numbers here refer to the transportation of assembled cars (ex. CKD). CKD (Complete Knock Down) is an abbreviation commonly used in the car manufacturing industry as a description for all the elements needed to assemble a complete car. It is mainly used in reference to export of cars, where they are transported to their destination in parts or partially assembled. This is done for tax saving purposes (OICA website, 2009).

## **Appendix 4A: Brief introduction of the interviewees**

**Benedicte Gude**, *Communications Manager, Corporate Communications, Wilhelmsen*

With a long and varied career within communications, Benedicte Gude has been my main contact in the Wilhelmsen Group. She has a background in international communication and has worked within several different industries before commencing her current job with Wilhelmsen.

**Melanie Moore**, *Head of Global Environment and Quality Management, WWL*

Melanie Moore has worked for the Wilhelmsen Group since her graduation. She has extensive international experience from the maritime industry and has worked on several environmental projects in the past before taking up her current position.

**Simen Røgeberg**, *HR Specialist, HR Department, Wilhelmsen*

Simen Røgeberg was referred to me by other Wilhelmsen contacts to provide a specific focus on Human Resources and the cross-section between HR and Wilhelmsens environmental focus.

**Jessica Battle**, *High Seas Communications Officer, WWF International*

Ms. Jessica Battle is the WWF High Seas Communications Officer with WWF International. Ms. Battle handles the WWL cooperation account and has many years of experience with NGOs working internationally.

**Hanna Lee Behrens**, *Director, Environment & Innovation, NSA*

Hanna Behrens of NSA has substantial experience in the industry with a previous position in DNV Maritime Solutions as Director for Maritime Solutions, mainly focusing on environmental challenges. Now the Director of Environment and Innovation with the NSA, Ms. Behrens is regarded as one of the foremost experts in the maritime environmental field, both in Norway and internationally and is a highly respected individual in the maritime industry. She has been a speaker at several conferences on issues relevant to this study in the past.

## **Appendix 4B: Brief introduction of other stakeholder representatives**

**Tom Gosselin**, *CSR Consultant, DNV Maritime Solutions*

I have had informal conversations with Mr. Tom Gosselin at a conference in Hamburg in the spring of 2009 which have led to a deeper understanding of the CSR challenges facing the industry. Mr. Gosselin who works at DNV's London Office is mainly a management consultant on CSR and represents environmental issues in the maritime industry. He has additionally been a speaker at several international conferences on these issues in the recent past.

**Per Kristian Knutsen**, *Project Manager, Wilhelmsen*

Per Kristian Knutsen is a former graduate from NHH and is now working with projects for the management of Wilhelmsen at the head office in Oslo. He has provided input regarding my interview questions and has been helpful with other issues regarding Wilhelmsen.

**Petter Jønvik**, *Consultant, Shipping and Environment, Wilhelmsen*

Petter Jønvik started his career with Wilhelmsen after writing his thesis with them during his studies at NTNU. He has provided valuable input on the cross-section of shipping and environment which is also the field he works with for Wilhelmsen.

## **Appendix 5: Interview Guide**

Parts 1-7 is a general interview guide mainly focused on the company representatives. Some of these sections and sub-questions have thus not been included in the interviews with the external stakeholders. In section 8 some specific questions for two of the external stakeholders are listed.

### **1 – Introduction**

1. What is your position? How did you end up in your current position?
2. What are your responsibilities within this position?
3. What are your daily activities?

### **2 – Corporate Social Responsibility (CSR)**

1. Are you familiar with the concept of CSR (Corporate Social Responsibility)? What does it mean to you and do you believe companies have a social responsibility?
2. Do you believe that is advantageous for the company (or the industry) to engage in CSR? If yes, how would this be advantageous?
3. Alternately, could you see the potential negative effects of being involved in CSR?
4. How does your company carry out its CSR? Why? How is this in comparison to the rest of the maritime industry?
5. What do you consider to be special about CSR in the maritime industry in Norway?

### **3 – Environmental, Organizational and Operational**

1. What is the environmental responsibility of a shipping company?
2. In your opinion, how does your company perform when compared to others in the industry? How is it ranked in comparison? Do you see a difference between European and non European competitors?
3. How are you adjusting to the international trend of more environmentally friendly business operations? What are the advantages/disadvantages of this?



4. What are the incentives to “go green”?
5. Who pushes for higher environmental standards in the industry? Please elaborate.
  - a. Do you have specific environmental clauses in the contracts binding your customers? If so, would you be at liberty to disclose an example?
  - b. Do your clients evaluate you (as a partner/ supplier) on the basis of environmental performance? If so, is there any pattern emergent in the types of clients who do this and why they do it? What other criteria are you evaluated upon?
6. In terms of other stakeholders, who is considered when decisions regarding environmental issues are made? Do you consider the whole value chain?

#### **4 – Market, Customers and PR**

1. Does your CSR strategy have any influence over the markets in which you are active? Does it affect the development of new markets?
2. Do long term contracts provide incentives to innovate and be environmentally proactive? If yes, please explain how?
3. Do you believe potential clients/customers consider your CSR strategy before choosing you? Do you believe this to be a contributing factor in the choice?
4. In theory, do you believe there should be a correlation between CSR/social responsibility and customer loyalty? Have you noticed this in your own sphere?
5. How would you describe the company’s reputation? What elements or activities would you attribute you company’s reputation to?
6. What are the steps in developing your marketing campaigns? What is emphasized? Why?

#### **5 – Industry rules and regulations (Norwegian: “Rammebetingelser”)**

1. What are the next and most anticipated changes to the industry rules and regulations?
2. How much of your environmental strategy can be attributed to existing and/or expected industry standards?

## **6 – HR-based**

1. In terms of recruitment and environmental focus, is this an area which you could attribute your current level of success within environmental CSR to? Why do jobseekers choose your company over others? (ie. Is any importance given to your CSR strategy when new employees apply for a job?)
2. What are the elements influencing employee turnover? Which of the company values are important to your employees?
3. Do you see a link between company values (CSR) – employee motivation – and cost savings (advantages) / productivity / innovation?
  - a. What are the main drivers of productivity?
  - b. What drives quality?
  - c. What drives innovation in the company? Why? (internally, externally)
  - d. Which are the major cost innovations over the past years?

## **7 – Additional questions**

1. Do you believe a company can exist/ survive today without a clear CSR strategy? What is your rationale?
2. Would you continue along with your social responsibility programs even if they were not publicized?
3. Are there any other factors regarding CSR in the maritime industry and specifically environmental responsibility which I have not mentioned but that you feel are of importance?
4. Will I be able to contact you for clarification or additional information at a later stage?

## **8 - For external stakeholders**

1. Questions asked to Jessica Battle at WWF
  - A) What is the full extent of your cooperation with WWL? What is the outcome of this cooperation?

- B) Do you cooperate with other maritime companies as well? If so, who, and what is the extent of your cooperation?
- C) How do you believe we can get more companies involved in active environmental work in the maritime industry?
- D) Do you as an organisation see a trend towards a stronger focus on environmental issues and a higher demand for focusing on these issues?
- E) In your opinion, how do WWL and WW stand out in comparison with other players in the industry?

2. Questions asked to Hanna Behrens, NSA

- A) Do you believe that the ownership structure of companies has an impact on how much focus they put on environmental issues? It can seem as if many of the most environmentally focused companies are often family owned.
- B) What is the extent of NSAs cooperation with the industry and also with the authorities?
- C) I have been informed that the car producers focus quite a bit on environmental issues, also related to transportation of their cars, at least some of the Scandinavian companies. At the same time they do not seem to use this information in their advertisements and publications in any. What are your thoughts on this subject?