Saila Rintamäki

Corporate social responsibility and sustainability in international container shipping

Case analysis of Sustainable Development Goals in international container liner shipping companies

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Author: Saila Rintamäki
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ABSTRACT:
Yritysten yhteiskuntavastuu ja kestävä kehitys saavat jatkuvasti enemmän huomiota liiketoiminnassa. Eri sidosryhmät painostavat yrityksiä toimimaan vastuullisesti ja tarjoamaan vastuullisesti valmistettuja tuotteita ja palveluita. Kiinnostus yritysten yhteiskuntavastuuseen on kasvanut merkittävästi 2000-luvun aikana. Tänä päivänä yhteiskuntavastuu sekä kestävä kehitys ovat erittäin ajankohtaisia aiheita muun muassa ilmastonmuutoksen vuoksi.

Tässä tutkimuksessa tarkastellaan yhteiskuntavastuuta sekä kestävää kehitystä kansainvälisten konttivarustamoiden näkökulmasta. Tutkimus on rajattu 10:een maailman suurimpaan konttien linjaliikennettä harjoittavaan varustamoon. Yli 90% koko maailmankaupasta kuljetetaan laivoissa, ja siitä 60% kuljetetaan konteissa. Kansainvälisillä konttivarustamoilla on siis suuri rooli kansainvälisissä toimitusketjuissa ja maailmantaloudessa. Varustamoiden liiketoimintaan sisältyy lukuisia kohtia, joissa yhteiskuntavastuun merkitys korostuu, kuten työntekijöiden turvallisuus aluksilla, vaarallisten aineiden kuljetus, sekä alusten aiheuttamat päästöt, jotka saastuttavat ilmaa ja vesistöjä.

Tutkimus on toteutettu laadullisin menetelmin monitapaustutkimuksena varustamoiden yhteiskuntavastuuraportteja analysoiden. Varustamoiden yhteiskuntavastuuta sekä kestävää kehitystä analysoidaan tässä tutkimuksessa YK:n kestävän kehityksen 17 tavoitteen kautta. Tavoitteet päätettiin vuonna 2015 universaaleiksi tavoitteiksi kestävän kehityksen saavuttamiseksi. Tavoitteet sisältävät niin taloudellisia, sosiaalisia, kuin ympäristöllisiä tavoitteita, sekä oikeudenmukaisuutta, rauhaa, ja yhteistyötä korostavia tavoitteita. 17 tavoitteella on yhteensä 169 tarkempaa päämäärää.

Tutkimuksen perusteella suurin osa tutkituista kansainvälisistä konttivarustamoista on soveltanut YK:n kestävän kehityksen tavoitteita vuosittaisissa yhteiskuntavastuu- tai kestävän kehityksen raporteissaan. Jotkut yritykset ovat arvioineet tavoitteita ja niiden tarkempia YK:n määrittelemiä päämääriä, jotkut tavoitteita, ja jotkut yritykset eivät ole soveltaneet tavoitteita yhteiskuntavastuuraporteissaan. Yleisimmät sovelletut tavoitteet ovat tämän tutkimuksen mukaan tavoitteet 8: ''ihmisarvoista työtä ja talouskasvua'', 13: ''ilmastotekoja'', 14: ''vedenalainen elämä'' sekä 17: ''yhteistyö ja kumppanuus''. Tulos osoittaa, että varustamot pitävät esimerkiksi työntekijöiden turvallisuutta ja terveyttä sekä liiketoimintansa ympäristöllisiä vaikutuksia ensisijaisen tärkeinä tekijöinä. Tutkimuksen mukaan varustamot ovat luoneet yhteiskuntavastuu- ja kestävän kehityksen strategioitaan riskien tunnistamisen sekä vähentämisen pohjalta eri sidosryhmiä kuunnellen. Lisäksi strategioihin voi vaikuttaa erilaiset motivaatiot, kuten vastuullisen brändin luominen ja ylläpito, standardisointi, sekä vastuullisten toimitusketjujen turvaaminen.

KEYWORDS: corporate social responsibility, sustainability, maritime, international container liner shipping, Sustainable Development Goals

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1 Introduction

The world is in a crisis. Every year the world uses more natural resources that it can renew (Earth Overshoot Day, n.d.). The climate is changing due to over consumption and global warming is starting to have more and more visible forms (Ellis, 2010). Glaciers are melting and towns are flooding (Ellis, 2010). Extreme weather conditions are increasing, ecosystems are being destroyed and species become extinct (Ellis, 2010). The world has started to realize that it needs to change its habits to save the planet. The pressure to take action towards climate change is constantly increasing from countries and governments to companies and individuals. Sustainability and circular economy are the hot topics of today and they are changing the way companies operate and plan their strategies these days. All of these factors demand drastic actions from companies to convert their strategies and value chains to be more sustainable to meet the requirements and expectations of their stakeholders.

However, at the same time as sustainability and circular economy are widely discussed in business, over consumption and online ordering are still highly promoted, for example through Black Friday, Cyber Monday, and Singles Day (Taylor, 2018). Instead of buying products from local producers and from local stores, people do their shopping online from Asia, where the production and labor costs are low, and thus the end price of the product is also low. As the processing of the raw materials and manufacturing of the goods or parts of it can be on the other side of the world than the buyer, the supply chains become complex and the transportation includes many legs on different delivery modes. Thus, a great paradox exists in the consuming of today. At the same time as companies try to balance the increasing pressure and requirements to develop the sustainability of business, many consumers still want their products to be low priced and fast delivered. That creates challenges for both companies to change their production and for consumers to change their consumption habits to be more responsible and sustainable.

1.1 Background of the study

According to the stakeholder theory presented in 1984 by Freeman (2010), companies' performance and objectives are affected by their stakeholders. In the same way, companies can affect their stakeholders, which is why companies need to consider all the stakeholders in their operations (Freeman, 2010). Such stakeholders include parties such as customers, suppliers, government, competitors and shareholders (Freeman, 2010). Nowadays, companies face more and more expectations from their stakeholders that go beyond the legally regulated requirements to meet the needs and standards of the industry and society (Crane, Spence & Matten, 2014). This challenges companies to take the extra step to thrive towards an ethical and sustainable way of operating and contribute to the well-being of the environment and people.

The role of corporate social responsibility (CSR) in business has increased significantly in the recent decades (Ditlev-Simonsen, 2014). The interest in CSR has started to increase from the year 2000 and has been growing rapidly ever since (Ditlev-Simonsen, 2014). The industries that can be seen as directly affecting the well-being of nature and humans by causing pollution and health issues were the first group that received pressure to consider how their actions truly affect the society and people (Crane et al., 2014). Such industries include oil, chemical, and tobacco production, for example (Crane et al., 2014). However, according to Crane et al. (2014), nowadays CSR is not only discussed when talking about the oxymorons, but it is seen as being part of the core of every business. This has resulted in companies establishing their own CSR departments, assigning CSR managers, and hiring CSR consultants (Crane et al., 2014). Companies have started to create CSR strategies and publish reports where they present the said strategies and different actions concerning CSR and sustainability (Crane et al., 2014).

Since the interest in CSR in general has started to increase in the 21st century, so has the amount of CSR and sustainability reports companies publish. KPMG (2017) has conducted a survey of corporate responsibility reporting in 2017, in which two groups of companies and their reporting since 1993 was examined. The first group N100 refers to

‘‘a worldwide sample of 4,900 companies comprising the top 100 companies by revenue in each of the 49 countries researched’’ (KPMG, 2017, p. 3). The second group G250 refers to ‘‘the world’s 250 largest companies by revenue based on the Fortune 500 ranking of 2016’’ (KPMG, 2017, p. 3). The survey states, that the reporting rate of the N100 companies increased from 12% in 1993 to 75% in 2017, and the rate of the G250 companies from 35% in 1999 to 93% in 2017 (KPMG, 2017). Thus, the increased interest in CSR in the beginning of the 2000’s can be clearly seen also in the reporting rates of the biggest companies in the world.

As the role of CSR and pressure for non-financial reporting in companies has increased, tools and standards for the reporting have been introduced. One organization providing such standards and tools for companies is Global Reporting Initiative (GRI, n.d.), which is an independent international non-profit organization supporting companies in sustainability and CSR reporting. GRI’s purpose is to help companies and governments to realize and communicate what impact they have on critical sustainability issues in the world, such as climate change and human rights (GRI, n.d.). By using GRI standards, companies can communicate their CSR and sustainability factors and actions, evaluate and measure them, and improve their sustainable development.

In addition to the GRI, the United Nations has also launched initiatives and goals for companies to promote ethical and sustainable practices. The United Nations Global Compact (n.d. -a) has defined ten principles for companies that they should align their strategies and operations with to improve their sustainability. The principles have been categorized under the themes of human rights, labor, environment, and anti-corruption (United Nations Global Compact, n.d. -a). In addition, the United Nations has published 17 Sustainable Development Goals (SDGs) including social, environmental, and economic goals, and described why they are important and how governments and companies can work towards achieving these goals (United Nations, n.d. -a; United Nations Global Compact, n.d. -b). Out of the 17 goals, companies and organizations can choose the ones that are the most relevant to their business or operations and create plans and

measurements to help meeting the goals. In addition, they can evaluate their impact on all the other goals for which they do not have a direct impact on.

1.2 Research gap

In this paper, CSR and sustainability are reflected by analyzing their applications in the international container shipping industry. Sea transportation can be seen as an industry that includes many aspects where CSR issues need to be considered. Such aspects contain, for example, the pollution and emissions of the ships, working conditions and rights of the employees, safety, and the impact of the industry for the international economy (Pawlik, Gaffron & Drewes, 2012; International Chamber of Shipping, 2020). Sea transportation is the main transportation mode in the international trade, since around 90% of global trade is transported with ships (International Chamber of Shipping, 2020). Moreover, global maritime container trade covers approximately 60% of all the global seaborn trade (Statista, 2018). Therefore, it is important that the global seaborne industry is regulated to follow ethical and safe behaviors and improve the sustainability of the business. There are many organizations that set global standards and regulations for the safety and employee rights in the maritime industry, such as the International Maritime Organization (IMO) and the International Labour Organization (ILO) (IMO, 2020a; ILO, 2006).

International maritime industry is a highly essential industry for the global economy to function (International Chamber of Shipping, 2020; IMO, 2020a). Sea transportation is the most efficient and cost-effective transport mode for most goods in international trade (IMO, 2020a). In addition, it is dependable and cheap compared to other transport modes and often the only possible delivery mode for intercontinental transport depending on the goods (International Chamber of Shipping, 2020; IMO, 2020a). As the shipping industry is fairly essential in the global economy, its role in the sustainable development of the world cannot be disregarded. The IMO is working together with its member states, civil society and the shipping industry to ‘‘ensure a continued and strengthened

contribution towards a green economy and growth in a sustainable manner'' (IMO, 2020a). Thus, sustainable development is strongly on the agenda of the IMO. IMO has assessed how the maritime industry could contribute to the SDGs defined by the UN, and thus the container liner shipping companies can use the considerations of IMO as guidance in their own application of the SDGs (IMO, 2020b).

In addition to the SDG guidance provided by the IMO, the United Nations Global Compact together with KPMG have issued several SDG Industry Matrixes, one of which is made specifically for the transportation industry (United Nations Global Compact & KPMG, 2016). The document gives specific examples for each 17 goals on how the transportation industry can contribute in achieving the goals. Moreover, it provides information about different organizations and co-operation possibilities that can help the companies on the industry to contribute for the achievement of the goals.

The report of the United Nations Global Compact and KPMG (2016) includes also examples from companies operating in the container liner shipping industry. Maersk is used as an example for their ''partnership with a non-profit organization working to accelerate poverty reduction in East Africa through trade growth, supported companies in the region to gain easier entry to world markets'' (United Nations Global Compact & KPMG, 2016, p. 31). This was achieved by digital solutions to reduce delivery time and increase efficiency (United Nations Global Compact & KPMG, 2016). Moreover, CMA CGM is given credit in the report for their innovations in transportation refrigeration technology that enables farmers in developing economies to export fruits and vegetables economically (United Nations Global Compact & KPMG, 2016). At the same time, it helps in transporting perishable goods in rural areas where transportation times can be long (United Nations Global Compact & KPMG, 2016). Thus, there are many ways in which container liner shipping companies can also contribute to the sustainable development of the world.

In this thesis, CSR and sustainability in the international container liner shipping are examined through the United Nation's SDGs. CSR and sustainability in the international container shipping industry have not been investigated extensively, and therefore the topic is rather new, which makes it interesting but also challenging to examine. Prior studies have examined the sustainability of the biggest container ports, for example (e.g. Yap & Lam, 2013; Zhang, Kim, Tee & Lam., 2017). Moreover, the sustainability of vessels is examined by different researchers, such as Armstrong (2013) and Kontovas (2014). In addition, Yang (2018) has studied the impact of CSR practices in the organizational performance of container shipping companies in Taiwan.

Tang and Gekara (2018) conducted an analysis about CSR in container shipping companies in their research ''The Importance of Customer Expectations: An Analysis of CSR in Container Shipping''. The research was executed by comparing the CSR and sustainability reports and websites of the 15 biggest international container shipping companies in the world. The authors categorized the CSR activities of the case companies to environmental elements and human factors and analyzed topics that were repeated on all reports as the first tier, and in fewer reports as the second tier. They found out, that the environmental elements have received more attention in the reports than the social factors. The analysis by Tang and Gekara focuses mostly on the factors for which there are global regulations and standards available and are therefore expected from the companies to implement and follow. Thus, the ''CSR elements related to philanthropic community engagement'' were left out from the analysis (Tang & Gekara, 2018, p. 4). To contribute to this research gap and gain a wider perspective of the topic, this paper includes also the ethical and philanthropic responsibilities, i.e. the factors that are expected or desired from the companies to follow by the community (see Carrol, 1991.)

1.3 Research questions and objectives

As explained above, the purpose of this research is to examine CSR and sustainability practices and contributions of the international container liner shipping companies by

using the UN Sustainable Development Goals as a framework. This research is delimited to examine CSR and sustainability of specifically container liner shipping companies. The delimitation is chosen due to the container liner shipping industry's large share of the global seaborn trade. Thus, other modes of sea cargo transportation, such as bulk cargo vessels or oil tankers, are excluded from the analysis.

Thus, the research questions are:

- How are the international container liner shipping companies adopting the UN Sustainable Development Goals in their annual CSR or sustainability reports?
- What kind of similarities and differences regarding the SDGs can be identified in the reports and how can they be explained?

The objectives of the research are:

- To gain a better understanding of the CSR and sustainability in the container liner shipping industry and of the different levels of CSR: the economic, legal, ethical, and philanthropic responsibilities (see Carroll, 1991).
- To compare and analyze how the biggest international container liner shipping companies in the world report their CSR and sustainability activities and initiatives.
- To analyze what are the most relevant UN Sustainable Development Goals in the international container liner shipping industry according to the annual CSR and sustainability reports of international container liner shipping companies.

1.4 Structure of the paper

The paper is divided into five main chapters. In the introduction, the topic of CSR and sustainability, and the context of the study, the international container liner shipping industry, are introduced. Moreover, the main framework UN SDGs and the research

territory are defined. In addition, the relevance and justification of the topic is explained by the increasing role of CSR and sustainability in business and by the importance of maritime industry in the sustainable development. After introducing the topic, the research gap and the existing research are discussed. Lastly, the purpose of the research, research questions, and objectives are stated.

The next chapter presents the theoretical framework of the thesis. The main models of CSR and sustainability and their most commonly known definitions and interpretations are described. Moreover, the UN Sustainable Development Goals are presented. In addition, the context through which the CSR and sustainability activities will be reflected, the international container liner shipping industry, and its main CSR and sustainability challenges are described. The next chapter presents the methodological choices of the research. That includes presentation of the research choices, the selected sample and data, and the case companies. Moreover, the credibility of the research is evaluated.

Thereafter, the data is analyzed in the next chapter with the theories presented earlier in the thesis. The different aspects of CSR and sustainability are categorized by using the theories and the UN SDG framework. Moreover, the findings are discussed with previous research. In the last part, the purpose of the research and its main findings and how it contributed to the existing research are concluded. Lastly, some ideas for further research of the topic are presented.

2 Main theories and concepts

The main concepts of this thesis are CSR, sustainability, and international container liner shipping industry. One of the main theoretical models used in this study is the stakeholder theory by Freeman (2010), which explains how companies are affected by their stakeholders. Moreover, the theory describes what kind of responsibilities companies have towards their stakeholders and how they motivate and require companies to act ethically and responsibly. Moreover, the pyramid model of CSR by Carroll (1991) is used, which describes the different kinds of responsibilities that are included in CSR and categorizes them to different levels

In addition to the stakeholder theory and the pyramid model of CSR, the triple bottom line model of sustainability defined by Elkington (2006) is presented. The model explains the three dimensions of sustainability: economic, social, and environmental. This categorization helps in understanding what kind of responsibilities or factors are included in each dimension. Also, it will help in the categorization of the research results by these three different areas. Moreover, some CSR drivers are presented.

Lastly, the main framework, the UN Sustainable Development Goals, through which the data will be analyzed later in the paper, is presented. Moreover, the main characteristics of the international container liner shipping industry concerning CSR and sustainability are discussed, such as safety, effectiveness, and emissions of the ships (Pawlik et al, 2012). Lastly, a summary of the theory is concluded in the end of this chapter.

2.1 Stakeholder theory

A company needs several stakeholders to run its business (Freeman, 2010). Stakeholders refer to ‘‘any group or individual who can affect or is affected by the achievements of the firm’s objectives’’ (Freeman, 2010, p. 25). Such stakeholders include owners, employees, customers, governments, and competitors, for example (Freeman, 2010).

According to Freeman (2010), when starting a business, companies need capital, thus investors and shareholders. To sell products or services, there needs to be employees to produce and sell, and customers to buy the goods or services. Governments regulate the laws that companies need to obey, and other organizations in each industry give their own requirements, which companies need to follow in order to ensure the legality of the business. In addition, companies need to acknowledge their competitors and monitor their pricing and product portfolios to be competitive in the same markets. Also, companies need suppliers to provide them materials to produce products or services. In addition, in the 21st century the role of non-governmental organizations (NGOs) and special-interest groups (SIGs) has increased (Freeman, Harrison & Wicks, 2007, p. 43). These parties are dedicated to some specific issue and can easily attract media and use political process to support their agenda (Freeman et al., 2007, pp. 43-44). Thus, media also has a significant role in the business nowadays, since with the technology of today it can quickly affect a company's reputation by spreading information worldwide, if some irresponsibility or other misbehavior is observed in the company (Freeman et al, 2007, pp. 43-44).

Freeman (2010) introduced the stakeholder theory that describes the shift of the perceived effects of the stakeholders to the company and vice versa. In 1963, when the concept of stakeholders was first introduced, stakeholders were mainly defined as the parties that are necessary in order for a company to exist (Freeman, 2010). Thus, the focus was on how the stakeholders affect the company, but not how the company affects the stakeholders. In 1984, Freeman presented the stakeholder theory in which more stakeholders were added on top of those that are vital for the company to survive (see Freeman, 2010). Moreover, a significant change from the earlier idea was to add the aspect of how the same way as the stakeholders affect the company, the company also affects its stakeholders (Freeman, 2010).

This addition can be regarded as an important factor in the rise of CSR in business. When earlier it was only important how the different stakeholders, such as suppliers,

governments, and customers affect companies, an increasing interest on how the companies affect their several stakeholders, such as the environment, customers, and shareholders, started to arise. In addition to creating economic value to the shareholders and to the local economy, companies should also create social value for them to keep the shareholders happy and contribute in developing the society better. In addition to using natural resources, companies should help in preserving the resources in order to keep the economy sustainable and let future generations also exploit the resources. In order to keep their image responsible and attractive to customers and investors, companies should act responsibly to avoid any scandals in media that could severely damage their image. These are just few examples of the expectations and requirements that companies need to tackle nowadays. Therefore, the role of CSR considerations has increased significantly in the last decades to take into account companies' effects to all their stakeholders.

2.2 CSR

CSR is an abbreviation for corporate social responsibility. It refers to the idea that in addition to making profit, companies have other responsibilities that they need to consider in all of their activities (Crane & Matten, 2010). There are many reasons why companies should consider their responsibilities, such as the company's image, employee commitment, and the long-term goals and strategies to be achieved by responsible actions (Crane & Matten, 2010). These reasons can be seen as only concerning the companies' own interests, but there are also other reasons that concern the whole society, that should be considered (Crane & Matten, 2010). Businesses cause environmental issues, like pollution, and they should invest in solving the problems they cause and prevent them from expanding (Crane & Matten, 2010). As companies use a lot of resources, they should be used in a way that there are still resources left for next generations (Crane & Matten, 2010). Business activities have always social impacts, such as employment, which may be negative, positive, or neutral (Crane & Matten, 2010). Lastly, companies

are reliable on other stakeholders than shareholders, so they need to take into account the interest of the other stakeholders as well (Crane & Matten, 2010).

Carroll (1991) created the pyramid model of CSR, which explains the different kinds of responsibilities included in CSR. The bottom level defined by Carroll (1991) is the ‘‘economic responsibilities’’ that are required by the society the company operates in. This level refers mainly to the fact that the company needs to make profit in order to succeed and contribute to the economy. The next level, ‘‘legal responsibilities’’, refers to the requirement of companies to obey the laws and regulations in all their actions, which is also required by the society. The third level, ‘‘ethical responsibilities’’, concerns the expectations for companies to follow the norms and fairness and justice that go beyond laws and regulations. These responsibilities are not required by the society, but highly expected to be followed. The top level, ‘‘philanthropic responsibilities’’, means the actions that are desired by the society for the companies to invest their resources into enhancing the common good and in solving social problems, for example.

Many different definitions for CSR have been presented. One commonly known definition is by the European Commission: ‘‘Corporate social responsibility (CSR) is a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis’’ (European Commission, 2006, p.2). Some have claimed that the only responsibility of companies is to make profit while following the laws and minimum ethical requirements (e.g. Friedman 1970), whereas other researchers, such as Carroll (1991), include more responsibilities that go beyond the laws and regulations to the term. Some more recent approaches of the social responsibility emphasize that acting responsibly can and should also benefit the company. One example of such approach is the term of ‘‘shared value’’ presented by Porter and Kramer (2011), which means ‘‘policies and operating practices that enhance the competitiveness of a company while simultaneously advancing the economic and social conditions in the communities in which it operates’’ (p. 66). As CSR and sustainability are becoming more important in business, as the whole world is under pressure of

changing its habits to fight the climate change and save the natural resources from running out, and also fight the social problems such as hunger and poverty, companies should apply the latter approach and find more ways for responsibility while simultaneously gaining profit from it.

The evolution of CSR is described by Ellis (2010). She states that in some corporations CSR has been and still might act as an ‘‘add-on’’ in the business, meaning voluntary and philanthropic actions that are promoted and managed by public relations, human resources, or marketing departments (p. 152). However, CSR should change from being only an ‘‘add-on’’ to being integrated to the core of the business and guiding all strategic decisions, thus, into ‘‘strategic CSR’’ (pp. 154-155).

The shift can also be explained with three terms: ‘‘compliance CSR’’, ‘‘conviction CSR’’, and ‘‘strategic CSR’’ (Ellis, 2010, pp. 154-155). ‘‘Compliance CSR’’ refers to the idea that CSR is practiced only to obey the legal requirements and that it will be enough to bring benefits to the society. Thus, CSR is not seen as bringing value to the company but rather as an extra cost or work. ‘‘Conviction CSR’’ is used to describe a business that acts responsibly due to the founder’s or CEO’s personal beliefs and values to act ethically. In conviction CSR, CSR is considered ‘‘not only as good business but as the right way to do business’’ (pp. 154-155). The last form, ‘‘strategic CSR’’, focuses on the opportunities that addressing social problems gives to the company. In strategic CSR, companies try to develop their strategies by identifying what kind of needs their business and the society has and try to develop solutions for them. In addition, Ellis (2010) also describes the strategic CSR with the term CSR 2.0. In CSR 2.0., the goal is to move towards the strategic CSR, where sustainability and responsibility would be in the core of the business and present in every decision. Strategic CSR should bring value to both, the company and the society, and not only be an add-on or an extra cost for the company to bring value to the society.

2.3 Sustainability

Sustainability means acting in a way that meets the current needs but does not compromise the needs of the future generations (Crane & Matten, 2010). The term has many definitions and conceptualizations. Crane & Matten (2010) describe sustainability as system maintenance, as in ensuring that the actions of the company do not have negative impact on the system, such as the Earth. Even though sustainability may often be regarded concerning only the environmental aspects, it includes economic and social factors as well (Crane & Matten, 2010). Therefore, one definition for the term is: ‘‘Sustainability refers to the long-term maintenance of systems according to the environmental, economic, and social considerations’’ (Crane & Matten, 2010, pp. 32-34).

The ‘‘triple bottom line’’ of sustainability defined by Elkington describes the three dimensions of sustainability: environmental, economic, and social dimension (Crane & Matten, 2010, pp. 35-36). The environmental dimension includes factors such as using resources in a way that there will still be resources left for future generations, the environmental impacts that businesses and industrialization causes to the nature, such as pollution, and also the problems the economic growth causes to the environment. The economic dimension includes companies’ activities and strategies that support the long-term economic growth, rather than gaining short-term profits. Moreover, it includes the activities that may harm the general economic framework of the society, such as not paying taxes appropriately, bribery, and cartels. Lastly, the social dimension includes social issues, such as hunger, poverty, levels of education, health, and inequality issues, and how companies can try to solve them through their business. Thus, when talking about sustainable development, all three levels should be considered.

2.4 CSR drivers

As explained above, CSR and sustainability include various factors that companies need to consider if they want to act responsibly. A company’s business and operations have

direct and indirect impacts to its internal stakeholders, such as employees, and also to various external stakeholders, such as suppliers, consumers, and societies. Considering CSR and sustainability in the company's decision making and operations takes time and resources. Companies need to make research on how their operations affect different stakeholders and also monitor their suppliers and subcontractors, if they want to ensure, that their values and codes of conducts are followed in the whole value chain. Thus, it may seem that companies could have faster decision-making processes and be more cost-efficient, if CSR considerations were not included in their strategies. However, there are several reasons and motivations, why companies choose to engage in CSR and sustainability activities.

Visser (2013) has divided companies' CSR drivers to local and global drivers. Visser (2013, p. 5) defines CSR as corporate sustainability and responsibility, rather than corporate social responsibility. The drivers of CSR and their importance can differ in different areas, such as regions, countries and communities. Also, the nature of the business itself affects the CSR drivers. Visser (2013, pp. 9-10) defines the local drivers as ''cultural tradition'', ''political reform'', ''socio-economic priorities'', ''governance gaps'', and ''crisis response''. The global drivers are defined as ''market access'', ''international standardisation'', ''investment incentives'', ''stakeholder activism'', and ''supply chain integrity'' (Visser, 2013, pp. 11-12). In the next paragraphs, all of these drivers are explained more specifically.

The first local CSR driver identified by Visser (2013, p. 9) is ''cultural tradition''. It means that cultural values, beliefs, traditions and religious views, for example, affect what people and organizations in different areas value and consider as ethical behavior. For example, Vives (2006) examined CSR of companies in Latin America and found out that the CSR drivers are mostly based on ethical and religious considerations. The next CSR driver by Visser (2013, pp. 9-10), ''political reform'', indicates that the political situation and governance has an effect on how companies consider the importance of CSR. For example, democratization and liberalization in politics can be regarded as drivers for

companies to also take more responsibility on the sustainability issues of the society (Visser, 2013, pp. 9-10.)

The ‘‘socio-economic priorities’’ describe the differences in the social and economic problems that occur in different countries and areas (Visser, 2013, p. 10). Visser (2013) states that the same issues do not exist on the same level in the whole world, and thus the CSR approaches should be considered reflecting the local conditions. For example, poverty alleviation and development of health care and education are bigger issues in developing countries than in the Western countries. In the Western countries, the CSR issues can include topics such as ‘‘consumer protection, fair trade, green marketing, climate change concerns, or socially responsible investments’’ (Visser, 2013, p. 10).

Considering the local conditions and political systems is also reflected in the next driver by Visser (2013, p. 10), ‘‘governance gaps’’. It means that CSR is seen as a way to help with social problems, which the government is not properly taking care of, for example due to corruption. In such situations, the role of companies in helping to provide societies with basic social needs, such as infrastructure, education, and health care, becomes bigger than in countries, where the government is providing the necessities for the society.

The last local driver, ‘‘crisis response’’, describes how CSR activities increase in times of crises (Visser, 2013, p. 10). For example, economic crises, environmental catastrophes, and scandals within companies can trigger the emphasis of CSR. In crisis response, the CSR activities have usually philanthropic nature, for example after natural disasters, when the whole society may be in need of reconstruction and provision of services and goods for basic human needs.

The first global CSR driver defined by Visser (2013, p. 11) is ‘‘market access’’. It can be regarded as the opposite of ‘‘socio-economic priorities’’ driver, where companies can gain new markets by engaging in CSR. For example, companies operating in developing

countries can access new markets by showing that they are responsible and can respond to the requirements and standards set by the developed countries for businesses. The next global driver by Visser (2013, p. 11), ‘‘international standardisation’’, refers to the pressure of companies to keep up with competitors in the markets by fulfilling the needs set by different standards and requirements of industries, such as in textile and agriculture. Accordingly, in order to operate in international markets, companies have to be able to show that they are aware of the different standards and have proof that they are following them.

The third global driver defined by Visser (2013, p. 11) is ‘‘investment incentives’’. It explains how especially multinational companies’ investments are usually linked with social development in developing countries. The investments of companies are often seen as a part of CSR and thus, socially responsible investments are identified as one driver for CSR. The investments can be done through global SRI funds and indexes, but also regionally and nationally through different channels.

The next driver, ‘‘stakeholder activism’’, refers to the role of different stakeholders, mainly ‘‘development agencies, trade unions, international NGOs and business associations’’ in encouraging companies to engage in CSR (Visser, 2013, p. 12). According to Visser, these stakeholders are identified to be the most powerful ones in developing countries to activate companies to engage in CSR. In countries where the governance does not set rules for the social, ethical or environmental performance of the companies, the pressure to engage in CSR comes increasingly from stakeholders. Media is also one stakeholder, whose role in promoting CSR is increasing (Visser, 2013, p. 12).

The last global driver defined by Visser (2013, p. 12) is ‘‘supply chain integrity’’. It describes the shift in the supply chain management of multinationals to favor suppliers that are sustainable and responsible. The shift began from different trading initiatives, which have resulted in auditing and labelling of products, especially in agriculture. Moreover, neglection of human rights and proper working conditions has led to initiation of

different standards, which companies can get certified for. The integrity of supply chains is an especially important driver for small and medium-sized companies, that want to do business with multinationals.

Furthermore, Visser (2013, pp. 12-14) describes many benefits that companies can gain through practicing CSR. For example, Visser explains how CSR can help companies to avoid legal consequences and costs by following all the applicable laws of the industry and acting responsibly. Moreover, engaging in CSR can positively affect companies' public reputation and thus attract more stakeholders, whereas irresponsible actions affect the reputation negatively. In addition, CSR can also help companies to lower their costs when investing in eco-efficiency, for example, and give better access to finances from investors that favor responsible companies. Lastly, it is noted that companies acting responsibly and investing in CSR can better recruit and retain skilled employees, who want to work in companies that ''give them a sense of purpose and pride'' (Visser, 2013, p. 14). Thus, companies which are found to be irresponsible or unsustainable are struggling to attract skilled employees (Visser, 2013, p. 14).

In addition to the CSR drivers and benefits described by Visser, many other CSR drivers and motivations are identified. Kurucz, Colbert and Wheeler (2008) define four factors, how CSR helps companies in value creation. The first case, ''cost and risk reduction'', refers to a situation, where CSR is applied in order to reduce the costs and risks of the business (pp. 87-88). In this case, the stakeholders and their demands are seen as imposing threats for the business, and in order to minimize the risks, the company needs to consider its social and environmental performance in addition to the economic performance. In the next case, CSR is applied as a way to gain ''competitive advantage'' over competitors, and the stakeholder demands are seen more as opportunities than threats for the business (pp. 88-89). In the third case CSR is seen as building the company's ''reputation and legitimacy'' (p. 90). Thus, CSR initiatives are used as a tool to strengthen the company's image and brand as responsible. Lastly, ''synergetic value creation'' happens when companies use CSR initiatives as common interests with different stakeholders to

create positive outcomes for all parties and find unseen opportunities that create value for the company and the stakeholders (pp. 91-92).

2.5 UN Sustainable Development Goals

The main framework used in this paper to analyze the sustainability and CSR of the biggest international container liner shipping companies in the world is the United Nations' Sustainable Development Goals. The goals were established in 2015 by the United Nations as a ''universal call to action to end poverty, protect the planet and improve the lives and prospects of everyone, everywhere'' (United Nations, n.d. -a). 17 goals were defined, which can be seen in picture 1. The goals were accepted by all the UN member countries and the target is to achieve all the goals by 2030, as per the ''2030 Agenda for Sustainable Development'' (United Nations, n.d. -a).

The sustainable development goals were founded as a guideline for countries to improve the sustainable development of societies and eventually the whole world. However, different organizations and companies have started to adapt the sustainable development goals as well as a tool to analyze and develop their systems and operations to become more sustainable. The goals help companies to analyze their value chains and different aspects of them and identify possible problems and improvement areas. Thus, companies can choose which goals are the most relevant to their business and focus on developing the selected few goals. Moreover, they can analyze every other goal and consider if they have direct or indirect and positive or negative impact on them, and how they could contribute in achieving the goals.

Picture 1 UN Sustainable Development Goals. (United Nations, n.d. -b.)

The sustainable development goals include goals belonging to the three dimensions of sustainability: economic, social, and environmental dimensions. Some goals focus on improving human rights and living conditions, such as goals ‘‘no poverty’’, ‘‘zero hunger’’, ‘‘good health and well-being’’, ‘‘quality education’’, and ‘‘gender equality’’. Goals ‘‘decent work and economic growth’’, ‘‘industry, innovation and infrastructure’’, and ‘‘responsible consumption and production’’ can be regarded in the economic dimension, and goals ‘‘climate action’’, ‘‘life below water’’, and ‘‘life on land’’ in the environmental dimension. For the 17 goals, 169 specific targets have been defined by the United Nations (n.d. -a). The goals are not legally binding but the countries adopting the goals are expected to create their own agendas and frameworks on how to achieve the goals (United Nations, n.d. -a).

SDG 1: ‘‘no poverty’’ aims to eliminate poverty and the inequality and other social problems that it causes in the society (United Nations, n.d. -c). The UN (n.d. -c) states that

over 700 million people, meaning 10 % of the world population, are living in severe poverty and are battling with fulfilling the basic human needs, such as health care, education, and clean water. The targets of SDG 1 are to have no more people living under 1.25 USD per day by 2030, half the amount of people living in poverty in the world and increase the equal rights to resources and basic human needs in the world, for example (United Nations, n.d. -c). SDG 2: ‘‘zero hunger’’ aims to develop the agriculture, forestry, and fisheries in the world to be more sustainable and to end malnutrition of people that are suffering from unequal distribution of food resources (United Nations, n.d. -d). According to the UN (n.d. -d), 821 million people in the world are suffering from hunger and the amount is expected to increase by 2 billion people by 2050. Thus, agriculture needs to be developed to be more productive and sustainable to help to eliminate the hunger in the world. The targets of SDG 2 include eliminating hunger and ensuring that all people have access to nutrition by 2030, double the productivity of agriculture and the income received from it, especially among small-scale producers, and develop the agriculture to sustain the ecosystems and help them to adapt to climate change and extreme weather conditions (United Nations, n.d. -d).

SDG 3: ‘‘good health and well-being’’ is focused on increasing the health and well-being of people at all ages (United Nations, n.d. -e.). Some specific targets of SDG 3 include decreasing the amount of child and maternal mortality in the world as well as eliminating diseases and other health issues, such as improving hygiene, increasing the resources of health care, and decreasing pollution and the health issues it causes in many places in the world (United Nations, n.d. -e). SDG 4: ‘‘quality education’’ aims to increase sustainable development by ensuring equal opportunities for quality education all around the world to improve the quality of life and give people tools to create innovative solutions to the biggest problems in the world (United Nations, n.d. -f). According to the UN (n.d. -f), over 265 million children, out of which 22% being in primary school age, are not in school. Moreover, children who are going in school still have troubles with reading skills and math, for example. Thus, the targets of this goal include ensuring equal

opportunities concerning primary and secondary education for all the people in the world, for example (United Nations, n.d. -f).

SDG 5: ‘‘gender equality’’ is aiming to tackle the problems of inequality between women and men in all aspects of life, such as domestic life, work, and education (United Nations, n.d. -g). As per the UN (n.d. -g), even though progress in the matter has been achieved with the UN’s Millennium Development Goals, extreme issues still lie with the gender equality in the world. Especially women are still experiencing serious problems such as domestic violence and child marriages, and there are no laws protecting them from such issues in many countries. The goal aims to eliminate the discrimination and violence towards women and increase the number of women in leadership in politics and economics and in different livelihoods, for example (United Nations, n.d. -g). SDG 6: ‘‘clean water and sanitation’’ aims to provide people all around the world with the basic need of clean and fresh water (United Nations, n.d. -h). The UN (n.d. -h) states that the lack of clean water causes death and diseases and other social problems, especially in the developing countries. The targets of SDG 6 include providing access for clean drinking water for all people, as well as improving hygiene and sanitation, and preserving ecosystems related to water (United Nations, n.d. h).

SDG 7: ‘‘affordable and clean energy’’ is considered as one of the main goals, since energy can be seen as being in the core of many major challenges in the world today, such as climate change (United Nations, n.d. -i). According to the UN (n.d. -i), the problems with not having access to energy and electricity causes problems with everyday life in areas such as Sub-Saharan Africa. Thus, the target is to provide access to affordable energy for everyone and also increase the renewable energy solutions and the energy efficiency in the world (United Nations, n.d. -i). SDG 8: ‘‘decent work and economic growth’’ takes into account the global unemployment issues, low pays, and gender gaps in salaries (United Nations, n.d. -j). According to the UN (n.d. -j), half of the population of the world lives under 2 USD per day, and the global unemployment rate was 5.6% in 2017. Due to the low pay, having a job does not guarantee people from experiencing poverty,

and thus, the economic and social policies need to be restructured to make the economic growth sustainable (United Nations, n.d. -j). The targets include sustaining and developing GDPs, increasing employment for everyone and decreasing the unemployment, especially within youth, and protecting labor rights (United Nations, n.d. -j).

SDG 9: ‘‘industries, innovation and infrastructure’’ aims to support investments in infrastructures, such as transportation and communication technology to support the sustainable development especially in developing countries (United Nations, n.d. -k). Moreover, SDG 9 also focuses on different industries and their manufacturing by trying to divide the value of manufacturing more equally in the world and also setting attention to lowering the carbon dioxide emissions in manufacturing. SDG 10: ‘‘reduced inequalities’’ continues the equality theme by focusing on the income inequalities between and within nations (United Nations, n.d. -l). The targets include achieving an income growth within the 40% of the population with the lowest income, promoting inclusivity and equal opportunities in employment, and increasing equality with laws and regulations concerning export and mobility of people and goods, for example (United Nations, n.d. -l).

SDG 11: ‘‘sustainable cities and communities’’ concentrates on developing cities to fulfil the needs and address the challenges that the growing urbanization creates with sustainable solutions (United Nations, n.d. -m). According to the UN (n.d. -m), 5 billion people are going to live in cities by 2030, which makes it important to develop the infrastructures and urbanization issues, such as waste management processes, to sustain and develop the living conditions in the cities. The targets of the goal include ensuring affordable and adequate housing, sustainable transport systems, protecting culture and natural heritage, and reducing the environmental impacts of urbanization (United Nations, n.d. -m). SDG 12: ‘‘responsible consumption and production’’ continues to focus on reducing the environmental impacts of urbanization by promoting efficiency in resource and energy use (United Nations, n.d. -n). The UN (n.d. -n) describes, that the responsible consumption and production aim to reduce the use of resources and the negative impacts overconsumption causes, such as pollution, and highlight the improving quality of life

achieved by it. In addition, the goal pays attention to the responsibility of supply chains and promotes transparency and responsible choices in supply chains. The goal has many targets concerning reducing of resources, dividing them more equally and ensuring access to them for everyone, as well as encouraging countries and companies to create strategies for more sustainable and responsible practices, for example in supply chains (United Nations, n.d. -n).

SDG 13: ‘‘climate action’’ takes a more specific approach to the environmental problems, namely the ongoing climate change (United Nations, n.d. -o). As per the UN (n.d. -o), the climate change is identified in the rising sea levels, changing and extreme weather conditions, and high greenhouse gas emissions. In the Paris agreement, which was made in November 2016, the signed countries agreed to start working together to limit the global warming (United Nations, n.d. -o). The climate change is an international problem and countries need to co-operate and innovate to create solutions that will develop economies to decrease the carbon emissions (United Nations, n.d. -o). The targets of the goal include making infrastructures more resistant towards extreme weather conditions and natural disasters, including measures of climate change to policies and strategies of countries, and raising awareness of climate change and how to hinder it (United Nations, n.d. -o).

SDGs 14 and 15 focus on the resources on land and water. SDG 14: ‘‘life below water’’ gives attention to preserving the water resources and protecting oceans and the organisms living in them (United Nations, n.d. -p). The earth is mainly covered by oceans and they give livelihood and incomes to over 3 billion people in the world (United Nations, n.d. -p). Current practices are polluting the oceans and affecting their ecosystems, and thus, the targets of SDG 14 include reducing pollution, protecting marine and coastal ecosystems, and regulating and managing sustainable fisheries and aquaculture (United Nations, n.d. -p). SDG 15: ‘‘life on land’’ concentrates on preserving the forests and agriculture (United Nations, n.d. -q). As forests cover almost a third of the Earth’s surface, they have major role in battling climate change, and offer shelter and home for many

species (United Nations, n.d. -q). The climate change and also human actions have caused deforestation and desertification, that this goal tries to prevent (United Nations, n.d. -q). The targets include sustainable management of forests, reducing deforestation and increasing reforestation and restoration of degraded lands, and protecting different species and preventing their extinction (United Nations, n.d. -q).

The last two goals promote peace and partnership between humans. SDG 16: ‘‘peace, justice and strong institutions’’ aims to fight social problems such as violence and human trafficking (United Nations, n.d. -r). The goal aims towards societies where everyone would feel safe and have the same opportunities to get justice and has targets such as ending violence of all forms, especially faced by children, promote laws that ensure justice for all, fight corruption, and increase transparency (United Nations, n.d. -r). The last SDG 17: ‘‘partnerships for the goals’’ highlights the need of co-operation between, public, private, and civil sectors to work together towards developing more sustainable societies for all (United Nations, n.d. -s). According to the UN (n.d. -s), all parties should share the same goals and values and share ideas and resources to achieve the goals. The goal has many targets how to help countries implement the strategies, in the areas of finance, technology, capacity building, trade, and systemic issues (United Nations, n.d. -s).

According to a survey conducted by The World Business Council for Sustainable Development together with Det Norske Veritas (WBSCD & DNV GL, 2018), 78% of around 250 of the WBSCD’s member companies in over 43 countries has taken the SDGs into account and chosen their priority SDGs to focus on. However, only a third of the companies have analyzed the SDG targets and even less have considered their negative impacts to the SDGs. In addition, over half of the companies have analyzed what kind of impact their direct operations have for the SDGs, whereas only 37% have analyzed their impact throughout the whole value chain. The business sectors the respondent companies operate in are, for example, industrial, consumer goods, financial, utilities, basic materials, and consumer services. The main SDGs the respondent companies had prioritized were SDGs 13: ‘‘climate action’’, 12: ‘‘responsible consumption and production’’, and 8:

‘‘decent work and economic growth’’. Among the least prioritized goals were SDGs 2: ‘‘zero hunger’’, 16: ‘‘peace, justice and strong institutions’’, and 14: ‘‘life below water’’.

Also, a research about SDGs in multinational enterprises is conducted by van Zanten and van Tulder (2018). They examined the SDGs as a ‘‘goal-based institution’’ (p. 208) and explored how some of the Financial Times Global 500 companies adopted the SDGs and why. The research consisted of 81 respondents, i.e. 81 companies, from Europe and North America. Van Zanten and van Tulder (2018) found out, that the companies were mostly adopting targets of SDGs 5: ‘‘gender equality’’, 8: ‘‘decent work and economic growth’’, 12: ‘‘responsible consumption and production’’, 13: ‘‘climate action’’, 16: ‘‘peace, justice and strong institutions’’, and 17: ‘‘partnerships for the goals ’’. In addition, the authors found out according to their propositions, that multinational enterprises are more likely to engage in ‘‘internally actionable SDG targets’’ (p. 227), meaning the targets that can be achieved by the company itself without co-operation with government, for example. Also, their proposition of companies’ preference to engage in targets that intend to ‘‘avoid harm’’ rather than to only ‘‘do good’’ was supported (p. 222). It means that companies are more likely to engage in SDGs and their targets that aim to reduce the negative impact of the business to the society, rather than goals that mainly aim to do good for the society.

2.6 International container liner shipping industry

The last main concept, through which the CSR and sustainability are reflected in this thesis, is the international container liner shipping industry. This thesis discusses international container shipping industry as a business that operates cargo transportation in containers on ships, that have regular routes and schedules, so called liner service (see World Shipping Council, 2019a). There are many kinds of containers that are globally standardized so that they can be moved easily from truck to the ship and loaded efficiently (World Shipping Council, 2019b). The seaborne trade has increased rapidly in the

last 40 years, since the amount of goods loaded in containers has increased from 102 million tons in year 1980 to 1 834 million tons in year 2017 (United Nations, 2018).

Container vessels with different capacities are needed in liner service. The biggest vessels used to have the capacity of 8 500 – 12 000 TEUs (Lindstad, Asbjørnslett & Pedersen, 2012). Nowadays, the largest container vessels in the world can transport over 20 000 TEUs (MI News Network, 2019). TEU means a twenty-foot equivalent unit, as in a 20-foot long container (World Shipping Council, 2019b). A 40-foot container equals two TEUs capacity (World Shipping Council, 2019b). The biggest vessels usually operate on routes between Asia and Europe, Asia and North America, and Europe and the East Coast of North America (Lindstad et al., 2012). As per Lindstad et al. (2012), the next group of vessels can carry around 3 000 – 5 500 TEUs, and they sail from Asia to eastern America and from Europe to western North America. A typical container vessel carries 2 000 – 3 000 TEUs. Such vessels sail roundtrips in the Mediterranean and other areas where larger vessels are not needed. The smallest vessels carry around 150 – 2 000 TEUs and they operate as feeder vessels between large hubs to smaller ports, for example in Northern Europe, from where the containers are further transported to the final destination.

The container shipping lines do not only transport cargo on their own ships, but the companies have formed alliances to cut the costs and make the voyages more efficient and have as much cargo on the ships as possible. Today, there are three major alliances: The 2M Alliance formed by MAERSK and MSC, the OCEAN Alliance including CMA CGM, COSCO, Evergreen, and OOCL, and the last one THE Alliance with Hapag-Lloyd, Yang Ming and ONE (ShipHub, 2020; The Maritime Executive, 2020). Starting from April 2020, HMM is also a member of THE Alliance (HMM, 2019, p. 60). By operating in alliances, the shipping companies are able to better exploit economies of scale and utilize more vessel space (Shipsta, 2019). Moreover, the alliances allow companies to offer more options and routes for their customers, since they can utilize their alliance partner's networks in areas, where they do not have their own operations (Shipsta, 2019).

2.6.1 CSR and sustainability in container liner shipping

International container shipping industry comprises several aspects that can be included in the CSR and sustainability considerations. The most significant part is the vessels that are essential for the whole industry to operate (Pawlik et al., 2012). According to Pawlik et al., (2012), the vessels generate environmental, social and economic impacts throughout their life cycles, from construction to operation to recycling of the vessels. The environmental, social and economic impacts begin from the construction of the ships. The environmental aspects include what kind of materials are used, how are they transported, what kind of emissions and waste the construction creates. The social aspects include the working conditions of the ship constructors, which is also linked to the economic impacts. Cost savings and efficiency can be one of the driving factors when deciding where to build the ships, and thus the economic factors can direct the manufacturing to low-cost or developing countries, where the working conditions may not be the most responsible. However, such big projects create employment to many, and can be thus considered to generate also positive economic impact to the manufacturing countries.

During the operating time of a vessel there are several factors concerning all dimensions of sustainability (Pawlik et al, 2012). Pawlik et al. (2012) state, that one of the main ones when thinking about the environment is the emission of greenhouse gases and pollution the vessels cause for the environment. The greenhouse gases emitted by ocean vessels equals 3% of that of the whole world's trade (The Economist, 2017). However, much bigger issues lie in other emissions, since only 15 of the biggest ships in the world produce more oxides of nitrogen and sulphur -gases than what all the cars in the world produce (The Economist, 2017). The IMO has established a new regulation for the maximum limit of sulphur oxide in the fuel, that was set to force in the beginning of year 2020. The regulation sets the maximum limit of sulphur oxide in the fuel to be 0.5% m/m (mass by mass) from the earlier limit of 3.5% (IMO, 2020c).

Moreover, the ships generate noise pollution, that can harm living creatures in the sea as well as humans on land, for example near the main ports of the world (Pawlik et al.,

2012). In addition, one issue is the waste dumped to the seas from the vessels as well as the risk of bunker fuel spillages caused by accidents (Pawlik et al, 2012). The IMO regulates the pollution of the ships with the International Convention for the Prevention of Pollution from Ships (MARPOL) (IMO, 1983).

Moreover, one significant environmental issue is the ballast water, that is pumped from the ocean to the ship to ensure its stability by compensating weight changes that is caused by different cargo loading levels, for example (IMO 2020d). The ballast water is pumped to the ship from one place, and then discharged elsewhere on another place. The water includes species such as bacteria and microbes, that may establish a new population and become invasive in areas, where they do not exist yet, when the ballast water is discharged in another part of the world. Thus, the invasive species can severely harm the local environments by damaging biodiversity, harming natural resources, and causing direct and indirect health effects. Thus, they are recognized as a significant threat to the planet. To minimize the risks of ballast water, the IMO (2020d) has established the ''International Convention for the Control and Management of Ships' ballast Water and Sediments'' (BMW Convention), that sets standards and regulations for all ships to create and implement a ballast water management plan. The convention was set to force in September 8, 2017.

The social factors during the operations of the vessels include working conditions, health and safety issues, training, accommodation and wages, for example (Pawlik, et al., 2012). The vessels follow the laws of their flag states, and thus it may be very difficult to ensure equal wages and working hours, for example, due to the different laws in different countries (Chopra, 2019). However, there are some industry specific regulations, such as the Maritime Labour Convention, which has set international guidelines for seafarers' rights (ILO, 2006). In addition, the IMO regulates the safety of the industry with the Safety of Life at Sea (SOLAS) convention, that was set to force in May 25, 1980 (IMO, 1980). The convention includes several regulations concerning the safety and rescue equipment, carriage of cargo, and safe operations of the ships, for example. The SOLAS convention

also includes own regulations for safe transport and handling of dangerous goods with the International Maritime Dangerous Goods (IMDG) code (IMO, 1980; IMO, 2018).

In addition to the internal safety issues that the industry has, such as the handling of cargo and dangerous goods and working on the vessels, there also several external risks that impose threats for the employees and for the cargo. For example, the industry is threatened by extreme weather conditions and pirate and terrorist attacks (Min, 2012). The extreme weather conditions can harm the cargo and vessels, and containers may get lost in the sea. According to the World Shipping Council (2017, p. 2), around 612 containers were lost at sea annually during 2014-2016. The annual average of lost containers was around 1 390 when including also the losses due to catastrophic events (World Shipping Council, 2017, p.2). In addition, valuable cargo can attract pirates, or the vessels can be used as targets of terrorism, which can cause financial losses for the companies and also risk the safety of the employees working on the ships (Min, 2012).

The economic impacts of the vessels during operations are highly linked to the efficiency and capacity of the ships (Pawlik et al., 2012). The maritime operations have the objectives of achieving great results in ‘‘quality, speed, dependability, flexibility, and cost’’ (Slack & Chambers, 2007, as cited in Pawlik et al., 2012, p. 209). Such objectives encourage companies to invest and build bigger ships that have bigger capacity to carry more containers on one voyage and develop the energy solutions and engines to make the vessels faster and lower the transit times, for example.

The retiring stage of the ships also raises many issues concerning sustainability and responsibility (Pawlik et al, 2012). After a vessel is not viable for operations anymore, it is often scrapped or recycled in developing countries (Chang, Wang & Durak, 2010). The standards for handling dangerous wastes generated by the breaking of the ships are low in developing countries, and thus the recycling can cause severe environmental impacts if the waste is not handled appropriately (Pawlik et al, 2012). The same issue can have negative social impacts as well, since the employees working with the recycling of the

ships have a high risk of accidents in the recycling sites (Pawlik et al, 2012). Regulations for the recycling of the ships have been introduced, such as the ‘‘Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships’’ that was adopted in 2009 but is yet to be set to force (IMO 2009 & 2019a).

In addition to the vessels, there are other issues related to the container shipping industry that causes environmental and social impacts. The hinterland transport is one large factor that causes emissions, congestions, noise pollution, and traffic accidents (Pawlik et al., 2012). As per Pawlik et al. (2012), all containers need to be transported from manufacturer to the ports and from ports to the consignee, and the transportation is mainly by road or rail. Moreover, the container shipping industry is reliant on outsourcing and subcontractors, such as port operators, trucking companies, and terminals. Thus, for the container shipping companies to be responsible, they should ensure that the subcontractors and suppliers they use also abide the same values and regulations they do, so that the whole value chain would be as responsible as possible.

Tang and Gekara (2018) have studied CSR in container shipping from the perspective of customer expectations. Tang and Gekara studied the 15 biggest container liner shipping companies at the time and analyzed the websites and CSR related materials of the companies, such as CSR and sustainability reports. The authors categorized the CSR and sustainability topics to environmental elements and human factors, and found out, that the environmental elements had received more attention in the international container liner shipping companies than the human factors. That is because some companies had only published environmental reports, and excluded social factors, for example. The environmental elements that Tang and Gekara identified were topics such as CO2 emissions, energy efficiency, ballast water management, and noise control. The human factors included health, safety, education, training, diversity and gender equality, for example.

2.6.2 SDGs in the container liner shipping industry

The SDGs in the container liner shipping industry have not yet been investigated much, and thus were chosen to be examined in this paper. As mentioned in the introduction, the International Maritime Organization has addressed all the SDGs and defined actions, how it will guide the industry towards sustainable development (IMO, 2020b). For example, for SDG 4: ‘‘quality education’’, the IMO is contributing by setting ‘‘international standards for seafarer training and has its own global higher education institutions’’ (IMO, 2019b, p. 5). For SDG 13: ‘‘climate action’’, the IMO contributes by developing ‘‘measures to control GHG emissions from the shipping sector and a global strategy to eliminate them entirely – in line with the Paris Agreement’’ (IMO, 2019b, p. 5). Thus, the IMO is adopting the SDGs in its strategy by setting different targets regarding the SDGs, and hence is also putting pressure on the companies of the industry to follow the regulations that will have an effect on achieving the goals.

In addition to the guidance from the IMO, the international container liner shipping companies can also get advice on how they could contribute to the SDGs from the United Nations Global Compact and KPMG’s industry matrix for transportation (United Nations Global Compact & KPMG, 2016). In the report, there are specific example actions listed for each of the 17 goals, as well as example cases about actions from different companies. For goals such as 13: ‘‘climate action’’ and 14: ‘‘life below water’’, the international container liner shipping companies can be regarded as having a strong direct impact on and for the issues regarding those goals, there are existing regulations, standards, and laws set by the IMO, for example. However, the matrix gives examples for all the goals, so the companies can get ideas for how they could contribute also for the goals that they do not necessarily have a direct impact on. For example, for SDG 2: ‘‘zero hunger’’, companies are advised to ‘‘accelerate technological innovation to increase efficiency, reduce the cost and reduce the environmental footprint of transporting food products’’ (United Nations Global Compact & KPMG, 2016, p. 16).

During the writing of this thesis, another research of the SDGs in the maritime industry was published in January 2020 by Wang, Yuen, Wong, and Li (2020). The study was conducted by examining the sustainability and CSR reports or other annual reports of container liner companies as well as container terminal operators from the year 2016 onwards. The study shows that the most prioritized SDGs in the maritime industry are SDGs 8: ‘‘decent work and economic growth’’, 9: ‘‘industry, innovation and infrastructure’’, and 11: ‘‘sustainable cities and communities’’. Less attention was noted to be given to SDGs 12: ‘‘responsible consumption and production’’, 13: ‘‘climate action’’, and 16: ‘‘peace, justice and strong institutions’’. Moreover, the adoption of SDG 14: ‘‘life below water’’ is surprisingly stated to be among the fewer ones, even though it has a direct connection to the industry. However, the authors state, that the reason for it might be the interconnection of the topics with other goals.

2.7 Summary

CSR can be defined as corporate social responsibility or corporate sustainability and responsibility. Its main idea is, that in addition to making profit, companies have also responsibilities for the society and the environment. The European Commission (2006, p. 2) defines CSR as a ‘‘concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis’’. As companies’ operations are affected by their stakeholders, in the same way companies’ operations affect their stakeholders. That is the main idea of the stakeholder theory defined by Freeman (2010). Since the companies’ operations affect many other parties than only the companies themselves, they have to consider carefully their strategies to avoid negative impacts and increase positive impacts for the stakeholders.

Carroll (1991) has categorized corporations’ responsibilities to 4 different levels. On the bottom level are the economic responsibilities that companies need to fill in order to keep the business viable and contribute to the economy. The next level, the legal

responsibilities, means the regulations and laws set by states and organizations, that the companies need to follow in order to achieve compliance. The legal responsibilities are followed by the ethical responsibilities, which the companies are not legally abided to follow but what the society highly expects them to follow. On the top level are the philanthropic responsibilities, which the society desires companies to fulfil.

The implementation of CSR may happen through various modes (Ellis, 2010). It can be applied mainly to follow the rules and regulations of the industry, but nothing more, as compliance CSR. It can also be applied due to the personal beliefs of the company's leaders, when the CSR is called conviction CSR. The preferred mode, strategic CSR, means that CSR is included in the core of the business and as a significant part of the strategic decision making of the company. Thus, CSR is not applied as an add-on or seen as an extra cost or effort in the company, but as a guidance for all decision making and strategic planning in the company.

Sustainability means operating in a way that meets the needs of today but doesn't compromise the needs of future generations (Crane & Matten, 2010). Thus, the resources need to be used in such a way, that there will still be resources left in the future for companies to operate and for societies to function. The triple bottom line of sustainability describes all the dimensions, economic, environmental, and social, that companies need to consider when planning their operations and strategies. The economic dimension includes aspects such as generating profit and compliance and legitimacy of operations. The social dimension included the health and safety of the employees and their working conditions and addressing social problems such as poverty and hunger. The environmental dimension includes the pollution the operations of businesses cause to the environment and the over exploitation of natural resources, for example.

There are several motives and drivers why companies choose to engage in CSR and sustainability actions and initiatives. Some drivers are linked to the local conditions in which the company operates in, whereas some drivers have a more global nature (Visser, 2013).

Local drivers include factors such as cultural traditions and beliefs, political situations and reforms, and crisis response. The global drivers include access to new markets, increase of international standards, rise of stakeholder activism, and supply chain integrity, for example. In addition, CSR can be used as a way to reduce costs and risks of the business, increase the competitive advantage compared to the competitors, build a responsible brand for the business, and engage in cooperation with different stakeholders in order to create shared and synergetic value (Kurucz et al., 2008).

The United Nations has defined 17 Sustainable Development Goals (SDGs) that are supposed to be achieved by year 2030 to ‘‘end poverty, protect the planet and improve the lives and prospects of everyone, everywhere’’ (United Nations, n.d. -a). The member countries of the United Nations are obliged to create their own strategies for the goals and their 169 targets. In addition to states, also companies have started to adapt the SDGs in their CSR and sustainability strategies. The SDGs include goals that are linked to the economic, social, and environmental problems in the world. The goals have targets such as ending poverty and hunger in all parts of the world, providing all people access to basic human needs, such as food, clean water, and affordable energy, develop infrastructures and sustainable communities, and increase health of the people and decrease child mortality and violence especially faced by women and children (see United Nations, n.d. -c-s). Moreover, the goals aim to fight the climate change and promote life below water and life on land by increasing sustainable agriculture and aquaculture, for example (see United Nations, n.d. -p&q).

In this paper, CSR and sustainability are analyzed through the international container liner shipping industry. Over 90% of the world trade is transported with ships and containerized cargo covers over 60% of the global seaborne trade (International Chamber of Shipping, 2020; Statista, 2018). Thus, the container shipping industry has a significant role in the world economy and an integral part in global supply chains (IMO, 2020a). International container shipping industry includes many risks for the society and the environment, that the companies need to address and try to reduce as much as possible.

For example, the safety of the employees working on the container terminals, ports, and on the vessels needs to be considered extensively, because the surroundings can be extremely dangerous for the employees (Pawlik et al, 2012). Many of the aspects concerning the general working conditions and safety are covered by the Maritime Labour Convention and the SOLAS convention (ILO, 2006; IMO, 1980).

In addition, the container vessels themselves have impacts to the environment throughout their whole life cycle, from the building and operations of the ships to the recycling of the ships (Pawlik et al, 2012). All these phases release harmful substances and emissions to the environment, that the companies are pressured by different stakeholders to reduce. During operating time, the vessels produce lot of emissions, for example CO2 and sulphur oxide. The IMO sets regulations for the pollution of the ships with MARPOL-convention and IMO Sulphur 2020 -regulation, for example (IMO, 1983; IMO, 2020c).

CSR and sustainability in the container liner shipping companies have not yet been investigated much. Tang and Gekara (2018) have conducted a research about the customer expectations in the CSR of the container shipping companies. They analyzed the 15 biggest companies on the market and their websites CSR and sustainability materials, and identified themes concerning social factors and environmental aspects. They discovered that the environmental aspects had received more attention in the companies than the social factors, since some companies had not included the social factors in their reports or had published only environmental reports. Moreover, in the early 2020, Wang et al. (2020) published a research about the SDGs in the container shipping companies and terminal operators. They discovered that the most common SDGs in the maritime industry are SDGs 8: ‘‘decent work and economic growth’’, 9: ‘‘industry, innovation and infrastructure’’, and 11: ‘‘sustainable cities and communities’’. Less attention was found to be given to SDGs 13: ‘‘climate action’’, 16: ‘‘peace, justice and strong institutions’’, and 12: ‘‘responsible consumption and production’’, and 14: ‘‘life below water’’. However, according to Wang et al. (2020) the interconnection between the topics of the goals may be the reason for why the environmental goals have received less attention.

A summary of the main CSR and sustainability issues in the international container shipping industry presented in this chapter is illustrated in figure 1. The issues are categorized to the three dimensions of sustainability: economic, environmental, and social dimensions. The main issues described in this chapter are categorized under the different dimensions. Moreover, the SDGs that are seen as the most relevant ones to the listed topics and issues are placed on the dimensions. For example, for pollutive emissions and ballast water management, the SDGs 13 and 14 are the most relevant ones, and for training and gender equality, the SDGs 4 and 5 are the most applicable ones. However, as stated earlier in the chapter, the goals are interconnected and many goals include aspects from more than one dimension, and thus they are impossible to be categorized to only one dimension. For example, SDG 8 can include social aspects, such as safe working conditions, but it also aims for economic growth, so therefore it can be considered in both social and economic dimensions.

Figure 1 CSR and sustainability issues and SDGs in container shipping. (SDG symbols from United Nations, n.d. -b.)

3 Methodological choices

When designing and conducting a research, one needs to make several choices and plans to understand what kind of research and how it needs to be executed in order to achieve the best possible outcomes. In this chapter, the research design process and main methodological choices of this research are presented. Moreover, the analyzed case companies are introduced. Lastly, the reliability, validity, and generalizability of this research are evaluated.

3.1 Research approach and design

The topic of this research is CSR and sustainability in the international container liner shipping companies and the research aims to find out how CSR and sustainability is practiced in the said companies. The topic is reflected through the UN Sustainable Development Goals -framework. This research has a combination of inductive and deductive approach. It has an inductive approach since the data is the main source of information to explore the phenomena and it is then reflected with the theories (see Saunders, Lewis & Thornhill, 2007, pp. 117-119). However, the research also has some elements of a deductive research, since the relevant theories are first introduced, and the data is analyzed and categorized using these theories. Despite that, no hypotheses are stated from the theories, but they are mainly used for categorizing and explaining the results, so the approach is more inductive.

This research is conducted by using qualitative methods. That is because the research has an exploratory approach, as it is trying to understand ‘‘what is happening and gain insights about a topic of interest’’ (Saunders, Lewis & Thornhill., 2012, p. 180). Therefore, the data is analyzed by words, not numbers. Since the research examines a phenomenon, CSR and sustainability, in a real-life context, the international container liner shipping companies, the research is a case study (see Robson, 2002, as cited in Saunders et al., 2007, pp. 139). In addition, since the study includes more than one case, as in more than

one examined company, the research is a multiple case study (see Yin, 2003, as cited in Saunders et al., 2007, p. 140). Moreover, this research is a mono method research, since only qualitative data is used in this research (see Saunders et al., 2007, p. 145).

The chosen sample for this research is the ten biggest container liner shipping companies in the world. The sample is delimited to the ten biggest companies, because being the biggest operators in the market, they are considered likely to publish CSR and sustainability reports, where they tell about their actions regarding the topic. The research is delimited to analyze only the CSR and sustainability reports of the case companies, so they will be the main source of information in this research. However, the websites of the case companies are used to gather basic facts and figures of the companies, as well as to find information about the CSR and sustainability actions of companies, that have not published CSR and sustainability reports. Thus, the information is gathered directly from the websites and CSR and sustainability reports of the case companies, and not from articles or specific industry publications, for example.

The sampling method is thus purposing sampling, in which specific case companies are chosen because they are seen to be cases ‘‘that will best enable you to answer your research questions(s) and to meet your objectives’’ (Saunders, et al., 2007, p. 231). Due to the time limit of this research, the amount of companies is limited to 10 to have enough time to analyze all the data specifically. The data for the study is collected by utilizing secondary data, more specifically documentary secondary data. Research about the ten biggest container shipping companies in the world was conducted for the thesis. The case companies of the research are listed below:

- APM-Maersk
- MSC - Mediterranean Shipping Company
- COSCO Group
- CMA CGM Group
- Hapag-Lloyd
- ONE - Ocean Network Express
- Evergreen Line
- Yang Ming Marine Transport

- PIL Pacific International Line
- Hyundai Merchant Marine (Statista, 2019.)

The listed companies are the biggest container ship operators based on capacity per TEU. The capacities of the companies in November 2019 are presented in the figure 2 below.

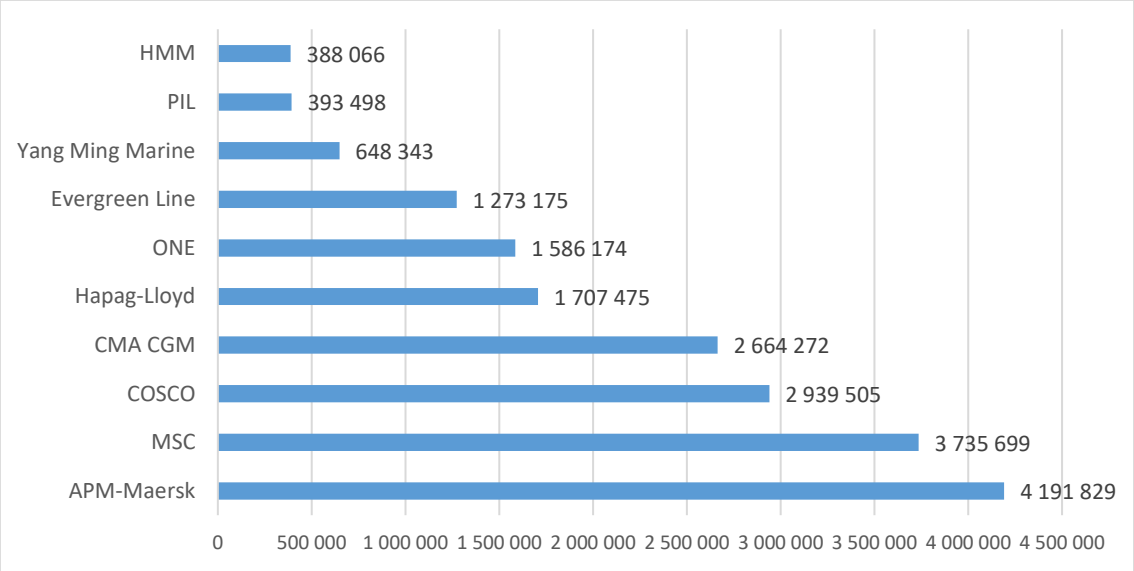

Figure 2 Leading container shipping operators in the world in November 2019 per TEU capacity. (adapted from Statista, 2019.)

Nine out of ten case companies have published CSR or sustainability reports latest of which are: Maersk Sustainability Report 2018 (Maersk, 2019a), MSC Sustainability Report 2018 (MSC, 2019a), COSCO Shipping Lines Co., Ltd. Sustainability Report 2018 (COSCO Shipping Lines, 2019), CMA CGM Corporate Social Responsibility Report 2018 (CMA CGM, 2019), Hapag-Lloyd Sustainability Report 2018 (Hapag-Lloyd, 2019), ONE Sustainability Report 2019 (ONE, 2019), Evergreen Marine Corp. Corporate Social Responsibility Report 2018 (Evergreen Marine Corp., 2019), Yang Ming Corporate Social Responsibility Report 2019 (Yang Ming, 2019), and HMM Sustainability Report 2019 (HMM, 2019). During the writing of this thesis some companies published new sustainability reports, so the latest reports available at the time of starting the analysis of the data in January 2020 will be used. PIL Pacific International Line seems not to have published such report, but it tells about its CSR activities on its website (PIL, 2016a&b). The

website of PIL will therefore be the main source of data in the analysis of the company. Moreover, the websites of all companies are used as a source of data for the research. Since the data is gathered at a certain time point and then compared and analyzed, the research is a cross-sectional study (Saunders et al., 2012, p. 190).

Secondary data is used because it is seen as the most suitable way in collecting data for this research, to examine what SDGs the international container shipping companies have chosen to develop, and what kind of similarities and differences can be found within the biggest container shipping companies in the world. Moreover, getting primary data from the companies, for example through surveys or interviews, is considered to be too time consuming and difficult, since the people that are working in the CSR-departments of the said companies are working all over the world. Thus, getting in contact with the personnel would be almost impossible in the circumstances, and it is not seen as necessary in this research, because the aim is to research and analyze existing reports.

In the analysis of the SDGs, thematical coding is used do to identify certain themes and patterns that repeat in the data. The categorization is done to provide structured and analytical framework for the analysis (see Saunders et al., 2007, p. 479). Moreover, it is done to help in categorizing the results into the different dimensions of sustainability and levels of responsibilities. The findings are thematically coded with different colors to highlight, which SDGs and actions belong to the economic, environmental, and social dimensions of sustainability. Moreover, the recurrence of the SDGs will be reported and concluded in a table, which will be presented in the analysis chapter. The table will work as a ‘‘data display’’ that ‘‘involves organising and assembling your reduced or selected data into diagrammatic or visual displays’’ (Saunders et al., 2007, p. 493). The table will include all the case companies and information on which SDGs they have adopted and on what level with different colored symbols, which are explained on the table. Thus, the table will act as a basis for the analysis and will offer the reader a quick overview of the findings of the research, followed by a more specific analysis of the SDGs and CSR and sustainability considerations in the case companies.

3.2 Case companies

In the next paragraphs, the ten case companies are introduced. Basic information about the case companies can also be found in the table 1 below. The information on the table has been built on information gathered from the case company websites or their CSR and sustainability reports or annual reports. In addition, Statista has been used as a source to find out the case companies' shares of the world liner fleet. The fleet of the companies presented on the table may include other vessels than container vessels on some of the cases, since only the container vessel fleet was not informed in all companies. In addition, the employee amount may also include employees working in other parts of the business than the container liner service. The figures of COSCO refer to COSCO Shipping Lines, except for the share of the world liner fleet, which refers to the whole group. This is explained in more detail in the sub chapter of COSCO.

Table 1 Basic information of the case companies. (CMA CGM, 2018, 2019, n.d.; COSCO Shipping Lines, 2019, n.d. -b; Evergreen Marine Corp., 2019, n.d.; Hapag Lloyd, 2019, n.d.; HMM, 2019; Maersk, 2019a-c, n.d.; MSC, 2019b, 2020; ONE, 2019, n.d. -a&b; PIL, 2016a; Statista, 2020; Yang Ming, 2019, n.d.)

	Maersk	**MSC**	**COSCO**	**CMA CGM**	**Hapag-Lloyd**
Home country	Denmark	Switzerland	China	France	Germany
Share of the world liner fleet in January 2020	17.80%	15.86%	12.48%*	11.31%	7.25%
Fleet	740	520	403	502	239
Employees	84 000	70 000	17 080	37 092	12 900
Operating countries	130	155	105	140	129
Ports of call	343	500	356	420	600
Annual transported volume / TEU	26.61 M	21 M	18.3 M	20.7 M	12 M
	ONE	**Evergreen**	**Yang Ming**	**PIL**	**HMM**
Home country	Singapore	Taiwan	Taiwan	Singapore	South Korea
Share of the world liner fleet in January 2020	6.74%	5.41%	2.75%	1.67%	1.65%
Fleet	224	200	102	130	91
Employees	8 000	1 770	1 889	9 000	3 590
Operating countries	120	117	100	100	-
Ports of call	200	-	-	-	100
Annual transported volume / TEU	-	6.57 M	5. 32 M	-	-
- = information not found					
* = Container vessel fleet of COSCO Group					

3.2.1 Maersk

A.P. Moller – Maersk, commonly known as Maersk, is the leading container shipping operator in the world (Statista, 2019). The company was established in Denmark in year 1904 (Maersk, n.d.). Maersk had the revenue of 39,019 million USD in year 2018 (Maersk, 2019c., p. 5). The revenue increased with almost 30% from year 2017 due to the acquisition of Hamburg Süd, a German container shipping operator (Maersk, 2019c., p. 5). Maersk has divided its business to four segments: Ocean, Logistics & Services, Terminals & Towage, and Manufacturing & Others (Maersk, 2019a, pp.4-5). The container liner shipping business of Maersk and Hamburg Süd are under the Ocean business (Maersk, 2019a., p. 5). The loaded volume of the ocean business was 26.612 million TEUs in 2018 (Maersk, 2019c, p. 32). The company has a fleet of 740 ships and 343 ports of call (Maersk, 2019b). The company has over 84 000 employees in over 130 countries (Maersk 2019a, p. 4). In January 2020, Maersk held 17.8% share of the world's liner fleet (Statista, 2020).

3.2.2 MSC

Mediterranean Shipping Company, shortened as MSC, was established in 1970 and has been headquartered in Geneva in Switzerland since 1978 (MSC, 2020). It is currently the second biggest container shipping operator in the world (Statista, 2019). MSC has divided its business to Cargo Division and Passenger Division, since the company also operates on passenger ship level as well as on cargo shipping sector (MSC, 2019a, p. 6). The cargo division includes shipping services of MSC, terminal operations of TiL, and transport and logistics services of MEDLOG (MSC, 2019a, p. 8). The company employs over 70 000 people in 155 countries (MSC, 2020). The container shipping services employ 47 000 people (MSC, 2019b, p. 18). MSC has the fleet of 520 vessels and the annual loaded cargo volume is around 21 million TEUs (MSC, 2020). The container liner service covers 500 ports of calls (MSC, 2020). MSC held 15.86% share of the world liner fleet in January 2020 (Statista, 2020).

3.2.3 COSCO

China COSCO Shipping Corporation Limited, or COSCO Shipping Group, is a Chinese shipping and logistics group, that was established by a merger of two container shipping companies: China Ocean Shipping Company (COSCO) and China Shipping Company (China Shipping) (COSCO Shipping, n.d. -a). The merger was approved by the Chinese State Council on January 4th in 2016 (COSCO Shipping, n.d. -b). The group has divided its business to seven clusters, that include shipping services, logistics services, and finance services, for example (COSCO Shipping, n.d. -a). The container shipping is under ''shipping industrial cluster'' (COSCO Shipping, n.d. -a). The container shipping is operated by two companies: COSCO Shipping Lines Co Ltd. and Orient Overseas Container Line Ltd. (OOCL) under China COSCO Holdings Company Limited (COSCO Shipping, n.d. -c). OOCL is a subsidiary of Orient Overseas (International) Limited (OOCL, n.d.). The COSCO Shipping Holdings acquired Orient Overseas International Limited in 2018, and thus the combined fleet of OOCL and COSCO Shipping Lines Co. Ltd reached 3 million TEUs capacity (COSCO Shipping Lines, 2019, p. 3). COSCO Shipping Group held 12.48% share of the world liner fleet in January 2020 (Statista, 2020).

Since COSCO Shipping Lines Co Ltd. has the majority of the capacity of China COSCO Holdings Company Limited, meaning 2.2 million TEUs of total 3.0 million TEUs (COSCO Shipping Lines, n.d. -a), COSCO Shipping Lines Co. Ltd is chosen to be analysed in this research. COSCO Shipping Lines has 403 container vessels, and the service network covers 356 ports (COSCO Shipping Lines, n.d. -b). The company has operations in 105 countries (COSCO Shipping Lines, n.d. -b). The company had total 17 080 employees in 2018 (COSCO Shipping Lines, 2019, p. 36). The volume of route container freight was 18.3 million TEUs in 2018 (COSCO Shipping Lines, 2019, p. 5).

3.2.4 CMA CGM

The shipping business of CMA CGM began in France in year 1978 (CMA CGM, 2018). CMA CGM belongs to the CMA CGM Group, which operates also on other businesses, such as supply chain solutions, terminal services, and intermodal transportation (CMA CGM, 2019, p. 7). In 2018, CMA CGM operated in over 140 countries and had 37 092 employees in the shipping services (CMA CGM, 2019, p. 8). The revenue in the same year was 23,476 million USD and the volume of containers transported was 20.7 million TEUs (CMA CGM, 2019, p. 9). The shipping services comprise over 420 ports of call with the fleet of 502 vessels (CMA CGM, n.d.). In January 2020, CMA CGM had 11.31% market share of the word liner fleet (Statista, 2020).

3.2.5 Hapag-Lloyd

Hapag-Lloyd is a German based container shipping company, that started its operations already in 1847 (Hapag-Lloyd, n.d.). Today the company has the fleet of 239 vessels and carries 12 million TEUs annually (Hapag-Lloyd, n.d.). The company has around 12 900 employees in 129 countries (Hapag-Lloyd, n.d.). The liner service network of Hapag-Lloyd (n.d.) comprises over 600 ports. In 2017, Hapag-Lloyd merged with another container liner shipping company UASC (United Arab Shipping Company), which enabled the company to acquire efficient ships and utilize economies of scale (Hapag-Lloyd, 2019, p. 9). Hapag-Lloyd had 7.25% share of the word liner fleet in January 2020 (Statista, 2020). The revenue in 2018 was EUR 11,515 million, which is around 12,707 million USD (Hapag-Lloyd, 2019, p. 9).

3.2.6 ONE

Ocean Network Express (ONE) is an integration of three Japanese container shipping companies: K Line, MOL and NYK (ONE, n.d. -a). The company was established in 2017 and is headquartered in Singapore (ONE, n.d. -a). By integrating three container shipping

companies, ONE now has the fleet of 224 vessels (ONE, n.d. -a). The liner service comprises over 200 ports of call (ONE, n.d. -b) in over 120 countries (ONE, n.d. -a). The company has almost 8 000 employees (ONE, 2019, p. 6). ONE's market share of the world liner fleet was 6.74% in January 2020 (Statista, 2020).

3.2.7 Evergreen

Evergreen Marine Corporation (EMC) was established in Taiwan in 1968 and its first full container liner service started operating in 1975 (Evergreen Marine Corp., n.d.). In 2018, the company had 1 770 employees and operated in 117 countries (Evergreen Marine Corp., 2019, p. 11). The total volume of transported containers was 6.57 million TEUs in 2018 (Evergreen Marine Corp., 2019, p. 9). The fleet includes over 200 ships (Evergreen Marine Corp., 2019, p. 12). Evergreen had the market share of 5.41% of the world liner fleet in January 2020 (Statista, 2020).

3.2.8 Yang Ming

Yang Ming Marine Transport Corp. (Yang Ming) is a part of the Yang Ming Group, that offers liner, bulk, terminal, and logistics services (Yang Ming, n.d.). The corporation was founded in 1972 (Yang Ming, n.d.). The company's headquarters is located in Keelung, Taiwan (Yang Ming, 2019, p. 4). In January 2020, Yang Ming (n.d.) had the operating fleet of 102 vessels. Yang Ming (2019, p. 4) has 241 subsidiaries in 100 countries. In year 2018, the company had 1 889 employees (Yang Ming, 2019, p. 36). The volume of transported containers was 5.32 million TEUs in 2018 (Yang Ming, 2019, p. 6). Yang Ming's market share of the world liner fleet in January 2020 was 2.75% (Statista, 2020).

3.2.9 PIL

Pacific International Lines (PIL) is a corporation that operates on container shipping and manufacturing and other logistics services (PIL, 2016a). The company was founded in Singapore in 1967 (PIL, 2016a). Nowadays PIL (2016a) operates in over 100 countries and the services cover over 500 locations. The company has over 9 000 employees and the fleet of over 130 vessels (PIL, 2016a). The market share of PIL in the world liner fleet in January 2020 was 1.67% (Statista, 2020).

3.2.10 HMM

Hyundai Merchant Marine (HMM) is a Korean global shipping company established in 1976 offering shipping services with container ships, bulk carriers and tankers (HMM, 2019, p. 14). HMM (2019, p. 14) employs 3 590 people. The company has the fleet of 91 vessels, out of which 53 are container vessels (HMM, 2019, p. 16). The container liner services comprise over 100 ports (HMM, 2019, p. 21). HMM had the share of 1.65% of the world liner fleet in January 2020 (Statista, 2020).

3.3 Credibility

In order to increase the credibility of research findings, one needs to consider the reliability and validity of the research. Reliability means ‘‘the extent to which your data collection techniques or analysis procedures will yield consistent findings’’ (Saunders et al., 2007, p. 149). Robson (2002, as cited in Saunders, 2007, pp. 149-150) presents four factors that may affect negatively to the reliability of a research. First, ‘‘subject or participant error’’ may occur if different results could be received in different times, for example during different hours of a workday from employees when asked about their enthusiasm. Next, ‘‘subject or participant bias’’ may occur if the respondents give information they are told to give, or if the data is presented in such a way that it can be interpreted in many ways. In addition, ‘‘observer error’’ means that different people can gather data

differently, for example in an interview situation, so structured formatting can be used to avoid the error. Lastly, ‘‘observer bias’’ happens if different people interpret the data in different ways.

The data collection in this thesis is done by downloading CRS and sustainability reports of the case companies. The analyzed reports are available on the internet for everyone to read, and thus the same analysis with the same data can be repeated. The analysis of this report is based on the UN SDGs that are mentioned in the reports and what kind of CSR and sustainability actions are linked to the SDGs. Since the SDGs are mentioned clearly in the reports, similar results could be concluded repeatedly by analyzing the reports. Thus, the research can be regarded as reliable. However, since the analysis is based on textual data, and not any numeric results, differences in interpretations of the reports could occur. Hence, the most possible threat for the reliability of this research is the observer bias. Moreover, subject or participant bias is also possible, if the case companies do not give truthful information in their reports or the information is expressed in a way, that can be interpreted in various ways.

Validity is used in describing ‘‘whether the findings are really about what they appear to be about’’ (Saunders et al., 2007, p. 150). Robson (2002, as cited in Saunders et al., 2007, p. 150) has defined factors that may affect the validity of a research. For example, the timing of the research may affect the findings, the participants may want to affect the findings with their actions, the participants of a research may drop out, or causal relations are not explained specifically enough in the findings. The term of generalizability is also linked to validity. It means ‘‘whether your findings may be equally applicable to other research settings, such as other organisations’’ (Saunders, 2007 et al., p. 151). The concern of generalizability is strongly present in case study researches, when one organization or few organizations are examined (Saunders, 2007 et al., p. 151).

The aim of this research is to find out what UN SDGs international container liner shipping companies are adopting and how. The SDGs mean Sustainable Development Goals,

so they are most likely to be presented in the sustainability or CSR reports of the case companies, rather than in other annual reports, which is why the CSR and sustainability reports are chosen to be examined in this report. The SDGs are presented in many of the reports, so analysis about them can be made from the reports, and thus it can be concluded that the research is valid. The analyzed reports are mostly presenting the actions of year 2018, so by analyzing reports from different years could give different kinds of results. The SDG framework was presented in year 2015, so the SDGs have started to be adopted only after that. Since this research is focused on the CSR and sustainability and the SDGs in the international container liner shipping companies, and all the examined case companies operate in the same business, the findings of this research cannot be generalized to other industries.

4 Analysis and discussion

In this chapter, the analysis of the SDGs in international container liner shipping companies is presented. The ten biggest container liner shipping companies presented in the previous chapter are used as case companies in the analysis. The main data used are the CSR and sustainability reports of the case companies. However, not all the companies have published such reports, and thus the corporate websites are also used as a source of information in the analysis.

Nine out of ten analyzed case companies have published a sustainability or CSR report during the year 2019. These companies are Maersk, MSC, COSCO Shipping Lines, CMA CGM, Hapag-Lloyd, ONE, Evergreen, Yang Ming, and HMM. All of these companies also have pages on their websites dedicated to CSR and/or sustainability, which shows that they have taken the sustainability and CSR considerations into account and also want to communicate that to their stakeholders by providing information about their sustainability actions through different platforms. PIL is the only case company that has not published CSR or sustainability report, but it also has a section in its website where it tells about its CSR focuses (see PIL, 2016b).

As most of the case companies have published CSR or sustainability reports or have communicated about their CSR activities in their websites, the companies have acknowledged that they have responsibilities for the society and for the environment in addition for the companies themselves. That is also seen in many of the reports in the introduction part, where the companies explain, why they are applying CSR. Below are some quotations from the reports of the case companies:

> - *We are not only a professional logistics company; we see ourselves as a member of society* (Hapag-Lloyd, 2019, p. 2).
> - *We also want to contribute to the protection of people and the environment beyond our Company borders* (Hapag-Lloyd, 2019, p. 11).
> - *-a global company has not only economical but also societal responsibilities; its purpose is to go beyond the financial performance* (CMA CGM, 2019, p. 5).
> - *''Shipping companies should not wait for new regulations to follow." We should make use of the latest marine technology with positivity and perspective to*

> *protect the marine ecology, safety of the port and happiness of mankind* (Evergreen Marine Corp., 2019, p. 8).

Thus, the case companies are communicating in their reports, that in addition to producing economic value, they also have social and environmental responsibilities as members of a society. Moreover, they are implying that they want to develop new innovations and practices that go beyond the regulations set by the laws and industry to contribute to the sustainable development. Therefore, some companies have already applied the SDGs in their CSR and sustainability strategies as a tool to assess their impact on the different economic, social, and environmental problems. On the next page, a table of which SDGs and on what level the companies have addressed them in their CSR or sustainability reports is presented.

First, the application of the SDGs is analyzed with the different levels of application presented in table 2. Also, the process of how the case companies have chosen the SDGs is discussed. Next, the SDGs are categorized to three groups in numerical order. The categorization follows also the three dimensions of sustainability: economic, social, and environmental. However, some goals can be regarded as including factors belonging to more than one dimension, such as SDG 8: ‘‘decent work and economic growth’’, so they are analyzed through more than one dimension. After the categorization some main differences and similarities between the case companies regarding the application of SDGs is described, and possible reasons for them are presented. In addition, the identified CSR and sustainability actions of the case companies are reflected with the four different levels of CSR by Carroll. Lastly, the main findings are discussed with the existing research about the topic.

Table 2 The level of application of the SDGs in the case companies in the sustainability / CSR reports. (CMA CGM, 2019; COSCO Shipping Lines, 2019; Evergreen Marine Corp., 2019; Hapag-Lloyd, 2019; HMM, 2019; Maersk, 2019a; MSC, 2019a; ONE, 2019; PIL, 2016b; Yang Ming, 2019.)

	CASE COMPANIES									
SDGs	**MAERSK**	**MSC**	**COSCO**	**CMA CGM**	**HAPAG**	**ONE**	**EMC**	**YMM**	**PIL**	**HMM**
1: No poverty	●	●		●		●				●
2: Zero hunger	●	●		●		●				●
3: Good health and well-being	●	●		●		●	●			●
4: Quality education	●	●		●	●	●				●
5: Gender equality	●	●		●		●				●
6: Clean water and sanitation	●	●		●		●				●
7: Affordable and clean energy	●	●		●		●	●			●
8: Decent work and economic growth	●	●		●	●	●	●			●
9: Industry, innovation and infrastructure	●	●		●		●	●			●
10: Reduced inequalities	●	●		●		●	●			●
11: Sustainable cities and communities	●	●		●		●				●
12: Responsible consumption and production	●	●		●		●				●
13: Climate action	●	●		●	●	●	●			●
14: Life below water	●	●		●	●	●	●			●
15: Life on land	●	●		●		●				●
16: Peace, justice and strong institutions	●	●		●	●	●				●
17: Partnerships for the goals	●	●		●	●	●	●			●

Meanings of colors:	
●	SDGs related to specific sustainability issues addressed in target level.
●	SDGs categorized under specific sustainability issues and/or individual SDGs addressed in the reports
●	SDGs mentioned generally in the report, but not categorized or analyzed more specifically.
	No mention of the SDGs in the report or website of the company.

The categorization in table 2 is not aimed to evaluate or measure which company is best contributing to some specific SDG or all of the SDGs. The purpose of the table is to show and describe what SDGs and how they are adopted in the CSR and sustainability reports of the case companies. The colored symbols are used only to make the data easy to read, so the colors are not on the scale. In addition, some companies, such as MSC, have used many different ways in which the SDGs were applied, which makes the categorization difficult. Thus, the difference between the categories is made by whether specific targets of the SDGs are referred to in the reports, whether specific SDGs are categorized or referred to in the text, whether the SDGs are addressed in general but not categorized, or whether the SDGs are mentioned at all in the report.

In table 2, the levels of how the SDGs have been applied in the case companies according to their CSR and sustainability reports is presented in four different modes, as in three different colors and blank cells. Green color means that the case company has addressed specific SDGs in its report relating to some specific sustainability issue and has also addressed the specific targets of the SDGs. For example, Maersk has structured its report on specific sustainability issues, and explains its targets and actions for each issue, and also refers to the corresponding SDG targets. For instance, when talking about responsible procurement, Maersk (2019a, p. 32) is referring to the SDG target 12.6: ‘‘Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle’’ (United Nations. (n.d. -n).

Yellow color means that the company has categorized the SDGs under different CSR or sustainability themes or issues and/or explained their own actions or targets for the goals. However, the SDG targets are not referred to. Some companies, such as Hapag-Lloyd and Evergreen, have chosen few SDGs that they address in their reports, and they also explain briefly their main actions regarding the chosen goals. For example, Hapag-Lloyd (2019, p. 28) refers to SDG 8 by stating:

> *Recruiting well-qualified staff and ensuring their long-term loyalty to the company is the prime goal of our HR management strategy. As an attractive employer, we also offer appealing employee benefits, measures to reconcile career and family life, and support programmes for young professionals, where local conditions allow*.

In addition, CMA CGM (2019, p. 16) has categorized and placed the SDGs under specific themes and chapters of the report. The company states that it has measured its CSR approach with the SDG framework and is presenting the main results of the year for each CSR pillar in the beginning of the chapters, where the relating SDGs are also placed. For example, the SDGs 8 and 16 are under the CSR topic of ethics and compliance (CMA CGM, 2019, p. 32).

The blue color means that the company has mentioned the SDGs in its CSR or sustainability report but has not analyzed or categorized the goals more specifically. In addition, the relating actions for the goals are explained only very briefly or not at all. For example, HMM (2019, p. 39) mentions all the goals in its report and is also explaining what the goals try to achieve, but the goals are not referred to more specifically later in the report. However, SDGs 3, 8, and 14 are addressed briefly in the end of the report when discussing health and safety at the European Headquarters:

> *HMM consider occupational health and safety a fundamental material topic. In this respect, we promote personal, and environmental safety in our European operations, navigational safety* in line with SDGs 3, 8 and 14, applicable to international shipping regulations and other relevant international instruments, plus proper cargo-handling and management* (HMM, 2019, p. 91).

Lastly, the blanks cells mean, that the companies have not mentioned or adopted some specific SDG or any of the SDGs in their CSR or sustainability reports or websites. This is the case for COSCO Shipping Lines, Yang Ming, and PIL.

4.1 The SDGs and CSR strategies

As presented in table 2, the SDGs have been applied in most of the case companies. Maersk, MSC, CMA CGM, Hapag-Lloyd, ONE, Evergreen, and HMM have used the SDGs in their CSR or sustainability reports. However, great variation in how the SDGs have been addressed can be identified in the reports. Maersk (2019a) has mentioned all the SDGs in its sustainability report and has categorized the goals to three different groups based on the level of impact the company has on the goals. They state that they have considered their positive and also negative impact on the goals: ‘‘We support and commit to contribute positively to the United Nations Sustainable Development Goals, while also reducing our potential negative impact on the goals’’ (Maersk, 2019a, p. 3). The goals that the company is seen to have the biggest impact on are addressed more specifically in the report and actions regarding those goals are presented.

Moreover, the targets of the goals are presented in some cases. For example, one of the main sustainability goals of Maersk is to help decarbonize logistics by having net-zero CO2 emissions from their own operations by year 2050 (Maersk, 2019a, p.13). With that goal, Maersk is referring to SDG targets 7.3., ‘‘By 2030, double the global rate of improvement in energy efficiency’’ (United Nations, n.d. -i), and 13.1, ‘‘Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries’’ (United Nations, n.d. -o). The sustainability topics, their targets, progress, and the corresponding SDGs and their targets are clearly stated in the report, and a summary can be founded in the end of the report.

MSC is another company that has mentioned all SDGs in its sustainability report. The goals are mentioned throughout the report. First in general, then under the main CSR themes, which have been defined as ‘‘Social Inclusion’’, ‘‘Environment’’, ‘‘Occupational Health and Safety’’, and ‘‘Business Ethics and Protection of Human rights’’ (MSC, 2019a, p. 3). MSC has also categorized the goals for their three businesses: the shipping services, terminal operations, and logistics operations providing for example inland

transportation. In addition to the SDGs, some of their targets have been addressed. For example, MSC explains, how it contributes to target 1 of SDG 9:

> *Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all* (United Nations, n.d. -k).

MSC tells, how it helps in developing infrastructures through its subsidiaries, TiL and MEDLOG, that provide terminal and logistics services. Through the subsidiaries, MSC contributes to the ‘‘modernisation and development of terminals as well as national, regional, and international freight corridors’’ (MSC, 2019a, p. 24).

CMA CGM is another case company that has addressed the UN SDGs in its CSR report. The company explains that it has used the SDGs as a reflection tool to evaluate its CSR approach and how well it follows the UN program. Based on the evaluation, the SDGs are classified to six groups, that are defined as the main CSR pillars: ‘‘Ethics and compliance’’, ‘‘Value chain’’, ‘‘Social’’, ‘‘Safety & Security’’, ‘‘Environment’’ and ‘‘Societal’’ (CMA CGM, 2019, p. 16). The corresponding SDGs are presented in the introduction page of each respective chapter, and some of the main progress regarding the topics of the goals are presented (see CMA CGM, 2019). However, the SDGs are not referred to in more detail, but they are supposed to be prioritized in year 2019: ‘‘During 2019, the priority SDGs for the Group will be identified alongside the completion of the CSR risk assessment and the comparison with the CSR challenges’’ (CMA CGM, 2019, p. 16).

Whereas Maersk, MSC, and CMA CGM have addressed all 17 SDGs in their reports, Hapag-Lloyd and Evergreen have used a more specified approach to the SDGs and chosen few main goals that are presented in their reports. Hapag-Lloyd (2019) states, that the sustainability report of 2018 is the first one, where the SDGs have been addressed, and that it has chosen the most relevant goals for the company and presents the chosen goals in the beginning of each chapter. Moreover, a summary about the chosen SDGs and the pages in which they are referred to is presented in the report, which makes it easy for the reader to find the information about the chosen specific goals. Evergreen has mentioned eight SDGs in its sustainability report and explained briefly what kind of

actions or targets they have for them. For example, Evergreen is addressing specifically SDG 3 by explaining their corresponding actions for the goal:

> *We provide all employees with free physical examination and a strong emphasis is placed on shipboard health. Comprehensive medical facilities are in place and 24-hour medical advice is provided by the dispensary to improve employees' health management ability* (Evergreen Marine Corp, 2019, p. 46).

However, the process of how the said goals are chosen and why is not explained in the report.

ONE has also mentioned the importance of the SDGs in the industry and presented the goals generally in the introduction part of its sustainability report but none of the goals are addressed more specifically later in the report, so the approach is very general. Thus, the SDGs are not yet assessed by the company, since they state that they ''will explore the possibility of mapping our business efforts to the SDGs in the coming years'' (ONE, 2019, p.12). HMM has also addressed all the SDGs in the introduction part of its sustainability report and refers to few goals briefly in the end of the report, but the goals are not really applied in the other parts of the report (HMM, 2019). COSCO Shipping Lines mentions Sustainable Development Goals in its sustainability report, but it is not clear, whether they refer to the UN's Sustainable Development Goals or not (COSCO Shipping Lines, 2019). Yang Ming and PIL have not addressed the SDGs at all in their reports or websites (PIL, 2016b; Yang Ming, 2019).

Thus, already in the general glance differences in the application of the SDGs can be observed. Moreover, the ways in which the companies have chosen the SDGs are different. Some companies, such as Maersk, have first defined their CSR strategy and then placed the different SDGs to the different parts of their strategy according to how big an impact the company can have on each of the goals. For example, Maersk (2019a, p. 6) has assessed that it can have the most positive impact on goals such as ''climate action'', ''responsible consumption and production'', and ''decent work and economic growth''. Goals for which the company has identified to have potential positive impact are ''gender equality'' and ''affordable and clean energy'', for example. Lastly, some of the goals for which the company is committing to reduce their negative impact on are ''life below

water'' and ''good health and well-being''. Maersk has defined three dimensions of materiality: ''responsibility'', ''risk'', and ''shared value'', under which it has categorized different sustainability issues and thus also the SDGs (Maersk, 2019a, p. 8).

Other companies, such as Hapag-Lloyd, CMA CGM and Evergreen, have identified their biggest sustainability and CSR issues by identifying and placing them to a materiality matrix. These companies have involved different stakeholders in their risk assessment process. By the results, they key issues were identified and placed on the materiality matrix based on their impact to the company and to the shareholders. The CSR strategies were then based on the materiality matrix. In addition, they have categorized the SDGs under the specific sustainability issues presented in the reports. MSC (2019a) mentions, that they had analyzed the SDGs by different committees, who had evaluated for which goals the company has direct or indirect impact on and based their CSR strategy on those considerations inside the company. Hapag-Lloyd (2019) states that the company had analyzed how its competitors and companies operating on other industries had applied the SDGs and what kind of achievements they had for them and compared their own activities with them. Resulting from the analysis the company chose to focus on the SDGs that it could have the biggest impact on.

In addition, HMM, COSCO Shipping Lines, ONE, and Yang Ming have used similar materiality matrixes, where the impact of the CSR and sustainability issues to the company and to the stakeholders was evaluated. However, the SDGs are not assessed or categorized with the identified issues. PIL is not presenting its specific CSR or sustainability strategy on its website, but the company states that it is ''committed to goals that have long lasting effects on the organisation, stakeholders, society and the environment'' (PIL, 2016b). The company tells on its website about its social and environmental considerations and actions, such as some examples about charitable work for social problems and the innovations and technologies that help the company to minimize its environmental impacts (PIL, 2016b).

4.2 SDG analysis

The SDGs that all seven companies that have addressed them in their reports are SDGs 8: ‘‘decent work and economic growth’’, 13: ‘‘climate action’’, 14: ‘‘life below water’’, and 17: ’’partnerships for the goals’’. The international container liner shipping industry can be regarded as having a significant impact on all these four goals, since the companies employ thousands of people and the work especially on board involves many risks, and the industry is producing lot of emissions that pollute water and air and thus, have a very serious impact on the climate change. Therefore, it is not surprising that the goals repeat on all seven reports and the themes and actions regarding the goals are given a lot of attention in the reports. In addition, the SDG 17, ‘‘partnerships for the goals’’ is regarded in the container liner shipping companies as co-operation with other companies in developing technological innovations to enhance the sustainable development of the industry and complying with the requirements of the industry to reduce the pollution, for example. Moreover, communicating and co-operating with many different industry related organizations, states, and educational organizations is needed to develop the whole industry as well as helping the society and attracting future talents that have the needed mindset and skills for sustainable development.

The SDGs, that have been addressed by at least six out of the seven companies that have addressed the SDGs specifically in their reports are SDGs 3: ‘‘good health and well-being’’, 4: ‘‘quality education’’, 7: ‘‘affordable and clean energy’’, 9: ‘‘industry, innovation and infrastructure’’, 10: ‘‘reduced inequalities’’, and 16: ‘‘peace, justice and strong institutions’’. For goals such as ‘‘good health and well-being’’, the companies can have direct impact through the health of their employees and indirect impact through enhancing the health of people in different societies, for example through charity activities. For the goal ‘‘quality education’’, companies can have a direct impact by providing adequate training for their employees and indirect impact by investing in developing education in developing countries, for example. Also, for the goal ‘‘reduced inequalities’’, the companies can impact directly through the hiring and wage policies inside the company, but also indirectly by charity and other philanthropic actions. For goal ‘‘peace, justice and

strong institutions'', companies can impact by improving their institution with complying laws and regulations and acting according to their own code of conduct or ethics, for example.

The goals that are addressed by five or less companies are SDGs 1: ''no poverty'', 2: ''zero hunger'', 5: ''gender equality'', 6: ''clean water and sanitation'', 11: ''sustainable cities and communities'', 12: ''responsible consumption and production'', and 15: ''life on land ''. Some of the goals can be seen as goals that the companies have more indirect than direct impact on, such as ''no poverty'' and ''zero hunger''. These goals can be seen as ones that can be affected mostly by philanthropic actions to help with the serious societal problems in the world, that are for example poverty and hunger. However, other goals, such as ''responsible consumption and production'' and ''life on land'' can be regarded as goals that the international container liner shipping companies could have also direct impact on, for example through responsible procurement and supplier management.

Also, the container liner shipping companies are dependent on inland transportation in delivering the containers to the harbors and from harbors to the buyers, so in that way the industry has also significant impact on the life on land. Thus, the variation in the addressing of these specific goals could be explained by the different focuses on the reporting styles, where some companies have focused more on how they promote sustainable development through the internal operations of the company, whereas others have included more views on how their operations affect also external shareholders and many different societies and communities.

In the next paragraphs, the goals are divided and analyzed in three groups in numerical order. The first group includes SDGs 1-6, which can be regarded as the goals linked most to the social dimension of sustainability, with topics such as poverty, hunger, health, and gender inequality. The next group includes SDGs 7-12 that can be regarded in the economic dimension, since the goals address issues such as access to energy,

unemployment, inequalities between countries and people living in them, and development of infrastructures. Lastly, SDGs 13-17 include goals belonging to the environmental dimensions, such as ‘‘life below water’’ and ‘‘life on land’’, and the last two goals are common goals for all dimensions. However, because the goals are interconnected and some goals include aspects from more than one dimension, the categorization is not strictly divided to the dimensions, but done in numerical order. The most common actions of the companies for each goal are presented and discussed, as well as some specific actions, that are only visible on some of the reports.

4.2.1 SDGs 1-6

SDGs 1, 2, and 6 are not addressed by many case companies in their CSR or sustainability reports, but SDGs 3, 4 and 5 have received a lot of attention from the companies. That is surely because many companies define employees as their main asset and their health and safety as their main priority. The SDGs 1 and 2, ‘‘no poverty’’ and ‘‘zero hunger’’ are addressed only by half of the case companies and the actions for these goals are mainly philanthropic, such as the Mercy Ships -project of MSC and the Containers of Hope of CMA CGM, that are charity projects that provide health care, nutrition and other assistance for people in need and in conflict zones (MSC, 2019a; CMA CGM, 2019).

However, a couple of companies have also addressed the prevention of food loss as an industry specific issue to support the SDG 2: ‘‘zero hunger’’. That is done by developing the reefer containers, i.e. refrigerated containers, that are temperature-controlled containers used in delivering goods, such as fruit, meat, and medicines, that need a certain temperature to preserve (see World Shipping Council, 2020a). By developing the temperature monitoring technologies of the containers, the companies can prevent the perishing of the food in containers and thus reduce food loss. For example, Maersk (2019a, p. 22) has defined halving food loss as one main area in their sustainability strategy to create shared value, and the company explains how they can contribute to the goal themselves and through partnerships. They state, that ‘‘the ultimate goal is to build

capabilities along the supply chain in countries with high prevalence of food loss in the production and transportation stages and enhance their ability to benefit from food loss-reducing solutions'' (Maersk, 2019a, p. 22).

The main social goals addressed by the case companies are SDGs 3, 4, and 5. When addressing SDG 3, most companies are talking about how they are promoting and maintaining good health and safety of their employees and the similar considerations are also addressed under the SDG 8: ''decent work and economic growth''. Thus, the health considerations are focused more on the health and safety in working life and as a part of the employee's rights, so called occupational health and safety. However, some companies such as CMA CGM and Evergreen are also addressing SDG 3 when talking about the health and safety management of the employees and their overall well-being, and discussing widely different practices they are applying for example to support work-life balance and providing different support systems for employees with children (CMA CGM, 2019; Evergreen Marine Corp., 2019).

In addition to the physical health, many companies also mention the importance of the mental health of their employees and how they are maintaining it. Hapag-Lloyd (2019) describes their process of developing psychological stress analysis for employees in management positions as well assessing the stress caused by noise and sailing through different time zones of employees working on the vessels. Also Evergreen (2019, p. 58) tells that it had arranged a course of ''Management of Stress and Emotions'' for their junior and middle management coordinated by external experts.

SDG 4: ''quality education'', is addressed by many companies through explaining the training practices and programs within the company. Moreover, different co-operations with local universities to attract future talents and to tell the students about the maritime industry as an employer are mentioned. For example, Evergreen describes that ''talents are the most important assets of an enterprise'' as stated by the founder of the company Dr. Chang Yung Fa (Evergreen Marine Corp., 2019, p. 56). Thus, the company

tells extensively about their training practices, for example orientational and professional training. The case companies tell less about how they are contributing to the education issues in different societies. However, CMA CGM (2019, pp.99-100), for example, tells about the CMA CGM foundation that has supported projects to enhance the equal opportunities for educations of children that come from disadvantaged backgrounds in France and Lebanon.

SDG 5: ‘‘gender equality’’ has also quite different emphasis within the different case companies. Most of the companies provide tables about the gender distribution in the work force and tell how many women work in management positions or in the board, for example. Many companies also state that gender is part of the non-discrimination policies and cannot affect the recruitment decisions. However, some companies such as CMA CGM tells about their specific ‘‘We are Shipping’’ –leadership program for women, which aims to help women in the career development and promote diversity in the management positions of the company (CMA CGM, 2019, p. 48). The program supports target 5 of the SDG 5: ‘‘Ensure women’s full and effective participation and equal opportunities for leadership at all levels of decisionmaking in political, economic and public life’’ (United Nations, n.d. -g). The United Nations Global Compact has also launched a ‘‘Target Gender Equality’’ initiative, that aims to ‘‘helping participating companies set concrete targets and take action to advance women’s leadership in their organizations, starting with the Board and Executive Management levels where women continue to be critically underrepresented’’ (United Nations Global Compact, 2020). Thus, similar programs will be needed to support the initiative.

SDG 6: ‘‘clean water and sanitation’’, is one of most rare ones that the case companies have addressed. The goal is mainly addressed as an environmental goal by describing the innovations and practices to protect the ocean waters, rather than as a social goal to help provide clean water for people in need. The environmental actions to protect the oceans are more addressed later in SDGs 13 and 14.

4.2.2 SDGs 7-12

SDG 7: ‘‘affordable and clean energy’’ can be regarded in all dimensions of sustainability, since the lack of access to affordable energy is a social issue, whereas the need for the development towards using renewable energy can be regarded an environmental issue, and the innovations and investments needed to achieve the goal require economic considerations. The actions regarding SDG 7 are mainly concerning the development of the efficiency of the ships in the case companies. The companies are presenting technologies that are meant to increase the efficiency and reduce pollution, thus provided by cleaner energy. Moreover, many companies have their own goals for reducing CO2 emissions, that will be achieved by increasing the efficiency of the ships. Maersk, for example, is addressing the specific target 3 of the SDG 7: ‘‘By 2030, double the global rate of improvement in energy efficiency’’ (United Nations, n.d. -i), with its target of reducing CO2 by 60% by 2030 with 2008 baseline (Maersk, 2019a). In addition, Evergreen Marine Corp. (2019) is mentioning methods such as calculation system for the load stability of the ships, weather navigation systems, and optimizing the sailing speed for improving the energy efficiency.

In addition, many case companies describe how they are following the Energy Efficiency Design Index (EEDI) established by the IMO to improve the energy efficiency of the ships (see IMO, 2020e). The EEDI measures the efficiency of the ships and supports using equipment and engines in new ships that pollute less (IMO, 2020e). Thus, the case companies describe the technological improvements and innovations in the new ships, that support complying with the EEDI.

SDG 8: ‘‘decent work and economic growth’’, includes both social and economic factors, since unemployment is a major social problem in the world, and by increasing the employment societies would gain economic benefits. The goal is one of the main goals that the case companies are focusing on. The main theme mentioned by the case companies is employee safety. Many companies emphasize that the employees are their most valuable asset and their safety their top priority. Thus, a lot of content concerning the safety

of the employees, especially employees working on the ships and container yards, is presented. Factors mentioned are, for example, following the Maritime Labour Convention's working condition regulations, providing safety trainings and equipment, and providing health check-ups and insurances for the employees.

Moreover, the living conditions on the ships, for example accommodation and nutrition, and equipment and networks for the employees to communicate with their families are seen as important factors. In addition, the trainings regarding transporting and handling dangerous goods is an important part of the safety of employees and cargo. The safety of dangerous goods handling is important and relevant, especially due to the fact that five people died in 2018 due to a fire on a cargo vessel Maersk Honam, that started from a container containing dangerous goods (Maersk, 2019a). Also, many fatalities or near misses have happened for employees working in the container yards, so there is still place for a lot of safety trainings and regulations in the industry. Moreover, the prevention of the use of child or forced labor is mentioned by many companies such as COSCO Shipping Lines, Hapag-Lloyd, Evergreen and YMM.

SDG 9: ''industry, innovation and infrastructure'' is mainly addressed in the case companies as the technological innovations that will develop the sustainability of the industry. For example, various digital solutions that are created to develop the whole industry are presented in the reports. The digitalization is used, for example, to improve customer service and the navigation systems. Moreover, some companies are describing how they have developed the infrastructures in their terminal locations. For example, MSC (2019a, p. 24) tells about how it has modernized and developed its terminals to: ''increase energy and operational efficiency, enhance countries' competitiveness at a regional and global level as well as to enable our customers, local stakeholders, and business partners to effectively benefit from our global network''.

SDG 10: ''reduced inequalities'' is widely addressed within the case companies and is seen as an important goal. Many case companies are emphasizing the diversity and non-

discrimination in the hiring policies of the company, and some are telling how they are trying to help potential talents living in poverty to work in their company, and that way helping to reduce the inequality in societies. For example, Evergreen is addressing SDG 10 with a specific program: ‘‘We are dedicated to promoting “Away from Poverty by Sailing” by providing channels and information for potential sailing talents to enter the shipping industry, supporting equal opportunities for disadvantaged families, and helping to lift them out of poverty’’ (Evergreen Marine Corp., 2019, p. 112).

For SDG 11: ‘‘sustainable cities and communities’’, the main themes are the charitable donations to different organizations or how their charity projects could help in achieving this goal. However, some companies such as MSC (2019a) are also talking about how they contribute in developing the infrastructure for example in cities where they have their own terminals and other businesses.

SDG 12: ‘‘responsible consumption and production’’ is also among the least addressed goals between the case companies. Few companies have addressed the goals and explained how they are contributing to the responsible production and consumption through investing in technologies of reefer containers and other solutions to help preserve goods such as fruits during transportation (e.g. MSC, 2019a). Another theme mentioned under SDG 12 is the responsible procurement of the case companies and supplier management processes. However, many companies have addressed this issue on SDG 16, so it will be discussed more specifically on that goal.

4.2.3 SDGs 13-17

SDGs 13: ‘‘climate action’’, 14: ‘‘life below water’’ and 15: ‘‘life on land’’ are the most relevant goals for the environmental dimension of sustainability. SDGs 13 and 14 are among the most common ones applied between the case companies due to the emissions and pollution of the vessels. Moreover, the industry has indirect impact for SDG 15, for example through the inland transportation of the containers. The goals 13: ‘‘climate

action'' and 14: ''life below water'' are among the most relevant industry specific goals for the international container liner shipping industry according to the CSR and sustainability reports of the case companies. All companies present environmental themes in the reports and various tools and measures for how the industry could be developed to be more sustainable and to fulfil the requirements set by the industry. Some of the main themes are the IMO Sulphur 2020 -regulation, safe recycling of the ships, and technological innovations and alternatives for bunker fuels to increase the efficiency of the ships and reduce the pollution. The IMO Sulphur 2020-regulation sets challenges for the container shipping companies in figuring out the alternative fuels and technologies to reduce the amount of sulphur oxide in the fuel. Such solutions mentioned in the reports are using LNG (liquefied natural gas) in the newer ships and installing scrubbers, that reduce the sulphur oxides of the fuel (e.g. HMM, 2019).

To increase the efficiency and reduce the amount of emissions, companies are implementing new practices and innovations, such as hull cleaning practices and energy efficient bulbous bows and propellers (e.g. Hapag-Lloyd, 2019; CMA CGM, 2019). The hull cleaning practices and technologies are supposed to reduce the amount of foul on the hull, that increases the friction of the ship and water and thus slows the ship and increases the needed fuel. Another innovation mentioned is the use of shore-based power when docking the ship (e.g. Hapag-Lloyd, 2019). That means that when the vessel is arriving in port, it can turn off the main engine and be connected to power from the shore, so that there will be almost no emissions in the time of docking. This practice is implemented already in California and China, for example.

One significant theme that is recurring in the reports is the safe recycling of the ships. As stated earlier in this paper, the recycling and retiring of ships includes many aspects that can harm the nature or the employees working with the recycling. Thus, the recycling is mentioned under SDGs 8 and 14, since it includes environmental and social factors. Usually the recycling happens in developing low-cost countries, where the working conditions and regulations of the employees nor the regulations for recycling and handling

dangerous waste are not as developed as in the developed countries. Thus, many risks exist in the recycling concerning the safety of the employees and in preserving the nature and not spilling any dangerous substances. Many companies mention the Hong Kong Convention in their report, which sets rules for the safe recycling of the ships, for example for the safety equipment needed, the reporting of all the hazardous materials on the ships, and for the safe disposal of the dangerous substances (see IMO, 2009). Even though the Hong Kong Convention is not yet set in force by the number of needed countries, most case companies are already applying the regulations of the convention in their ship recycling processes.

Another policy for the ship recycling implemented by many of the case companies is the Ship Recycling Transparency Initiative (SRTI) that sets criteria for the safe recycling of the ships and aims to increase the transparency of the recycling (SRTI, n.d.). In addition to the safe recycling of ships, companies can prolong the ships' lifetime with extensive maintenance, which is mentioned by Hapag-Lloyd (2019), for example. Moreover, the companies can reduce the recycling of containers by creating innovations for the containers, such as steel or bamboo flooring (Hapag-Lloyd, 2019; Evergreen Marine Corp., 2019) to make the containers more durable and prolong their lifetime.

To preserve the life below water, there are a pair of themes that repeat in the reports, mainly ballast water management and speed reduction and route alterations in whale habitant areas. The companies have created different kinds of ballast water management systems to clean the water before releasing it to avoid the pollution of the ocean by ballast water, and to comply with the IMO's BWM Convention (see IMO, 2020d). Another factor that could harm the living creatures below the water is the possible collision of the ships and whales and the noise pollution the ships generate below water. To prevent the problems, the vessels are said to reduce speed of the ships to give time for the whales to notice the ship to avoid collisions and also reroute the vessels in the time of whale breeding, for example (e.g. Evergreen Marine Corp., 2019).

The IMO sets regulations for the shipping companies to prevent pollution and ensure safe transportation of dangerous cargo with the IMDG (International Maritime Dangerous Goods) Code (IMO, 2018). In addition to following the IMDG code, to prevent the risks in transporting dangerous goods, companies have established their own systems to identify undeclared or falsely declared dangerous goods in their bookings. For example, Hapag-Lloyd (2019, p. 47) presents their ‘‘Cargo Patrol System’’, that searches undeclared dangerous goods based on keywords and helps to identify such shipments. The system found 3 900 shipments in 2018, which were declined by the shipping line.

Moreover, COSCO Shipping Lines (2019, p. 14) has also created a notification system that holds records from shipments that have involved undeclaring or concealing dangerous goods. The system works in a three-step process: ‘‘prevention and monitoring, emergency response, as well as accountability and punishment’’ (COSCO Shipping Lines, 2019, p. 14). Clients who have been identified for such false or concealed reporting of dangerous goods will be put to blacklist, and they will not be allowed to book any containers from the company in the future.

SDG 15: ‘‘life on land’’ has not received much attention from the case companies, since they have mostly focused on the life below water- goal. MSC and CMA CGM are referring to the goal when mentioning the inland logistics solutions but are not explaining the actions regarding the SDG more specifically. However, the container liner shipping companies are strongly linked to the inland transportation providers to transport to container to the harbor and to the customers. Thus, the SDG 15 could be more relevant for the suppliers of the international container liner shipping companies and is therefore linked to the supplier management issues.

For SDG 16: ‘‘peace, justice and strong institutions’’, many different factors are mentioned by the case companies. Some companies are emphasizing the compliance of the company. For example, the case companies mention their own codes of conduct that all the employees need to follow and the ethical management of the company. In addition,

the mentioned compliance factors include aspects such as fair competition and anti-bribery policies. Moreover, many companies such as Hapag-Lloyd (2019) state that they have established whistle blowing systems or ethical hot-lines for their employees to express their concerns or report any incidents that they might have noticed concerning compliance, safety, or harassment, for example.

In addition to the compliance of the company, also the compliance of the suppliers and subcontractors is a significant part of the SDG 16. The companies communicate, that they have systems for supplier management, where the suppliers are screened and assessed with various criteria before being accepted as suppliers. In addition to supplier management, the companies also want to prevent possible transportation of unethical goods of their customers. For example, Hapag-Lloyd (2019) has mentioned how they have banned transportation of controversial cargo, such as shark fins and hunting trophies.

Lastly, the SDG 17: ‘‘partnerships for the goals’’, is mainly addressed as the partnerships between the different container shipping companies and industry related organizations to develop technology and other solutions to respond to the changing regulations of the industry. Some companies have also included the compliance matters and ethical management of the company under this goal, as in emphasizing the internal partnership within the company to work towards common goal in an ethical manner. However, some companies such as Maersk (2019a) have also included wider perspectives about the society under this goal with discussing inclusive trade practices.

In addition, many case companies such as Hapag-Lloyd, CMA CGM and COSCO Shipping Lines are describing their cooperation with NGOs or industry specific organizations, that aim to support the sustainable development, such as Clean Cargo, that is an initiative that works together with businesses to reduce the environmental impacts of the international transportation industry and promotes responsible shipping practices (BSR, 2020). Moreover, a platform for shipping line members about security and safety

incidents on containerized cargo, Cargo Incident Notification System (CINS), has been established to share information between the companies and to prevent risks of transportation of dangerous goods and other safety issues (CINS, n.d.). In addition, as the container liner shipping industry is operated mainly in alliances, it can be regarded also under the partnership goal. The companies work together to improve their efficiency, widen their network and port coverage, reducing costs, and to help meeting the environmental requirements of the industry (Evergreen Marine Corp., 2019).

4.3 Similarities and differences

As per the analysis, the reporting styles and the sustainability themes and issues of the case companies discussed in the CSR and sustainability reports are fairly similar. The different issues are usually divided for the corporate governance and compliance, environmental protection, employee relations, and societal matters. Seven out of the ten analyzed companies have addressed the UN SDGs in their reports. However, the level of the application of the SDGs varies significantly between these companies, that are Maersk, MSC, CMA CGM, Hapag-Lloyd, ONE, Evergreen, and HMM. All of these companies except for ONE have addressed the SDGs also later in the report, whereas ONE mentions the SDGs in the introduction part of the report but is not referring to them any deeper or more specifically in their report. Also, the approach of HMM is very brief compared to the other companies.

The reason for the differences in the approaches could be explained by the fact that all of the companies that have addressed the SDGs more specifically in their reports are based in Europe, except for the Taiwanese Evergreen. ONE is headquartered in Singapore and HMM in the South Korea. Thus, it could be concluded that the SDGs are more commonly known and used in Europe than in Asia. The World Business Council for Sustainable Development (WBCSD) and Det Norske Veritas (DNV GL), that provides ‘‘risk management and quality assurance services to the maritime, oil and gas, and power and renewable industries’’ (DNV GL, n.d.) conducted a global survey in 2018 to find out, how

the WBCSD members and Global Network partners are working towards the SDGs. The survey got responds from around 250 companies, out of which 56% were located in Europe, Middle East & Africa, 15% in Asia Pacific, and 27% in the Americas (WBSCD & DNV GL, 2018). Since over half of the respondents were from Europe and only 15% from Asia, it could be an indicator, that the SDGs are better known and used in Europe than in Asia. In addition, van Zanten & van Tulder (2018) found out in their research about the SDGs in MNEs, that companies in Europe engage with the SDGs more than companies in North America, which also supports the idea that European companies could be applying the SDGs more than companies in other parts of the world.

Also, all the home countries of the case companies, except for Taiwan, which is the home country of Evergreen and Yang Ming, are members of the United Nations (United Nations, n.d. -t). Thus, Evergreen has chosen to follow the SDGs even though its home country does not expectedly have its own strategy to follow the goals. In the contrary, COSCO Shipping Lines, that has not really addressed the SDGs in its sustainability report, is based in China, which is a member of the United Nations (United Nations, n.d. -t). Therefore, it is shown that the SDGs are not mandatory to be followed by the companies, even though their home country has agreed to create strategies to achieve them.

Moreover, the analyzed sustainability report of HMM was its first published sustainability report and ONE's analyzed report was its second sustainability report. Thus, it could be figured that the sustainability reporting is still in its beginning stages and the reporting practices are not as developed than other companies' that have published such reports for many years already. However, it is good to acknowledge that ONE was established only on 2017, so it is the youngest of the case companies. Nevertheless, the company was formed by a merger of three different container shipping companies, where the sustainability issues are surely thought of before the merger.

In addition to the nationality, the company size could be one reason explaining the different approaches concerning the SDGs. The biggest companies of the industry seem to

have applied the SDGs more extensively, as in also on the target level, whereas the smaller companies have addressed the SDGs very generally or not at all. Thus, it could indicate that the market leaders are more advanced in the CSR and sustainability reporting and are more aware of the tools and measures used for sustainable development. For example, according to Baumann-Pauly, Wickert, Spence and Scherer (2013), larger firms can have characteristics that enable them to implement CSR more than smaller companies.

Moreover, many of the case companies are stating sustainability in their vision and mission. Evergreen states, that the company wants to be a ''a guardian of the green earth" (Evergreen Marine Corp., 2019, p. 8). HMM (2019, p. 38) has a vision to be ''A leader in the global shipping and logistics industry that creates value for a sustainable future''. Thus, the companies can be regarded as using CSR as a way to build the company's responsible image and brand to the stakeholders, as per the CSR drivers described by Kurucz et al. (2008). It can also be a reason why the companies have adopted the SDGs to show that they want to contribute through them to build a more sustainable society and future. Many companies also describe the awards they have received for their CSR actions. For example, CMA CGM achieved a GOLD level in 2018 by Eco Vadis, a CSR rating agency, for their substantial improvement (CMA CGM, 2019, p. 12), and HMM received the Environment Award at the Global Freight Awards 2019 by Lloyd's List (HMM, 2019, p. 51). Thus, the companies want to show their stakeholders that they have received recognition for their responsible and sustainable actions in the industry.

4.4 Levels of responsibilities

When analyzing the CSR and sustainability reports of the case companies, the different levels of responsibilities defined by Carroll (1991) can be easily identified. For the economic responsibilities, the case companies are for example presenting their key figures from the reporting year, such as revenue and total transported volume. Thus, they are communicating that they have contributed economically to the societies where they

operate in. Moreover, the companies are providing information about how the corporations are governed, as in what committees and persons are responsible of which functions in the company to ensure the company operations.

For the legal responsibilities the companies are telling how they are following the industry related regulations and laws, for example by the IMO and ILO, as well as the national and international laws. The main factors concerning the legal aspects presented in the report are compliance in taxes, anti-corruption policies, employee rights and working conditions and compliance in different regulations preventing air and ocean pollution, for example.

The third level, the ethical responsibilities, begins to discuss actions that are not legally required from the companies but highly expected from the companies. First of all, publishing CSR or sustainability reports can be seen as a such responsibility itself, because the companies are not legally required to report their sustainability activities. However, since the reporting is very common nowadays, it can be regarded as one of companies' ethical responsibilities, through which companies can communicate that they want to act responsibly and contribute to the well-being of society and the environment. Moreover, assessing companies' activities and applying the SDGs in assessing risks and opportunities can also be regarded as an ethical responsibility, since the SDGs are not a mandatory framework for the companies to follow. In addition for the SDGs being a tool for companies in assessing their sustainability, they can also be a way to communicate the sustainability to the relevant stakeholders.

Many themes and actions mentioned in the reports can also be included in the ethical responsibilities. For example, providing employees health care, insurances, different kinds of assistance to help with balancing work and private life, that go beyond those set in the laws concerning working hours and conditions, can for example be listed under ethical responsibilities. That goes to show that the companies care about their employees and are contributing to their well-being and health, not only at the workplace. For

the environmental factors, the companies present many innovations and plans for how they could reduce their emissions even more than required by the IMO. Moreover, the companies take part in implementing the Hong Kong Convention and SRTI for the safe recycling of ships and thus, also show their commitment to act responsibly beyond the legal requirements in the said matter.

For the philanthropic responsibilities, the companies tell about their contributions in charity and donations and societal projects. Examples are MSC's Mercy Ships -project, that provides the vessels in use as hospitals and providing health care and nutrition for people in need (MSC, 2019a). CMA CGM (2019) tells about the Containers of Hope, where they have offered container and vessel space for charity projects. Moreover, for example ONE (2019) also mentions how they have offered free deliveries for NGOs to support in societal problems. In addition, the companies mention many local projects and charities where their employees have been a part of, for example ocean and coastal clean-up projects, and how they have organized different kinds of events to gather money for their own charity foundations.

4.5 Discussion with previous research

The findings of this research are partly in accordance with the findings of previous research, but show also differing results, which indicates that progress in the CSR and sustainability issues in the international container liner shipping companies is happening. Tang & Gekara (2018) state in their research that the environmental factors have received more attention in the industry than the social factors according to the CSR and sustainability reports and websites of the companies and found out, that some companies had not even included the social factors in the reports. The findings of this research, however, show that all the ten case companies have included both environmental and social factors in their CSR considerations. For example, during the writing of this thesis HMM published its first sustainability report, which includes also social aspects (HMM,

2019), when earlier the company has published only environmental reports (Tang & Gekara, 2018).

Tang & Gekara (2018, p. 6) also identified CO2 reduction and energy efficiency to be the top priorities in the environmental factors, whereas ‘‘health, safety and education and training’’ were identified to be the most important factors in the social dimension. According to the findings of this thesis, whereas the CO2 reduction and energy efficiency are still themes that are receiving a lot of attention from the case companies, also the NOx and SOx emissions and safe recycling of the ships are themes that are mentioned repeatedly in the reports. One factor for the change is surely the IMO Sulphur 2020 regulation, which has required companies to consider the emissions more broadly and to innovate solutions for the emission reductions.

For the social factors, the findings of this research and that of Tang & Gekara (2018) are quite similar. The occupational health and safety and education and training are still the main themes on the social factors of the sustainability reports. Nevertheless, there are some other topics, that seem to be included in the newer reports analyzed in this thesis, that are for example the importance of mental health and stress reduction of especially employees working on board and on managerial level, as well as encouraging women to higher positions through different managerial programs.

As Tang & Gekara (2018) also state in their research, there are several regulations that the international container liner shipping companies need to follow, for example the SOLAS, MARPOL, IMDG, etc. Thus, many CSR activities the companies describe in their reports are required from them to obey and not voluntary. Therefore, one could argue that the international container liner shipping is highly following the practices of compliance CSR, where CSR is practiced only to obey the legal requirements (see Ellis, 2010). However, many of the companies are communicating their role in contributing to common good and helping to preserve the environment as being a member of the society. Hence, many companies seem to implement strategic CSR, where they develop their CSR

strategies with the views and needs of different stakeholders and build the strategies to help in developing solutions for the problems (see Ellis, 2010). The strategic CSR mindset of the companies can be seen in the below quotes, for example:

> - *At MSC, sustainability is not a single department, but a mindset*. (MSC, 2019a, p. 50).
> - *Therefore, global companies are not only sponsoring volunteerism and social contribution programs, but also contemplating on their roles in addressing social problems and creating social value* (HMM, 2019, p. 86).

The most common SDGs in the international container liner shipping companies according to this research are SDGs 8: ‘‘decent work and economic growth’’, 13: ‘‘climate action’’, 14: ‘‘life below water’’, and 17: ‘‘partnerships for the goals’’. Wang et al. (2020) identified SDGs 8: ‘‘decent work and economic growth’’, 9: ‘‘industry, innovation and infrastructure’’, and 11: ‘‘sustainable cities and communities’’ to be the most adopted ones in the maritime industry. Thus, the findings of this research are partly in line with that of Wang et al. The SDG 8 seems to be among the most addressed ones in the maritime industry, which indicates, that the social factors of sustainability, and especially employee relations such as occupational health and safety are seen as extremely important in the maritime industry.

However, variation of the next most relevant goals seems to occur between this research and the findings of Wang et al. The difference in the findings could be explained by the different samples of the researches, since this research examines only 10 container liner shipping companies, whereas Wang et al. (2020) have also included container terminal operators in their analysis. Thus, the SDGs 9 and 11 might be more addressed by the container terminal operators than the container liner shipping companies, because the terminal operators are more involved in the local environments and communities, whereas the container liner shipping companies can be regarded as having more influence on the climate change and to the condition of the oceans. In addition, as also stated by Wang et al. (2020), the SDGs are highly interconnected with each other, and companies address similar themes on different SDGs, which is why the findings of the most addressed SDGs can differ.

Van Zanten and van Tulder (2018) state in their research about SDGs in MNEs (multinational enterprises), that MNEs are more bound to engage in SDG targets, that they can achieve through internal operations, rather than targets that need several stakeholders to contribute in. The findings of this research are in line with this statement of van Zanten and van Tulder (2018), since some of the most addressed SDGs in the case companies, SDGs 8, 13, and 14 have many factors that can be achieved through the company's own actions, such as for SDG 8 by following the laws and regulations concerning working conditions and creating company's own policies for non-discriminative hiring, for example. Moreover, for SDGs 13 and 14 companies can contribute directly by following the regulations set for the pollution, for example, and creating innovations and solutions that reduce the environmental impacts of the business.

Moreover, van Zanten and van Tulder (2018, p. 22) found out in their research, that MNEs intend to engage in SDG targets that ''avoid harm'' rather than ''do good''. The finding is also identified in the analyzed CSR and sustainability reports for this thesis, since most of the case companies had built their CSR and sustainability strategies by a risk assessment with stakeholders, and the identified risks were placed on materiality matrix based on the level of the risk for the company and for the stakeholders. Thus, risk reduction, as defined by Kurucz et al. (2008), can also be regarded as one of the CSR drivers in the international container shipping. The finding is not surprising, since the industry involves many risks, for example in the everyday work at the ships, in transportation of dangerous goods, and risks of oil spillage in the oceans, for example, which is why many CSR and sustainability considerations arise from aiming to avoid such risks.

In addition to the risk reduction and responsible brand being identified as some CSR drivers in the case companies, also international standardization and supply chain integrity can be regarded as significant CSR drivers in international container shipping. Many case companies are following ISO certificates, such as ISO 14001 for environmental management and ISO 9001 for quality management (see ISO, n.d.). There are certain

requirements that the companies need to meet to get the certifications. For example, to get the ISO 14001 certification for environmental management system, companies have to consider ‘‘all environmental issues relevant to its operations, such as air pollution, water and sewage issues, waste management, soil contamination, climate change mitigation and adaptation, and resource use and efficiency’’ (ISO, 2015, p. 3). Thus, the companies can be motivated to address and fix certain CSR challenges in order to receive the certification.

Moreover, the international container liner shipping companies are a significant part of global supply chains. As the supply chain integrity and responsibility can act as CSR drivers in companies (Visser, 2013, p. 12), it directly affects the freight transportation providers, such as container liners and airlines. Thus, the container liner shipping companies are pressured by their stakeholders to operate in responsible and sustainable manner according to their customers’ supplier management requirements, in the same ways as container liner shipping companies require their suppliers and subcontractors to follow their supplier code of conduct and meet certain CSR related requirements before accepting them as suppliers.

5 Conclusions

In this last chapter, conclusions of the main findings, theoretical contributions, managerial implications, limitations of the research, and ideas for future research are presented. This research aimed to shed light on how international container liner shipping companies practice CSR and sustainability through the Sustainable Development Goals defined by the United Nations. The international container liner shipping industry includes many aspects where CSR and sustainability considerations are important. Such aspects include the pollution of the ships, working conditions of the employees, and recycling of the ships, for example. Thus, the companies are experiencing many challenges and pressure to include CSR and sustainability issues in their risk assessment and find sustainable practices and solutions to tackle the challenges and minimize the risks. In the process of identifying the challenges and possible solutions, companies can use the SDGs and assess and amend their practices according to them to improve their actions and business to be more sustainable and contribute towards creating a better society and world.

The research found out, that most of the biggest operators in the container liner shipping industry have started to adapt the SDGs in their CSR and sustainability reports. The companies have different ways on how the priority SDGs are chosen and how they are integrated in the CSR strategies. Some companies are only starting to adopt the SDGs or have assessed them in very general level, whereas some companies have already analyzed the goals and their positive and negative impacts towards them very specifically and created own strategies and targets that are linked to the SDGs and their targets. Few of the case companies have not yet addressed the SDGs in their CSR or sustainability reports.

The SDGs that are the most addressed by the international container liner shipping industry according to the data analysis of this research are SDGs 8: ‘‘decent work and economic growth’’, 13: ‘‘climate action’’, 14: ‘‘life below water’’, and 17: ‘‘partnerships for the goals’’. These goals are linked to the biggest social and environmental risks that the industry creates, mainly the safety of the employees working on the companies,

especially on the ships and container yards, and the environmental impacts the emissions of the ships cause to air and water.

According to the findings, the adoption of the SDGs does not necessarily mean additional content on the reports. The main topics of the reports are fairly similar between companies that are more advanced on addressing the SDGs and companies that have not addressed the SDGs. Similar CSR and sustainability themes and their actions and innovations repeat in the reports. However, some differences concerning the approach for the SDGs can be identified, since some companies are discussing more about the internal actions to support the achievement of the goals, whereas some companies are presenting how they are contributing to the goals in a more philanthropic level.

As was stated by Wang et al. (2020) and also confirmed with this research, the SDGs are very interconnected and have similar themes between same goals. For example, for SDGs 3 and 8 the case companies had presented similar themes for how they are providing health care services for their employees in various forms. Thus, even though some company is not addressing an SDG that would be seen as a relevant goal for the industry in case, it cannot be concluded, that the company is not doing anything to support the said goal.

As stated by Tang & Gekara (2018) in their research about the role of customer expectations in the CSR in the international container shipping industry, the industry is highly regulated by different organizations, such as the IMO and ILO. The regulations concern, for example, the working conditions, safety practices, transportation of dangerous goods, emissions of the ships, and the energy efficiency of the ships. Thus, there several aspects of CSR are mandatory for the companies to follow in order to operate, so the CSR strategies can be regarded as compliance CSR, where the CSR is practiced mainly to follow the legal requirements. However, the companies emphasize their role as a member or a society and describe many different kinds of actions, that have an ethical or philanthropic nature in their CSR and sustainability reports. It shows, that the companies are

integrating the CSR considerations to the core of their strategical thinking. Moreover, they are involving different stakeholders in the strategic building process, to gain a better understanding of how their actions affect the stakeholders and what kind of issues the stakeholders consider significant for their business. Hence, the companies show great orientation for practicing strategic CSR, which can be regarded as preferred or even necessary considering the importance and the nature of the business in the world trade.

The different approaches for the SDGs could be explained by different CSR drivers of the case companies. For example, the SDGs can be used as a way to build the responsible brand of the company. Moreover, the size and nationality of the company might affect the level of implementation of the SDGs, since larger and more visible companies are stated to engage in CSR and sustainability initiatives easier than less visible companies. In addition, the SDGs might be more familiar in Europe than in Asia, for example.

5.1 Theoretical contributions

This thesis contributes to the existing research about CSR and sustainability in container liner shipping industry by providing an extensive glance on how the companies are practicing CSR and sustainability according to their CSR and sustainability reports. The triple bottom line of sustainability and different levels of CSR are discussed and examples about the CSR actions and initiatives according to them are described. Moreover, the thesis contributes to the research gap set by Tang & Gekara (2018) about the philanthropic community engagement in the case companies. Examples about the philanthropic actions, that were founded in the reports, are providing education possibilities for people from disadvantaged backgrounds and offering them employment in the company, for example. Thus, the people are given opportunity to get out of poverty and get a job, whereas the company gets talents.

Also, this thesis contributes to the existing research about SDGs in the container shipping industry by giving a comprehensive analysis about what SDGs are applied by the 10 case

companies operating in the international container liner shipping industry. The thesis describes what are the most common SDGs between the case companies and what SDGs are not seen as the most relevant within the case companies based on the CSR and sustainability reports they have published. The thesis gives the reader and overall view on how the international container liner shipping companies can contribute in the sustainable development and creates links between the SDGs and the CSR actions of the case companies. Moreover, the thesis presents differences and similarities in the application of the SDGs and discusses reasons for them, such as the different CSR drivers and nationality of the companies.

5.2 Managerial implications

The managerial implications of this research include the presentation of how international container liner shipping companies can contribute to the SDGs. The companies can contribute to the goals through their internal actions, such as for SDG 8 by following mandatory regulations and laws concerning employee safety and rights, as well as creating non-discriminative hiring policies. In addition, the companies can contribute to the sustainable development by innovating solutions and strategies to improve the efficiency of the vessels and the industry. Moreover, the companies can contribute to the SDGs with various co-operations with other companies and educations organizations, for example, to create initiatives with other companies to help in improving the sustainability of the industry, such as the Clean Cargo, or co-operate with education organizations to provide maritime education and employment for people with difficult backgrounds and get talented employees.

Also, this thesis can be used as an example when conducting an SDG analysis about some other industry. This thesis provides an example about how to categorize the different SDGs and the level of how they are addressed, provides examples on what kind of themes can be involved in which SDGs, and how the CSR actions and drivers can be explained by relevant theories.

5.3 Limitations and future research

Naturally this research has some limitations, that may affect the credibility of the research or give different results. As mentioned earlier in the methodology, all the case companies operate in the same industry, container liner shipping, which is the chosen industry to be examined in this research. Thus, the findings of this research are not to be generalized to other industries. The chosen sample for the research is 10 case companies, because they are the biggest operators in the market by TEU capacity. However, if the sample size was bigger, the results would have more variance and some new information could be revealed through a larger sample. However, due to the time limit of this research, the sample size was limited to ten companies.

In addition, the container liner shipping is not the only business of the case companies, but the companies are usually part of bigger corporation groups, that operate also on terminal and logistics services, for example. Some companies have included the other areas of business in their CSR and sustainability reports, whereas other companies have focused only to the container shipping in the report, and the terminal operations and logistics services can be practiced by different subsidiaries of the group. Thus, some of the results include also factors concerning the terminal and logistics services, but not from all companies since the delimitation was done to only analyze the container liner shipping. Moreover, the categorization in this thesis about the level of the application of the SDGs in the case companies is only one interpretation, and the categorization could be done differently by different observers.

The data for this research was gathered by downloading and analyzing the CSR and sustainability reports of the case companies. They were found to be the main channel where the companies communicate their CSR strategies and actions. However, it cannot be concluded for sure, that the companies tell the absolute truth about the state of the CSR in the companies. For example, some companies were very transparent about the reported compliance incidents and their reasons and consequences, or about the safety incidents that had happened in the company during the reporting year. Some companies stated

that no incidents had happened at all during the year, which seems quite hard to believe considering the risks of the industry. The case can also be, that some incidents have happened, but they have not been reported in the appropriate manner, which is why they don't show in the reports.

Thus, it could be that in some cases the CSR and sustainability reports are not as transparent as they seem to be and used more as a marketing material to build the brand image, rather than a transparent report about the past year and its challenges. Therefore, a more truthful view about the state of CSR and sustainability of the companies could be received from the employees working in the companies. By interviewing or by conducting a survey, one could better find out, are the CSR strategies presented in the reports really communicated to the employees and are the employees aware about the focus areas in the strategies. Moreover, it would give more information on how the safety regulations and practices are applied in practice on the vessels and container yards, and whether the employees feel that their safety and well-being is considered as extensively as stated in the reports. Hence, one possible future research topic could be the CSR and sustainability views of the employees of the international container shipping industry.

In addition, the SDGs have also received some critique on whether companies use them to boost the responsible and sustainable image of a company, but not really apply them in the whole value chain of the company, as to ''market their positive contribution to some SDGs while ignoring their negative impact on others'' (Nieuwenkamp, 2017). Since the SDG framework is voluntary for the companies to apply, it is possible that the easiest goals or only the goals that the company can have a positive impact on are emphasized, while at the same time there can be serious sustainability issues still happening on some other aspect. Thus, a more specific analysis about the whole value chain of the companies would need to be executed in order to know, whether the SDGs are truly considered and applied or if they are only used for marketing purposes, so called ''SDG washing'' (see Nieuwenkamp, 2017).

The year 2020 has already brought great challenges to the industry. The IMO Sulphur 2020 -regulation was set to force, which means that the companies need to choose the ways in which they can achieve compliance for the regulation. All the options bring extra costs and challenges for the shipping companies and take resources to plan and implement the new practices in the vessels (Vousvounis, 2019). Moreover, the global economy is facing severe challenges during the finishing of this thesis in spring 2020. The COVID-19 pandemic has reached global levels and is affecting the economies worldwide. The virus started from China, which is a very significant country for the international container shipping industry, since many of the biggest ports in the world are located in China (World Shipping Council, 2020b). Since many factories were closed in China in the beginning of the year, when the virus began to spread, the demand of the container shipping services decreased significantly (Paris, 2020).

Thus, the global trade is highly affected by the virus and is going to need a long time to recover. Since the international container shipping industry has an integral role in the global trade and is an essential part of global supply chains, it cannot avoid being affected by the virus, but is also going to experience great financial losses due to the situation. Thus, the economic and social dimensions of sustainability are surely increased during this time to ensure the continuity of the business and the health and support of the employees in case of illness or lay-off. In addition, CSR's role in crisis response also increases. Hence, the effect of the Coronavirus pandemic to the international container shipping business could be another possible topic for future research.

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