



**PROMOTING SUSTAINABLE DEVELOPMENT AS A PACKAGING MANUFACTURER IN THE EU AND THE US REGULATORY ENVIRONMENTS**

Lappeenranta–Lahti University of Technology LUT

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Examiner: Post-doctoral researcher Ekaterina Albats

## ABSTRACT

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### **Promoting sustainable development as a packaging manufacturer in the EU and the US regulatory environments**

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The global packaging industry is facing a phase of transformation. The amount of packaging waste should be reduced, as a significant part of, for example, the plastic waste in the seas originates from packaging, but many product-protective properties of these materials cannot be compromised. This requires enhancing the sustainable development of the industry at every stage of the value chain. This would require support from all political, economic, and social stakeholders, and cooperation between companies and organizations. The situation is complicated by the ambiguity of laws and regulations, and in the case of multi-national corporations', different practices in different operating regions. The company's subsidiaries can therefore be required to do very different things in terms of sustainability measures, sustainability communication, and sustainable marketing depending on the location of the facility.

This thesis examines how the packaging manufacturer's sustainability measures vary in different regulatory environments and how they shape the company's sustainability communication and sustainability marketing. The review is limited to the EU and the US, and the subject of the study is a large international packaging company originating from Europe. The empirical data of the thesis has been collected qualitatively using semi-structured interviews from the company's middle management, which are supported by data collected from the company's publications. The theoretical framework is based on previous research.

The findings indicate that for a large packaging manufacturer, the company's own policies have the greatest impact on subsidiaries' sustainability measures. Individual directives have an effect on practical measures, but often the company would do the same actions without regulations, or the laws do not demand enough from the company. Decision-making should be streamlined, and ambitious decisions should be made with the cooperation of different stakeholders. In addition, international dialogue could bring regions closer together.

## TIIVISTELMÄ

Lappeenrannan–Lahden teknillinen yliopisto LUT

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Kauppätieteet

Jarno Pasonen

### **Kestävän kehityksen edistäminen pakkausten valmistajana EU:n ja Yhdysvaltain sääntely-ympäristöissä**

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Kansainvälinen pakkausteollisuus on muutosvaiheessa. Pakkauksista syntyvän jätteen määrää tulee vähentää merkittävästi, sillä esimerkiksi merkittävä osa merien muovijätteestä aiheutuu pakkauksista, mutta näiden materiaalien tuotteita suojaavista ominaisuuksista ei voida tinkiä. Tämän ongelman ratkaisu edellyttää alan kestävä kehityksen edistämistä arvoketjun jokaisessa vaiheessa. Tämä edellyttäisi kaikkien poliittisten, taloudellisten ja yhteiskunnallisten sidosryhmien tukea sekä yritysten välistä yhteistyötä. Tilannetta mutkistaa lakien ja säädösten monimutkaisuus, sekä kansainvälisten yritysten tapauksessa erilaiset käytännöt eri toiminta-alueilla. Yrityksen tytäryhtiöiltä voidaankin vaatia hyvin erilaisia kestävyystoimia, -viestintää ja kestävä markkinointia riippuen toimipisteen sijainnista.

Tässä kandidaatintutkielmassa tarkastellaan, kuinka pakkausvalmistajan kestävyystoimet vaihtelevat eri sääntely-ympäristöissä ja miten ne muokkaavat kestävyysviestintää ja kestävä markkinointia. Katsaus rajoittuu Euroopan unioniin ja Yhdysvaltoihin, ja tutkimuksen kohteena on suuri, Euroopasta lähtöisin oleva kansainvälinen pakkausyritys. Tutkielman empiirinen aineisto on koottu laadullisesti käyttämällä puolistrukturoituja haastatteluja yrityksen keskijohdolta, joita tuetaan yrityksen julkaisuista kerätyillä tiedoilla. Teoreettinen viitekehys perustuu aikaisempaan tutkimukseen.

Tulokset osoittavat, että suurelle pakkausvalmistajalle yhtiön omat menettelytavat vaikuttavat eniten tytäryhtiöiden kestävyystoimiin. Yksittäiset direktiivit vaikuttavat käytännön toimenpiteisiin, mutta usein yritys tekisi samoja toimia ilman määräyksiä, tai vaihtoehtoisesti lait eivät vaadi yritykseltä tarpeeksi. Päätöksentekoa täytyisikin virtaviivaistaa ja kunnianhimoisia päätöksiä tehdä yhteistyössä eri sidosryhmien kanssa. Lisäksi kansainvälinen vuoropuhelu voisi lähentää eri alueita toisiinsa nähden.

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## ABBREVIATIONS

B2B	Business to Business
B2C	Business to Consumer
CE	Circular Economy
CEAP	Circular Economy Action Plan
CSR	Corporate Social Responsibility
CWA	Clean Water Act
EPA	(US) Environmental Protection Agency
ESG	Environmental, Social, and Governance
EPR	Extended Producer Responsibility
EUGD	European Union Green Deal
FTC	Federal Trade Commission
IRA	Inflation Reduction Act
KPI	Key Performance Indicator
MNC	Multi-National Corporation / Company
NFD	Non-Financial Disclosure
PCR	Post-Consumer Recycling
RCRA	Resource Conservation and Recovery Act
SM	Sustainable Manufacturing
SUP	Single-Use Plastic
TBL	Triple Bottom Line

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# 1 Introduction

There are fundamental differences between the US and the EU in what kind of sustainability measures and communication are required from companies through governmental regulation, which is natural between two distinct cultural contexts. As an example, companies operating in the EU have had to disclose all their environmental, social, and governance (ESG) sustainability information since 2017, when at the same time, such reporting is still voluntary for the companies operating in the US as for May 2023 (Rezaee et al., 2023). In recent years, it has been possible to observe how the regulations of these two areas differ in environmental matters. The EU tends to require binding solutions for organizations, while in the US, voluntary contributions are relied on, because according to the governmental bodies, this approach creates more ambition and less resistance (Erbach, 2015). Ranta et al. (2018) argue that also the requirements for thinking the whole life cycle and circular economy (CE) of product have noticeable differences between the EU and the US. With the help of internal regulation, companies are encouraged to think CE issues in all EU countries, but in the US, there are large differences in requirements between states, and there is not necessarily a binding regulation on a national level. (Ranta et al., 2018)

These differences put especially the multinational companies (MNCs) and manufacturers operating in both regions in a special situation. The parts of the company operating in various regions are naturally in a different regulatory environment in relation to each other. These different situations are not necessarily affected by the company's own collective values or goals, although MNCs themselves may even have an influence on regional regulations (Contractor et al., 2020). As a result, the company may set different sustainability goals for different regions or communicate to stakeholders about different sustainability issues or emphasize different topics depending on the region of operations. In a world that constantly demands more sustainability measures from organizations, it is important to understand how the operations of multinational manufacturers are shaped in relation to the regulations of different operating environments. Due to the scope of the global manufacturing business, in this thesis the examination is limited to the packaging sector, which in itself is a market worth more than a trillion dollars (Nikhil & Yerukola, 2022). The interest and importance of

the industry is also increased by the current pressures for change in terms of waste treatment and climate effects, and in addition to this, it is also a constantly growing industry (Viitanen et al., 2021). This thesis studies the sustainability measures, sustainability communication, and sustainable marketing of a packaging manufacturer operating in several countries in different regulatory environments.

## 1.1 Background

The global packaging industry is in transition, as the amount of waste generated from the package manufacturing would have to be reduced considerably, as a significant portion of, for example, the plastic waste in the seas comes from packaging, but many of the product-protecting properties of these materials makes them more difficult to recycle (Viitanen et al., 2021). The problem cannot be solved only by individual bans or material choices, but the solution requires all possible political, economic, and social stakeholders, and companies should focus on mutual cooperation instead of competition. (Package-Heroes, n.d.) The situation is complicated by the institutional ambiguity observed in the studies, which can be seen in the lack of clarity of regulations and policies concerning the industry, and how there are no precisely defined authorities responsible for solving problems (Sundqvist-Andberg & Åkerman, 2022).

From the point of view of this research and the companies that could benefit from this, it is important to look at what kind of actions have been taken in the EU and the US regarding the topic. The EU's European Green Deal (EUGD) has set the goal of being the world's first climate neutral continent by 2050 and creating a toxic-free environment in its area of influence (European Commission, 2019a). The key for the EUGD is the promotion of the CE, which problematically has over 100 different interpretations, which can lead to major implementation challenges and the collapse of the whole concept (Van Dijk et al., 2021). In the US, The Inflation Reduction Act (IRA) was recently introduced, which directs 370 billion dollars to clean energy and part of this to the development of clean American manufacturing (The White House, 2023). However, the strict domestic requirements of this act put manufacturers operating both the EU and the US in a position where they must seriously consider shifting the focus of investment to the US (Boehm, 2023). Both of these large projects in the

EU and the US will certainly shape the actions of multinational package manufacturers in many ways, and it is the assessment of such influencing factors that is one of the key elements of this thesis.

### 1.1.1 Implementing regulations

Studies show that environmental regulations can have a negative financial impact on manufacturing industries (Gray, 1987; Palmer et al, 1995) and companies often try to minimize these regulations' adverse effects in their operations to such an extent that the positive effects of the regulations are partially unrealized. (Wang et al., 2021) Nevertheless, it should be noted that strict environmental regulations can have a positive effect on a company's green innovation and promote the development of environmentally friendly competition (Borsatto & Amui, 2019). What makes these phenomena special for MNCs is that the same regulations do not apply to all parts of the company. It would seem that there is a research gap on how to collectively assess the impact of regulations on MNCs, whose operating environment is multifactorial and consists of several regulatory frameworks. Research must therefore be focused on individual regions and the results obtained from these should be combined into a single framework. Often the effects of regulations to companies' actions are assessed in the context of a specific country and the subjects of scrutiny are national companies, not global players (e.g., Féres & Reynaud, 2012). Companies and governments could benefit if these global regulatory interactions were studied in more detail.

The responsibility of companies in the implementation of stakeholder requirements and regulations cannot only be thought of as a negative thing for companies' performance. Companies' sustainability measures and reporting must be evaluated and developed so that these modern requirements are not only mandatory binding issues but can in the future be a source of business development and profit for companies (Niskala et al., 2019). In the context of packaging manufacturers, for example, implementing the EU's recent goals related to reducing plastic waste in manufacturing should be seen as a new opportunity for growth and development of companies' innovation activities (Package-Heroes, 2021). In the case of multinational manufacturers, problems can occur if regulations and ideas concerning the EU region were to be brought to the company's US operations as well. Cooperation between different companies in the US context around these EU regulation issues is difficult to arise

when competitors are not obliged to commit to the same goals. It would be interesting to see if companies find it beneficial to combine regulations concerning certain regions in all areas of the company, or if they are content to keep the sustainability goals as region-specific to maintain global competitiveness.

### 1.1.2 Communicating sustainably

Companies and organizations in general can be said to be non-homogenous entities with unique characteristics and dynamics, and each one's actions differ from each other in specific ways (Fonseca et al., 2021), even though entities facing the same environmental conditions can lead to institutional isomorphism, which can reduce these differences (DiMaggio & Powell, 1983). As a result of these possible differences, the integration of sustainability measures into the company's operations largely depends on the internal and external influences of the company (Fonseca et al., 2021). In the same way, there are many differences in corporate communication between different companies and the motivations, for example, towards corporate social responsibility (CSR) communication varies significantly through different industries and regions (Sweeney & Coughlan, 2008). Evaluating sustainability communication and drawing conclusions is also complicated by the fact that corporate communication and corporate marketing differ significantly from each other. Corporate communication reflects itself to public opinion, activists, and the media, and it considers many different communication methods and channels. On the other hand, a central part of the corporate marketing tradition is naturally to generate value for the company by sharpening and improving the brand image to shareholders. (Illia & Balmer, 2012) Thus, there is a need to assess the relationship of regulation to the motivations and goals of communication and marketing, especially in the context of sustainability. It could then be possible to see whether these actions serve the company, the society, or ideally both of them.

Research shows that sustainability reporting and ESG communication have a positive effect on the market, financial, and operational performance of a manufacturing company, and actions towards developing green production are generally not expensive in relation to the end result (Buallay, 2019). It can therefore be useful for manufacturing companies to at least communicate about sustainability issues comprehensively, even if it is not required through separate regulations or policies. However, for example, large European manufacturing

companies do not report on CE matters on a sufficient scale, and in addition, there is a lack of credible discussion about the practices for implementing CE procedures to the companies' manufacturing processes (Dagiliene et al., 2020). Although some companies are happy to participate in sustainability communication and reporting, there may often be shortcomings in the implementation, especially if the communications about sustainability matters are not regulated in any significant ways. The existing policies and regulations may not be able to consider the quality requirements of reporting well enough, and policy makers probably do not want to restrict companies' freedom of communication excessively, so that the willingness to report does not decrease significantly. Finding the appropriate number of regulating actions is a challenge.

## 1.2 Research objectives and questions

Based on previous studies, it can be observed that there is a definite research gap regarding the drivers of the sustainable regional operations of large multinational packaging manufacturers. There is a need to study in more detail how local regulations and policies affect the sustainability measures of a manufacturer operating simultaneously in the EU and the US. The objective is to investigate how the company's representatives see the sustainability regulatory environments concerning the company's industry and how these regulations shape the company's operations. At the same time, this thesis searches differences in the company's operations between the EU and US facilities. The overarching goal is to create a picture for companies and policy makers of how local regulations work for MNCs, only part of whose activities fall under the scope of these specific regulations. The pursuit of CE and sustainability have been a strong part of the values of the company studied in this thesis for a long time. Therefore, one objective is also to investigate how unified the company's values can be when business operations are spread globally across relatively independently operating units.

As a result of these factors, the main research question is stated as follows:

*Q1: How package manufacturers' sustainability measures vary depending on the different regulatory environments in the EU and the US?*

Perhaps the most publicly visible parts of a manufacturing company in sustainability matters are communication and marketing. These channels are the most direct way for stakeholders to get information about the company's values, operations, results, and future plans. EU Directive 95/2014 regulates companies' non-financial reports and defines mandatory reportable matters, which shows that there is also a binding regulation on corporate sustainability reporting (Aureli et al., 2020). Despite the binding nature of this directive, institutional pressure is also an opportunity for companies to communicate and present their sustainability measures in a defined and reliable manner. Another object of this thesis is therefore to examine how different regulations in the EU and the US shape the sustainability communication and marketing of a multinational package manufacturing company. It is necessary to study how the company's sustainability communication differs in different regions and which regulations shape communication in a visible way. In addition, the communication of different regional offices must be compared with the company's international sustainability communication.

Therefore, the second research question is stated as follows:

*Q2: How do different regulatory environments shape package manufacturers' sustainability communications and sustainable marketing?*

With the help of these two research questions, this thesis aims to create a sufficiently comprehensive picture of the impact of regional regulations on both publicly visible and internal operations of a package manufacturing company.

### 1.3 Research methodology and delimitations – in brief

The empirical study of this thesis is conducted using qualitative methods. More precisely, it is a qualitative single-case study of a large multinational package manufacturing company. For the empirical section, semi-structured interviews have been conducted and the interviewees are company representatives from two distinct operational regions. In addition to this, a substantial amount of secondary data has been collected from the publications of the company and stakeholders alongside the interviews. The thesis covers two operational

regions of a single company in the packaging sector. The use of qualitative methods is justified when detailed information about a specific phenomenon is desired, and no actual quantitatively measurable results are produced (Hammarberg et al., 2016). The use of a case study method is also reasonable in this thesis. Case studies aim to gather information from a single situation or setting, they typically use interviews and observations as data, and they can be used to describe, test, or generate theories (Eisenhardt, 1989). Broader justifications for research methods, all data sources, data collection, and analysis methods are presented in chapter 3. Although qualitative studies are characterized by weak generalizability, the purpose of this thesis is above all to serve as a detailed example for companies and communities. This thesis can be placed as supporting material for the theoretical framework of the packaging industry, the research of which should be expanded significantly.

## 1.4 Structure

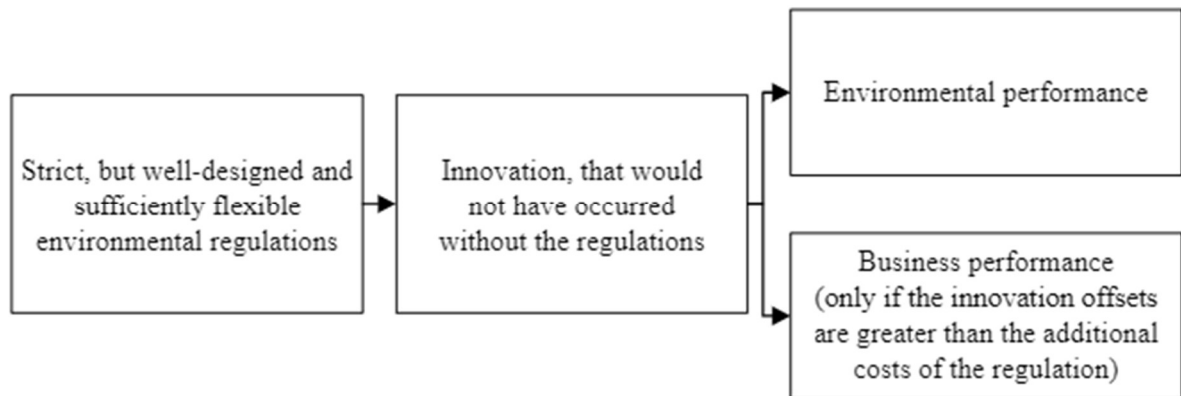
This bachelor's thesis studies the sustainable regional regulatory environments of an international package manufacturing company in six main chapters. The introduction presents the background and reason for the research, the research questions, and goals, and briefly the research methodology and delimitations. The theoretical framework is created with the help of a literature review. Topics covered include environmental regulations in manufacturing, sustainability theories, sustainability communications, and sustainable marketing. In the third chapter, the research methodology for the empirical study is discussed in more detail. The fourth chapter presents the results and findings of the case study, and the fifth chapter is the discussion which combines the results with previous studies. The sixth and final chapter is conclusions, which discusses implications, reliability, limitations, and future research.

## 2 Theoretical framework

This section introduces the concepts and theories important to this thesis, which form the theoretical basis of the conducted research. The previous literature presented in this section addresses environmental regulations concerning manufacturing industries, and examples from the EU and the US. After that, the sustainability and the CE of manufacturing and the package industry will be reviewed. Finally, the section presents literature on companies' sustainability communication and sustainable marketing. Due to the scope and multiple dimensions of the topics covered, not all perspectives can be considered, but the presented literature primarily focuses on theories and concepts concerning manufacturing companies. Whenever relevant and available from the literature, the review in each section also has links to the packaging industry.

### 2.1 Environmental regulations in manufacturing

Traditionally, it is thought that particularly strict environmental regulation can cause harm to the competitiveness and productivity of manufacturing companies. Regulations limit the natural operation of industries, force companies to direct resources to update production and meeting environmental requirements, and the financial resources used for these cannot be directed towards other investments or opportunities. (Rubashkina et al., 2015; Wang et al., 2019) However, this view has been challenged, maybe most notably in the articles by Porter (1991) and Porter & van der Linde (1995). On the basis of these articles, the Porter Hypothesis has been created, which suggests that well-designed environmental regulations can produce innovative activities that benefit both the environment and generate economic growth for the company. The assumption is that only certain types of regulations can produce innovation in polluting industries that leads to environmental benefits. If the monetary benefit obtained from the innovation exceeds the value of the resources used by the company to implement the regulation, causal relationships can show that the environmental regulation was both environmentally and economically beneficial. (Porter, 1991; Porter & van der Linde, 1995) This hypothesis and the causal relations are described in Figure 1.



*Figure 1. Causal links in the Porter Hypothesis – adapted from Porter (1991), Porter & van der Linde (1995), and Ambec et al. (2013)*

The Porter Hypothesis is a relatively unambiguous concept, but it did not have a strong theoretical basis until several years after its introduction. This weakness of the theoretical foundation has been one of the most significant reasons for criticizing the model (Dechezleprêtre & Kruse, 2018). However, Mohr (2002) has presented a theoretical model that strongly supports the assumption of the Porter Hypothesis that environmental regulations can produce both environmental and business performance. The premise of this example is that knowledge spillovers prevent companies from switching their ineffective polluting processes to more effective and environmentally friendly options. When companies know what their competitors are doing, they tend to wait until someone else makes the decision to adapt the new processes. This creates second adapter benefits that can exceed those of the first adapter. Environmental regulations force the companies to simultaneously adopt the new, more efficient, and environmentally friendly innovations, in which case no winner-loser situations arise. (Mohr, 2002) This is a significant example that demonstrates the potential theoretical validity of all causal relationships in the Porter Hypothesis.

These concepts and examples have one significant limitation which weakens their generalizability at the international level, and in the situation of MNCs of the industries, which is the use of country-specific markets. The introduction of subsidiaries and multiple markets creates more complex theories and examples. The behavior of MNCs in the face of environmental regulations can be roughly divided into two opposing groups of research examples. Nippa et al. (2021) say, that according to the more negative view, MNCs systematically

oppose environmental regulation to maximize profits (Clapp & Dauvergne, 2011), either by moving production to less regulated countries (Candau & Dienesch, 2017; Li & Zhou), or by weakening the effectiveness of regulations through lobbying and political influence (Eberlein & Matten, 2009). An important example of MNCs anti-regulation activity was the Volkswagen's emission scandal, as the company was caught understating and covering their emissions, which also ultimately exposed the car manufacturer's significant lobbying power in the sustainability issues across the globe (Braun & Van Erp, 2022).

The more positive view suggests, that MNCs are willing to reduce their negative environmental impact and obey the regulations, because developing environmentally friendly processes and products create firm-specific advantages (FSA's), as these new innovations can be brought to the global market (Rugman & Verbeke, 2001; Nippa et al., 2021). This positive scenario will more likely apply to MNCs with subsidiaries in regions with strict environmental regulations, as the subsidiary is operating in an environment where green innovation is strongly encouraged, which then leads to possible FSA's (Attig et al., 2016; Nippa et al., 2021). There is certainly evidence that MNCs should encourage their subsidiaries to be as sustainable as possible to obtain various competitive advantages. For example, the Porter Hypothesis can therefore be considered in the case of MNCs to be particularly related to subsidiaries, which can be thought of as operating partially like domestic companies. After all, subsidiaries can be considered to be their own legal entities, they are a separate company from an accounting standpoint, they can have their own corporate culture, and they have their distinct operational regions, even though the parent company also has an effect on their actions (Chen, 2020)

### 2.1.1 The EU context

In recent years, the European union has presented several different strategies, the aim of which is to develop the competitiveness, digitalization, and greenness of European industries (Mohamedaly et al., 2022). Perhaps the most comprehensive of these strategies is the previously introduced European Green Deal (EUGD), which aims to set the benchmarks for the EU's sustainable development and climate neutrality for the next three decades (European Commission, 2019a). One of the key plans of the EUGD is the Circular Economy Action Plan (CEAP), which presents a set of legislative and non-legislative measures to create a

suitable political environment to transform the European industries and businesses towards the CE (European Commission, 2020a). The CEAP includes the Sustainable Products Initiative, the purpose of which is to produce a clear and consistent regulatory framework that makes sustainable products the norm in the EU and targets especially the resource-intensive industries (European Commission, 2022). From the point of view of the packaging industry, the CEAP especially aims to influence the reduction of over-packaging of products, the standardization of packaging quality in all EU countries, and the mislabeling of packaging and the clarity of instructions (EFFL, 2021).

The EU has also created an extensive regulatory framework related to the sustainability communications and reporting of large companies. These topics are also discussed later in section 2.3. The previously mentioned EU Directive 95/2014, also known as the Non-Financial Disclosure (NFD) Directive, requires large companies to report on their social, environmental, and human rights impacts, which brings transparency to different industries and should indirectly result to more responsible and sustainable actions as the liability increases (Kinderman, 2020). Although the NFD Directive is not a regulation that directly shapes the production and environmental impact of companies, it is still mandatory and, compared to previous directives, more specific in its requirements. In addition, it has had several years to develop and receive various updates and refinements. (Korca & Costa, 2021).

### 2.1.2 The US context

In the US, the US Environmental Protection Agency (EPA) is the primary actor when environmental laws passed by the US Congress are formed into regulations or national standards, the latter of which serve as the basis for the states' own regulations. In addition, the agency helps states comply with standards, educates companies and, when necessary, enforces regulations. (EPA, 2022a) The EPA has had a role in many key environmental laws and regulations affecting manufacturing companies, for example, the Resource Conservation and Recovery Act (RCRA) and the Clean Water Act (CWA) (EPA, 2022b). The former is mainly related to the disposition and transportation of hazardous waste and the latter is related to preventing, for example, industrial waste from entering the waterbodies (EPA, 2022c; EPA, 2023a). For the CE and sustainable development of materials there are currently no binding national regulations, but the EPA has a systematic approach to using and reusing materials

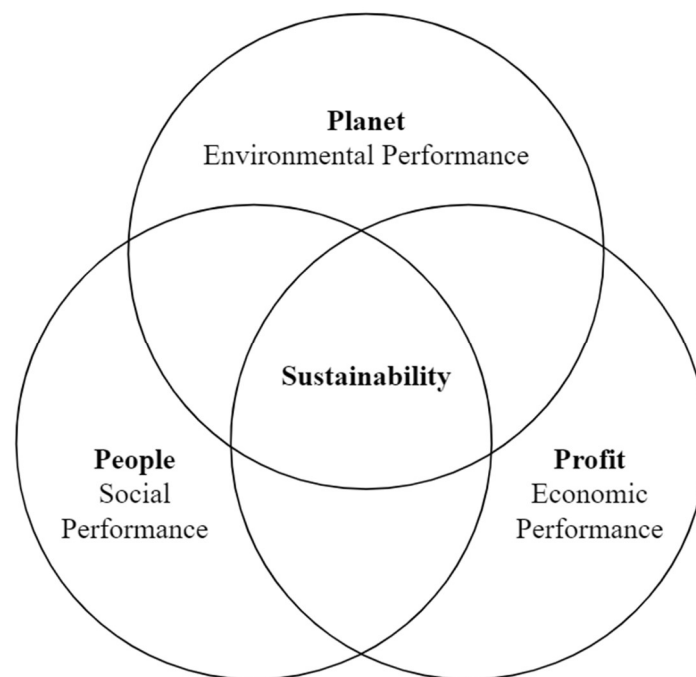
and the future development of the life-cycle perspective called the Sustainable Materials Management (EPA, 2023b). In the US, the responsibility of the states is strongly emphasized when it comes to sustainability and environmental regulation, and the actions required of companies vary relatively much depending on the place of operation. There is also currently no binding policy similar to the NFD Directive regarding the companies' ESG (environmental, social, and governance) reporting in the US (Christensen et al., 2021).

## 2.2 Sustainability in manufacturing businesses

Studies have shown that manufacturing businesses commonly define sustainability through the traditional Triple Bottom Line (TBL) (Eslami et al., 2018; Moldavska & Welo, 2017). The term was made familiar to the wider audience by John Elkington in his article *Cannibals with Forks: The Triple Bottom Line of 21<sup>st</sup> Century Business* (1997). Elkington says that when companies focus simultaneously on economic, environmental, and social aspects of their business, these together can create sustainability. In the original definition these aspects were called profit, planet, and people. The connection between these aspects is described in Figure 2. Alhaddi (2015) says that the TBL and sustainability are often used interchangeably in various sources and the three aspects of the TBL might not always be in balance with each other. When researchers talk about sustainability, they might only mean the environmental or social part of the TBL, or even exclude the economic factor, even though Elkington originally placed the aspects in an equally important role (Alhaddi, 2015). Although there are many ambiguities in the use of this model in different sources, it is still important to understand the meaning of the TBL, as many manufacturing companies determine their sustainability actions through the three aspects of this concept.

Previous business literature often has a strong focus only on the environmental aspects of sustainability, even though it is not necessarily stated in the research at hand (Alhaddi, 2015). In the context of this thesis, it does not necessarily become a problem, as the environment is also the most central element of the definition of sustainability in this work. Some literature suggest that the term "sustainability" only refers to the environmental side of a wider term called "sustainable development" (Holden et al., 2014). The widely referenced Brundtland Report defines sustainable development as the "development that meets the needs of the

present generations without compromising the ability of the future generations to meet their own needs.” (WCED, 1987, p.41). By this definition the environment rises to the most important position, as the social and economic aspects are not as crucial when talking about the basic human needs. The environmental dimension of sustainability seems to be the most important for manufacturing companies, as the achieved environmental development is in itself enough to justify the implementation of sustainability maneuvers into the operations of the company (Eslami et al., 2018).



*Figure 2. Triple Bottom Line – adapted from Elkington (1997)*

### 2.2.1 Sustainable manufacturing and circular economy

For manufacturing companies, an important way to implement sustainability measures in their operations is sustainable manufacturing (SM) and production. As with the definition of sustainability, there are also many definitional problems with SM, because previous literature does not agree on what SM actually means (Haapala et al, 2013) and there are numerous different definitions and interpretations for the whole concept (Jawahir & Bradley, 2016). For the packaging industry, factors that determine sustainable manufacturing are, for example, the use of better modern packaging materials, the efficiency of production, product reusability and overall recyclability. These elements largely overlap with the elements defining

the CE, such as maximizing recycling, extending product life cycles, reducing the amount of waste generated, and encouraging reuse. (Mattia et al., 2021) The importance of the CE for manufacturing industries has been emphasized in recent years and, for example, the European Commission currently places the CE and resource efficiency among the most important issues in sustainable development strategies (Domenech & Bahn-Walkowiak, 2019). As the definition of SM remains in the literature, despite extensive research, as a complex set of organizational instruments and performance characteristics (Moldavska & Welo, 2017), there is an option to use concepts like the CE to support industry-specific definitions.

Even though the CE also has many definitions and interpretations, Nobre and Tavares (2021) have created a combining set of defining factors for the concept:

*Circular Economy is an economic system that targets zero waste and pollution throughout materials lifecycles, from environment extraction to industrial transformation, and to final consumers, applying to all involved ecosystems. Upon its lifetime end, materials return to either an industrial process or, in case of a treated organic residual, safely back to the environment as in a natural regenerating cycle. It operates creating value at the macro, meso and micro levels and exploits to the fullest the sustainability nested concept. Used energy sources are clean and renewable. Resources use and consumption are efficient. Government agencies and responsible consumers play an active role ensuring correct system longterm operation. (Nobre & Tavares, 2021, p.10)*

This definition shows the importance of CE to the manufacturing businesses and especially to the packaging industry. CE studies currently have a strong focus on production and material use, and most of the articles discussing CE are clearly limited to the manufacturing industries (Kirchherr & van Santen, 2019). The importance of CE in the sustainable development of manufacturing industry cannot be ignored, as it has a great potential for companies to reach many of their current sustainability goals (Kristoffersen et al., 2020). Knowing the concept could then be said to be particularly important when looking at how packaging manufacturers understand their sustainability measures and sustainable manufacturing.

### 2.2.2 Sustainability in the packaging industry

Many sustainability actions that a company can implement are not industry specific. For example, in environmental matters, almost any company could consider energy consumption, the amount of waste and emissions, reporting, animals and natural habitats, voluntary

actions, accident prevention, and the use of sustainable materials and components (Chow & Chen, 2012). However, packaging manufacturers have to think about a special trade-off when talking about the sustainability of their products' raw materials. Some materials, especially plastic, extend the shelf life and improves the durability of the goods placed inside the packaging, for example food items (Tucki et al., 2022). High-quality and durable materials, especially in consumer packaging have significantly increased the sustainability of food production and distribution on a global scale (Sundqvist-Andberg & Åkerman, 2021). However, plastic, and plastic-coated packaging are a significant hindrance to the implementation of CE in the packaging industry, which is not necessarily the fault of the material, but of inadequate disposal (Van Eygen et al., 2018). Roughly half of the worlds' plastic becomes waste in less than four years, and the largest market for the global plastic production is the packaging sector (National Science Teachers Association, 2017). Plastic-like properties are definitely required from packaging materials now and in the future, but the utilization of fossil-based and non-biodegradable products must naturally be reduced and switched to more environmentally friendly polymers (Asgher et al. 2020). However, as the cost of developing new materials is significant, and the use of fully biodegradable materials present challenges, companies and stakeholders must first of all think about how the packaging materials could be reused, instead of disposing them as in a traditional linear economy (Steenis et al., 2017).

In addition to material choices, the sustainability of the packaging industry can be increased by making processes more efficient and improving employees' skills in using the equipment and machinery. However, it is difficult to influence these issues with standards and industry-specific regulations because each producer's technologies are different from each other, and the development of sustainability might require producer-specific solutions. (Tucki et al., 2022) Instead of these internal actions, the collective sustainability of the industry could possibly be developed at the end of the products' first life cycle, if the packaging manufacturers were required to take more producer responsibility in waste management (da Cruz et al., 2014). Traditionally, the public sector has been responsible for processing waste generated in society, such as for example packaging waste. Consequently, the monetary costs of waste management have often been the responsibility of someone other than the producer, for example, in Japan and the US. (Okuda & Thomson, 2007) However, at least in the EU, companies that produce waste, have a large financial responsibility in implementing package waste recycling, as in almost every EU country the producers are covering the incremental

costs of recycling completely. Still, there are also so-called free riding producers, who are not doing their part at every possible point of the product's life cycle disrupt the market and make waste recovery collectively more difficult. (Da Cruz et al., 2014) Broader producer responsibility could possibly reduce the waste generated when every stakeholder would like to cut costs at the end of the product's life cycle.

### 2.3 Sustainability communication

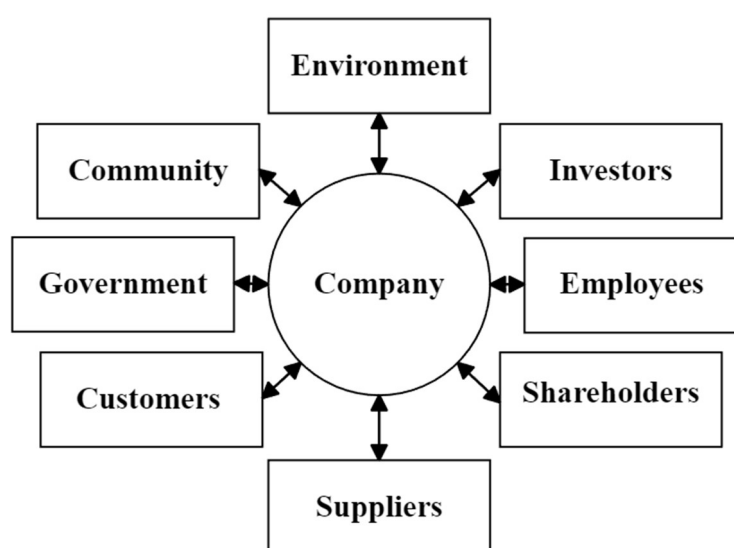
Communication plays a significant role in companies' sustainability measures, as it helps the company's sustainability actions seem legitimate. In addition, sustainability is a broad, complex, and ambiguous concept with a high uncertainty, which requires continuous communication of information to all stakeholders. (Genç, 2017) Communication must be an integral part of companies' sustainability measures, if they want to secure their sustainability strategies and possibly achieve competitive advantage (Amini & Bienstock, 2014). Effective sustainability communication, for example corporate sustainability reporting and the inclusion of sustainability themes in employee training and evaluation can promote the change of corporate culture in a more sustainable direction and strengthen the sustainable image of the company (Linnenluecke & Griffiths, 2010).

Corporate sustainability communication can be evaluated and defined in countless different ways, but the commonly used term when talking about these topics is Corporate Social Responsibility (CSR). This refers to all the activities in which the company tries to include social and environmental responsibility in its business operations and stakeholder interactions (Van Marrewijk, 2003). CSR reporting gives companies the opportunity to communicate to society the sustainability issues that the company considers to be important (Sheehy, 2015). Different organizations and projects have tried to standardize CSR reporting and train companies to communicate effectively about sustainability issues, but around the world companies are required to do different things related to non-financial reporting, and often these actions are not mandatory (Christensen et al., 2021).

Companies have many different motivations for participating in CSR reporting and communication. In the case of voluntary reporting, the purpose may be to try to please different

stakeholders, for example to reduce external pressure from regulators, society, and customers (Sinclair-Desgagne & Gozlan, 2003). Another view is that companies participate in environmental CSR reporting purely with the goal of increasing the company's financial value and thereby bringing additional value to owners and investors (Cordeiro & Tewari, 2015). However, it is difficult to assess how significantly CSR activities increase the company's financial value, as a causal relationship between increased CSR reporting and financial performance cannot be directly demonstrated (Lyon & Maxwell, 2013), or the impact is relatively small in comparison to other major corporate events (Cordeiro & Tewari, 2015). Therefore, when evaluating the value of CSR reporting, all stakeholders can be considered, and the created value does not have to be assessed only in monetary terms (Freudenreich et al., 2020).

The important thing is that the value brought by the company's actions is in line with the stakeholders' interests, which then leads to a more positive perception of the company (Freeman, 1984). This is a fundamental part of Freeman's (1984) Stakeholder Theory, which suggests that a successful company should deliver value to all stakeholders. Figure 3 introduces some examples of possible stakeholders in the context of CSR. Sustainability measures, such as resource efficiency and reducing emissions can also be seen as value creation parameters and the company should communicate about these issues (Khojastehpour & Shams, 2020).



*Figure 3. Stakeholder Theory in the context of CSR – adapted from Freeman (1984) and Jansson (2005)*

## 2.4 Sustainable marketing

Sustainable marketing could be said to be an umbrella term, and the definitions and interpretations for it are diverse, especially because the term “sustainable” can mean many other things besides environmental sustainability (Kumar et al., 2013). This thesis focuses on sustainable marketing from the point of view of how companies include environmental sustainability in their marketing and marketing strategies. There are two examples that together define sustainable or green marketing well. Fuller (1999, p.4) says that sustainable marketing is “the process of planning, implementing and controlling the development, pricing, promotion, and distribution of products in a manner that satisfies the following three criteria: (1) customer needs are met, (2) organizational goals are attained, and (3) the process is compatible with eco-systems”. This definition combines the traditional definitions of marketing with the environmental impact of such processes. Mishra and Sharma (2012) say that in green marketing the marketing process should be less harmful to the environment and raise awareness about current environmental issues, and the marketed products or services should be environmentally safe. Sustainable marketing is distinguishable from other sustainability communication, as the focus is above all on increasing sales of products and services and developing the green brand image (Dangelico & Vocalelli, 2017). However, green, or sustainable marketing can also be considered a subcategory of company’s CSR strategies (Vacaro, 2009).

Research has shown that B2B companies tend to implement sustainability to their marketing strategies more often than B2C companies. This might have something to do with the great buying power, leverage, and overall environmental sensitivity of B2B customers, as they also often have sustainability responsibilities to their own customers. (Rudawska, 2019) In the modern business environment, incorporating sustainability themes into companies’ marketing strategies is becoming necessary to maintain a sustainable market advantage (Kumar et al., 2016). The size of the company may also affect the sustainability of their marketing, as larger companies often have more resources and also experience greater pressure from stakeholders to change their marketing methods (Rudawska, 2019). In the context of the packaging industry, if a customer does not care or is not ready to pay more to a company that is relatively active in their sustainable marketing, it can reduce other companies’ interest to invest in such activities. However, since sustainable marketing can also improve

companies' competitiveness in this industry, with the help of information and promotion, customer's preferences can be changed, and sustainable products can be brought to their attention. (Wandosell et al., 2021) Sustainable marketing cannot only be related to product designs or individual advertisements when there is an information asymmetry between the seller and the buyer. For example, just eco-labeling products is not enough to make the customer understand how environmentally friendly the product truly is, and the producer must use additional communication methods to explain what makes their products sustainable in a reliable manner and thus introduce transparency to their marketing (Van Amstel et al., 2008).

#### 2.4.1 Greenwashing

As mentioned before, companies are implementing and developing sustainable marketing, as the external pressure from stakeholders can be high, and sustainable marketing has a potential to increase competitiveness. On the other hand, governmental pressure affects how companies' sustainable marketing remains truthful and ethical (Rotman et al., 2020). Misleading consumers about a product, service, or environmental practice is called *greenwashing*, and it is prohibited in various regions, even though the regulations for it are often ambiguous (Lee et al., 2018; European Commission, 2020b). Greenwashing often comes up at the supply-chain level, when a company marketing itself as environmentally friendly is revealed to be cooperating with a supplier that operates in an environmentally or socially harmful way (Pizzetti et al., 2019). Governmental regulations are necessary means of reducing greenwashing at the supply-chain level (Zhao et al., 2012), but the penalties given by the governments would have to be tougher than at present to prevent the phenomenon completely (Sun & Zhang, 2019).

Greenwashing can be divided into two main categories. "Claim greenwashing" is the use of textual disinformation to deceive the customer about the brands or products eco-friendliness, and "executional greenwashing" uses visuals, as for example, colors or pictures to influence customers perception about the product's environmental benefits. (Parguel et al., 2015) Both of these have significance in the packaging industry, as the products visuals and textual information are an important way to affect images and purchase decisions (Wagner, 2015; Parguel et al., 2015; Testa et al., 2020). The materials, size, marketing, logistics, and many

other things related to packaging are regulated, but when it comes to visuals and graphic design, there is a lot of ambiguity at what point the package has false claims or represents greenwashing (Wagner, 2015).

## 2.5 Summary of theories

The theoretical section introduced previous literature on environmental regulations in the EU and the US, the sustainability of manufacturing companies, corporate sustainability communication, and sustainable marketing. The topics included within these sections were, for example, the Porter Hypothesis, motivations behind sustainability, the Triple Bottom Line, definitions for circular economy, sustainability in the packaging industry, corporate social responsibility, the Stakeholder Theory, and greenwashing. With the help of these, a theoretical framework has been created, against which the findings of the study are evaluated in the discussion section.

Together with the research questions the presented concepts and theories form a framework for the researched topic that surrounds the results and gives the findings a point of comparison, which can link them to the existing studies. There are definite research gaps in the previous literature, especially in this case when dealing with packaging companies, but the empirical section can provide evidence that the presented theories are also compatible with the studied industry. Next, the thesis moves to the description of the methodology, followed by findings, discussion, and conclusions.

### 3 Methodology

This section introduces the data collection methods and the nature of the data (primary and secondary data), formation of the interviews, interviewees, and data analysis process. The contents are divided into a data section and an analysis section, in addition to which the choice of research methods is justified. The empirical work of this thesis has been conducted as a qualitative study. More specifically, this is a qualitative case study of a multinational company in the packaging industry (Company X). Depending on the interpretation, this thesis can be considered as a single case or a group of multiple cases, as the research includes two operational regions, albeit within the same company. Single cases also often contain multiple layers of analysis, and the scope can include, for example, the whole industry alongside an individual company (Eisenhardt, 1989). The reason for the use of a qualitative case study in addition to the justifications by Hammarberg et al. (2016) and Eisenhardt (1989), is the methods flexibility and the ability to design the research methods according to the phenomenon being studied. In addition, the use of multiple data sources is a characteristic for this method, and therefore it is well suited to studying the complex phenomenon of this thesis. (Hyett et al., 2014)

Despite the relatively broad theoretical framework, both inductive (context, similarity, researcher's judgement) and deductive (theory, causal-relations, existing knowledge) methods are used in the analysis (Naumovska & Zajac, 2022), as the research questions can be considered pragmatic, and the interview answers are partially specific to the subsidiary or company. The use of inductive approach is justified when the theory behind the topic is incomplete and there are insufficient research results in the previous studies (Armat et al., 2018).

For confidentiality reasons, no precise information can be given about the Company X used in this research. In terms of size, it is a company whose net sales are measured in billions, and they operate in more than 100 locations worldwide. They mainly operate in the B2B sector and in their values, they emphasize sustainability, responsibility, and safety. They produce versatile packaging solutions from different raw materials for a wide range of uses. A significant proportion of the company's customers are other large companies globally.

### 3.1 Data

The primary data for this thesis has been collected using semi-structured interviews. Cachia and Millward (2011), say that this interview method has features of both structured and unstructured interviews, because despite the pre-defined interview guide, the interviewer can ask follow-up questions to deepen understanding or to explore the topic more. This type of interaction can be described as a “managed conversation”, and it is suitable for both inductive and deductive approaches. One of the most important benefits of a semi-structured interview is the easy emergence of reciprocity between the parties (Galletta, 2012). One practical thing about this method is, that the interview guide should be created before the interviews and contain the main themes and topics of the research, but the goal is not to follow the guide exactly, but to get similar information from all participants (Kallio et al., 2016).

Three middle management representatives of Company X participated in the interviews: Key Account Manager; VP, Sustainability and Communications; and VP Sustainability, Products, Technologies, Operations. In this study they are referred by their professional titles. The participants had different regional areas of responsibility, but everyone had information about the company’s sustainability. The interviews were conducted in Microsoft Teams and an individual interview took an average of 20 minutes. The primary data has been summarized in Table 1. All participants were asked the same main questions, but follow-up questions arose depending on their answers and focus areas.

The default question frame was primarily based on the two research questions, but in the follow-up questions the theoretical framework was considered to combine the practical information with the existing theories (Appendix 1). In other words, the deductive approach was already used in the interview phase, whenever it served the overall goals of the research, and the theoretical linkages could be found. The questions were divided into themes according to the research questions. As the research gaps were significant, the analysis of the data uses both inductive and deductive approaches. Whenever possible, data collection and analysis follow the theoretical framework.

Due to the nature of the thesis and the research questions, secondary data had a role in the empirical sections, as partial answers to the questions could be found based on the

company's publications and reports, policy reports, and what has been investigated about the company in previous contexts. They also help to assess whether the interviewees' comments are in line with each other and in relation to the company's outputs. The secondary data has been summarized in Table 2. To maintain confidentiality, the company's publications are not referred to using the company's name. All data related to the company in the empirical section remains anonymous.

Table 1. Summary of the primary data sources

Interview number	Interview 1	Interview 2	Interview 3
Job description	Key Account Manager	VP, Sustainability and Communications	VP, Sustainability, Products, Technologies, Operations
Region of responsibility / knowledge	EU	US	EU, US
Interview location	Microsoft Teams	Microsoft Teams	Microsoft Teams
Duration (minutes)	22	23	15
Transcript pages	5	6	3

Table 2. Summary of the secondary data sources

Name	Type	Page quantity
Annual Report 2022	Company report	210
Company X Initiative Website	Website	Not specified
Press Release 2018	Press release	3
Press Release 2021a	Press release	2
Press Release 2021b	Press release	2
Press Release 2021c	Press release	2
Press Release 2022a	Press release	2
Press Release 2022b	Press release	3

### 3.2 Analysis

The analysis of the primary data was conducted using the content analysis method. In content analysis, concepts and themes describing the research phenomenon are searched from the collected data, which are determined based on the research questions (Elo et al., 2014). Since the method gives a lot of freedom to the researcher, the reader must be explained in the reporting phase how the raw data is processed to first reach the analysis and finally

conclusions (Elo et al., 2014; Schreier, 2012). In terms of coding the collected data, the pragmatic nature of the interview questions excluded most of the irrelevant data from the study. In the next phase, confidential information and unnecessary repetition were removed. The data was then divided into two categories (1) sustainability measures and (2) sustainability communications and sustainable marketing. Distinct codes were searched for in these two categories: 17 were found in the first category and 13 in the second. Themes were combined from these codes: the first 17 were narrowed to 9 themes and the second 13 to 7 themes. In both datasets the themes were divided among three subcategories: (1) the global context, (2) the EU context, and (3) the US context. With the help of these six subcategories, the findings section was implemented. This data processing and structuring is presented in Appendix 2. The formation of the first-order codes is explained in Appendix 3.

Textual analysis was used to analyze secondary data (company publications, reports, policy reports, previous studies of the company). This method aims to understand the images, language, and symbols of the text, for example in political, ethical, cultural, and historical context (Hawkins, 2017). The role of the secondary data is above all to support the collected primary data. The textual information written about Company X can be used to review the answers received from the interviews, compare them to the previous company findings and look for possible contradictions. Such an approach is suitable for a qualitative case study.

## 4 Findings

This section discusses the findings that emerged during the empirical research. The data collected from the interviews is divided as presented in the methodology. The importance of the global context was especially emphasized in the speech of the interviewees because they often wanted to talk about sustainability issues above all at the level of the entire company. This also makes the processing of the data related to the EU and the US easier, as it can be compared to the company's global visions and values. To support the information obtained from the interviews, data from the company's publications and policy reports have also been brought into the different categories.

### 4.1 Company X's sustainability measures

#### 4.1.1 Sustainability measures in the global context

First, the interviewees were asked questions related to the company's general sustainability measures, such as operational and production measures. The questions mainly focused on the current situation, but recent changes and future prospects were also brought up. When discussing the company's global operations, the similarity of actions in different regions was emphasized:

*“I think our approach is very similar around the world because we're all working on very similar KPI's [Key Performance Indicators] including water reduction, energy reduction, and zero waste to landfill. We're working on and pulling the same trigger up levers there I believe.” – VP, Sustainability and Communications*

*“Our goal and vision are to be a pioneer in our area of operation. As a provider of packaging solutions, the goal is to be the primary option for our customers when it comes to responsible packaging. Of course, we operate globally with the same themes, and we aim to find the best possible responsible packaging solutions for our customers.” – Key Account Manager*

When talking about the company in terms of regulations, one of the interviewees mentioned the uniform approach in this matter as well, and that the location of the subsidiary does not change the operating principles:

*“Whatever regulations there are in different regions of operations, we have a very similar approach, no matter where the subsidiary is located. We always aim for sustainability. It is of course understandable that different regions are at different “timelines” in relation to certain regulations, but we do have a similar approach in the company regardless of the region. We have our own people geographically, who are always more aware of certain areas, but they operate on a very similar basis and the operating, communication, and marketing principles are the same everywhere.”* – Key Account Manager

Regardless of the region, the interviewees also repeated the things mentioned as the company’s core values, such as the circular economy (CE), life cycle thinking, and sustainability. At the same time, the importance of innovation, R&D, and proactivity was realized, also in terms of regulations:

*“...we're focused both on operational sustainability for our factories as well as product sustainability in order to help our customers. So, we're looking from a product standpoint from the beginning of life through the end of life... our packaging becomes circular or is in a circular environment. Our hope on the operational side is to lower emissions, continue to get to zero carbon footprint or [as high as possible] handprint as much as we can. On the product side leave us as light of a footprint as we can for our customers as well in a circular environment.”* – VP, Sustainability and Communications

*“We have reacted strongly by supporting decision-making so that it would be based on the entire life cycle of the packaging... I believe that we are going in the right direction by paying attention to the environmental impacts of our company... If we think about where we are going, then of course the life cycle thinking is always strongly raising its head globally...”* – Key Account Manager

*“Regulations have an impact, but we want to be proactive. We're developing new and innovative products because we understand the direction and we have lots of people within our teams that speak to various legislators. By having a strong innovation and R&D, we're able to get ahead of the game. We understand what's coming our way. Some products will fit well within a recycling stream and maybe some of the projects where we are replacing plastic with paper will allow the consumer to put the empty packaging into the recycling bin. We have an eye on product development that takes into consideration end of life, for example.”* – VP, Sustainability, Products, Technologies, Operations

The results of these answers with a global context were completely in line with the Company X's Annual Report of 2022. In this report the subsidiaries' actions could be said to be assessed above all through the parent company's values and goals, which is natural as the group owns 100 % of the subsidiaries' shares. Even though the interviewees work in different parts and facilities of the company, they still underlined the global company policies.

#### 4.1.2 Sustainability measures in the EU context

Two of the interviewees had areas of responsibility in the EU market. From the beginning, it became clear that EU regulations are mainly perceived as understandable and forward-looking. This could also be related to the observation that the company has the desire and ability to influence different regulations, at least in the EU area. Company X has a special initiative that aims to influence and develop the EU regulations in terms of packaging industry (Company X Initiative Website, n.d.). In addition, the company was described to be flexible and the products to be compatible with regulations:

*“The EU regulations have been understandable, and these joint actions help everyone move forward on a global level. For example, at the EU level we have been given regulations according to which we operate in business. Of course, we act in accordance with the rules, and our goal is also to show that the decisions that are made must be based on facts, and with that to also make more public the research results on which the regulations are drawn up.”* – Key Account Manager

*“There are many challenges that lie ahead for us, but we have a broad product portfolio, highly recyclable and compostable materials within our business and in our flexible packaging segment... I think we'll be able meet any kind of regulation that comes our way from the EU.”* – VP, Sustainability, Products, Technologies, Operations

From the speeches of the interviewees, it was possible to conclude that especially life cycle thinking and the role of packaging in protecting goods should continue to have a central role in the EU's regulations on the packaging industry:

*“When we talk about packaging, we must consider the entire life cycle of the packaging, so that we can properly compare different options and then find the best possible solution. An important thing is the fact that the packaging itself*

*also protects the food and thus can reduce food spoilage and loss when the right packaging solution has been found.” – Key Account Manager*

When talking about the European Green Deal (EUGD) and its effects, it was seen above all to improve performance and raise the company’s sustainability to a new level. At the same time, the SUP (Single-Use Plastics) Directive (European Commission, 2019b) came up in a practical way. Company X supports EUGD but has criticized the strict nature of the SUP Directive (Press Release, 2021a; Press Release, 2018). In this context, it was also brought up how the company has offered data to the EU policy makers to improve the development of possible future directives:

*“It [EUGD] has affected in a sense that we also want to be responsible in the future and take the environment into account. We measure the performance of our factories and how they could burden the environment as little as possible. For our products, they need to be made of renewable materials and must be recyclable, so that they consume natural resources as little as possible and be in line with the regulations. The SUP Directive has made us to modify our product range to be even more sustainable in the future... the most visible thing is the SUP logo in our disposable [products]... We have also offered research results from an external operator on the comparison, for example what kind of environmental impact do single-use containers made of paper have compared to other materials.” – Key Account Manager*

Answers were also received regarding the future directions of the EU and the company in terms of the packaging industry. In particular, emerging trends and the measurement of sustainability had a central role. Concrete goals were also brought up regarding their 2030 strategy. This strategy has also previously emphasized the importance of CEAP and SUP Directive (Press Release, 2021b):

*“...responsible and sustainable materials, raw materials, renewables, recyclability, they will definitely be on the surface in the future as well. On the European level, the replacement of fossil-based raw materials with renewable and recyclable alternatives, will grow globally all the time in the future as well. We have certain metrics, what kind of energy our factories use and how much land waste is created. We have different metrics with different goals in them. In our product line we follow the regulations to a large extent, and we always try to find more sustainable solutions. We are committed to our latest 2030 strategy and the data related to it is constantly reviewed.” – Key Account Manager*

The comment above shows well how a great set of things must be considered in the future of the European packaging industry as well. The thoughts related to replacing fossil-based

raw materials are particularly significant, as it explains how drastically the industry must change.

#### 4.1.3 Sustainability measures in the US context

When the interviewees were asked to describe the company's sustainability activities in the US market, the answers were similar in many ways to the EU context. Circular economy and life cycle thinking were brought up and the company was described as an active operator in the field of sustainability themes in the packaging industry. However, the interviews revealed a concrete difference in focus when the discussion moved to the operational sustainability of the company in the US, which is the central role of recycling initiatives in the region. The company has also recently emphasized this in its publications (Press Release, 2022a), but the scope of focus might get wider in the future:

*“Every region has a different focus. Here the focus has really been on recyclability. The types of packaging that we do kind of lend themselves in some regards to compostability as well, and we're trying to put more of a focus in the compostable space. But we are also working on the recyclability for the products that cannot be composted. So, we're working on both fronts. But I think in the US, most of the activity has really been around the recyclability of products, not necessarily the compostability at this point. The compostability side of things are still fairly embryonic, a very young from an operational standpoint.” – VP, Sustainability and Communications*

*“The focus from... a North American perspective will probably be more on a compostability landscape and angle. We have both plastic and fiber in there. What's happening from a regulatory landscape is being driven by states that have introduced EPR [Extended Producer Responsibility]. I think there's California, Ohio, Maine, and Delaware. There are a number of states that are rolling out EPR. There will be more responsibility and more targets for both brand owners and for further up the supply chain to have recyclable, compostable products within their portfolio.” – VP, Sustainability, Products, Technologies, Operations*

When the US regulatory environment was discussed, fragmentation at the state level had a big role, even though these issues were not really addressed in the secondary data. Based on the interviews, the company must usually operate according to the most strictly regulated states, and they want the consumers to understand the amount of monitoring required:

*“Our regulatory environment is very fragmented, and it's really on a state-by-state basis, there's not a lot of federal legislation that is actually being discussed. At the federal level the focus is more on carbon reduction and climate change. At the state level, they're more involved with the environmental side of things, plastic, waste, and pollution reduction. We are trying to figure out how do we handle EPR and Post-Consumer Recycling legislation on a state level. We're trying to pay very close attention, what the policies are and then we're bringing those back in [to the company], because fortunately or unfortunately our packaging has to be appropriate for 50 states when there may only be one or two states who are legislating a specific way. It's important that we help our customers understand that as well.” – VP, Sustainability and Communications*

The company's sustainability efforts in the US were described as impressive and sustainability was said to be embedded to all activities alongside the overall safety of the products. The company was also praised for being proactive in these issues. The goals for the future were especially reducing the amount of food and package waste and to increase the use of renewable energy. They have underlined these goals and their linkage to the 2030 strategy in the company's recent releases (Press Release, 2022b):

*“We're trying to make sure it [the packaging] is safe... We want to get to 100% renewable energy for our factories, which is a phenomenal goal. In the US we're about 40% now, which is really great. We are very much looking at renewable energy sources, water reductions, zero waste to landfills. We have several of our plants who are already on that journey... we all try to lower our carbon footprint as much as possible.” – VP, Sustainability and Communications*

## 4.2 Company X's sustainability communication and sustainable marketing

### 4.2.1 Sustainability communication and sustainable marketing in the global context

Next, the interviewees were asked questions related to the company's sustainability communication and sustainable marketing. One of the interviewees especially emphasized the company's uniform line in the global context, also for these questions. At the same time, the importance of factual information in company's sustainability communications, and influencing peoples' sustainable choices in the company marketing was brought up:

*“We want to globally offer information and research results in both sustainability communication and sustainable marketing and then encourage, not only*

*customers, but people in general to choose the most responsible options. We support our message by bringing these researches to public awareness, for example what the environmental effects of our packaging solutions are. Marketing changes regionally, but the main message always remains very similar.” – Key Account Manager*

However, in the end it was concluded that even though the company aims for a uniform line in their global communications, differences in operating environments and sustainability stages were deemed to be a defining factor in different regions:

*“...there are lot of differences on a global level. Different regions are at different stages in the sustainability issues. The sustainability communication and sustainable marketing can be different depending on the location, but the main message is similar.” – Key Account Manager*

When talking about the company’s global reporting practices, the interviewees mentioned the collective company reporting, and how the reporting also binds the subsidiaries operating in the regions where the law does not regulate reporting. The sustainability reporting was also said to be active. This is certainly supported by the company’s uninterrupted stream of reports and policies in their websites:

*“If we think globally about our operational facilities, they are measured individually, but the results are compiled into a single report. The results can then be seen in a wider perspective. Of course, everything starts by measuring one location at a time and then putting the results together in a single report.” – Key Account Manager*

*“Yes, we are [reporting in the US as well]. We roll up into the corporate reporting measures. So yes, we are reporting ESG measures.” – VP, Sustainability and Communications*

*“We take a very active leadership role and sustainability across the globe and segments. We report externally to demonstrate to our investors, Board of Directors, and customers the work that we’re doing and we’re very proactive in that sphere. We do sustainable communication and marketing particularly well, and the teams have been very balanced and how they can convey what we’re working on, but also respecting various guardrails at the customer may have that limits us and what we can and can’t say. I think we’re very proactive in that space.” – VP, Sustainability, Products, Technologies, Operations*

According to one comment, the external regulatory and legislative pressure does not always take sustainability communication in the desired direction:

*“We're conscious of the pressures that are coming from a reuse perspective versus a single use. We have commissioned reports and compared these models and some of the information that we've received is that there's a discrepancy in terms of energy and water from a reuse market. While there are external comments which say that reuse and refill are a better solution from an overall energy, carbon, and ESG perspective, that's not necessarily true. The ability to share that information backed up with reliable and credible data and external validation is the key. Our marketing and communication colleagues must deliver the message that our products are good for the environment and customers.” – VP, Sustainability, Products, Technologies, Operations*

The company has actively brought these research results forward in their releases (Press Release, 2021c).

#### 4.2.2 Sustainability communication and sustainable marketing in the EU context

When finding out how EU regulations shape sustainability communications and sustainable marketing, it became clear how interactive a large company and legislators can be. Naturally, it was emphasized in several points that the company's sustainability communication and marketing is in line with the regulations and changes when necessary. In addition, it was estimated that the company's CSR reporting is not only dependent on the directives, but also on the company itself:

*“We are already involved at an early stage in the regulatory process before decisions are made. We try to influence these decisions so that they will be based on facts. We offer information and research results to support sustainable solutions in the future as well. Then, of course, according to the decisions, our communication and marketing will be adjusted to suit the modern times. We take different things to consideration as needed, so that they are in line with different regulations... this NFD Directive. However, we have focused and paid attention to these issues for a long time, so I dare to promise that yes, the company has prepared and reported before this directive. Our goal is not only to report according to regulations, as these issues have been in the core of our company for a long time.” – Key Account Manager*

The company has made publications comparable to sustainability reports at least two years prior the EU directive, which would indicate that the company itself other stakeholders outside the legislators also think about sustainability communication and reporting.

As a concrete example of the EU's influence on the company's regional sustainability message, the SUP Directive was brought up again. It was noticed that EU decisions do not necessarily affect the actions of other subsidiaries, but the sustainability message remains:

*“...the SUP Directive... It has to be that way only in Europe, but outside the EU this requirement does not exist. Therefore, we have cups available outside the EU that do not have this logo. If something has to be done in a certain way or more strictly somewhere, it does not necessarily need to be done in all regions. Of course, the message about our sustainability actions remains regardless of the geographical area, but these regulations may be so specific to certain areas that we will have to take one step at a time and always in accordance with the regulations of a certain region.”* – Key Account Manager

This comment shows how the regional regulations specific nature is not necessarily making things easier for the company. Even though the procedures demanded by the SUP Directive do not affect subsidiaries outside the EU, they require the creation of multiple sets of similar products in different regions. Therefore, some products manufactured outside of the EU cannot be brought to the EU's internal markets.

#### 4.2.3 Sustainability communication and sustainable marketing in the US context

In the US context there were many practical examples of the impact of regulations on sustainability communications and sustainable marketing. In addition, it became clear which guidelines are relevant to the company in these areas, even though they do not really mention them in their reports. At the same time, it seemed that the regulations do not necessarily push the company to be as active in sustainability communication as they could be:

*“Here in the US our marketing activities are governed by the Federal Trade Commission. They have these green guides. We subscribe fully to these, which prevents companies from overstating their sustainable activities or their product offerings etc. It really prevents a lot of greenwashing. We work within those guidelines of what we can and cannot say. We want to make sure that our products are certified and properly audited and that what we say complies. We are a pretty conservative organization is what I've noticed. We don't want to overreach; we probably don't do enough to talk about our sustainable activities. I would say we need to increase our communications just so customers, investors and other stakeholders understand what we're doing. But at the same time, we want to stay within the guidelines of what we should and can say because there is a governance side in our ESG strategy. We want to make sure*

*that we're responsible business as well.” – VP, Sustainability and Communications*

The interviewee estimated that regulations in the US, especially in terms of greenwashing will become stricter in the near future:

*“I just spoke to the FTC, and I think they are only going to get more critical of sustainability marketing and communications. They update the green guides about every 10 years, and we're in process right now of updating. We're in a comment period right now. Accepting comments for the green guides and how they're going to be updated, and I think they're just going to become even more stringent because we're a lot smarter than we were 10 or 12 years ago about what's happening in the sustainability space. We all understand what we could or should or can't say as well.” -VP, Sustainability and Communications*

Finally, the future of the company’s communication in the US market was evaluated. It was clear that the company communication strategy had some indistinct elements which might be resolved in the future:

*“Here in the US, it is very confusing many times, because we have this fragmentation. We're on this EPR journey, and we're all starting to understand what this legislation means. The communications will be about how we help our customers really understand the value and impact of our products. The value of the package is much greater than the imprint it makes on the environment, because the need for packaging is great and there's so many good reasons for this need, but we have to make sure we're leaving the least amount of environmental footprint... I think our communications need to be built around those types of statements. I think the future is going to be more specific to what's the value of what we're doing. EPR's are going to help us define that, versus the impact it leaves on the environment.” – VP, Sustainability and Communications*

This comment summarizes well how there are many changing factors in the company’s US operations and understanding this changing sustainability space takes time. In addition, the need to develop sustainability communication was understood well. On that note, the thesis continues with a summary of the findings, then turns to conclusions and implications.

### 4.3 Summary of findings

Regarding the Company X’s sustainability measures, the uniform operating methods were emphasized, as well as the subsidiaries’ uniform approach to regulations. In addition to this,

the same core values and sustainability concepts were repeated in the interviews, regardless of the region, and these were in line with the company's publications. In the EU actions, the company's ability to comply with different regulations and, if necessary, influence them with the help of research was highlighted. Of the EU directives, especially the EUGD and the SUP Directive came to the fore as regulations defining sustainability measures. In the US, the company had a stronger focus towards recyclability than compostability, but that did not necessarily have anything to do with a specific regulation. The fragmented regulatory environment of the US forces the company to act according to the rules of the strictest states, as the company usually does not know where their product will end up.

In communication and marketing, the company strives for a unified message, but different regions may have different communication and marketing practices. Nevertheless, all subsidiaries seemed to participate, for example, in CSR reporting, regardless of regional regulations. In the EU, the company was said to be proactive and communicating with the EU's legislators. The SUP Directive was said to be shaping the company's visual sustainable marketing. In the US, the FTC green guides shape the company's sustainability communication, but overall, the country's regulatory environment does not necessarily demand enough sustainability communication from companies. The important findings are in the most concise form in Table 3. Next, the thesis will move on to the discussion section.

Table 3. Summary of important findings

<b>Sustainability measures</b>	<b>Sustainability communication &amp; sustainable marketing</b>
Similar approach towards sustainability and regulations.	The company aims for a uniform message, but there can be regional differences.
Same core values and concepts were brought up.	All subsidiaries report CSR issues regardless of regional regulations.
In the EU, the company is able to comply with regulations and even influence them.	In the EU, the company is proactive and is involved in the regulatory process.
In the EU, the EUGD and SUP Directive influenced sustainability measures.	In the EU, the SUP Directive shapes the visual sustainable marketing.
In the US, the company has focused more on recyclability than compostability.	In the US, the FTC green guides shape the company's sustainability communication.
In the US, the regulatory environment is fragmented which requires to act according to the strictest regulated states.	In the US, the federal or state-level regulations may not require enough sustainability communication from the company.

## 5 Discussion

This section discusses the findings by identifying the links between them and the theoretical framework. However, answers cannot be formed only in relation to previous theories and literature, as the weak generalizability of the theories to the studied industry in relation to the pragmatism of the obtained results leads to partially inductive reasoning. Furthermore, it is worth noting that this research focuses strongly on Company X and the results cannot therefore be generalized to the entire packaging industry. This section presents multinational packaging company's sustainability measures, communication, and marketing and their variations in different regions, but they cannot be assumed to be fully repeating in the operations of other companies. This chapter is divided into two parts based on the research questions. In both parts, the discussion begins with the analysis of the answers, both in themselves and in relation to the framework, after which the answer to the presented research question is formed.

### 5.1 Variation of sustainability measures in different regulatory contexts

The first research question sought to find variations in the sustainability measures of a multinational packaging manufacturer in both the EU and the US regulatory environments. The question was stated as follows:

*Q1: How package manufacturers' sustainability measures vary depending on the different regulatory environments in the EU and the US?*

Evidence for this question could be found from the introduction, the first half of the theoretical framework and the first section of findings. In the beginning of the thesis, it was argued that the regulatory environments of these two mentioned regions are different, especially as in the US the differences between states were significant (Ranta et al., 2018). However, based on the findings, this fragmentation did not mean wider operational opportunities for the US subsidiary, on the contrary, it forced them to operate according to the most strictly regulated state. On the EU side, it was found that the parent company may even have the ability to influence regulations, which was in line with the observations of Contractor et al.

(2020). Wang et al. (2021) said that companies can sometimes try to minimize the effects of regulations in such a way that it compromises the intended effect. However, this did not emerge in any regional context, but the interviewees said that the company is above all very skilled and active in sustainability issues and can work with the given regulations. Regulatory actions were mainly seen as a positive thing.

In discussions about the impact of sustainability on the performance of the entire company and various subsidiaries, positive effects were especially emphasized. However, for example the Porter Hypothesis, in which well-designed environmental regulations create both environmental and financial benefits (Porter, 1991), did not receive strong support from this study. Instead, in many of the answers related to general sustainability measures, the company's proactivity was emphasized and how the benefits of these actions arise from the company itself. Surely it was mentioned that the SUP Directive has made the company's future product lines even more sustainable, but at least the possible economic benefits of these changes were not apparent in these data. If the measures themselves or in the form of regulations temporarily increase costs, the respondents thought that the price is worth paying. Nor was Mohr's (2002) second-adaptor theory reflected in any parts of the company, as they said they are striving to be pioneers in sustainability and not wait for the other companies. Based on the findings, Nippa et al. (2021) view was supported in the case of Company X. Based on this view, the MNC should encourage its subsidiaries to be as sustainable as possible for competitive advantage. The answers received from Company X showed that the subsidiaries participate in sustainability innovation and these common themes are actively shared between regions. Even if different areas are at different sustainability stages, the company tries to keep different subsidiaries at the desired phase of sustainable development.

The most significant differences between subsidiaries arose in the case of regionally specific regulations, which was expected. For the company's actions in the EU, the EUGD, CEAP, and SUP Directives came up naturally either in interviews or in the company's publications. Although these regulations mainly define only the European operations of the company, and for example the SUP Directive is not visible in the US, the sustainability message related to these initiatives cuts across the organization globally. In the US context the Inflation Reduction Act (IRA) or Environmental Protection Agency (EPA) did not come up. Instead, the EPR and PCR legislation of specific states were key constraints defining the company's US

operations. There are hardly any mentions of these in the company's global publications, so they can be seen as especially region-specific regulations. Of course, the company has extensive manufacturer' responsibilities in EU operations as well, but it was seen to be defined above all by life cycle thinking, and not directly through specific regulations. Also, the company's different focus on recyclability versus compostability in the US was not explained by regulatory differences, but mainly by the schedule of the company's own operations.

Based on the interviews and secondary data, the company has a globally consistent line also in what sustainability means. In relation to the Triple Bottom Line (Elkington, 1997), Company X's representatives and publications especially emphasized the environmental and social aspects, and despite follow-up questions, the economic aspect remained in a secondary role. This is in line with Alhaddi's (2015) findings of sustainability research. In the end, the most important factor determining the company's sustainability may have been the implementation of the circular economy (CE). Even though the concept of the CE is especially considered in the goals of the EUGD, it is also crucial in the global manufacturing context (Kirchherr & van Santen, 2019; Kristoffersen et al., 2020).

For the Company X, the CE was emphasized regardless of the region or regulatory framework. As for industry specific sustainability measures, especially in the EU context, the importance of material choices came to the fore. The primary and secondary data of the EU context, according to which, the European aim is to move away from fossil-based raw material in packaging was in line with Asgher et al. (2020) observations about the future of the packaging industry. In the data collected from the US, instead of new bio-based material choices, the development of the recyclability of current types of packaging was emphasized, which was similar to the arguments made by Steenis et al. (2017). These differences in representatives' comments and company data in different regions would possibly point to differences in the focus of legislation such as the EUGD and EPR, which is reflected in the operating differences between subsidiaries.

## 5.2 The shaping of sustainability communication and sustainable marketing in different regulatory contexts

The second research question focused on how the packaging manufacturer's sustainability communication and sustainable marketing are shaped in the mentioned regulatory environments. The question was stated as follows:

*Q2: How do different regulatory environments shape package manufacturers' sustainability communications and sustainable marketing?*

Evidence for this question was also found in several places: introduction, the second half of the theoretical framework and the second section of findings. The collected data first highlighted that Company X does not necessarily make a difference between sustainability communication and sustainable marketing, but rather places the marketing under their CSR and ESG strategies. This recalled Vaccaro's (2009) comments of marketing as part of a company's wider CSR strategy. On the other hand, contrary to Sweeney's and Coughlan's (2008) views, for Company X, the region of operations did not seem to be a significantly shaping factor in sustainability communication. Although in the interviews it was said that different regions are in different sustainability phases, and it may have some effect on practices, it does not shape the company's main sustainability message. Based on the collected data, Company X's sustainability communication is active, thorough, and directed at various stakeholders, which largely corresponds to Genç's (2017), and Amini's and Bienstock's (2014) views on active and competitive sustainability communication.

In the obligation to report on CSR and ESG issues in different subsidiaries, they follow the lead of the parent company. In this context, the regulations, or their absence, do not affect the US subsidiary's reporting, as they respond to corporate's wishes and produce ESG reports despite the voluntary nature of the overall regional reporting environment. Therefore, it is difficult to assess Company X's motivations behind the reporting, as they also report on the affairs of subsidiaries according to the NFD Directive in the EU, which is mandatory. Despite this, the company underlines that sustainability communication is extremely important to them, regardless of external pressure and different legislators' demands. In addition, clear connections between Company X's CSR strategies and Freeman's (1984)

Stakeholder Theory could be found. The collected data emphasized how the company tries to communicate to as many reference groups as possible, and, for example, influence sustainable choices, which can be seen as value creating activities. Such information and promotion of sustainable product choices is also likely related to raising the awareness of potential customers similar to the observations of Wandosell et al. (2021). In this context too, the role of regulations was relatively insignificant. Sometimes the legislators' sustainability discussion even takes the development in an irrelevant direction for the company, in which case the company's sustainability communication is shaped into correcting possible misunderstanding in public discussion. Communicating with different stakeholders works both ways, but during this study the discussion about the messages coming to the company itself were mainly related to legislators, and no information about, for example, how messages from customers and other reference groups affect the company's operations was discussed.

In the EU's sustainability regulation context, in addition to the company and other stakeholders, the NFD Directive and SUP Directive were seen as factors shaping the company's communication and marketing. However, the company's publications and comments give the impression that similar actions would be taken regardless of these directives, and at the same time, the company itself is capable of shaping and developing new regulations with its communications and research. In the US context, the Federal Trade Commission's (FTC) green guides were the most significant factors shaping the company's sustainability communication and sustainable marketing, especially when talking about the prevention of greenwashing. These governmental actions preventing greenwashing are similar to the ones mentioned by Rotman et al. (2020). Although these guides could be used to determine what the company can and cannot do in their communication, in general it seemed that the government or states do not push the company as much to communicate about their sustainability as would be sufficient. However, one of the representatives believed that the states' emerging EPR legislations will help to shape and define the company's sustainability message to be clearer in the future.

Altogether, Company X's internal regulation and sophisticated communication practices cause the company to have the greatest influence on subsidiaries' sustainability communication and sustainable marketing in different regions. The role of specific regional regulations is significant, but their effect is largely related to practical actions and does not

necessarily shape the entire subsidiary's communication culture. However, no part or department of the company exists in a vacuum and each level of organization is shaped according to the requirements set by someone, and at the highest level of hierarchy are various regulatory actions. As the case company has such a strong focus on sustainability there is a possibility that these kinds of results, where the company itself is the leading source of sustainable development, would be repeated in some other industries. This of course would require the study of a company with a similarly strong focus on sustainability themes in some other industry. Choosing a company that already in the early stages of this study proved to have a strong desire to be an industry leader in sustainability further weakens the generalizability of the results, because they may not be applicable to several other companies. In other words, these results are mostly relevant for the packaging companies, which are active in sustainability issues; however, the findings could also be useful for examining companies active in the sustainability of other industries.

### 5.3 Testable propositions

Based on these findings and discussion, there is a possibility of formulating testable propositions to give examples where the study of this topic could be taken next. According to this study, there is particularly one phenomenon that should be tested in the future studies, and it comes to the role of the company itself in their sustainability activities. It seems like the size of the company is positively correlated with the homogeneity of its sustainability activities across heterogeneous operational regions. In billion-dollar companies, or MNCs it could be logical to assume their sustainability measures and communication to be more systematic and uniform compared to smaller companies. Of course, this relation between the size and the homogeneity is not necessarily caused by the absolute monetary size of the company, but by the size and investment of the company's sustainability departments and divisions. This relationship between the size of the company (absolute or in terms of sustainability) and the homogeneity of sustainability activities across heterogeneous regions could be studied in the context of different companies, industries, and regions.

## 6 Conclusions

The aim of this thesis was to evaluate how the regulatory environments of the EU and the US affect sustainability measures and shape sustainability communication and sustainable marketing in the case of a multinational packaging manufacturer operating simultaneously in both regions. To reach the objective, qualitative methods were used to collect data from the case company, both through interviews and by comprehensively analyzing company publications from both operational regions (the EU and the US). The research topic could be found to be important, as the global packaging industry is currently undergoing a major transition, and different regions are not in the same position or develop at the same pace in terms of sustainability regulations. Therefore, it is important to know in which direction the sustainability regulation of the packaging industry is going in different regions and how it may affect the major players in the industry.

The key findings of the thesis indicate that in the case of a large packaging manufacturer, the factor that most shapes the company's sustainability measures and communication in different parts of the company is the company itself. For a company whose operating principles are determined by sustainability, it is not an issue to comply with regulations set in different regions, and the company itself may have thought these concepts long before the regulation or may have been influencing the creation of the regulatory framework. The results showed that naturally the largest differences in sustainability measures between subsidiaries in the legislative context arose from specific regional regulations, for example, in the EU, the EUGD (European Green Deal) and SUP (Single-Use Plastics) Directive, and in the US, state specific EPR (Extended Produced Responsibility and PCR (Post-Consumer Recycling) legislations. What this could mean is, in the EU, partly because of these regulations the company has recently been focusing especially on the development of new packaging materials, while in the US, the focus has been more on developing the recyclability of current products. There are significant differences in the focus of subsidiaries, but how much it directly depends on the regulations requires further research.

Regarding sustainability communication and sustainable marketing, the NFD (Non-Financial Disclosure) and SUP (Single-Use Plastics) Directives in the EU, and FTC's (Federal Trade Commission) green guides in the US were the significant regulations shaping the company's sustainability communications. However, in the EU it was felt that the reporting required by the NFD Directive would be done in the company anyway, and in the US, while the green guides are good ways to reduce greenwashing, there are not really any other legislative forces pushing the company's sustainability communication forward. In other words, when it comes to sustainability communication, a proactive company may not get anything new from the regulations, and in addition, they may require far too little action from the company. In these cases, the sustainable development of the company must above all rise from the company itself.

## 6.1 Implications

All these findings would indicate that for a large but dynamic packaging manufacturer, whose basic operating principles include sustainability, development should be thought first of all through the company itself and other stakeholders outside the governmental or federal actors. This is in line with the Package-Heroes (n.d.) project statement, that package industry's sustainable development requires all political, economic, and social stakeholders, and the cooperation of different companies. Legislative actions do not seem to be enough, and especially cannot keep up with the rapid changes in the global sustainability space. Companies must be demanded, and they themselves must demand faster and better sustainability measures and the development of communication at the level of society as a whole, because the sustainable development of the packaging sector should not depend on the passage of individual directives, but a collective change in the thought process is needed. If companies were given more decision-making power in their sustainability measures and communication than before, the importance of the academic research would be emphasized significantly, as the decisions would require some other legitimate evidence instead of the law.

Another important thing shown by this thesis is that companies operating in less regulated regions must themselves ensure that their subsidiaries remain at the level required by the company in terms of sustainability. Otherwise, the company's excessive sustainability

promises, which only certain parts of the company can reach, can become a problem. The company should perhaps consider that the entire company operates according to the regulatory environment at least equivalent to the head office, or more strictly when moving to even more specifically regulated operating regions. In this method, there is naturally a risk of a weakening of the competitive position, if other companies in the industry operate according to much lighter regulations. However, this should not be a problem for companies whose value propositions are strongly related to sustainability themes. In global business, it is necessary to accept that competition in terms of price and volume can be challenging, if the company wants to compete with sustainability and superior quality. For these companies, the role of sustainability communication also increases, when different stakeholders have to be convinced of the superiority of the company's more environmentally friendly products.

## 6.2 Limitations and reliability

The goal of qualitative research is to create detailed descriptions of the studied phenomenon, but the results cannot be generalized to a wider population, as they cannot be tested to be statistically reliable. In addition, the analysis of written and spoken language is always full of possible ambiguities that can undermine reliability (Atieno, 2009). In this case too, as the object of the thesis is the two operational regions of a single multinational packaging manufacturer, the results cannot be generalized in relation to the subject or the industry. Although a relatively good picture is obtained of the regulatory situations of the target company's subsidiaries, there is no evidence of their recurrence in other companies.

In particular, the reliability of primary data could be weakened by the possibility of the interviewees to answer in the way they personally see fit without actual restrictions. Furthermore, different job descriptions, areas of responsibility, regional knowledge, and lengths of career can affect the answers significantly. However, this uncertainty was eased by the sufficiently large number of participants and the extensive use of secondary company data both in the general analysis of the findings and in the assessment of the reliability of the answers received. The systematic data analysis process described in the methodology was also used to increase the reliability of this thesis.

### 6.3 Future research

In future research, one option would be to broaden the scope to include more companies and subsidiaries. Another option would be to deepen the understanding of Company X, for example by interviewing more people from different levels and parts of the organization and subsidiaries. In both cases, it could be possible to obtain results with stronger generalizability and applicability than at present. Alongside qualitative research, it would be beneficial to gather numerical data. For example, the sustainability and environmental performance of different subsidiaries could be evaluated numerically, and the results could be compared with each other and in relation to the entire company. Thus, along with the understanding of the phenomenon, standardized and mutually comparable results would be obtained. The quantitative data could also help to compare if some types of companies are more or less affected by a certain sustainability regulation than others.

There is also a possibility to give thought to alternatives in which general sustainability measures, for example in processes and operations, would be separated from sustainability actions related to communication and marketing into their own studies. In this thesis, it was possible to create an overall picture of the phenomenon, but due to the scope of the concepts and the ambiguity of sustainability in business, the topics related to the two research questions could be studied in more depth as separate research topics. For example, the role of marketing and marketers in the sustainability of packaging companies could be examined in different operational areas and subsidiaries, which could not be thoroughly addressed in this study due to the lack of time and resources.

Further research should also look for more links between traditional theories related to sustainability themes and the packaging industry, to obtain more material to create a cohesive theoretical framework. In the existing research a problem may be the strong links of the studies to other industries, in which case the applicability of the formed theories to the packaging industry may be questionable. In other words, despite the obviousness of this statement, academic research related to the packaging industry should be developed and expanded, to form interlinked and applicable theories and concepts for the whole industry. In this regard, projects like the Package-Heroes project can be said to play a significant role in the future of the academic research of this industry.

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## Appendices

### Appendix 1: Interview questions in Finnish (*and English*) languages

#### Profiili (*Profile*)

1. Mikä on asemanne yrityksessänne? (*What is your position at your company?*)
2. Mitkä ovat vastuualueitanne yrityksessänne? (*What are your areas of responsibility at your company?*)
3. Mitkä maantieteelliset alueet ovat työnkuvanne piirissä? (*Which geographical areas and regions are covered by your job description?*)

#### Kestävyystoimet (*Sustainability measures*)

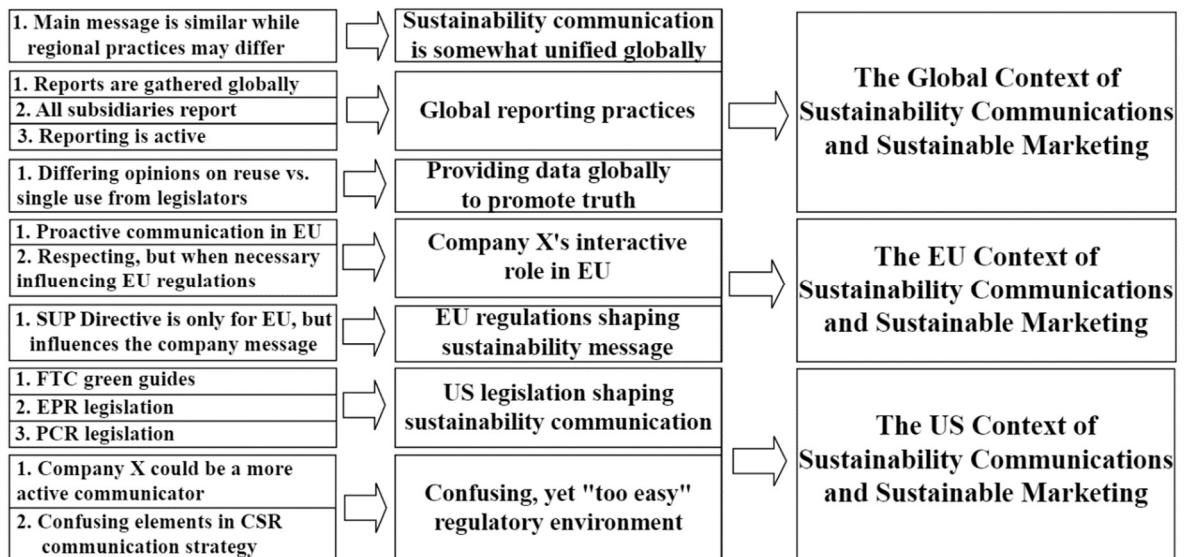
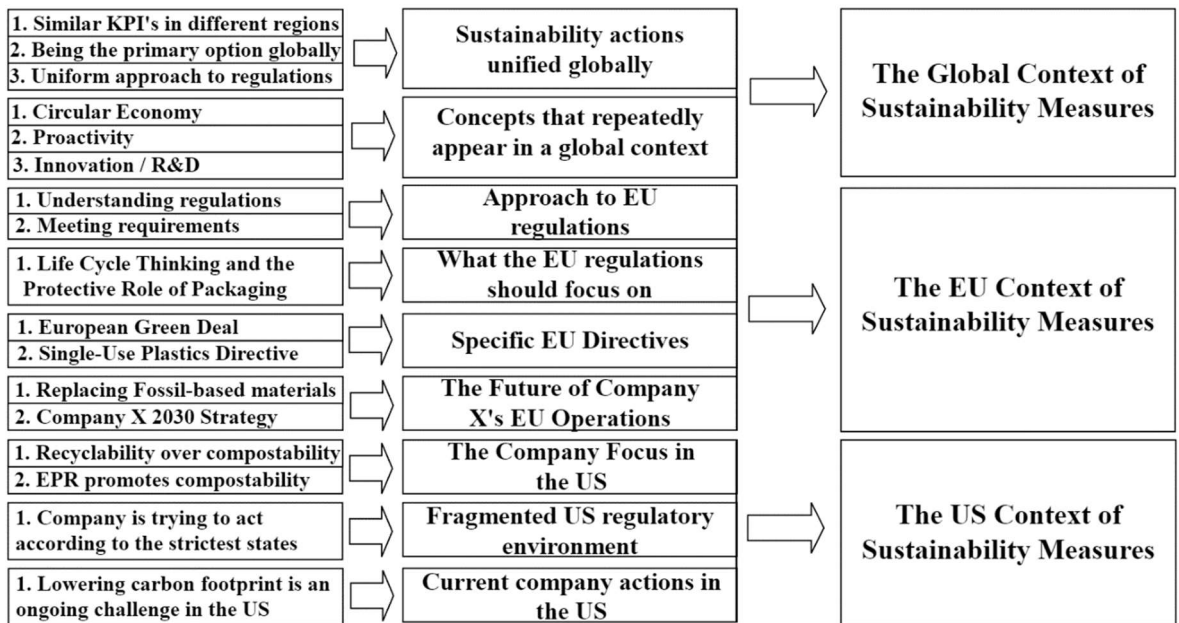
4. Millaisena näette yrityksenne kestävyystoiminnan yleisellä tasolla? Entä suhteessa maantieteelliseen toiminta-alueeseen? (*How do you see your company's sustainability activities on a general level? What about in relation to the region of operations?*)
5. Millaisena näette EU:n sääntely-ympäristön yrityksenne kestävyystoiminnan kannalta? (*How do you see the EU's regulatory environment in terms of your company's sustainability activities?*)
6. Millaisena näette Yhdysvaltain sääntely-ympäristön yrityksenne kestävyystoiminnan kannalta? (*How do you see the US regulatory environment in terms of your company's sustainability activities?*)
7. Miten näiden maantieteellisten alueiden sääntely-ympäristöt muovaavat yrityksenne kestävyystoimintaa? (*How do the regulatory environments of these regions shape your company's sustainability activities?*)
8. Miltä tulevaisuus näyttää yrityksenne kestävyystoiminnan kannalta? Millaisia ympäristön muutoksia on luvassa? (*What does the future look like in terms of your company's sustainability activities? What kind of changes are possible?*)

Kestävyysviestintä ja kestävä markkinointi (*Sustainability communication and sustainable marketing*)

9. Millaisena näette yrityksen kestävyysviestinnän ja kestävä markkinoinnin yleisellä tasolla? Entä suhteessa maantieteelliseen toiminta-alueeseen? (*How do you see your company's sustainability communication and sustainable marketing on a general level? What about in relation to the region of operations?*)
10. Millaisena näette EU:n sääntely-ympäristön yrityksen kestävyysviestinnän ja kestävä markkinoinnin kannalta? (*How do you see the EU's regulatory environment in terms of your company's sustainability communications and sustainable marketing?*)
11. Millaisena näette Yhdysvaltain sääntely-ympäristön yrityksen kestävyysviestinnän ja kestävä markkinoinnin kannalta? (*How do you see the US regulatory environment in terms of your company's sustainability communications and sustainable marketing?*)
12. Miten näiden maantieteellisten alueiden sääntely-ympäristöt muovaavat yrityksen kestävyysviestintää ja kestävä markkinointia? (*How do the regulatory environments of these regions shape your company's sustainability communication and sustainable marketing?*)
13. Miltä tulevaisuus näyttää yrityksen kestävyysviestinnän ja kestävä markkinoinnin kannalta? Millaisia ympäristön muutoksia on luvassa? (*What does the future look like in terms of your company's sustainability communication and sustainable marketing? What kind of changes are possible?*)

## Appendix 2: The coding and structuring of data

From left to right: first-order codes, second-order themes, and aggregate dimensions.



Appendix 3. The formation of the first-order codes

A part of an example quote	First-order code
<p>“I think our approach is <b>very similar around the world because we're all working on very similar KPI's [Key Performance Indicators]</b> including water reduction, energy reduction, and zero waste to landfill. We're working on and pulling the same trigger up levers there I believe.”</p>	<p><b>Similar KPI's in different regions</b></p>
<p>“Our goal and vision are to be a pioneer in our area of operation. As a provider of packaging solutions, <b>the goal is to be the primary option for our customers when it comes to responsible packaging.</b> Of course, we operate <b>globally</b> with the same themes, and we aim to find the best possible responsible packaging solutions for our customers.”</p>	<p><b>Being the primary option globally</b></p>
<p>“<b>Whatever regulations there are in different regions of operations, we have a very similar approach, no matter where the subsidiary is located.</b> We always aim for sustainability...”</p>	<p><b>Uniform approach to regulations</b></p>
<p>“So, we're looking from a product standpoint from the beginning of life through the end of life... <b>our packaging becomes circular or is in a circular environment.</b> Our hope on the operational side is to lower emissions, continue to get to zero carbon footprint or [as high as possible] handprint as much as we can. On the product side leave us as light of a footprint as we can for our customers as well in a <b>circular environment.</b>”</p>	<p><b>Circular Economy</b></p>
<p>“Regulations have an impact, <b>but we want to be proactive.</b> We're developing new and innovative products because we understand the direction and we have lots of people within our teams that speak to various legislators...”</p>	<p><b>Proactivity</b></p>
<p>By <b>having a strong innovation and R&amp;D, we're able to get ahead of the game.</b> We understand what's coming our way... We have an eye on product development”</p>	<p><b>Innovation / R&amp;D</b></p>

<p>“The EU regulations have been understandable, and these joint actions help everyone move forward on a global level... we act in accordance with the rules...”</p>	<p>Understanding regulations (EU)</p>
<p>“There are many challenges that lie ahead for us, but we have a broad product portfolio, highly recyclable and compostable materials within our business and in our flexible packaging segment... I think we'll be able meet any kind of regulation that comes our way from the EU.”</p>	<p>Meeting requirements (EU)</p>
<p>“When we talk about packaging, we must consider the entire life cycle of the packaging, so that we can properly compare different options and then find the best possible solution. An important thing is the fact that the packaging itself also protects the food and thus can reduce food spoilage and loss when the right packaging solution has been found.”</p>	<p>Life Cycle Thinking and the Protective Role of the Packaging (EU)</p>
<p>“It [EUGD] has affected in a sense that we also want to be responsible in the future and take the environment into account...”</p>	<p>European Green Deal (EU)</p>
<p>“The SUP Directive has made us to modify our product range to be even more sustainable in the future... the most visible thing is the SUP logo in our disposable [products]...”</p>	<p>Single-Use Plastics Directive (EU)</p>
<p>“...responsible and sustainable materials, raw materials, renewables, recyclability, they will definitely be on the surface in the future as well. On the European level, the replacement of fossil-based raw materials with renewable and recyclable alternatives, will grow globally all the time in the future as well.</p>	<p>Replacing Fossil-based materials (EU)</p>
<p>“We have different metrics with different goals in them. In our product line we follow the regulations to a large extent, and we always try to find more sustainable solutions. We are committed to our latest 2030 strategy and the data related to it is constantly reviewed.”</p>	<p>Company X 2030 Strategy (EU)</p>
<p>“Every region has a different focus. Here the focus has really been on recyclability... I think in the US, most of the activity has really been around the recyclability of products, not necessarily the compostability at this point.”</p>	<p>Recyclability over compostability (US)</p>

<p>“The focus from... a North American perspective <b>will probably be more on a compostability landscape and angle...</b> What's happening from a regulatory landscape is being driven by states that have introduced <b>EPR [Extended Producer Responsibility]</b>, more responsibility and more targets for both brand owners and for further up the supply chain to have recyclable, <b>compostable</b> products within their portfolio.”</p>	<p><b>EPR promotes compostability (US)</b></p>
<p>“Our regulatory environment is very <b>fragmented, and it's really on a state-by-state basis</b>, there's not a lot of federal legislation that is actually being discussed... because fortunately or unfortunately <b>our packaging has to be appropriate for 50 states when there may only be one or two states who are legislating a specific way</b>. It's important that we help our customers understand that as well.”</p>	<p><b>Company is trying to act according to the strictest states (US)</b></p>
<p>“We want to get to 100% renewable energy for our factories, which is a phenomenal goal. In the US we're about 40% now, which is really great. We are very much looking at renewable energy sources, water reductions, zero waste to landfills. <b>We have several of our plants who are already on that journey... we all try to lower our carbon footprint as much as possible.</b>”</p>	<p><b>Lowering carbon footprint is an ongoing challenge in the US (US)</b></p>
<p>“We support our message by bringing these researches to public awareness, for example what the environmental effects of our packaging solutions are. <b>Marketing changes regionally, but the main message always remains very similar.</b>”</p>	<p><b>Main message is similar while regional practices may differ</b></p>
<p>“Of course, everything starts by <b>measuring one location at a time and then putting the results together in a single report.</b>”</p>	<p><b>Reports are gathered globally</b></p>
<p>Yes, <b>we are [reporting in the US as well]</b>. We roll up into the corporate re-<b>porting</b> measures. <b>So yes, we are reporting ESG measures.</b>”</p>	<p><b>All subsidiaries report</b></p>
<p>“We <b>report externally</b> to demonstrate to our investors, Board of Directors, and customers the work that we're doing and <b>we're very proactive in that sphere.</b>”</p>	<p><b>Reporting is active</b></p>
<p>“We're conscious of the pressures that are coming from a <b>reuse perspective versus a single use</b>. We have commissioned</p>	<p><b>Differing opinions on reuse vs. single use from legislators</b></p>

reports... While there are external comments which say that reuse and refill are a better solution from an overall energy, carbon, and ESG perspective, that's not necessarily true."	
"We are already involved at an early stage in the regulatory process before decisions are made."	Proactive communication in EU (EU)
"We try to influence these decisions so that they will be based on facts... according to the decisions, our communication and marketing will be adjusted to suit the modern times. We take different things to consideration as needed, so that they are in line with different regulations..."	Respecting, but when necessary, influencing EU regulations (EU)
"...the SUP Directive... It has to be that way only in Europe, but outside the EU this requirement does not exist... Of course, the message about our sustainability actions remains regardless of the geographical area, but these regulations may be so specific to certain areas that we will have to take one step at a time..."	SUP Directive is only for EU, but influences the company message (EU)
"Here in the US our marketing activities are governed by the Federal Trade Commission. They have these green guides. We subscribe fully to these, which prevents companies from overstating their sustainable activities or their product offerings etc."	FTC green guides (US)
"We're on this EPR journey, and we're all starting to understand what this legislation means..."	EPR legislation (US)
"We are trying to figure out how do we handle EPR and Post-Consumer Recycling legislation on a state level."	PCR legislation (US)
"We don't want to overreach; we probably don't do enough to talk about our sustainable activities. I would say we need to increase our communications just so customers, investors and other stakeholders understand what we're doing."	Company X could be a more active communicator (US)
"Here in the US, it is very confusing many times, because we have this fragmentation. The communications will be about how we help our customers really understand the value and impact of our products."	Confusing elements in CSR communication strategy (US)