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The Role of the Institutional Environment in Circular Business Model Adaptation

Circular SMEs perspective

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ABSTRACT :

Climate change has become part of our daily lives. However, in recent years global climate action has received less attention, reflecting geopolitical uncertainty. Challenges brought by climate change require active solutions from various stakeholders in society, including businesses, as the depletion of natural resources caused by the linear economy model does not support the sustainable continuation of business operations. The circular economy is an alternative economic model, that aims to keep materials in circulation longer, reducing environmental impact. The circular economy also has its challenges, as the transition requires resources and expertise from companies, as well as a clear and supportive operating environment. The circular economy has significant growth potential internationally and it creates value for both companies and their customers. This study focuses on the internal and external factors influencing the adaptation of circular business models in the EU market.

Previous literature on circular business models has mainly focused on the key business models and their challenges and drivers. The literature has identified that the market is driven by institutional factors, that influence the local operating environment. Dynamic capabilities help companies to identify and respond to these changes in the market, by adapting their operations accordingly. In Europe, circular economy regulation is governed at the EU level, but decisions are implemented locally. Furthermore, customers and culture are strongly linked to adaptation, as the adoption of the circular economy and local practices varies across markets. The theoretical framework examines circular economy concepts and business models. The adaptation of business models is examined through external and internal factors by analysing institutional factors and the company's dynamic capabilities. The data for this qualitative study is collected through semi-structured interviews, from four companies utilizing circular economy business models.

The empirical findings discovered that market adaptation is not influenced by the business model itself, but rather by companies' ability to adapt their operations to the institutional environment. The themes addressed in the study are strongly interrelated, as adaptation is strongly influenced not only by a company's capabilities but the local operating environment and its changing conditions. The results indicate that a company's resources, culture, and employees are seen as key capabilities. Institutional factors are strongly interrelated, and adapting to them is seen as necessary. According to the findings, although the EU plays a central role in regulation, there may be differences in the country-specific operating environment. Based on the results, companies can identify areas for development within their own organizations and understand the key impacts of institutional factors.

KEYWORDS: Circular economy, small and medium-sized enterprises, adaptation, business models, dynamic capabilities, institutions

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TIIVISTELMÄ :

Ilmastonmuutoksesta on tullut osa jokapäiväistä elämäämme, kuitenkin viime vuosien aikana globaalit ilmastotoimet ovat jääneet vähemmälle huomiolle, heijastuen geopoliittisesta epävarmuudesta. Ongelmat edellyttävät aktiivisia ratkaisuja yhteiskunnan eri sidosryhmiltä, mukaan lukien yrityksiltä, sillä luonnonvarojen väheneminen lineaarisen talousmallin vuoksi ei tue liiketoiminnan kestävää jatkuvuutta. Kiertotalous on vaihtoehtoinen talousmalli, jossa materiaalit pyritään pitämään kierrossa pidempään, vähentäen luonnolle kohdistuvaa kuormitusta. Kiertotalouteen kohdistuu myös haasteita, sillä siirtymä vaatii yrityksiltä resursseja ja osaamista, sekä selkeää ja myönteistä toimintaympäristöä. Kiertotaloudella on paljon kasvupotentiaalia kansainvälisesti ja se luo arvoa niin yrityksille, kuin asiakkaillekin. Tässä tutkimuksessa keskitytään tunnistamaan kiertotalouden liiketoimintamallien adaptaatioon vaikuttavia sisäisiä ja ulkoisia tekijöitä EU markkinassa.

Aikaisempi kirjallisuus kiertotalouden liiketoimintamalleista on pitkälti keskittynyt keskeisiin liiketoimintamalleihin, sekä niiden haasteisiin ja ajureihin. Kirjallisuudessa on tunnistettu, että markkinaa ohjaavat institutionaaliset tekijät, jotka vaikuttavat paikalliseen toimintaympäristöön. Dynaamiset kyvykkyydet edesauttavat yrityksiä tunnistamaan ja tarttumaan markkinan muutoksiin, muokkaamalla omaa toimintaansa institutionaalisen ympäristön mukaiseksi. Euroopassa kiertotalouden säätelyä ohjataan EU-tasolta, mutta päätöksiä toteutetaan paikallisesti. Lisäksi asiakkaat, sekä kulttuuri ovat vahvasti liitännäisiä adaptaatioon, sillä kiertotalouden omaksuminen ja paikalliset toimintatavat vaikuttavat yritysten toimintaan. Viitekehyksessä tarkastellaan kiertotalouden käsitteitä ja liiketoimintamalleja. Liiketoimintamallien adaptaatiota tarkastellaan ulkoisten ja sisäisten tekijöiden kautta analysoimalla institutionaalisia tekijöitä ja yrityksen dynaamisia kyvykkyyksiä. Tämän laadullisen tutkimuksen aineisto kerättiin puolistrukturoiduilla haastatteluilla, haastattelemalla neljää kiertotalouden liiketoimintamallia hyödyntävää yritystä.

Empiirisistä tuloksista havaittiin, ettei adaptaatioon vaikuta itse liiketoimintamalli, vaan enneminkin yritysten kyky mukauttaa toimintaansa institutionaalisen ympäristön mukaiseksi. Tutkimuksessa käsitellyt teemat ovat vahvasti liitännäisiä toisiinsa, sillä adaptaatioon vaikuttaa vahvasti yrityksen osaaminen, mutta myös paikallinen toimintaympäristö ja sen muutokset. Tulokset osoittavat, että yrityksen resurssit, kulttuuri ja työntekijät nähdään keskeisinä kyvykkyyksinä. Institutionaaliset tekijät ovat vahvasti liitännäisiä toisiinsa ja niihin sopeutuminen nähdään tarpeellisena. Löydösten mukaan, vaikka EU:lla on keskeinen asema sääntelyssä, maakohtaisessa toimintaympäristössä voi olla eroavaisuuksia. Tuloksiin pohjautuen, yritykset voivat tunnistaa kehityskohteita omassa organisaatiossaan, sekä ymmärtää instituutionaalisten tekijöiden keskeiset vaikutukset.

KEYWORDS: Circular economy, small and medium-sized enterprises, adaptation, business models, dynamic capabilities, institutions

Contents

Figures

Tables

Abbreviations

CE	Circular Economy
CBM	Circular Business Model
SME	Small and Medium Sized Business
B2C	Business- to- Consumer
B2B	Business-to-Business

1 Introduction

The growing population on our planet requires more resources than it can meet. If we continue the consumption as we are today, by 2050 we require the equivalent of three earths of natural resources. As we already are in a point where the earth's resources are running out, the current consumption habits require change, as the economic and social development has been pursued over the wellbeing of our natural systems, leading to this situation (United Nations, n.d.-a). We are in a situation where in 2025, seven of the nine planetary boundaries were exceeded, causing a risk of permanent and irreversible changes to nature and to our living environment (Stockholm Resilience Centre, 2025). Continuous consumption and unsustainable use of natural resources accelerate climate change. As stated by hundreds of scientists, climate change and global warming are caused by humans, and extreme natural events are increasing and intensifying as we continue (IPCC, 2022).

The concept of sustainability was first defined by the United Nations Brundtland Commission on their report in 1987. The report defined sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (United Nations, n.d.- b). Vos (2007, p. 339) explained sustainability as an equivalent to security. Making the wrong choices eliminates opportunities for future generations instead of providing safety.

Building resilience to climate change and issues it results require action between different sectors (Vijayakumar, 2025). This includes governments, non-governmental organisations, business sector, and different stakeholders in society, with mutual goal to promote prosperity while protecting the earth (Calabrese et al. 2019, p. 155). Cross-sectoral discussion has shifted from how to solve the issues arising from climate change to how can we mitigate these issues. The solution requires collective action and a change in thinking that favours the interests of the community over the individual (Vijayakumar, 2025).

Calabrese et al. (2019) states that sustainability is the biggest problem of 21st century faced by companies. Authors stated that when sustainability is failed to integrate as part of the business strategy, it has negative impacts on environment and society. Neglecting sustainability accelerates climate change, resource scarcity, biodiversity loss and contribute to social inequality (Souto, 2021, pp. 805-806). Furthermore, it also affects the companies' ability to survive, generate profit and grow (Calabrese et al. 2019). From the perspective of business performance, relationship between the industry and the environment should be considered, as the growing consumption increases production, causing harmful emissions to the environment, increasing waste and its disposal to landfills (Lieder & Rashid, 2016, p. 37). Casserley & Critchley (2010) argues that due to competition in business environment, economic growth is often considered as primary focus over the environmental impact.

Companies are lacking a business model that considers the well-being of nature and the economic aspect, which can be implemented regardless of the size of the company (Murray et al. 2017). The current economic model is built on low resource prices and cheap labour. This encourages companies to dispose resources and the end-products as waste, instead of recycling the materials. These actions are contributing to a decline in natural resources (Ellen MacArthur Foundation, 2013). In a response to these urgent issues, Circular Economy (CE) is created as an alternative way to act (Ellen Mac-Arthur Foundation, 2013; Murray et al. 2017).

Ghisellini et al. (2016, p. 27) see the CE as a robust framework towards eco-industrial development, offering improvement on traditional linear business models. CE's is beneficial not only from an environmental point of view, but it also benefits business by increasing the efficiency of material use. This is why CE is an attractive option for businesses. Concluded by Ritzén and Sandström (2017, p. 11) the attractiveness of CE builds on a holistic approach to business development and sustainability challenges, with a focus of reducing resource consumption.

When discussing how companies operate in a circular economy framework, the term circular business model (CBM) arises. CBMs refers to the way a company creates, captures and delivers value. In opposite as in a linear economic model, the circular economy aims to close the loop of materials within the life cycle of a product (Nussholz, 2017). This means keeping materials in circulation, rather than disposing them, while reducing the use of materials, energy and resources (Ritzén & Sandström, 2017). Thus, material loops are designed to keep a product or material in circulation for as long as it produces value, reducing the amount of virgin materials in the value chain (Ranta et al. 2018; Zhu et al. 2010). However, closing the material loop requires CE to be implemented for all stakeholders in the value chain, especially to consumers (Khan et al., 2022).

1.1 Justification for the study

Global climate actions, CE amongst the actions, have received less attention in recent years due to geopolitical uncertainty. This is reflected in higher investments in military spending both in Europe and in rest of the world, which increase emissions and undermine the climate actions that the CE aims to address (Saha et al. 2025). Therefore, authors state that it is important to increase research on the CE. In the past years, new incentives and regulations such as the European Union's Circular Economy Action Plan were created to accelerate CE transition, meaning more funding, creating a new competitive environment and support for innovation (EU, 2020).

The CE as a topic of research has gained widespread of interest amongst the scientific field embedding its place in economics and industrial sciences. CE framework has been widely adapted by companies and institutions as part of their decision making and reporting, however the implementation in global scale is in the early stages requiring more research to advance (Ghisellini et al. 2016, pp. 24–27; Figge et al. 2023). The research on CE requires multi-level actors and at the institutional level, such as the EU, which contributes to transition of the CE by collaborating with universities, research organizations, industries and SMEs within the knowledge and innovation communities (EU, 2020).

Europe has been seen receptive to the circular economy as it recognises its benefits for both businesses and consumers. Regardless of the sector, CE is seen as a potential paradigm shift towards more sustainable activities, transforming economic activities away from non-renewables, towards more sustainable raw material flows and consumption (Khan et al., 2022; Korhonen et al., 2018a, p. 551).

However, there is still a gap to bridge in the CE. De Pascale et al. (2023) argued that the assessment of CE case studies focusing on the implementation, strategies and practices is still in its early stages. This leads to the conclusion that even though research on CE implementation is growing there are various open questions related to the topic. This also applies to potential end users of the CE, and it has been found that regardless of the end customer, consumers and businesses have varying differences in their opinions regarding the CE. Rizos & Bryhn (2022, p. 9) found that circularity is often viewed with scepticism, and its benefits are not necessarily recognized. Authors state that the companies acknowledge the benefits and believe that accelerating the CE through EU-level regulation and legislation, will have a positive impact on CBM development, but the lack of global regulation is seen as barrier.

Early research on the circular economy focused on the biological aspects of the circular economy (Govindan & Hasanagic, 2018, p. 79). However, in the present there is a wide range of research on the CE covering various areas of society. From the perspective of companies, research has focused mainly on the implementation of CE into the supply chains and only in recent years the direction of research switched to look at the drivers, problems and ways of implementing the CE on a company level. This has also increased the focus on SMEs, what implies about their economic importance. However, due to the growing trend on CE transition, further research on drivers and barriers at SME level is needed (Chakraborty et al. 2025).

Research on the CBMs requires focus on their implementation across geographical areas. Often the external challenges that are beyond the company's control, slow down the CE

transition (De Angelis, 2024). Previously Chabowski et al. (2023) examined sustainable business model innovation focusing on CE business models from the international marketing perspective. Authors argued that firms should adapt business models based on the institutional framework of different markets and identified a research gap in adapting CBMI to international markets and what factors influence the success in different institutional environments. Furthermore, Ghisellini et al. (2016, p. 27) suggested that the CE requires more macro level evaluation of projects, regulations and awareness of CE actors at different level.

It is widely recognized that SMEs are valuable players for both the economy and from a sustainability perspective. SMEs have the potential to bring sustainability innovations to the market and have been recognized for their ability to be agile in response to new regulations and requirements. However, research shows that most circular SMEs in the EU focus on their domestic market, as there are still challenges to internationalization, such as lack of demand for circular products and services, additional costs of CBM implementation, missing economic incentives to establish a position in the market, regulatory challenges, and lack of awareness and peer support from successful CBMs (ten Wolde & Koehler, 2021).

Reim et al. (2022) found that overall business model challenges of SMEs internationalization are often related to value creation in international markets, such as a lack of market knowledge, marketing challenges, or a missing value proposition. In addition, there may be challenges in delivering value, such as a lack of resources, cooperation challenges, and a lack of international competence. Authors state that capturing value may arise challenges to SMEs, such as increasing costs or uncertain returns from international business.

Therefore, more research of the business model challenges of circular SMEs is much needed, as the institutional challenges are important factor to consider when operating in foreign markets. De Angelis (2024) suggested that CBMs require more research on the

challenges of implementation in foreign markets and Saha et al. (2024, p. 14) emphasized that practical implementation and operational challenges of scaling CBMs require more attention. A solid foundation for the circular economy has been established in the EU internal market, and its importance is recognized by both institutions and businesses. The implementation of the CE model has positive effects on the environment and is an essential part of the fight against climate change (UNDP, 2023). Considering the economic value of SMEs, there is a need for further research from the perspective of both society and businesses.

1.2 Aim and research question

The main objective of this thesis is to find out the role of institutional environment when adapting circular business models in international markets. Furthermore, how this is done by circular SMEs and what are the main challenges. Thesis aims to examine the external- and internal factors that affect the market adaptation, by analysing institutional drivers and the dynamic capabilities of the firm. Institutional drivers of the market adaptation considered in the thesis are regulative environment, local culture, and customers. The focus of the study is on SMEs that utilize CBM as part of business. When examining international markets, the scope of the study is narrowed geographically in the EU market environment.

The research question is complex, and without narrowing it down and establishing a clear theoretical framework, the research would be too broad. Through institutional factors the thesis is able to analyse external factors affecting companies, and based on dynamic capabilities, internal factors affecting companies can be analysed.

Thus, the main research question is:

How can SMEs adapt circular business models to international markets?

To answer the research question, the objectives of the thesis are as followed:

1. *Define circular business models and their characteristics*
2. *What are the key external institutional challenges in adapting CBM's to different markets?*
3. *How do dynamic capabilities affect the ability of SMEs to adapt their circular economy business models?*

1.3 Delimitations & Scope of the study

This thesis is focusing on SMEs, that have international activities such as trade, subsidies or collaborative activities in the EU market area. The study is limited in terms of company size, as SMEs often face challenges in internationalization due to their limited resources, both human and financial. Same issues affect also in the implementation of CBMs. Rizos & Bryhn (2022, p. 9) found financial resources being the biggest barrier on expanding CE operations. However, it is important to be aware that there may be differences between companies in terms of company-specific resources and capabilities that are essential enablers of building sustainable growth and expansion into new markets (Kaur & Kumar, 2024). This thesis is not limited to a specific industry, due to its niche nature and the challenges involved in finding companies to interview. By examining various industries, the thesis aims to analyse the differences across industries and customer segments.

The concept of CE is broad, and it can be studied in various academic disciplines. The purpose of this study is not to explore the term deeper, but rather from the perspective of companies that have already implemented CE as part of their operations. Through data collected from the interviews, thesis aim to provide companies with a perspective on how to operate and aims to create a basis for further research on the topic, such as narrowing the research between different industries.

2 Literature Review

The literature review of this study consists of two parts. The first part discusses the CE and linear business models, and how companies transition from a linear model to a CE model. Supporting the research question, the first part also discusses CBMs and SMEs in the context of the CE. The second part discusses more thoroughly the business model adaptation and scaling in international context and the role of the institutional factors in adaptation. In addition, thesis discuss how SMEs can overcome these challenges by examining the importance of dynamic capabilities. The literature review discusses the key theories and concepts in the field in an international context, creating a conceptual foundation that allows the reader to understand the phenomenon on which the research focuses. The theories are used to answer the research questions and bridge the gap between theory and results of the findings.

2.1 Circular Economy – from linear to circular

CE as a model is opposite to the traditional linear economy model. Murray et al. (2017, p. 371) defines linear economy as the conversion of natural resources into waste through production. The current linear economy is inefficient and cannot meet the current or future requirements for our mankind (Sitra, 2023; Sariatli, 2017, p. 34). In a linear economy, actors are not focused on the efficient use of resources, but rather on maximizing profits as demand increases. The linear economic model has reached the end of its road, as the increasing amount of waste and usage of natural resources damages the environment (Sariatli, 2017, p. 34). However, companies are in the position where they can change their business logic away from this (Sitra, 2023).

Linear economy builds on take-make-dispose logic. Take materials needed, make the product, generate profit and dispose after use (Sariatli, 2017, p. 32). The linear economy's take-make-dispose logic provides short term benefits. Product becomes waste, ending up in a landfill, producing no economic benefit at the end of its life cycle (Sitra, 2023). Linear economy model contributes to rising production costs as the demand

increases, meaning that the availability and access to natural resources is becoming more challenging, as mines are unable to extract materials at the required pace. In addition, due to growing competition, companies are pressured to compete with pricing, which further affects the company's profitability negatively (Sariatli, 2017, pp. 32-34).

Knight (2023) explained that the linear economy is harmful to both nature and the climate, causing pollution and biodiversity loss. Another harmful aspect is that products are manufactured as cheaply as possible throughout the supply chain. This is due sourcing of materials from the global markets, where the cost of labour is cheap, leading to more cheap materials than sourcing from western markets. This leads companies to utilize business models that relies on the use of cheap materials. This consequences companies to neglect recycling and re-use of resources and focusing more on producing waste (Sariatli, 2017, p. 31).

Successful CE promotes sustainability and maximizes the benefits of the product for society and nature. In CE, the different cycles of ecosystems are considered so that they can recover naturally (Korhonen et al. 2018, p. 39). Kirchherr et al. (2017a, p. 229) defines it as economic system which is constructed on reusing, reducing, recycling, and recovering of materials in various production processes, moving away from the end-of-life concept for products. Later Kirchherr et al. (2023, p. 7) complemented the definition for CE, by stating that the CE is a regenerative economic system that considers sustainability from a natural, economic, and social perspective and considers future generations. Authors also mentioned the importance of various stakeholders as enablers of CE, such as industry, consumers, decision-makers, and the scientific community.

The CE and the linear economy can be compared in terms of value conservation. In a linear economy, the common scenario is that the functional value of a product is lost after its first use, and the product ends up in a landfill. CE as the opposite, where typically after recycling, remanufacturing, or reuse, the functional value of the product is better preserved. This enables the products to be reused, creating additional opportunities for

value creation through extended product lifecycles (Vulsteke et al. 2024, p. 7). The linear economy does not consider the recovery of value at the end of a product's life cycle, instead it seeks to create it through new products (Sharma et al. 2020, p. 1851).

According to Murray et al. (2017, p. 371), this behaviour damages the environment in two ways: by removing natural resources from the ecosystem and by reducing the value of natural resources by turning them into waste and causing pollution. The idea of CE on the contrary is to have as little impact on the environments as possible. It rather repairs damage and aims to generate as little waste as possible through the life cycle of the product, from production to the end user. Ghisellini et al. (2016, p. 18) presents CE as a way to design an economic model that builds on the appropriate use, reuse and exchange of resources, and by these means increasing the efficiency of production by getting more out of doing less. In this way CE as a concept has succeeded to attract interest of the companies to contribute to sustainable development by simplifying its economic benefits. Instead of investing in and creating a product that offers economic benefits, these economic benefits can be generated multiple times (Korhonen et al. 2018b, p. 45).

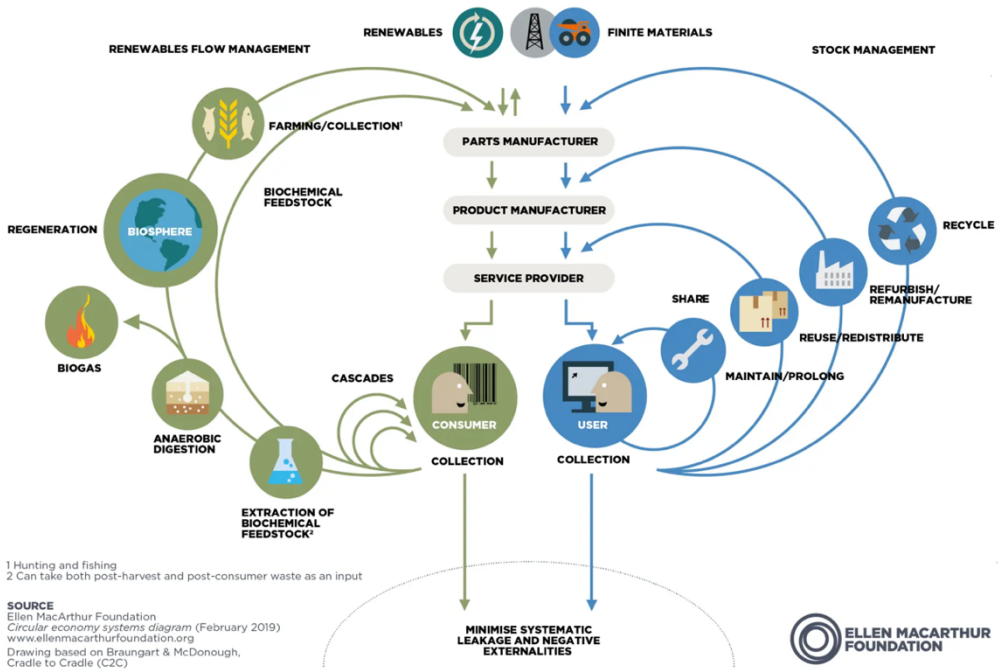

Figure 1. Butterfly diagram (Ellen McArthur Foundation, 2019).

To visualize CE, Ellen McArthur Foundation (2019) created butterfly diagram to represent different cycles of the CE model, as well as to reflect the continuous flow of material. Butterfly diagram presents biological and technical cycle. On the left side of the diagram in figure 1. is the biological cycle, that reflects the cycle of renewable materials that decompose and can be safely returned to the ground. Korhonen et al. (2018b, pp. 39-40) stated that the purpose of CE is to make economic use of nature's cycles in terms of energy, materials, and nutrients, but the aim is to be able to return them from economy to nature in a way, that the nature can also benefit.

On the right side of figure 1. is the technical cycle, which focuses on the cycles of non-renewable materials. Velenturf et al. (2019, p. 964) opened the butterfly diagram and explained that the materials in technical cycle are in closed loop cycles, that are kept in circulation through different functions through sharing, maintaining, reusing, refurbishing and recycling the products and materials. In the biological cycle, materials flow through nature in an open loop cycle through regeneration, farming, composting, cascading and through different extraction processes (Ellen McArthur Foundation, 2019).

At the end, CE is about recycling of the resources used and keeping them in cycle. For example, in industrial symbiosis companies utilize waste created by other companies as a resource. Another example is the service economy, where service life cycles are slowed down to delay the generation of waste. In general, by focusing on the life cycle of products, it is possible to reduce the use of resources (Murphy et al. 2017, p. 372). Central concept of CE is the 4R framework: recycle, reduce, repair, and reuse. (Kirchherr et al. 2017a; Murray et al. 2017, p. 371).

CE is criticised of not having social dimension. However, CE benefits people through regenerative use of our natural resources, but concrete social dimension is completely missing (Murphy et al. 2017, p. 376). The missing social dimension draws from the triple bottom line of sustainability that is suggesting that instead aiming for creating economic value, it is necessary for companies to consider social and environmental aspects as well.

The economic aspect of the model suggests that the company's economic growth should happen within the limits of the earth, thus not putting future generations in a disadvantaged position due to the unsustainable choices of previous generations. The social aspect underlines the impact companies have on social matters such as equality, stakeholders, well-being and human rights, as well as direct impact to societies and communities. Environmental perspective emphasizes the utilization of physical resources so that they are conserved for the future as well (Crane & Matten, 2016, pp. 33-35; Murphy et al. 2017, p. 376).

Murphy et al. (2017, p. 376) raised issues arising from CE and sustainable business models, such as overly simplistic goals and unintended consequences. The authors refer to the negative impacts of many so-called "sustainable" products, such as green technology's reliance on rare metals or deforestation caused by biofuels. In addition, many sustainable products may require more energy in terms of both use and manufacture.

Ce barriers are often related to the implementation of the model. Aligning with the geographical scope of the thesis, Rizos & Bryhn (2022) studied the barriers to CE implementation in the EU area. Authors stated that the EU member states need to standardize their legislation to support the CE regardless of the country. Authors (2022, p. 5) highlighted differing VAT rates and rules between member states, such as how second-hand products are taxed. The lack of standardized legislation towards circular products is creating unequal competition amongst different circular practices. This can negatively affect to the scaling of circular businesses to other member states, or to make other business models more appealing than the other. In addition, the expansion of CE practices is prevented by differing opinions amongst the decision-makers (Rizos & Bryhn, 2022 p. 9). Kirchherr et al. (2017b) named regulatory, cultural, market and technological barriers as the biggest barriers in CE implementation in the EU area.

2.1.1 Circular Economy in Finland

The CE rate of materials is set to double in Finland by 2035, which needs adjusting as the current consumption of materials is four times higher than the regenerative capacity of earth (Finland's Environmental Administration, 2026). In 2016, Finland became the first country in the world to prepare a national roadmap for Circular Economy, thus aimed to be a pioneer in CE globally. The roadmap included measures and actions set in co-operation across sectors, including government, public-, private- and third sector. Measures address how Finland can respond to challenges arising from climate change, resources depletion and urbanization. Designing of the roadmap included other stakeholders such as Finnish citizens as part of the process (Sitra, n.d.).

On the publication of European Environmental Agency (2024), Finland was on the beginning of implementing the EU's Circular Economy Green Deal for 2035. Finland's economy is built on agriculture, industry and services. The use of fossil energy in 2024 was 65,7%, compared to the EU27's 54,4%. Most of the materials used in economic processes that are extracted from the nature are non-renewables (80%), such as soil and materials from the earth (Finland's environmental administration, 2026). Circular material usage in Finland, between 2011-2022 was 0,6% compared to EU's average of 11,5% and raw material consumption amongst the highest in the EU (EEA, 2024; Finland's environmental administration, 2026).

Finland is dedicated to investing on the infrastructure of CE, to be able to re-use and recycle materials and industrial by-products, as well as to research and development of CE, such as allocating funds to research and innovation programmes. Part of the investments are allocated to international growth of companies (EEA, 2024). According to the Ministry of Environment (n.d.) private sector is encouraged to experiment and innovate circular solutions and economic incentives are created to support that, so that companies could make choices that both beneficial for their economy, as well as to CE.

2.1.2 Circular Economy as a value creation tool

It is estimated by Ellen McArthur Foundation (2025) that circular markets in Europe, could reach a value of 1.5 trillion Euros By 2040. In essence, CE is way of creating value to the businesses utilizing it. When it comes to the value of the product, the time that product or materials are kept in the inner cycles of the technical flow should be maximized (see Figure 1.), as sharing, reusing and refurbishing provides more value than the traditional recycling (Korhonen, 2018a, p. 38). Authors state that the economic benefits of CE are beyond the cycles, as it has the benefits of lowering the cost arising from sourcing resources, energy use, waste disposal and the cost of emissions, it also creates new opportunities for businesses as it opens new markets and employment possibilities. Authors see that CE is improving company's public image. From economical perspective, CE possess value to the whole economy, as circulating materials means less exposure to varying prices of materials, lowering overall material costs leading to a more effective material use regarding both value and volume (Sariatli, 2017, p. 33).

According to Vulsteke et al. (2024, p. 3) the value created by the CE can be examined through the value framework, in which the value produced is divided into two different types: functional value and created value. It is essential for the CE to preserve functional value as well as possible. Functional value is defined for materials, resources, products, and components based on the benefits and functions they offer to products and people, as well as to human well-being. Created value acts as a bridge between the CE and sustainability, reflecting the positive and negative impacts of a product's life cycle in terms of economic, social, and environmental impacts. The purpose of the CE is to maximize the positive created value.

De Angelis (2024) highlighted that it is important to demonstrate to companies how CE can be a route to a better resilience and how it can create sustainable competitive advantage, so that more companies would embrace CE. The economic value generated by CE, is achieved by reducing dependence on materials. The fluctuation of raw material prices and the availability is directly affecting on the company’s ability to generate profit,

but through the CE, companies can reduce their dependence on resources by keeping the materials in circulation (Lieder & Rashid, 2016, pp. 45-46)

2.1.3 Circular Business Models

Business model implicates the way that companies are creating and delivering value to their customers. As Teece stated already in 2010, in addition to meeting the needs of their customers, companies should consider how new products and services can create added value. Therefore, the company needs to be innovative, since competitive advantage is not only achieved by successful business models, but rather by being unique and hardly replicable (Teece, 2010, p. 173). For business model to be successful, companies need to measure both internal- and external factors through the supply chain, and the operating environment (Teece, 2010, p. 192).

When companies are moving away from linear business models towards CE, it opens new opportunities for business models based on value creation and preservation, without dependence of non-renewable resources. These are called CBMs, which aim to create value by keeping products and materials in circulation, instead of disposing of them after use (Ellen McArthur Foundation, 2023). CE thinking and CE business models are an essential part of bringing the economy into line with planetary boundaries (De Angelis, 2024). CBMs open new business opportunities and growth potential, are cost-efficient, and improve a company's resilience (Ellen McArthur Foundation, 2023).

Linder & Williander (2017, p. 183) defined CBMs as followed: “a business model in which the conceptual logic for value creation is based on utilizing economic value retained in products after use in the production of new offerings”. Authors explained that in the flow of CBMs, the product returns to its producer not necessarily directly, but also through intermediaries. Thus, CBMs as a concept are like closed-loop supply-chain where the product is being returned directly by the customer and re-used. In addition, the CBMs involves circular activities, such as recycling, remanufacturing and reuse (Linder & Williander, 2017, p. 184).

CE is beneficial, as it strives for gaining economic benefits and address problems related to resource scarcity and the environmental. The economic benefits of CE arise from the implementation of new business models and remodelling the entire product life cycle from material sourcing to the supply chain. Positive environmental impact is generated through recycling materials, reducing waste and emissions from manufacturing (Lieder & Rashid, 2016, pp. 45-46). From a business perspective, the CE can be used to expand the value proposition of services and business models, enabling new revenue streams for companies through their products (Ritzén & Sandström, 2017). When making commercial assessments, CE is often valued through few recycled materials, instead of the potential offered by the CE throughout the supply chain and what value it creates to society (Velenturf et al. 2019, p. 967). Author De Angelis (2024) also discussed about CBMs contribution to competitive advantage of a firm, as they often save costs, set them apart from their competitors, and meet customer demand for sustainable solutions.

The definitions of CBMs utilized in this master's thesis are based on Chabowski et al. (2023) and Sitra (2023, pp. 46-48). Authors introduced five CBMs as following: circular inputs, sharing platforms, product as a service, product use extension and resource recovery. Table 1 presents the key characteristics of each CBM, as well as how they can benefit business.

Table 1. Circular Business Models (Chabowski et al. 2023; Sitra, 2023, pp. 46-48)

CBM	Characteristics	Business Benefits
Circular Inputs	○ Use of sustainable, renewable and recyclable materials instead of virgin materials ○ Circular design of products that are repairable and durable ○ Applicable across industries through circular design	○ Improving efficiency and productivity of resources through re-use ○ Decrease of emissions & energy consumption ○ Simplified and repairable products
Sharing Platforms	○ Maximize the use of capacity ○ Efficient use of resources	○ Better margins on sales

	○ User accessibility	○ Opportunity for additional sales through add-on and transaction fees
Product as a Service	○ Subscription based products ○ Service provider keeps the product ownership	○ Increased margins ○ Decrease of emissions & energy consumption ○ Optimised reusability & the possibility of sustainable material choices both through ownership of the product
Product Use Extension	○ Extended life cycle of products through repair & maintenance ○ resale of used products ○ product restoration and remanufacturing	○ Revenue flow from full product life cycle ○ Better customer engagement ○ Repairability of the products and through which value can be generated for longer ○ Sales through second hand products and spare parts
Resource Recovery	○ Recycle and upcycle materials that have reached the end of their life cycle, after which they are returned to the market. ○ Return surplus and wasted products back to their source.	○ Regenerate value from waste streams and resource ○ Decrease of environmental impact and energy through recovery. ○ Reduce material & waste disposal costs

2.1.4 Challenges of Circular Business Models

The CBMs presented in table 1. also involves challenges that companies face. Notable challenge is that some industries are lacking circular practices, but through wider implementation, these types of challenges can be solved. CBMs problems can be divided into key themes: resource related, customer related, knowledge based, and financials (Sitra, 2023, p. 81).

The key challenges identified in relation to resources is the availability of recycled materials on the market and the costs arising from the procurement and remanufacturing. Secondary materials were found to have unclear regulations and lack of information about the material and its origin, as well as unclear standards regarding the usage and recycling of the materials. In resource recovery model, where the focus is to recover

waste, the variation in quality and restricted availability emerged as challenges (Sitra, 2023, p. 81).

When it comes to the customers, the reuse of materials requires proving the quality of the product, as well change to consumption habits towards more circular consumption. This change can be such as change in ownership thinking. In the case of sharing platforms, customers do not purchase products or services but share them instead (Sitra, 2023, p. 81).

The knowledge-based issues arise in the utilization of new technologies and in the ability to innovate CE solutions and concepts. For example, the resource recovery model requires reverse logistics and new technologies to capture the waste and to convert it into reusable form. All the following requires financial capabilities from the company, as CBMs requires investments to new technologies and infrastructure, more capable employees, as well as shift from traditional sell and dispose linear revenue streams, to aiming for a longevity of the products and services with consideration of sustainability (Sitra, 2023, p. 81).

When companies have established their business model on linear economy basis, circular transition put them in the same starting position as with a new business. As a result, the company will have to reconsider their concept and how to get it to work, where to find a good team around it and how to fund it (Sitra, 2023, p. 79). This means that the company should integrate CE into their organization and business model, by setting clear targets for CE, allocate both human and financial resources, and get all the decision-makers to contribute achieving these targets. (Khan et al. 2020, p. 1491).

De Angelis (2024) found that most of the challenges regarding CBMs are caused by external factors, that directly affect the company's innovation process when implementing CE into their business. Due to these challenges, scaling CE business is difficult, as the operating environment requires speed and innovation. Sitra however stated (2023, p.

80), that the biggest challenges are companies internal, customer and ecosystem related challenges.

According to Sitra, implementing the CE is often seen as less challenging for SMEs than for large corporations. In large corporations, linear practices are often an established part of business operations, whereas small and medium-sized enterprises are more agile when it comes to change (Sitra, 2023, p. 80). However, SMEs face their own challenges. For SMEs operating in the EU-area, the key barrier of implementing and expanding circular business models is the lack of financing. However, the EU has enabled funding for the development of CBMs through research and innovation, as well as direct financial support for CE practices such repairing, created policies and standards to accelerate CE activities (Rizos & Bryhn, 2022, p. 9).

Sharma et al. (2020) founded that the challenges of the CE implementation faced by SMEs are such as lack of awareness, commitment and understanding of CE within management and workers. Rizos & Bryhn (2022, p. 9) found that CE implementation may involve competitive challenges. SMEs have found challenging to implement the CE at a practical level, since materials have different recycling requirements, implementation requires financial resources and the necessary infrastructure, which may be missing. According to the authors, SMEs are following the example of larger companies. However, SMEs face the same difficulties when it comes to CE implementation, without having the financial capabilities to overcome these issues.

2.2 Business Model Adaptation in International Markets

According to Chabowski et al. (2025, p. 398) when companies internationalize, they must be able to adapt to the formal and informal institutional differences of the target country. Thus, actions to adapt and standardize operations in accordance with the local characteristics are required. The authors listed behavioural, cultural, and value-based differences as informal institutional differences, while formal institutions include legislation,

policy, and official measures. Scott (2025) noted that as companies become international, they are influenced by external actors, beliefs, and practices. In this master's thesis, the focus is narrowed to three different institutional pressures on the adaptation of CBMs in new markets, namely regulative environment, local culture, and customers.

It is a significant advantage for a company if its business model can be transferred from one country to another. However, it is not that simple, as there are many external factors that must be considered (Stampfl et al. 2013). Saebi et al. (2017) define business model adaptation as a process in which a company responds to changes in its operating environment. Companies are often forced to change their value proposition, market segment, or entire value chain. Business model adaptations are often driven by strong motivations, as such changes possess a risk for the company. These motivations are often threats or opportunities arising in the company's operating environment, such as market changes.

The adaptation of business model is often influenced by how a company experiences its operating environment and whether it views change as an opportunity or a threat. In a threatening situation, companies might start adapting their business models to better align with their operating environment (Saebi et al. 2017). Stampfl et al. (2013) identified adaptation to legal system as a cause for business model scalability. According to the authors, without taking the legal system into account, expansion into new markets may be prevented. Therefore, from the perspective of this thesis, it is essential to understand the scaling process from the CBMs' perspective and what threats it may possess.

Scaling in academia can be discussed in various contexts. Palmié et al. (2023, p. 1) classify scaling into four categories "financial scaling, market scaling, organizational scaling, and volume scaling." Authors defined scalability as following: "increase in the size of a focal subject that is accompanied by a larger-than-proportional increase in the performance resulting from the said subject". Authors refer subject as what is scaled, such as products, or markets (Palmié et al. 2023, p. 2). Tippmann et al. (2023, p. 2) defines scaling as "persistent rapid growth to deliver a viable business model". According to Mortensen et al.

(2026, p. 32), scaling is more than expansion or growth of business, it requires changes in social structures, culture, and the operating environment.

Scaling CBMs is important for accelerating CE (Mortensen et al. (2026, p. 32). From the perspective of both sustainable and international business, scaling opens new market opportunities and creates new opportunities to bring sustainability-oriented products to new customers, thereby increasing sustainable consumption and building a more sustainable economy (Palmié, et al. 2023, p. 9). According to Mortensen et al. (2026, p. 32) CBMs often don't reach into the mainstream, but instead they remain in experimental phase, or find a small niche gap in the market.

Mortensen et al. (2026, pp. 32-24) discussed about different scaling strategies, namely scaling out, scaling up and scaling deep. Scaling out refers to increasing the number of customers through new markets and channels. Scaling up refers to influencing market conditions, such as regulatory frameworks and policies to make them more suitable. Scaling deep refers to influencing culture and behaviour, for example regarding consumption habits.

According to Acquirer et al. (2023) from CBMs perspective scaling requires favourable regulatory framework, as well as internal capabilities. As previously discussed, same themes are raised by Acquirer et al. (2023) such as unfavourable regulatory frameworks and market conditions for CBMs, which directly impact to the success. This is because the factors influencing scaling are based on local market conditions and demand, combined with international opportunities. Therefore, local institutions and other external factors impact the success (Tippman et al. 2023, p. 11).

When scaling is being researched, it examines the changes between two variables. What object is changing and how organizations change according to it. For this reason, it is essential for researchers to define the object of their study, of what is being scaled (Palmié, et al. 2023, p. 11)

2.2.1 External Factors

As mentioned earlier, the CE is attracting attention from governments, institutions and society. Approaches to tackle environmental issues such as resource scarcity is done by the stakeholders mentioned with various actions and policies, such as the European Commission's Circular Economy Action Plan. (Lieder & Rashid, 2016; EU, 2020). The role of institutions in the wider implementation and presentation of CE and CBMs is to accelerate the efforts through policies, showcasing the importance of CE. This demonstrates the important role that institutions have, when promoting this transition (Arranz & Arroyabe, 2023, p. 9). According to the authors, the most effective way to apply institutional pressure is to implement a combined set of regulations and policies. How effective these institutional pressures are is also influenced by organizations ability to adopt information, how active they are, and how well they can respond to change.

The role of institutions can be explained through institutional theory (DiMaggio & Powell, 1983; Scott, 2005). Institutional theory examines how social structures and different social processes such as norms, regulations, routines, and models have been embedded as part of the society that guides the activities of various stakeholders (Scott, 2005). Theory suggest that companies are adapting their characteristics to fit with the environment leading to "institutional isomorphism" (DiMaggio & Powell, 1983; Scott 2005; Arranz & Arroyabe, 2023, p. 9). DiMaggio & Powell (1983) has identified the different mechanisms of isomorphic change, coercive, mimetic and normative isomorphism.

Following mechanisms of isomorphic change, Scott (2005) defined that institutions have three pillars, regulative, normative and cultural-cognitive leading to institutional isomorphism. In regulative pillar, the compliance is based on the appropriateness, and it encompass such as regulations, rules, laws and sanctions. Normative pillar is compiled due to social obligation including such as expectations, norms and appropriateness. Cultural-cognitive pillar is compiled due to shared understanding of the society, and it includes elements such as beliefs, shared understanding and operating procedures and logic. There is a logic behind these actions, as regulative is binded and sanctioned by the law,

normative is regulated on a moral basis and cultural-cognitive is supported by the culture (Scott, 2005).

Theory also focuses on how these different elements of society are adapting and how they are adapted over time (Scott, 2005). Scott pointed that institutional environment is diverse and has complexities, such as disagreements among different decision-making bodies. Same applies with the pillars of institutions, as regulatory, normative and cultural-cognitive dimensions may influence and reduce the effects of another. Organizations face the same institutional pressures when adapting to regulations, operating practices, and norms, particularly when expanding into new markets. as institutional pressure directly effect on how the organizations are behaving and what is expected of them. (Scott 2005; Arranz & Arroyabe, 2023, p. 9.)

CE not only requires change in the value-and supply chains of company, but it also but requires rebuilding them and close cooperation with the company's stakeholders. In addition, CE requires cooperation across sectors involving new stakeholders such as various authorities, institutions, and research institutes (Sitra, 2023, p. 80). The biggest CE enabler, as well as the stakeholder which has high interest in the CE succession are the governments.

The governments have the biggest power to overcome the main barriers in the CE markets and Kirchherr et al. (2017b) mentioned that governments should solve problems that are related to resources and their production and to improve the overall circularity and waste management of materials. What comes to the price of materials, many virgin and carbon intensive materials are cheaper than circular materials, since they are supported through subsidies. To accelerate CE, subsidies should be renewed to favour circular materials. Furthermore, CE would require investments, as the initial investment in CE infrastructure is high, preventing the transition.

Kirchherr et al. (2017b) found that companies find that laws and regulation may hinder CE. Not only if the companies are faced challenges by following the EU-level regulations, but various directives are also implemented locally at the member state level. However, Arranz & Arroyabe (2023, p. 10) had a different perspective on their findings. Authors found that policies and regulations have positive implications on CBMs, particularly from the EU's perspective, which has successfully promoted the adoption of CBMs (Arranz & Arroyabe, 2023, p. 10)

According to Rizos & Bryhn (2022, p. 6) companies have encountered challenges when member states have flexibility from the EU in terms of regulation, which allows them to create the framework for local action and regulation, so that the directives can be achieved. For example, regarding the WEEE Directive, which the authors discuss, the variety of collection and recycling practices in different countries poses challenges. Authors also raised the REACH Directive, which increases the administrative burden and bureaucracy. However, experiences are varying between companies, as the authors found that some companies believes that strong CE regulation communicates the need for a CE to be implemented for companies and provides operative framework.

Kirchherr et al. (2017b) identified four barriers of CE as following: cultural, regulatory, technological and market, which are all interconnected. The authors illustrate the connection between culture and technology by pointing out that if CE solutions are not available on the market and a company’s culture does not favour or develop CE solutions, it directly impacts on the awareness and customers willingness to buy. If there’s no circular solutions on market, it is difficult to find funding for circular businesses. This can lead to institutional barriers as policymakers cannot draw conclusions about the transition to a CE without examples of working CBMs (Kirchherr et al. 2017b)

Drawing from the connection between culture and the customer, customer related issues in CE implementation are more than awareness and willingness to buy (Kirchherr et al. 2017b). Sitra mentioned that CE implementation requires re-positioning products

and services to customers. This means that companies need to justify the benefit of circularity and to encourage their customers to favour circular products by affecting to their consuming behaviour towards more sustainable choises (Sitra, 2023, p.80). Arranz & Arroyabe (2023, p. 9) found that customers are negatively affected by the complex regulations regarding the CE, as well as overwhelming amount of information on the subject, which may result that CBMs and circular products loose interest, thus institutional pressures do not work as intended.

Kirchherr et al. (2017b) stated that from all the identified barriers, culture has the most significant impact. According to the authors, the study revealed that a lack of interest and awareness, corporate culture, and operations within a linear system possess the biggest cultural challenges towards CE. This is due to mainstream consumer habits and companies' willingness to stick with the current linear model due to its effectiveness when compared to CE.

2.2.2 Internal Factors

Dynamic capabilities refer to a firm's ability to purposely modify, create and extend their resource base (Pitelis & Wang, 2019, p. 2). According to Laaksonen and Peltoniemi (2018, p. 186) dynamic capabilities vary between companies, and the firm-specific nature of the dynamic capabilities makes them difficult to measure. However, it is shown that there are similar practices between companies. Dynamic capabilities effect on how the company can shape the environment it operates in, how well the company is able to develop effective business models and create the right products and services for their customers (Teece, 2007, p. 1320).

Teece, Pisano and Shuen (1997, p. 516) defined dynamic capabilities as following; "*firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments".* Teece (2007, p. 1319) further explained and classified the dynamic capabilities by the following: "(*1) to sense and shape opportunities and threats, (2) to seize opportunities, and (3) to maintain competitiveness through*

enhancing, combining, protecting, and, when necessary, reconfiguring the business enterprise's intangible and tangible assets". Khan et al. (2020) studied the role of dynamic capabilities in CE implementation. Study focused on how the CE opportunities are addressed and identified, and how to accelerate the CE implementation utilizing the dynamic capabilities framework of Teece (2007). Authors found that dynamic capabilities should be utilized and developed due to their positive implications on CE business opportunities (Khan et al. 2020, p. 1491). Authors (p. 1489) found that the phases of dynamic capabilities, sense, seize and reconfigure were part of the process when the CE was implemented.

Business environment is in constant change globally, as new technologies are emerging, customer requirements are changing, and companies are required to actively maintain their competitive position. Therefore, by sensing, Teece (2007, p. 1323) refers to the capability to recognize new business opportunities. Author states that sensing requires observation, creativity, learning and interpreting, thus requires companies' commitment to research and research-related activities of the ongoing changes in the industries and the markets. Khan et al. (2020, pp. 1483-1484) found that the key actions for sensing CE business opportunities include market monitoring and understanding current market trends, identifying customer needs, monitoring competitors, and actively tracking technological development. According to the authors, a combination of these capabilities often leads to a higher probability of success and proactive approach help preventing threats.

After sensing opportunity, company needs to seize it by responding to market demands with new products or services, and by adapting its processes. When the opportunities are seized, company needs to develop and maintain their expertise to be able to gain market recognition. Seizing as dynamic capability of requires company to invest into the right business model, meet the requirements of the market and to invest in strategic planning (Teece, 2007, pp. 1326-1327; Khan et al. p. 1486). Teece (2007, p. 1327) highlights the importance of the business model innovation, as well as understanding of the

institutional frameworks to support the model and technologies utilized. Business model design is crucial in terms of value creation and the company's capability to adjust their business models accordingly (pp. 1329-1330). Khan et al. (2020, p. 1487) emphasized that the reshaping of business models also applies into CE business models and is essential for identifying CE business opportunities.

Reconfiguration as a dynamic capability, comes after the company has successfully seized and sensed new market opportunities. To be able to sustain in the situation, company needs to reconfigure its resources and capabilities, as the ability to respond to market changes can easily weaken due to processes becoming more established, even leading to negative impacts on business continuity. For this reason, the author argues that it is essential to shape the company's culture and processes in such a way that the dynamic capabilities are maintained (Teece, 2007, p. 1335). Regarding CE implementation, Khan et al. (2020) found that reconfiguring organizational structure and technological innovation are crucial for company's success.

Torkkeli et al. (2019) studied on the influence of institutional drivers on SME internationalization. Authors pointed, that institutional drivers have more important role in the SMEs internationalization than the country-specific institutional barriers, however, it is noted that these can vary by country. However, dynamic capabilities play a significant role in entering foreign markets, and the host country's institutional environment is important in this regard. If internationalizing firms are supported, it is more likely that they will develop the capabilities needed to overcome institutional challenges.

Internal challenges are amongst the main issues of circular implementation. Internal challenges refer to organizational skills through the whole organizational structure from operational roles to the legal department. Maintaining these skills require investing to employees. Organizational culture is crucial when implementing change. CE requires organizations to be agile and to acquire capabilities required to operate. This benefits the organization in the long-term (Sitra, 2023, p. 80).

In the EU markets, decision-makers are part of the CE implementation challenges. According to De Pascale et al. (2023, p. 16), implementing the CE at the European level requires greater awareness among decision-makers, companies, and other stakeholders of the barriers to the CE and how to overcome them. The EU policy instruments have been found to have a significant role in accelerating CE, as the change will not happen by itself across economic sectors, even though it has been found that most CE incentives are implemented at the micro level (De Pascale et al. 2023, p. 15).

Teece at al. (1997, p. 518) discussed about company-specific assets within the framework of dynamic capabilities. Authors discussed how the processes of a company demonstrate their capabilities and competencies, emphasizing their importance as an asset to a company. Authors stated that capabilities and competencies need to be built, not bought. Authors (p. 522) discussed about institutional assets and how operating environment cannot be assessed through markets alone, since Institutional environment is crucial part of the operating environment of a company. The regulatory framework however has differences between countries and usually the institutional assets that companies possess may differ significantly from the host country's institutional framework, making these assets not entirely company specific. Teece (2007, p. 1320) added that the external factors influence the performance of the company, can be overcome and succeed through internal dynamic capabilities.

Previous studies have identified approaches that have overcome institutional challenges in successful market entry. Torkkeli et al. (2019) raised the importance of dynamic capabilities, especially relationships- and network capabilities to build a foundation for business through networks and relationships. Authors also emphasized that a less complex institutional environment is more conducive to companies to establish the groundwork for their business operations.

3 Methodology

In this chapter, the methodology of the study is covered. Firstly, the methodological approach is covered, consisting of research methods and research strategy. Secondly, data collection, where the primary data collection is discussed, followed by data analysis. Lastly the reliability and validity of the study are covered.

3.1 Methodological approach

Qualitative research in business framework allows to examine and study complex phenomenon and issues, by seeking to understand how and why things work and whether it is possible to change them (Hennik et al., 2020, p. 11; Eriksson & Kovalainen, 2011, p. 6). Quantitative research, on the other hand is more data centric, with aim to study a phenomenon as broadly as possible and draw conclusions based on the data (Tuomi & Sarajärvi 2018). This master's thesis focuses on of qualitative research methods. According to Eriksson & Kovalainen (2011, p. 7), there are various qualitative research methods and even within these methods, there are differences in research techniques, focus, and philosophy.

To be able to respond to the research question, qualitative research was selected as the research method. Qualitative research method is often chosen when the aim of the research is to gain deep knowledge on research questions, encompassing the perspective and environment of the subjects of the research. Authors state that when it comes to research methods, qualitative research is most effective in answering questions “why”, which aim to understand and explain phenomena and “how”, which describe processes and behaviour (Hennik et al., 2020, p. 11). Qualitative research is a process that begins with formulating research questions and objectives, reviewing the literature, applying theory, and selecting qualitative research methods (Hennik et al., 2020, p. 30)

Research philosophy reflects the researchers approach to deepening their understanding of the research topic, as well as how they interpret the topic. The term refers to the adoption and expansion of knowledge. Therefore, researcher's own perspective on the topic influences how knowledge develops and what kind of knowledge is acquired (Saunders, 2007, pp. 101-102).

Saunders et al. (2007, p. 133) classified research purpose in three different categories: Explanatory, Exploratory and Descriptive. Explanatory means that the research aims to explain the problem and how it affects the relationship between variables. Qualitative data can be collected to support this (Saunders et al., 2007, p. 134). Exploratory in the other hand, aims to help researcher to explain and clarify the problem of the research. The aim is to find out what is happening and ask questions about it. Exploratory research is particularly useful in situations where there is not much existing research on the phenomenon assessed in the research (Saunders et al., 2007, p. 133). This combination of explanatory and exploratory is chosen for this master's thesis as the aim is to examines the relationship between the institutional framework and CBMs models in the international market and explores the factors that most influence this relationship.

To achieve the study's objectives, a research strategy must be defined. According to Saunders et al. (2007, p. 135) research strategies can be such as experiment, survey, case study, action research, grounded theory, ethnography, archival research, or a combination of these strategies. In this master's thesis, the chosen research strategy is multiple case study, because it allows researchers to examine whether a phenomenon occurs repeatedly across different cases, so that study can examine whether the phenomenon can be generalised (Saunders et al. 2007, p. 140). Case study is often used in research, which is by nature explanatory or exploratory (Saunders et al., 2007, p. 139). Eriksson & Kovalainen (2016, p. 131) stated that case study first defines the problem and then solution to the case. Case study aims to answer questions "why"," what" and" how", based on which it can be used to generate holistic, comprehensive, and contextual information (Saunders et al. 2007, p. 139; Eriksson & Kovalainen, 2016, p. 131).

In qualitative research, research approaches are inductive, deductive and abductive (Saunders, 2007, p. 117; Tuomi & Sarajärvi, 2018). The difference between these approaches is that in deductive approach, theory and hypotheses are formulated first and then tested through research. In contrast, an inductive approach data is first collected and analysed, and theory is developed based on the findings (Saunders, 2007, p. 117). In the abductive approach, research is based on existing theories, and the researcher aims to integrate data with theoretical frameworks. The aim is often to refine prior knowledge in a new context to identify new theoretical findings (Tuomi & Sarajärvi, 2018). An abductive approach was chosen for this thesis. The thesis examines the interaction between previous theories and the data, based on which conclusions are drawn.

3.2 Data collection

This study consists of primary and secondary data. The primary qualitative data of the study is gathered from the semi-structured interviews held with the case companies. Unlike quantitative data, qualitative data is not measurable. Qualitative data can be in the form of text, video, verbal, or audio. Qualitative data characteristics are its interpretability and descriptive nature (Eriksson & Kovalainen,2016, p. 82). Primary data, which is collected by the researcher themselves, is empirical data. Empirical data can also consist of existing information that was collected previously, such as data found in databases or books. This is referred to as secondary data (Eriksson & Kovalainen, 2016, p. 82.)

Based on the research question and the nature of the study, the correct type of qualitative interview must be selected. Eriksson & Kovalainen (2016, p. 93) listed three different types of interviews. Firstly structured & standardized interview, which often aim to answer the question “what” and utilize the same questions for all interviewees. Secondly guided, structured and semi-structured interviews, in which the main issues, themes and topics are explored, but wording and order of the structure can be modified. The questions in these interviews are broader “how” and “what” questions. Lastly, informal, open

and narrative interviews, where the interview is a more open conversation based on the interests, aiming to answer “what” and “how” questions.

The study will be conducted by using semi-structured interviews as a qualitative research method. The research method was chosen since qualitative research allows the research question and topic to be explored based on the interviewee's experiences and thus relevant data to be collected. (Hennik et al., 2020, p. 10). Semi-structured interviews use selected themes and specific questions to seek answers to the research question (Tuomi & Sarajärvi, 2018). Eriksson (2016, 92) emphasizes that the data collected from the interviews should be able to answer the research questions by “why” and “how.” For this reason, it is essential that the research questions are formulated before data collection. Semi-structured interviews are often chosen as research method in business context, because it allows us to study a new phenomenon based on experience-based data (Eriksson, 2016, p. 9).

In qualitative research, when considering the sample, researchers often use purposive sampling, in which participants are selected based on characteristics that are relevant to the study. In contrast to quantitative research, qualitative research aims to understand phenomena and gain as detailed and fundamental an understanding of the subject as possible, while quantitative research seeks to measure and generalize results based on a large sample (Hennik et al., 2020, p. 92). The criteria for the interviewees can be found from the theoretical background of the study, thus recognizing that a person with certain kind of experience is able to provide relevant information for the study. Most common criteria utilized are demographic, geographic, or experience-based characteristics (Hennik et al., 2020, p. 92)

Interviewees will be selected and then contacted after pre determing the factors for a qualified interviewee. sampling method enables the selection of interviewees based on characteristics relevant to the research. Thus, it can provide both fundamental and experimental understanding towards the research area (Hennik et al., 2020, p. 93).

However, the number of participants of the study is often determined by resources available, both the researchers and the subject of the research. Often when writing a thesis, it is more important to find interviewees who have relevant experience and knowledge of the subject. Therefore, it is important to carefully select the participants for the study (Tuomi & Sarajärvi, 2018).

Research ethics is a central aspect of qualitative research. The purpose of qualitative methods is to understand people, and the aim is to establish a confidential relationship with the interviewee. Confidential relationship between the interviewer and the interviewee may involve maintaining confidential data, as well as agreeing to anonymize data to ensure that the interviewee's identity and information remain confidential. Research also requires the consent of the interviewee and interviewee must be given the opportunity to express their willingness to participate in the study (Hennik et al., 2020, p. 71). Hennik et al. (2020, p. 77) emphasized the importance to introducing yourself to the interviewee, describe the nature of the study and clearly explain why the data is being collected, for what purpose, and what the outcome of the study will be, such as master's thesis.

The criteria for selecting interviewees for this case study, were defined in accordance with the research question. The case companies interviewed represented different industries: clothing and fashion industry, the construction industry, and the self-service and software industry. Thus, case study can provide cross-sectoral analysis on the subject. The interviewees were all SMEs operating in the EU market, according to the criteria defined by the European Commission (see table 1.). The exception in the study is Case Company D, as interview was conducted with the Finnish branch of a large Scandinavian company. Finnish branch meets the SME criteria in terms of staff, turnover, and balance sheet. As stated by the European Commission, 99% of the companies within the area of EU are SMEs. The case companies operate in both the business-to-business (B2B) and business-to-consumer (B2C) sectors.

Category	Micro	Small	Medium-Sized
Staff	<10	<50	<250
Turnover	≤ €2 million	≤ €10 million	≤ €50 million
OR			
Balance Sheet	≤ €2 million	≤ €10 million	≤ €43 million

Table 2. SME criteria (European Commission, n.d.).

In addition to the sample company criteria, the case study was limited based on whether the companies had a CBM as part of their operations. The interviewees needed to have the knowledge or to be in some way involved in the CE operation of their company and preferably part of the company's international operations. Criteria were set to get as accurate description of the processes as possible.

Company	Title	Industry	Circular Business model
Case Company A	CEO	Clothing- and fabric manu-facturer	Circular Inputs Resource Recovery
Case Company B	CEO	Industrial manufacturing	Product as a Service Sharing Platforms
Case Company C	CEO	Self-service industry	Product as a Service (PAAS) Product Use Extension
Case Company D	Marketing Manager	Industrial manufacturing	Circular Inputs Resource Recovery

Table 3. Overview of the interviewees

The purposive sampling started by searching the case companies with specific criteria. To identify companies, publications about CE companies from explored from various websites, such as publications by Sitra and Business Finland. In total of 27 companies

were contacted during February, which 18 through e-mail and 9 through companies' website. It was difficult to find companies to interview due to the criteria, particularly the requirement for international operations. In addition to the difficulties, the general response was that the companies did not have the resources available for an interview.

After agreement to participate to the study, interviews were conducted using Microsoft Teams. Although the language of the study is English, the interviews were conducted in Finnish. Conducting the interviews in Finnish felt natural, as Finnish is the native language of both the interviewer and the interviewees. Interviews were recorded and transcribed. Before the interview, all the questions were categorized in to following categories in according with the research question: Company's background information, circular economy in a company, business model adaptation, institutional challenges divided to regulatory, customer and cultural context, and the dynamic capabilities. All the participants received the questions before the interview to give the interviewees time to prepare. The interview transcripts were translated into English for data analysis.

3.3 Data analysis

Qualitative data analysis aims to examine the data collected in-depth and aims to understand the phenomenon studied through the experiences and perspectives of the interviewees. The answers to the research questions will be used to form an evidence-based understanding, which then will be used to explain the phenomenon (Hennik et al., 2020, p. 211). Qualitative content analysis is commonly utilized method in research. It focuses on why something was said and done and aims to create a broader picture of the phenomenon studied (Eriksson & Kovalainen, 2016, pp. 119-123).

After data has been collected, it needs to be prepared for analysis by transcribing the interviews into text form. To comply with research ethics, the data is anonymized during the transcription process so that neither the interviewee nor the company can be identified by any characteristics (Hennik et al., 2020, p. 82). After data is transcribed, data is

coded and categorized to make it easier to explain and organize. Coding units can be words or sentences (Eriksson & Kovalainen, 2016, pp. 119-123) In coding, codes are named, and it is determined what they refer to or what they mean, how the content is defined for the code, and what is excluded from the data (Eriksson & Kovalainen, 2016, p. 122).

If themes are used as coding units, this is referred to as thematic analysis (Eriksson & Kovalainen, 2016, p. 123; Guest et al. 2012). When qualitative interview data is analysed by utilizing thematic analysis, analysis focuses on interpreting and identifying certain themes arising from the gathered data. After identifying the themes arising from the data, themes are coded. Once the codes are defined, they are added to the data to help outline the themes for analysis. Analysis can be such as comparison of the codes and identifying similarities and recurring themes (Guest et al. 2012).

In this master's thesis, the data analysis is conducted by utilizing thematic analysis. Central themes had been identified before the theoretical framework of the study. To help in this phase, the structure of the interview was organized according to the themes related to the study. After setting the themes, a colour was assigned to each code in advance, which made it easier to interpret the interview transcript and identify key points when reviewing the results. As suggested by Hennik et al. (2020, p. 82) the data was anonymized in a way, which ensures that neither the interviewee nor the company can be identified. For this reason, the companies' services and business models are not referred to by their specific names, but by the definitions provided by Chabowski et al. and Sitra, which can be found in Table 1. (Chabowski et al. 2023; Sitra, 2023, pp. 46–48).

3.4 Trustworthiness of the study

The evaluation of research should be an ongoing process throughout the research and the evaluation criteria for study should be set. This is due to the transparency of the research process and as a researcher, you should be able to explain both the strengths

and weaknesses of the study to the reader (Eriksson & Kovalainen, 2016, p. 303). In business research, evaluation criteria are often reliability, validity and generalizability. According to Saunders et al (2007, p. 149) as part of the research, it is important to emphasize reliability and validity to avoid incorrect results.

The definition of reliability is to indicate whether the study is repeatable and to what extent the result is the same. Meaning, would other researchers achieve the same results, make the same observation and is the research transparent (Eriksson & Kovalainen, 2016, p. 304; Saunders, 2007, p. 149). The validity of the study measures how well the key findings and conclusions of the study can define what has happened, and how this can be proved (Eriksson & Kovalainen, 2016, p. 304). According to Saunders et al. (2007, p. 1510) validity examines the cause-and-effect relationship between two variables.

Generalizability as evaluation criteria indicates whether the results of the study can be expanded to a larger mass. In other words, can the study's findings be generalized to a larger sample. The generalizability is affected by the size of the sample and the sample selection criteria for the research (Eriksson & Kovalainen, 2016, pp. 305). According to Saunders et al. (2007, p. 151) in qualitative research the results often cannot be generalized. If you study individual organization, or the organization you study has unique individual characteristics compared to others, the nature of the study is to focus on the impacts of an issue or phenomenon in a specific environment. Then it is essential to not claim that the results can be generalized.

As mentioned, Saunders (2007, p. 149) states that reliability and validity are central part of research to achieve accurate results. In authors text, Saunders outlines the following threats that may compromise reliability and validity. Threats to reliability are as follows: subject or participant error, subject or participant bias, observer error and observer bias.

According to Saunders (2007, pp. 149-151), the timing of the study and the respondent's state of mind at that time can influence the results, leading to subject or participant error.

However subject or participant bias can for example occur, when studying an organization where employees are afraid to answer honestly or assume that the organization expects a certain line of answers. Observer error can occur if there is significant variation in the structure of the research. This can happen if the interview questions were presented differently or in a different order to the interviewees. This can lead to observer bias if these results are interpreted in the same way.

Threats to validity of research are history, testing, instrumentation, mortality, maturation and ambiguity about causal direction. History can impact on the validity of your research, because the subject or phenomenon you study, may experience changes after the research is completed, thereby misleading the results. When testing or measuring results, they can be influenced if a more favourable outcome is desired. The same applies to instrumentation, as changes to measurement processes can affect the result. Mortality refers to a subjects or participants withdrawal from the study. Lastly, ambiguity about causal direction, referring to ambiguity of which phenomenon is the cause, and which one is effect in the study (Saunders, 2007, pp. 150-151).

Followed by Eriksson & Kovalainen (2016, p. 303) and Saunders et al. (2007, p. 149) to avoid incorrect results, evaluation of the study has been ongoing through the writing process. The aim of the study is not to generalize the results, but rather to provide useful information to Finnish SMEs that are utilizing the CE, explaining how the institutional framework can influence them in international markets and what capabilities are required for a company to adapt their business models and to operate in a dynamic market environment. According to Saunders et al. (2007, p. 149), these observations are important when generalizability is discussed.

To avoid threats to reliability and validity of the study, efforts were made to minimize risks in accordance with Saunders et al. (2007, p. 149). Interviews were scheduled for a time convenient for the interviewee, often after the workday, to avoid any sense of urgency. Three interviewees were in the position of CEO, so it can be assumed that they

were not under pressure to respond in a certain way. To minimize observer error, the structure of the questions was tested, and a specific interview framework was created to avoid errors. From the perspective of the study's validity, this thesis considers that in the institutional framework, there can be rapid changes, particularly in terms of how various regulations may evolve, as well as customers' attitudes toward the CE. Both factors can influence the culture.

4 Empirical Findings

This chapter of the master's thesis presents the findings of the interviews. The empirical findings are following the structure of the interview, which was already separated in different themes as following, circular economy in a company, business model adaptation, institutional challenges and dynamic capabilities.

4.1 Circular Economy in a Company

"When the company was founded, the concept of the circular economy had not yet been considered" (Case Company C)

This is how interviewee described the development of their business model. When asked about the main business model and main circular activities in a company, all the interviewees had distinctive answers. CBM scope is various and depends on the industry, but characteristics such as recyclability, repairability, longevity and re-use were in the center amongst the case companies. The emerging of the CE and CBMs as terms are relatively new in the business environment according to some of the interviewees. Some found that the terms have not necessarily received that much attention.

"The term "circular economy" has emerged over the last 10 to 15 years" (Case Company B)

Considering how new the terms "CE" and "CBM" are according to interviewees, they were not necessarily considered in the development of their business model. One interviewee stated that their business model was built on circularity from the very beginning of their business. Rest of the case companies have developed their business model without considering the CE perspective but rather ended up there by accident. Following this, the case companies have started to develop their business models to align with the CE framework.

“It's partly due to luck that we fit with it.” (Case Company B)

“From a circular economy perspective, the metal components of our physical products are recyclable and everlasting. Our customers can reuse them in different locations. We arrived at this somewhat by accident from a circular economy perspective.” (Case Company C)

“In Finland, this is generally evident in companies’ day-to-day operations, and I think there are many other companies that didn’t give this aspect much thought when they were founded.” (Case Company C)

The interviews pointed out that the values of Finnish and Scandinavian companies are often environmentally focused, and their level of CE is seen as higher than in other parts of Europe. It was seen that when environment is emphasized in the core of business, it can result that CE may be integrated into business models without the companies even realizing it. Fundamentally, the case companies did not feel that Integrating the CE into their business models was challenging. However, one of the interviewees identified obtaining funding and attracting investors as key challenges for their CE business when it comes to manufacturing physical products.

“The circular economy is at the core of our business” (Case Company A)

In addition to CE, other motivators for the development of the business model emerged during the interviews. Motivators such as a customer-oriented approach, increasing of product longevity and the creation of added value to customers emerged, and the CE is seen as supporting these motivators. According to the interviewees, quality and longevity is seen as most ecological factor of their products. Companies view CE as part of their corporate responsibility, making it an integral part of their business models. According to interviewee, it motivates to make their industry more sustainable.

“The textile industry is a highly polluting sector on a global scale, and because it involves the manufacture of products that every person on Earth uses." It is part of our company’s DNA to strive, through our business operations, to contribute to a better future for the planet.” (Case Company A)

4.2 Business Model Adaptation

Drawing from the interviews, CBMs have a large market in Europe. Some of the case companies interviewed have widely internationalized across different continents. However, based on the interviews, it can be concluded that European countries tend to be more accessible and easier markets to operate. All the case companies mentioned, they have growth ambition in the European market on the following years.

Some of the CBMs of the case companies can be categorized under the same definition (Table 1), but each case company have individual characteristics in their CBM and their own way of conducting CE as part of business. Regarding case companies CBMs, no significant differences were raised regarding their target markets. Overall, Europe is perceived as a strategically essential location in the internationalization process, even though the ambition is to reach more global markets. All interviewees aim to expand their operations in Europe and promote internationalization. Some of the interviewees emphasized that they have developed their products to be more scalable in new markets.

Amongst the interviewees, manufacturing of products, or some individual part of the supply chain, takes place outside Finland, even outside Europe. Although challenges related to internationalization were not specifically asked about, they emerged in response to the question "How would you characterize your current stage in the internationalization process?" Some interviewees mentioned the COVID-19 pandemic as a key challenge, emphasizing the ongoing uncertainty and its impact on the predictability of business operations.

"Predictability in business has been challenging, and our customers' business models have changed significantly." (Case Company A)

According to some of the interviewees, adjustments to the functionalities of their business model in Europe have been minimal, and very few country-specific adjustments have been necessary. The interviewees noted that there have been very little legal challenges regarding CBMs, and the adjustments have primarily been product-specific preferences rather than CBM adjustments. GDPR was noted as a challenge, but not in the CE aspect.

In contrast to this, according to interviewee, they have done significant changes to their CBM, as distribution models and logistics had to be renewed to ensure product availability. Another interviewee emphasized the difficulties of scaling their CBM, as the business model cannot be copied and pasted into new markets, it requires adaptation and infrastructure.

"For example, in the Netherlands CE is given a lot of weight, whereas in the Baltic states it is not significant." (Case Company A)

"I would say that in the Nordic countries, the circular economy is viewed more positively, but ultimately, in our industry, it comes down to a matter of price and quality, and unfortunately, the circular economy is more of a "nice-to-have" feature. (Case Company B)

In addition, there are found to be differences between countries regarding the materials preferred. It can be assumed that the differences among the interviewees are more dependent on industry and customer segment factors. One interviewee explained that they have faced challenges regarding the surplus material they use in their manufacturing process. Case company see it as a raw material, but according to law its waste. A separate permit is required for waste management.

"The biggest challenge in manufacturing is the blended yarn we use, which contains cotton and polyester. The Central European market is conservative and accustomed to purchasing all-cotton products." (Case Company A)

Companies do not have specific metrics for measuring the success of their CBMs. Instead, the adjustments are primarily measured in terms of revenue rather than from a CE perspective. Part of one interviewee's business focuses on the consumer side, where customer feedback and brand awareness are tracked.

"Of course, we also measure the development of our brand from the company's perspective: do we, as a company, have the space to deliver our message, and are we being talked about in terms of innovation?" (Case Company A)

4.3 Regulatory Environment

The impact of the regulatory framework is complex. Based on interviews, it can be viewed both as a challenge and as a missing element. According to two interviewees, the biggest challenge posed by regulation in adapting to CBMs arises from changing standards and certifications. Regulation is not necessarily seen as a source of uncertainty for business operations, but rather as something that increases bureaucracy. Country-specific differences between EU regulations mainly arises in local environmental permits and exports. CE regulation does not itself have a negative impact on expanding into new markets. According to interviewee, it is viewed as positive when considering expansion into a country. However, uncertainty arises from the implementation of changes in the regulations, as well as when and how they will be carried out. According to one interviewee, there have been a great many delays in recent years.

"Of course, when changes are implemented, we need to consider the timeline for their implementation, as well as which countries they will apply to, and the specific regulations

involved. I feel that implementation has been delayed significantly over the past two to three years, and it remains unclear what these laws will take effect". (Case Company A)

As mentioned, the interviews highlighted different standards, permits and certifications as a challenge for CBMs. According to one interviewee, these are not directly related to CE, while another interviewee has specifically had to apply for certifications for the recycled materials they produce. The biggest challenges related to certifications are process-related audits and the impact of regulatory changes on certification requirements. Certifications are seen more as a way of validating CBMs, instead of being a concrete indicator. Certifications require a lot of resources to be able to adapt according to changing requirements.

As legislation changes, so do the certifications; in other words, you're never really done, you must be able to adapt as things change. (Case Company A)

"Certifications focus more on materials and manufacturing. It would be good to have standards for durability, but these are difficult to define without usage data". (Case Company A)

The EU regulatory tools have brought challenges to the interviewee, who's company is also operating on the consumer interface. Interviewee identified the EU's Digital Product Passport as a significant challenge in terms of both communication and adaptation, as well as the EU's REACH Regulation, which must be complied with. ESG and EU's financial instruments are seen as increasing bureaucracy for businesses due to strict reporting regulations.

"Naturally, ESG and other financial instruments require reporting, which involves a lot of bureaucracy. If you take out a loan from a source that is subject to ESG reporting, you are automatically subject to it as well. Regulations require extensive reporting and the

production of code-of-conduct-type materials, but these can also be used to your advantage." (Case Company A)

To be able to comply and constantly adapt according to the changing regulation, requires companies to have the resources. However, in general, the interviewees viewed regulation neutrally. One interviewee, stated, that the challenges posed by regulation have been passed on to customers, while another noted that no challenges have arisen if the company complies with regulations in its operations.

"I don't see any major issues with the EU directives that would require us to make any significant changes" (Case Company C)

4.4 Customer Influence

The influence of customers had differing opinions amongst interviewees. Some stated, that the aspect of CE is not significantly helpful with their customers. Customer expectations regarding CE vary depending on the market and the size of the company. Expectations regarding products or services tend to focus more on quality or pricing of the product. One of the interviewees specifically noted company size as a significant factor affecting their interest towards CE. Interviewee have found that CE is often expected to generate additional costs, which may influence smaller companies' decision making.

However, there may be market-specific differences in expectations. According to interviewee, their products are at first bought precisely because of their sustainability, and customers expect to receive eco-friendly products. Even within the concept of sustainability, there are market-specific differences, such as whether a product is required to be biodegradable or environmentally sustainable.

"The larger the company, the more aware they are. Smaller businesses may not have the resources to invest in circular economy solutions" (Case Company D)

However, most of the interviewees, have not done any major adjustments to their business models based on the customers' requirements towards sustainability. The business models of the interviewees and the products they offer are already sustainable. Many have focused on extending the product's lifecycle, and their manufacturing methods are in line with the CE.

Our product is already produced in closed loop, so basically, we're already able to offer the best possible solution and you really can't find anything better" (Case Company D)

"We can easily offer a 5-year warranty on our products, and there's certainly no need to replace them right away. Our products have been repositioned by our customers and by us for our new customers. The products are 100% recyclable" (Case Company C)

According to our interviewees, pricing is a significant factor. According to interviewee they adjust the price based on the size of the market and purchasing power parity. However, not all case companies adjust their prices to adapt, since they are not willing to lower their prices. The discussion is often steered from pricing towards quality of their products. According to the interviewee, the customer's ability to pay also affects their operations and to what extent the CE is implemented in their products. CE products are often more expensive to produce, but customers are not willing to pay the extra cost.

"In theory, we could reuse them, but customers prefer to use new products because of the price." (Case company B)

Communication about the CE is perceived as controversial, and according to the interviewees, customers do not necessarily understand what CE means or how the process works in detail. It also emerged that the CE trend has lost some of its significance and is not necessarily seen as relevant from the customer's perspective. One interviewee noted

that people are not ready for their CBM, since they find the operating procedures more difficult.

“People are not willing to make the effort, since law don’t require them to” (Case Company D).

“It supports the company's vision, but in recent years the trend toward sustainability has experienced inflation” (Case Company A)

Interviewee sees this a result, when majority of the companies have various promises regarding sustainability and the fulfilment of these promises are difficult to monitor. When results are not proved, it affects customers trust negatively. According to interviewee, one difficulty is that the macro-level message does not reach customers, as they do not encounter these measuring factors in their daily lives.

Macro-level messaging—such as how much our product reduces CO2 emissions or how much water it saves—doesn’t resonate with customers because they don’t encounter it in their daily lives. (Case Company A)

4.5 Cultural Context

The cultural context is seen as a significant factor, and it is necessary to adapt to it. There are differences between cultures, and according to the interviewees, it is important to at least acknowledge these differences.

“After all, it’s polite to understand the customer’s culture when entering a new market. Of course, legal differences and obligations must be considered to a large degree” (Case Company C)

In the context of CE, cultural differences depend a lot on the age and traditionality of the culture. Interviewee stated that older cultures tend to be more conservative, and they adapt to change slowly, whereas newer cultures, such as Finland and the Baltic countries are more receptive and adaptive to change.

"Older cultures tend to be more conservative, and cultural change tends to occur more slowly. Smaller and younger countries adapt more quickly to new things, for example, Estonia vs. Germany. Business in Germany, for example, is highly structured and follows the law to the letter, whereas in the Nordic countries, processes can be very fast and informal." (Case Company A)

Case companies sees that the Nordic countries are very much on the same level in terms of culture and as mentioned before, awareness of the CE is on higher level. According to interviewee, culture is also defined by how formally structured and legally oriented it is. Informality and flexible nature can be seen as the opposite. Interviewees have founded that they can amend cultural experience from other markets they operate. This helps develop the ability to adapt to cultural differences

"We operate on a truly global scale, which gives us a deep understanding of different cultures. Although the study is limited to Europe, we can draw on experience regarding imports from Japan, manufacturing from India, or, for example, North and South America, all of which have significant cultural differences" (Case Company A)

"In the Nordic countries and in Central and Northern Europe, I believe that the importance of recycling and the circular economy, as well as people's awareness is at a much higher level" (Case Company D)

According to the interviewee, culture plays a role in what customers expect to receive- In some markets, customers expect high quality of the products. Some markets prioritize speed and quick availability of products over quality.

The interviews highlighted the importance of language and physical contact as part of the business culture. Language skills have been found to be beneficial as it creates added value for customers and in some countries, companies prefer to do business in their native language. According to the interviewee, it is essential to minimize risk when exporting, and therefore it is important to be aware of culturally specific practices.

"In the end, it all comes down to the product and service you're selling and the added value it provides. After all, you have to deliver value to your customers when you're selling them a service." (Case Company C)

4.6 The Role of Dynamic Capabilities

There were differences in the role of dynamic capabilities and in how significant they considered to be amongst case companies. Dynamic capabilities are also perceived differently across case companies, and there is no clearly structured approach. According to interviewee, their company does not have a systematic approach to seize market changes on an international level, rather, the aim is to conduct a long-term assessment of the market.

The interviews also highlighted the importance of the customer, particularly from the perspective of market changes and according to one interviewee, in their operating environment, the responsibility to be aware of the changes is left to their customers to consider. A different perspective is that interviewee is involved in legislative processes, which provides information directly from the interface.

"We receive a lot of information about regulations directly from the interface, because in addition to sales, we are involved in the legislative process and manufacture the products ourselves" (Case Company A)

When discussing how to respond to external pressures, one interviewee highlighted the importance of their own product when it comes to CBM. When operating with a CBM, it is seen as important that product claims can be validated. According to interviewee, in difficult situations, companies should adopt a solution-oriented approach, which comes with experience.

"The claims made about our product can be verified, meaning if we say that a product is made using eco-friendly methods and is sustainable, we can proof this." (Case Company A)

In addition to case companies' firm specific capabilities, companies rely on external consulting, customers, and various methods. According to the interviewee, AI will be integrated into their processes as they adapt to the new market. AI has been used both for market analysis and to predict market changes based on data. The interviews also highlighted the importance for companies to develop and assess their own competitiveness.

"*We will use AI to interpret and analyse various markets. How does the market work and why? Who are the partners and customers in that market? And what is the most effective business model for that market?"* (Case Company A)

When it comes to the firm's specific dynamic capabilities, all respondents emphasized the ability to handle various situations, which can be developed through prior experience. Experience in such as market knowledge, internationalization process and an understanding of regulatory processes are considered important part of building resilience and dynamic capabilities. Cultural skills can be amended from other markets companies operate in.

"In difficult situation, we are trying to figure out how to move forward from here, but in the end, none of the issues have been impossible to overcome." (Case Company B)

"Internally, we possess extensive expertise in our field, for example, in manufacturing processes and materials, which is a great asset." (Case Company A)

"Expertise is important because there are legal considerations in our business that we need to take into account." (Case Company C)

Furthermore, it was seen as important to develop the company's resilience to adapt to market changes and potential crisis through supporting staff and strengthening their skills. This was seen as important to help companies to deal with change. Employees play a key role, and the case companies have trust in them.

"By strengthening the team's skills, supporting them, and giving them a lot of responsibility." (Case Company B)

This reflects the case companies' culture, which is seen as capability. According to one interviewee, their agile corporate culture and low power distance are key strengths. Information flows and spreads rapidly across company and help is available when needed. Knowledge sharing is emphasized when processes are being modified in an organization as part of adapting to the market.

"Information spreads pretty quickly and it's always easy to ask questions, even if it's not always easy to get answers to all of them" (Case Company D)

5 Discussion and Conclusions

This chapter of the thesis presents the conclusions of the thesis and bridges the gap between research findings and the theory. Followed by the practical implications of the study and suggestions for the future research agenda. Lastly, the study is concluded.

5.1 Summary of the main findings

The purpose of the thesis was to find out how SMEs are adapting their CBMs to different markets and what are the challenges through examining the external- and internal factors that have an impact on the market adaptation. External factors were examined trough institutional factors, divided into regulative, cultural and customer factors. Internal factors were discussed through the perspective of dynamic capabilities of the firm. The focus of the study was internationalized SMEs, with CBMs as part of their business, focusing on the EU market environment.

This thesis was conducted by utilizing semi-structured interviews as qualitative research method and the data for the empirical findings consists of four interviews. Thematic analysis with abductive approach was chosen for this thesis. The interviews were divided into four different themes: circular economy in a company, business model adaptation, institutional challenges and dynamic capabilities. Institutional challenges are divided into sub-themes: regulatory, customer, and culture.

Overall, the findings of the thesis indicate that based on the themes of external and internal factors, it can be concluded that CBM adaptation is not influenced by a single external factor, but rather by the institutional context of the new market, which is a combination of all sub-themes: regulatory, customer and cultural. Although, each sub-theme represents a different aspect of the institutional context, findings indicate that these themes are interrelated and contribute to the challenge of adaptation, even though companies' CBM is designed to be easily scalable. This is due to the individual

characteristics and functionalities of different CBMs, as well as the regulations affecting them. At the end, these challenges can be overcome based on firm-specific capabilities, as the companies are required to change their operations according to the market.

The main objectives of the study were formulated to better understand the different aspects of the study and to answer the research question. The first objective "*Define circular business models, and their characteristics"* played a key role in determining whether different CBMs have impact on company's market adaptation. Followed the Figure 1. Circular Business Models defined by Chabowski et al. (2023) and Sitra (2023 pp. 46-48), study identified that the CBMs are difficult to categorize under a single concept. The business model rather consists of several definitions. Findings suggested, that all different CBMs possess challenges and no model was found to overcome other in terms of adaptation. This requires the CBM to be easily scalable to different markets. The case Companies' CBMs were identified as *Circular Inputs, Resource Recovery, Product as a Service, Sharing Platforms*, and *Product Use Extension.*

The second objective *"What are the key external institutional challenges in adapting CBM's to different markets?"* indicates, that the challenges are multidimensional, but all challenges are interconnected to each other. Clear geographical differences can be seen in the EU market as the host country is responsible for implementing the regulations set by the EU. Cultures were found to have individual characteristics, and the customers varies not only in terms of culture, but also in terms of market development and economic factors. CBM is seen more as an expense and a "nice-to-have" feature rather than a requirement. However, there are market-specific differences in this area as well.

Finally, the third objective *"How do dynamic capabilities affect the ability of SMEs to adapt their circular economy business models?"* Findings implicate, that the companies are lacking clear structured approach in response to the market changes or how the opportunities are sensed. However, drawing from the results that dynamic capabilities is seen as combination of internal processes and tools, rather than structured approach.

Findings suggest that company a company culture that support their employees, and where knowledge and experience is shared is seen as an essential part of adaptation and building resilience. External assistance and tools are only supportive, as capabilities are built on the company's human capital.

Based on the objectives and the findings of the research, thesis can answer the main research question of the thesis**: *How can SMEs adapt circular business models to international markets?*"** The results showed that process of adaptation is a multidimensional process, where companies need to consider local regulative framework, culture and customers to be able to adapt to the market. External market changes influence adaptation, as CBM cannot be copied directly from one market to another as the local operative environment must be considered. The findings did not reveal any significant differences regarding CBMs in terms of which is easier to adapt, as the underlying problems are the same. More central are the dynamic capabilities of a company, as they play a major role. Findings indicate that company must have the resources to adapt, agile organizational culture and skilled personnel to respond to market changes and operate in a new market. Although the EU plays a significant role in regulation, the results emphasise more local approach to the regulation, as legislative processes are applied by local policymakers.

5.2 Discussion and Theoretical Contributions

This section discusses the findings in relation to existing literature and theoretical framework through the themes of the thesis. The thesis contributes to the academic literature about CE and responds to the research gaps identified in previous studies. Thesis findings highlighted the importance of adapting CBM to institutional framework in international markets (Chabowski et al. 2023; Saha et al. 2024) and highlighted the role of dynamic capabilities (Kaur & Kumar, 2024; Teece et al. 1997) and contributed to the SMEs perspective (Reim et al. 2022; Sharma et al. 2020; Rizos & Bryhn, 2022). According to the previous literature, no previous research has not combined these elements under same research, so this thesis contributes to the broader discussion of the themes.

Circular economy in a company interpreted whether different CE activities have impact on the market adaptation and what challenges CE itself may have. The findings supporting this theme suggest that CE is not necessarily embedded into business since start, but companies may end utilizing, even accidentally. CE implementation did not raise any specific challenges, it is more of a combination of factors such as regulatory, market and cultural challenges (Rhizos & Bryhn, 2022; Kirchherr et al. 2017b). This can be due to supportive home country conditions, as Finland aims to be pioneer in CE (Sitra, n.d.).

Ghisellini et al. (2016, p. 27) stated that CE is attracting businesses as it increases the effectiveness of material use and reduces the environmental impact. Findings contribute to this, as the motivating factor towards CE is related to value creation to their customers and extending the product lifecycle. Previously Vulsteke et al. (2024, p. 7) mentioned that CE is created additional value through extended lifecycles, which is completely opposite than the linear economy's take-make-dispose logic, where the economic value ends as the product is disposed to the landfill (Sariatli 2017, p. 32; Sitra, 2023; Vulsteke et al. 2024, p. 3).

The business model adaptations in previous studies have emphasized the role of internal and external factors (Teece 2010) and examined the adaptations in the European markets (Rizos & Bryhn, 2022). Drawing from the findings of the thesis, external factors were seen as the biggest challenge for adaptations (De Angelis, 2024; Sitra, 2023, p. 81; Rizos & Bryhn, 2022, p 9). Similarly to earlier studies, findings indicate that the companies need to consider local factors of the market, as well as the role of organizational culture when adapting to new market. Results of the study implicated, that Europe is a favourable environment for internationalization, as well as for CBMs. However, country specific factors need to be considered as the external factors have influence on the performance (Teece, 2007).

Findings of *the role of institutional challenges* highlighted that CBMs cannot be copied directly from one market to another, as local factors should be considered. This supports the view that companies need to adapt to the institutional framework in international markets (Chabowski et al. 2023) and that CE requires evaluation on different levels (Ghisellini, 2016). The findings of the study provide additional support to existing literature as De Angelis (2024) suggested that CBMs require more research on the challenges of implementation in foreign markets. However, in the existing literature, customers are not treated as part of the institutional framework, even though they too are affected by complex regulations (Arranz & Arroyabe 2023). They are often discussed as a challenge on the CBMs perspective (Sitra, 2023). However, the findings of the thesis implicate that customers are central part of institutional framework, and should be considered, as the purpose of the CBMs is to deliver value to customers (Teece, 2010).

The findings on *the role of dynamic capabilities* indicate, that case companies emphasize skills, organizational culture and tools when new markets are assessed. This aligns with previous studies as previously Khan et al. (2020, p. 1491) noted that when CE opportunities are sensed, the emphasis is more on what is happening in the market and Sitra (2023, p. 80) emphasized organizational skills and culture. Aligning with theory, development of company specific capabilities and institutional assets can help companies to overcome challenges, especially the prior knowledge of the market, or the regulative environment (Kaur & Kumar 2024; Teece et al. 1997).

Taken together, the findings of the themes suggest that CBMs adaptation is closely linked to the themes mentioned. The themes of the study can be addressed independently, but together they contribute to the existing CE and CBM literature, as the themes continue to support each other. Furthermore, the thesis addressed directly the research gap by Chabowski et al. (2023) as the study addressed institutional challenges of the CBMs in the international markets but also introduced the dynamic capabilities perspective through the theories of Teece (2007) and Teece et al. (1997) and findings of Khan et al. (2020), as an approach to overcome the institutional challenges.

5.3 Practical Implications

The purpose of the thesis was to answer the question of how these CBM adaptations are implemented and what the challenges are. The findings also examine what is required to integrate the circular economy into business models and what are the potential challenges. According to the findings, CE can be integrated into the business model at a later stage. The key is to examine business model and develop its operations to align the CE framework. Hopefully, this work will encourage companies to transition from a linear economy to the circular economy, as they may already have the necessary conditions without realizing it.

Based on these findings, companies can understand what the key influencing institutional factors are and identify areas for development within their own organizations that may require additional training. The study emphasizes the continuous assessment of external and internal factors as part of CBMs adaptation and highlights particularly the development of dynamic capabilities as part of this process. The findings of the thesis have identified multiple implications for SMEs, as well as companies of various sizes, because the fundamental issues and processes are essentially the same. At the end, differences in CBMs adaptation capabilities are more dependant of the human – and financial capita.

Before entering new markets, companies should carefully assess the local market factors and to understand the factors that influence them. The role of the institutions is significant, thus regulation, culture and the customer are interconnected and should not be addressed separately. The local legislation should be carefully assessed, because even though the EU has a strong position accelerating the CE, legislation is implemented at the local level (De Pascale et al. 2023, p. 15). This also has a direct impact on culture, as some countries are founded to be more legislation-oriented than others. Culture and customers interact with each other, and operating practices vary between countries. For this reason, if companies lack direct experience with the local operating environment, it

would be recommended to utilize local assistance, for example, by hiring a local employee to ensure that problems do not arise from a lack of knowledge.

Furthermore, findings of the thesis suggest companies to develop a structure approach for both the adaptation and the ability to respond to market changes such as the changing legislation. Organizational culture, continuous development, and knowledge sharing play a central role in this. At the end, developing dynamic capabilities are beneficial as the companies require company-specific capabilities to be able to seize and sense market opportunities, as well as to respond to changes in the market such as the institutional factors.

5.4 Limitations and Future Research

Despite the findings of the thesis, the limitations need to be considered. As mentioned earlier in the thesis, the scope of the study was niche and finding companies to interview presented challenges. This can be due to narrowing the study to the Finnish SMEs. Due to the empirical data gathered from four interviews, it only presents a narrow overview of the experience's companies have. The scope of the market is focusing on the EU as a market area, which provided extensive overview but is therefore unable to provide market-specific information. The study's sample also included the Finnish branch of a large Scandinavian company. The branch is a separate company that falls into the SME category, but this might affect to the implemented CBMs and dynamic capabilities.

The limitations can be viewed also from the perspective of the interviewed companies. The case companies all represented different industry and therefore, the results cannot be generalized on a specific industry. The CBMs utilized by case companies differed from each other, although they had similar elements. It is also worth noting that the interviewees' experiences varied, and the companies in which they were involved have operated internationally for different periods of time, even outside Europe. Some of the challenges of market adaptation had been outsourced to the customer, and external

assistance has been utilized, which displays significant differences compared to the interviewees who are directly operating in the interface.

The chosen research method can also be seen as a limitation, since the results of the interviews can vary depending on the person interviewed from the company. This only presents the knowledge and opinions of one person, which is why it cannot be generalized from a company perspective. From the researcher's perspective, it is also important to consider errors that may have occurred during the interview or in the translation of the transcript. After all, the interpretation of the findings is left to the researcher, which leaves room for error.

In the future, research on the adaptation of CBMs could be focusing more on the internal factors of the company. CE is regulated, and regulatory frameworks vary by country, so it would be helpful to understand whether a more structured approach on the CBM adaptation would be beneficial from a business perspective. The scope of the study could be narrowed by focusing on specific countries or by comparing regulatory differences across various markets. In addition, the research could be limited to specific CBMs, specific customer segments, and specific industries. The research could also be directed to address institutional factors more broadly. With this knowledge, SMEs utilizing CBMs could be more prepared to scale their business models to new market and get the know-how on what to prepare for.

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Appendices

Appendix 1. Interview Questions

Company's background information

1. What is your role in the company?
2. Can you briefly describe what do you do? (title & function)

Circular Economy in a company

3. Can you briefly describe your company's business model and main circular economy activities?
4. Has the CE always been part of your business? If not, what motivated the company to make the transition?
5. Was CE easy to implement as part of your business models? What were most challenging part?

Business model adaptation

6. In which European countries do you currently operate or plan to operate?
7. How would you characterize your current stage in the internationalisation process?
8. What major adjustments has your ce business model required for European/foreign markets? – what has been the most difficult?
9. Have you revised your value proposition of your product or service for specific markets? If so, how?
10. How do you measure the success of these adaptations?and why?

Institutional Challenges (Regulatory)

11. What regulatory requirements in Europe have posed challenges for your business model adaptation?

12. How do differences between EU-wide and country-specific regulations affect your operations?
13. Can you describe any regulatory uncertainty that has impacted your decisions?
14. How do regulatory frameworks on circular economy influence your decisions on market entry or expansion?

Institutional Challenges (Customer)

15. How do customer expectations regarding circular solutions differ across European markets?
16. Has customer demand influenced your product/service design?
17. What barriers have you faced in communicating the value of circular models to customers?
18. Have you needed to adjust pricing strategies to align with customer expectations?

Institutional Challenges (Cultural Context)

19. Have cultural differences influenced customer engagement?
20. How does local business culture affect your selling and negotiation processes?
21. Can you provide examples where cultural norms shaped operational challenges abroad?

Dynamic Capabilities

22. How do you identify changes in regulation, market demand or cultural expectations internationally?
23. What internal processes do you use to sense new market opportunities or threats?
24. What internal capabilities have been most important for responding to external pressures?
25. How has your organisation transformed processes, skills or resources to support adaptation?