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One step closer to sustainability?

An explorative study analyzing the role of sustainability
in the reshoring process at the micro- and macro-level

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Abstract

Research problem and objective: Offshoring production activities from the EU to non-EU countries have been studied widely in academia, and the reversion of this decision, reshoring, is receiving increasing attention. However, the direct relation of reshoring and sustainability is highly unexplored. Nevertheless, the impact of value creation activities on the environment and society is significant and can differ depending on a firm's location. Hence, this study aims to analyze the role of sustainability concerning reshoring at the micro-and macro-level. Therefore, this research answers the following main question: *What is the role of sustainability at the firm- and supranational level when reshoring value creation activities to the EU?*

Theory: This study applies the novel framework developed by Boffelli and Johansson (2020) to examine the reshoring processes of two case companies and integrates the social and environmental sustainability dimensions into it.

Methods: An explorative, multiple case study design was chosen, examining the reshoring processes of two firms operating in the bicycle industry; one nearshoring and the other one backshoring production activities from Asia to the EU. This examination was further complemented by analyzing ten semi-structured interviews with various experts to investigate the role of reshoring at the EU-level and identify sustainability-related opportunities and risks of reshoring.

Results: The study's findings indicate that sustainability-related aspects were not the decisive factors during the reshoring processes. The extent of inclusion of environmental or social aspects could be dependent on a firm's values and sustainability strategy. Nevertheless, the reshoring decision may be attributed to specific favorable effects related to sustainability, such as stricter environmental and labor regulations, employment creation, and transport minimization. The investigation of sustainability-related opportunities at the EU-level further supports these aspects and emphasizes the potential adverse effects of reshoring, such as having an elevated environmental and social risk in the EU or contributing to the rise of inequalities in previous host countries.

Discussion/Conclusion: The findings shed new light on reshoring and sustainability and potential outcomes at the micro-and macro-level. It provides valuable insights for managers and policy-makers to scrutinize reshoring as the benefits and risks might differ depending on the level of assessment (firm, national, global). Furthermore, it stresses the importance of reshoring being a complex and dynamic process, meaning that the degree of reshoring might differ per firm and that it might not be inherently the right decision for a company or regarding environmental and/or social sustainability aspects.

Key words: reshoring, backshoring, nearshoring, sustainability, firm-level, EU-level, case study, bicycle industry

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1. Introduction

Starting in the 1950s, many companies decided to move value creation activities offshore to foreign countries to stay competitive (Lewin & Peeters, 2006). However, difficulties at the offshoring location due to unsatisfactory quality or long delivery times lead some companies to re-evaluate their decision. Additionally, multinational companies are susceptible to supply chain disruptions resulting from, e.g. financial crises, trade wars, natural disasters, or global health crises such as Covid-19 (Lund et al., 2020; Raza et al., 2021). The McKinsey Global Institute estimated that companies could expect disruptions from 1-2 months length every 3.7 years (Lund et al., 2020). All these factors can contribute to firms re-evaluating their decision to offshore, which sometimes results in relocating value creation activities back to their home countries or region (Hilletoft et al., 2019). From 2015 until 2018, Eurofound recorded 253 European firms, predominantly operating in the manufacturing sector, relocating their businesses (Eurofound, 2019). Noteworthy is that the debate about reshoring has received more attention at EU-level, enhanced by bottlenecks for critical products such as medical goods resulting from the current global pandemic or shortages of semiconductors (Raza et al., 2021).

The phenomenon of relocating value creation activities is known as ‘reshoring’ which generally refers to “the relocation of value creation tasks from offshore locations to geographically closer locations such as domestic or nearshore countries” (Foerstl et al., 2016, p. 495). In detail, reshoring can be differentiated between two categories depending on the final location of the value creation activities. Backshoring refers to moving value creation activities back to a company’s home country, and nearshoring to relocating these to a site geographically closer to the home country but not into the home country itself (Fratocchi et al., 2014; Tate & Bals, 2017). Backshoring is defined as a “voluntary corporate strategy regarding the home country's partial or total relocation of (in-sourced or outsourced) production to serve the local, regional or global demands” (Fratocchi et al., 2014, p. 56). As the terms reshoring and backshoring are often used interchangeably, in this study, only the term backshoring is used when referring to relocation to a company’s home country specifically. The term reshoring is applied when referring to the phenomenon as a whole, including both backshoring and nearshoring.

Moreover, the influence of the location of value creation activities on sustainability throughout a company’s whole supply chain is of great importance. Value creation activities of companies can significantly impact all sustainability pillars, namely environmental, social, and economic. This impact can differ depending on the specific location a company is situating these activities. It can lead to positive developments such as the creation of employment and can contribute to negative externalities if e.g., through these activities, an elevated environmental burden is moved to a specific region (Agrawal & Lee, 2016). Concerning this

influence, Orzes and Sarkis (2019) state that “the relationship between reshoring and sustainability is a foundational unexplored relationship” (2019, p. 482). Fratocchi and Di Stefano (2019) examined the connection between reshoring and sustainability in more detail. They discovered that the environmental and social aspects of sustainability are receiving some relevance in the reshoring debate. Cosimato and Vona (2021) firstly explored the mutual connection of reshoring, sustainability, and innovation. However, all authors emphasize the importance of analyzing this relationship further. Sustainability impacts of reshoring may also legitimate political action in the European Union. If reshoring would contribute to the sustainability of the European economy, the European Commission and its member states could think of developing particular policies to promote reshoring. At the same time, such a policy may also contribute to other objectives of EU policy, such as creating more jobs, reviving the manufacturing sectors, and becoming geopolitically more independent.

In the last decade, studies have been published focusing on explaining the phenomenon of reshoring itself and its connection to offshoring (such as Bals et al., 2016; Bellego, 2014; Fratocchi et al., 2014; Gray et al., 2013; Joubioux & Vanpoucke, 2016). Moreover, the underlying motivations (such as Foerstl et al., 2016; Fratocchi et al., 2016; Johansson et al., 2019; Kinkel & Maloca, 2009), contingency factors (Benstead et al., 2017; Boffelli & Johansson, 2020), its decision-making and implementation processes (such as Bals et al., 2016; Benstead et al., 2017; Boffelli & Johansson, 2020; Di Mauro et al., 2018) and the outcomes (Boffelli & Johansson, 2020; Johansson et al., 2019; Johansson & Olhager, 2018) have been studied in previous research. However, the reshoring process is still not fully understood yet, and Benstead et al. (2017) and Boffelli and Johansson (2020) integrated the aspects above to build comprehensive frameworks of the phenomenon.

There is a general call by academia to study the decision-making, implementation, outcomes, and contingency factors further (Bals et al., 2016; Barbieri et al., 2018; Boffelli & Johansson, 2020; Foerstl et al., 2016; Johansson & Olhager, 2018; Wiesmann et al., 2017). For example, Barbieri et al. (2018) stress that “understanding the way companies undertake the decision to reshore and implement it, and evaluate the results of that choice is of paramount importance” (p. 109) for managers to learn from previous reshoring cases and perform relocations successfully. Furthermore, Fratocchi et al. (2016) call to examine the effects of reshoring. Moreover, Boffelli and Johansson (2020) highlight the significance of exploring the outcomes and the success of reshoring further and especially how these factors can alter over time.

The main aim of this study is to understand the role of sustainability in reshoring on firm- and supranational better. In particular, this study aims to provide insights into the different steps of the reshoring process and short-term and long-term sustainability outcomes. Therefore, the study is structured around the following research questions (RQs):

Main RQ: What is the role of sustainability at the firm- and supranational-level when reshoring value creation activities to the EU?

- *RQ1: How do environmental and social sustainability-related aspects trigger the reshoring decision-making process at the firm-level?*
- *RQ2: How do environmental and social sustainability-related aspects influence the reshoring implementation process at the firm-level?*
- *RQ3: What are the long-term and short-term outcomes of reshoring, and how does reshoring influence environmental and social sustainability-related outcomes at the firm-level?*
- *RQ4: What are the sustainability-related risks and opportunities of reshoring at the EU-level?*

To accomplish the aim of this study, an explorative, multiple case study design was chosen. Two European firms operating in the bicycle industry were analyzed, one firm that nearshored and one that backshored value creation activities from Asia back to a European country. The bicycle industry is an interesting industry to investigate as it is characterized by complex, global supply chains that suffer from extensive lead times and can be easily affected by supply chain disruptions such as those emerging from the Covid-19 pandemic (Dempsey & Lewis, 2021). Moreover, a “slow but steady trend of reshoring” (Sutton, 2020) can be observed in the industry.

The cases were investigated by applying the reshoring framework developed by Boffelli and Johansson (2020). The framework consists of multiple aspects resulting from the analysis of 14 articles investigating the reshoring process. The authors differentiate between the overarching offshoring and reshoring process as well as contingency factors influencing both. The offshoring process that influences the subsequent reshoring process consists of three aspects: decision-making, implementation, and outcomes (Barbieri et al., 2020). These elements are as well included in the reshoring process. This study’s objective is to extend this framework by integrating the social and environmental sustainability dimensions. Additionally, interviews with experts on EU-level provided insights on the role of the EU in this process and its connection to sustainability-related risks and opportunities.

This study contributes to the literature in the field of reshoring by examining each step of the reshoring process in detail and their connection to sustainability from a firm-level perspective. This research answers the call from Boffelli and Johansson (2020) of applying and testing their framework in case studies and expanding it by integrating the sustainability dimensions. The explicit addressing of sustainability in case study research about reshoring is still a novel and innovative approach and has only been done by Ashby

(2016). However her work focused on investigating a single case and lacks the comparability between cases and in-depth analysis of each step of the reshoring process through the sustainability lens. In this study, the firm-level perspective is further complemented by including the supranational-level examining what sustainability-related risks and opportunities concerning reshoring exist in the EU. This inclusion contributes to a more holistic understanding of reshoring and explores the potentials and threats of reshoring not only at the micro-level but also at the macro-level. Addressing both levels in this study allows the triangulation of the findings and comparison of the outcomes at the firm-level with the perceived benefits and risks at the EU-level.

This research is highly relevant for managers, as they are confronted with the challenges of successfully relocating value creation activities. The results can provide managers with the necessary holistic understanding of the reshoring process to assist their decision-making (Fratocchi & Di Stefano, 2019), develop the necessary capabilities and skills, become aware of obstacles and difficulties, and can demonstrate how sustainability factors can be taken into account during the process. Additionally, it can give policy-makers insights into which aspects were predominant in each step of the firms' reshoring processes and how they can facilitate the relocation process to make reshoring more sustainable at the EU-level.

In the following, the theoretical foundations and related literature of reshoring are outlined first, followed by a description of the methodological approach and the selected cases. Then, the case study findings are presented individually, and afterward, the results of the analysis at the EU-level are given. Lastly, the findings are discussed with the current literature streams, and a conclusion is presented.

2. Theoretical framework

First, the terms offshoring and reshoring are defined, followed by introducing three underlying theoretical foundations of this research. Then, relating studies about reshoring and, specifically, the different elements of the reshoring process are described. Lastly, the conceptual framework of this study is presented.

2.1 Defining offshoring and reshoring

Offshoring

Since reshoring is directly connected to the previous offshoring decision, it is essential to outline what factors motivated a firm to offshore and reasons to relocate value creation activities again. Offshoring can be defined as “the relocation of business functions from home base to foreign locations” (Roza et al., 2011, p. 314). Most frequently, offshoring motivations refer to cost advantages, greater productivity, or labor skills (Kinkel & Maloca, 2009; Roza et al., 2011). However, offshoring is connected to risks and problems, and Johansson and Olhager (2018) accurately summarize this as “a balancing act between obtaining potential benefits and handling the risk associated with manufacturing relocation” (p. 641). Potential problems connected to offshoring are unsatisfactory quality, flexibility issues, and long delivery times (Kinkel & Maloca, 2009). Besides these aspects, risks such as transaction costs, difficult protection of intellectual property, spillovers to competitors, or changing legislation or taxation can create additional hidden costs and, hinder the company from yielding offshoring benefits (Contractor et al., 2010).

According to Fratocchi and Di Stefano (2019), a company has three alternatives to consider when changing the location after the initial offshoring decision. The company can either decide to further offshore the activities under question to another country, it can move the activities to a country closer to the home country (‘nearshoring’), or it can integrate the activities back to the home country (‘backshoring’) (Fratocchi & Di Stefano, 2019).

Reshoring

Reshoring is characterized by a location decision and is connected to value creation activities, such as production activities of a company that has previously decided to offshore and moves these activities back to the home country or region (Fratocchi et al., 2016). Consequently, reshoring is connected to a company's previous offshoring decision (Gray et al., 2013). The offshore decision-making process is directly linked to and can influence the subsequent reshoring decision and cannot be viewed in isolation (Gray et al., 2013; Joubioux & Vanpoucke, 2016; Wiesmann et al., 2017).

According to Gray et al. (2013), the reshoring decision is generally independent of the manufacturing activities' ownership, but the process might nevertheless lead to a change of ownership. Consequently, the authors propose four possible reshoring options: *In-house reshoring*, *Reshoring for outsourcing*, *Reshoring for insourcing*, and *Outsourced reshoring* (see Table 1). The different strategies include a ‘make-or-buy’ decision, whereas outsourcing can be defined as “work [that] is performed by independent parties who are not part of the firm’s employee base” (Ellram et al., 2008, p. 149) and insourcing as “decision to reincorporate a given activity within a company that had formerly been transferred to an external supplier” (Cabral et al., 2014, p. 366).

Table 1: Reshoring options (Gray et al., 2013)

		To: Onshore	
		In-House	Outsourced
From: Offshore	In-House	In-House Reshoring	Reshoring for Outsourcing
	Outsourced	Reshoring for Insourcing	Outsourced Reshoring

2.2 Theoretical foundations

The studies investigating the reshoring phenomenon and their mentioned theoretical foundations are diverse and fragmented. Many studies do not connect their research to any theories, but the ones that do, frequently mention Transaction Cost Economics (TCE), the resource-based view (RBV), and Dunning’s eclectic framework (Barbieri et al., 2018). These are briefly explained in the following section.

2.2.1 Transaction cost economics

A possible explanation of why companies decide to move production activities back or closer to the home country is the theory of TCE. TCE deals with the decision of companies to either integrate a specific value creation activity into the company or to contract suppliers (‘make-or-buy’ decision) (Williamson, 2008). Williamson (2008) argues that a company aims to minimize transaction costs. A transaction is taking place “... when a good or service is transferred across a technologically separable interface” (Williamson, 1981, p. 552), which can generally be connected with difficulties that can increase the costs of transactions. The theory is based on two assumptions that explain these frictions’ origin: bounded rationality and opportunism (Williamson, 1973, 1981).

The main idea of the theory is “that individual firms will tend to move away from higher cost to lower cost regions, all else being equal” (Ellram et al., 2013, p. 15). Depending on “the level of transaction-specific investment in the economic exchange” (McIvor, 2013, p. 23), the company can decide to outsource or not. The decision to contract suppliers increases the risk of opportunistic behavior and, thus, transaction costs. This risk is enhanced when cooperating with suppliers located geographically far from the company, as it is the case when offshoring. Geographical distance can hinder the development of trust, and cultural distance can enhance opportunistic behavior (Ellram et al., 2013; Joubioux & Vanpoucke, 2016; McIvor, 2013). If a company is confronted with opportunistic behaviors, it may re-evaluate the partnership to lower the transaction costs. This can lead to moving the respective activities closer to the home country or integrating them entirely into the company itself (Fratocchi et al., 2016; Joubioux & Vanpoucke, 2016; Kinkel & Maloca, 2009). The second assumption is about bounded rationality, which refers to the supposition that humans’ capacity to recognize, process, and evaluate all aspects and consequences to make, e.g. the best decision for an organization, is limited (Williamson, 1973, 1981). Hence, there is always a certain level of uncertainty present. In this specific case, bounded rationality could lead to managers making decisions to offshore based on only a limited set of information and only later identifying additional aspects which might negatively influence the company’s activities abroad and could contribute to the decision to reshore (Foerstl et al., 2016; McIvor & Bals, in press). However, Johansson et al. (2019) stress that since TCE focuses on transaction costs and reshoring is motivated by cost aspects and others such as quality, flexibility, and delivery times, TCE can only partially explain the reshoring phenomenon.

2.2.2 Resource-based view

To address these other factors, the RBV theory can explain the reasons behind relocating value creation activities. The RBV considers resources a crucial determining factor in whether a company can achieve a sustained competitive advantage (Barney, 1991). Ideally, these resources should be valuable, rare, imperfectly imitable, and non-substitutable (Barney, 1991). However, the difficulty for firms is how to capture and maintain these determining resources (McIvor, 2013). According to this theory, a company will invest in those resources, competencies, and capabilities that are part of their focal point and outsource other secondary activities that do not use their essential resources (Johansson et al., 2019; Wiesmann et al., 2017). As a result, a company can fail to obtain a competitive advantage by, e.g. not having the capabilities to capture the benefits of outsourcing certain activities in a foreign country (Canham & Hamilton, 2013; Di Mauro et al., 2018). Then other factors than cost-related aspects might be more important when considering to relocate these activities back to the home country (Canham & Hamilton, 2013; Di Mauro et al., 2018; Johansson et al., 2019). Therefore, “the prescription in relation to the outsourcing decision is influenced by the capability of an organization to develop a sustainable advantage in the resource” (McIvor, 2013, p. 25).

Hence, according to RBV, reshoring could be explained by a company not achieving the desired competitive advantage after it offshored certain activities and resources. Consequently, it could bring these activities back to the home country or region to obtain a higher competitive advantage.

2.2.3 OLI framework

Dunning’s eclectic theory of international production (Dunning, 1980, 1998) is often used in studies about offshoring and reshoring. According to his theory, the decision of multinational companies (MNCs) to engage in a foreign market is connected to three factors, namely *ownership* (O), *location* (L), and *internalization* (I) that are present in various countries and industries (Dunning, 1980; Johansson & Olhager, 2018). If a company is benefitting from all these advantages, it may decide to engage in foreign markets. Since Gray et al. (2013) stress that reshoring is mainly a location decision, the location advantages are most prominent for this research. Dunning (1998) differentiated between four advantages related to location that influence where MNCs locate value creation activities (see Table 2).

Table 2: Location-specific advantages and their descriptions

Location-specific advantages	Explanation
Resource seeking advantages	Availability of raw materials, infrastructure, and local suppliers (Dunning, 1998)
Marketing seeking advantages	“Availability and cost of local talent and suppliers, access to domestic markets and government (economic) policies” (Wiesmann et al., 2017, p. 26)
Efficiency seeking advantages	Costs related to production and the role of government in improving trading conditions (Dunning, 1998)
Strategic asset seeking advantages	Aspects related to knowledge, such as tacit knowledge, knowledge exchange and connection to foreign cultures and customers, etc. (Dunning, 1998)

These advantages can change over time due to varying conditions in the home or host country¹ (Ellram et al., 2013). The OLI framework can explain reshoring activities as firms might reconsider their foreign engagement and even relocate certain activities under question when some of the advantages mentioned above are not present anymore (Ellram et al., 2013).

¹ Home country refers to the location of the company’s headquarters, and host country to the country to which the production activities under question have been offshored.

2.3 Related literature

In the following, the state-of-the-art literature of reshoring is outlined by explaining the different aspects composing the reshoring process in more detail.

2.3.1 Reshoring motivations

A great part of the research on reshoring has focused on understanding the drivers of relocating value creation activities. Various authors have identified a great variety of these factors (such as Ellram et al., 2013; Engström et al., 2018; Joubioux & Vanpoucke, 2016; Kinkel & Maloca, 2009; Tate & Bals, 2017), which were then used for the development of multiple classifications in subsequent studies (Benstead et al., 2017; Foerstl et al., 2016; Fratocchi et al., 2016; Wiesmann et al., 2017).

Fratocchi et al. (2016) developed one of these classifications. The authors categorized motivations for reshoring in two broad groups with each two subgroups, namely: *The goal* (customer perceived value vs. cost-efficiency) and *The level of analysis* (internal vs. external environment). Contrasting the just mentioned four subgroups, the authors developed a framework that categorizes various motivations along these groups. Extending the framework by Fratocchi et al. (2016), Di Mauro et al. (2018) investigated the relationship between offshoring and reshoring motivations further by searching for similarities between those two. The study found evidence that reshoring and offshoring motivations differ and are characterized by different strategic goals. Thus, offshoring is primarily related to cost-focused motivations, while reshoring originates from strategic considerations such as the desire to increase flexibility (Di Mauro et al., 2018).

One of the few quantitative studies in this field stressed that for offshoring, “cost, market, development, trade policy and external influence” (Johansson et al., 2019, p. 7) are the most critical factors influencing the decision. On the other hand, for reshoring, the central aspect is quality, besides other factors such as “development, market proximity, cost, and external influence and trade policy” (Johansson et al., 2019, p. 7). These findings support the argument that TCE alone cannot explain the reshoring phenomenon and that other factors related to RBV or location advantages are more relevant.

As one of the few scholars connecting reshoring with sustainability, Ashby (2016) conducted a longitudinal case study focusing on investigating the reasons for relocation, the integration of sustainability during the process, and the development of the supply chain network of a UK-based firm operating in the apparel industry. The author stresses the importance of local supply chains and of “socially complex, long-term relationships in developing and managing a sustainable supply network” (p. 85).

Fratocchi and Di Stefano (2019) examined whether sustainability issues can be seen as motivation/driver, benefit/outcome, or barrier/enabling factor. Concerning the first option, the authors conclude that “the

attention of scholars to the environmental and social sustainability as a motivation/driver of manufacturing back-shoring decision is still at a generic level” (Fratocchi & Di Stefano, 2019, p. 458). Some studies refer to sustainability as a possible driver for reshoring but mostly without giving specific explanations about the details of this motivation. The authors further examined secondary data of reshoring decisions concerning sustainability-related aspects, and a minority of companies mentioned three drivers, namely “social pressure in the home country (e.g. trade unions) ... carbon footprint and other environmental issues ... and CSR” (Fratocchi & Di Stefano, 2019, p. 464).

2.3.2 Reshoring decision-making

Compared to the amount of research focusing on the motivations for companies to reshore, the decision-making process, and the implementation, even if considered highly important, have not received much focus in academia yet (Bals et al., 2016; Barbieri et al., 2018).

The decision to reshore is directly linked to offshoring failures, meaning failures of offshoring can contribute to the decision to reshore value creation activities. According to Joubioux and Vanpoucke (2016), an evaluation of the risks of choosing a new location is part of a company's decision-making process when confronted with difficulties concerning the offshoring location. Besides the risk assessment, the framework explaining the reshoring and offshoring process developed by Boffelli and Johansson (2020) points out other factors such as the value creation activities under question, the product, and the location should be considered in the decision-making process. Interestingly, the authors included the motivations and barriers in the decision-making process as well and referred to those as factors as they are dynamic. Moreover, they stress that a company can reach a tipping point to facilitate the decision to relocate. They state that several factors such as failures at the offshoring location or changing conditions at facilities in the home country can arise, build upon each other, and finally become the tipping point for the decision to reshore (Boffelli & Johansson, 2020). These factors are dynamic, meaning they can arise simultaneously in various locations and change over time (Boffelli & Johansson, 2020; Ellram et al., 2013). The authors suggested categorizing these factors into six groups depending on which part of the supply chain they arise, namely *Domestic internal*, *Domestic external*, *Offshore internal*, *Offshore external*, *Supply Chain*, and *Global factors* (Boffelli & Johansson, 2020).

Lastly, research found that location decisions are linked to specific competencies and resources needed for certain products or activities. Hence, those locations are chosen that fit best to the requirements or demands of a specific product or activity which is in line with the RBV (Boffelli & Johansson, 2020). Additionally, specific activities are often reshored that fit well within the company's existing local facilities (Boffelli & Johansson, 2020).

Concerning the influence of sustainability on the decision-making process, Fratocchi and Di Stefano (2019) found scarce evidence that reshoring decision-making might be facilitated by changing environmental and social legislation in the host country, by companies sustainability strategy or by the decision to implement specific standards/ certification.

It is crucial to investigate how companies consider future generations’ needs and address all aspects of the triple bottom line, namely people, planet, profit equally (Elkington & Zeitz, 2014) during the reshoring decision-making process. Therefore, besides investigating whether environmental and social legislation influenced the decision-making process, other aspects were explored as part of this research.

2.3.3 Reshoring implementation

Concerning the implementation process, Benstead et al. (2017) developed a framework including implementation considerations. The authors categorized the factors into two broad groups: *Location, Ownership and Timing*, and *Operations and Supply Chain Development*. Boffelli and Johansson (2020) integrated these into their framework and identified a preparation phase for reshoring as an additional aspect of the implementation phase (see Table 3). This preparation phase includes assessing different skills and capabilities needed to relocate the value creation activities under question. As often skills and know-how were transferred abroad when many industries were initially offshored, firms have to evaluate how to develop the required expertise (Boffelli & Johansson, 2020).

Table 3: Overview of the factors identified in the reshoring implementation phase

Preparation phase	
Implementation	
Location, Ownership and Timing	Operations and Supply Chain Development
Entry and exit (governance) modes onshore and offshore	In-house training
Maintaining production in a domestic location	Building strong relationships with suppliers, internal teams, and customers
Degree of reshoring, e.g. partial or full	Improving information sharing with suppliers, internal teams, and customers
Process (incremental vs instantaneous)	Market movement (e.g. developing new customers within new market segments)
	Global supply chain development

Note. Adapted from Boffelli & Johansson (2020).

The influence of sustainability on the implementation of reshoring is vastly unexplored. Ashby (2016) points out the importance of establishing a close, local supply chain to produce sustainably. Other potential environmental influencing factors such as reducing the company's environmental impact when moving production activities by, e.g. reducing waste or emissions, using renewable resources or sustainable materials are unexplored.

Aspects concerning the social dimension of sustainability during the reshoring implementation have not been studied yet. It is interesting to study whether companies consider social aspects that benefit society, such as fair wages, equality, diversity, safety at work, or charity campaigns when reshoring.

2.3.4 Reshoring outcomes

Another aspect not being addressed sufficiently yet are the outcomes of reshoring. Johansson and Olhager (2018) and Stentoft et al. (2015) mention flexibility, quality, and faster delivery times as relevant benefits of reshoring. A subsequent study by Johansson et al. (2019) discovered that for both phenomena, offshoring, and reshoring, the potential benefits were identical; however, offshoring was primarily associated with cost benefits, whereas reshoring could yield cost and quality, delivery, and flexibility benefits.

Boffelli and Johansson (2020) included the long- and short-term problems and benefits of offshoring and reshoring as elements in their framework. The authors argue that understanding these aspects is essential as offshoring outcomes can often motivate reshoring. In addition, the success of offshoring and reshoring can greatly influence the further strategy of a company, and, therefore, a deeper understanding of these is necessary.

In their study, Fratocchi and DiStefano (2019) examined whether sustainability issues are represented as outcome/benefit of reshoring. The literature review revealed that "sustainability has not been recognised as a specific and autonomous result" (Fratocchi & Di Stefano, 2019, p. 458). However, some outcomes of reshoring activities are connected to sustainability, such as lower environmental impact and reduced carbon emissions due to minimized transportation, better technologies or renewable sources in the home country or the 'made-in effect' that is connected to customer's perception of locally produced goods having a reduced environmental impact (Fratocchi & Di Stefano, 2019). The outcomes addressed most frequently in terms of the social dimension of sustainability were linked to employment, meaning growth in job opportunities for the region. However, the relocation of value creation activities does not automatically lead to job opportunities (Engström et al., 2018). Additionally, the study identified that reshoring could "improve the visibility of working practices and ethical behaviour" (Fratocchi & Di Stefano, 2019, p. 460).

Nevertheless, as the outcomes have been given too little attention in research yet and no study has specifically examined first-hand the connection of reshoring outcomes and their implications on environmental and social sustainability issues, this study explores the potential benefits of reshoring for sustainability as well as difficulties and problems.

2.3.5 Reshoring contingencies

Benstead et al. (2017) first captured various contingency factors influencing the reshoring process and outcomes mentioned in the literature and categorized them. Building upon this, Boffelli and Johansson (2020) also included contingency factors in their framework. As can be seen in Table 4, the authors categorized these factors into six categories. They conclude that these factors can be identified and can influence relocation throughout the whole process at different stages, and one part of the framework can become a contingency factor for another. At the same time, their relevance can change over time, making it challenging for firms to detect and govern these factors (Boffelli & Johansson, 2020). The contingency factors mentioned below can directly relate to environmental or social sustainability aspects, influencing the reshoring process.

Table 4: Contingency factors during the offshoring and reshoring process

Contingency factor	Description
Domestic internal factors	Industry, size, strategy & core business
Offshore internal factors	Size of offshore plant & characteristics of offshore production
Global factors	Global industrial trends & events
Domestic external factors	Industrial district, industrial landscape, labor market & governmental incentives/ regulations
Offshore external factors	
Supply chain factors	Type of relationships with suppliers and customers, length of supply chain & position in the supply chain

Note. Adapted from Boffelli & Johansson (2020).

2.4 Conceptual framework

This research adopts the proposed framework by Boffelli and Johansson (2020), as this is the most recent framework explaining the reshoring phenomenon connected to the previous offshoring decision (see Appendix A of original framework).

This study expands this framework by investigating how social and environmental sustainability-related aspects influence the reshoring process. For companies, this means to not only follow their traditional aim

of focusing on economic returns by increasing effectiveness but equally as well considering the other two pillars of the triple bottom line (Elkington & Zeitz, 2014). The first pillar refers to contributing to society's well-being by, e.g. reducing inequalities and bringing benefit to society. The second dimension concerns the condition of the environment and how the firm is reducing its impact on the planet by, e.g. using renewable resources and reducing emissions. The last pillar, profit, refers to the company's profitability and the “fair distribution and efficient allocation of resources” (Fratocchi & Di Stefano, 2019, p. 450). However, this pillar was not the focus of this research.

Figure 1 provides an overview of the conceptual framework of this research. The dotted lines indicate the relationships that have not yet been investigated, highlighting this study's contribution.

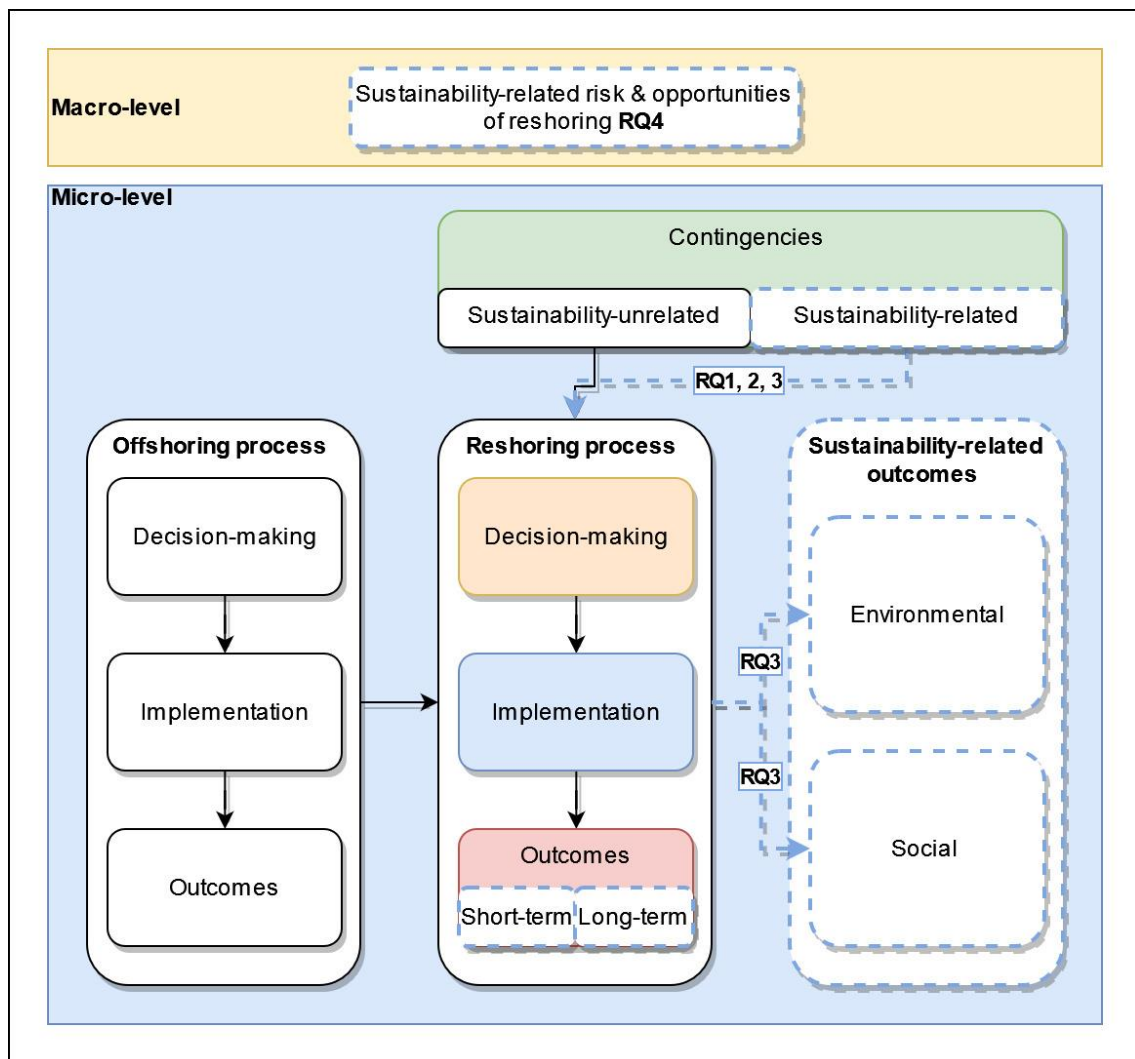


Figure 1: Conceptual framework including micro- and macro-level adapted from Boffelli & Johansson (2020) and connected with the research questions (RQs) of this study

3. Methodology

In the following chapter the methodological approach of this research, including the research design, case selection, data collection and data analysis, is presented. An overview of the research framework is illustrated in Figure 2.

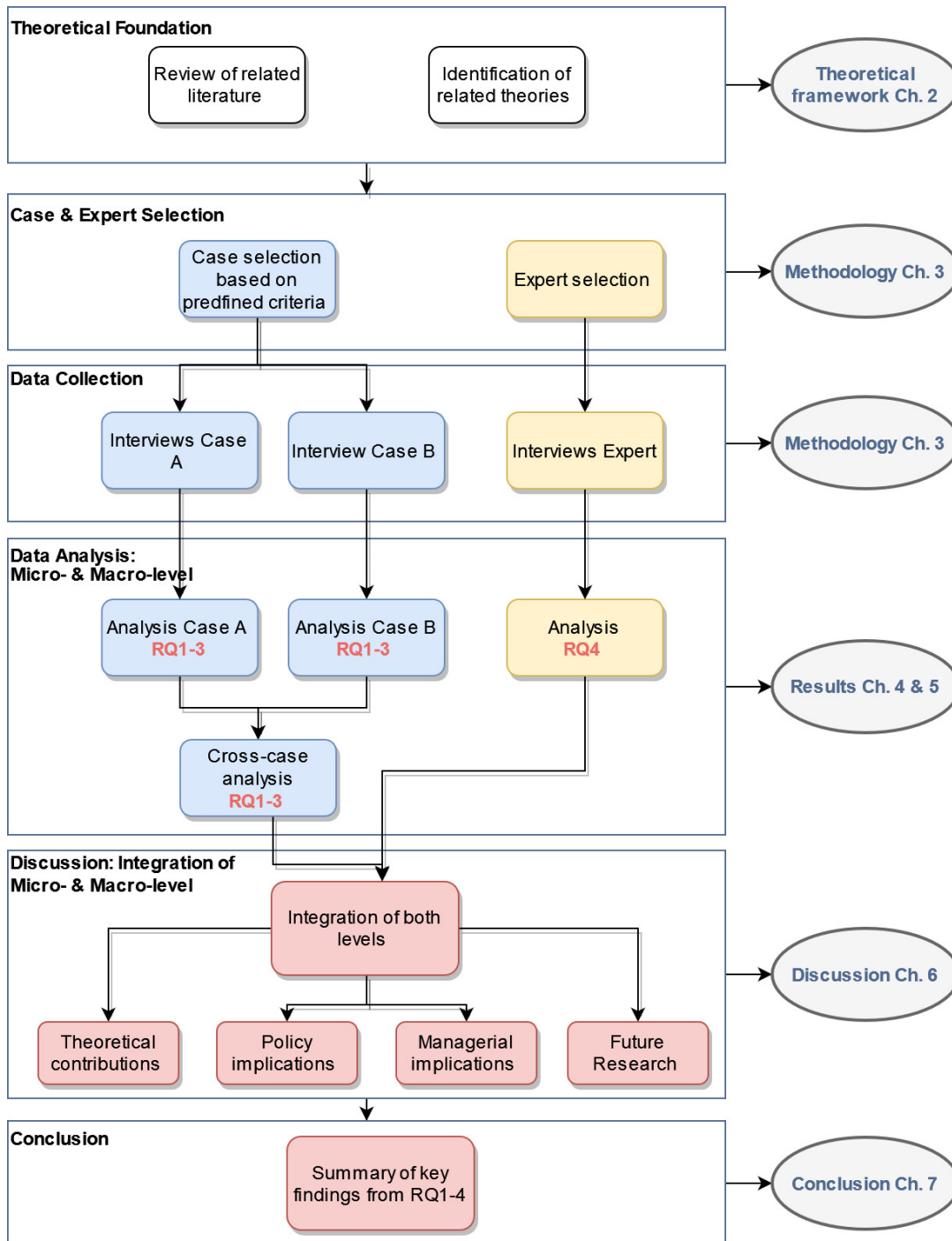


Figure 2: Research framework

3.1 Research design

The study's main objective is to understand the role of sustainability during the reshoring process at the firm- and supranational level. The study applied an exploratory, multiple case study design as the existing research of reshoring in connection to sustainability is limited. A qualitative, exploratory research approach is suitable for studying poorly understood phenomena (Bryman, 2012). The unit of analysis was the completed reshoring process which was investigated by analyzing two case companies. To understand the reshoring phenomenon at the macro-level, to triangulate the findings from firm-level with EU-level and to contribute to a more holistic understanding of the reshoring phenomenon, interviews with experts at the EU-level were conducted. These interviews could provide in-depth knowledge resulting from the experts' position, experience, or responsibilities and are suitable and time-efficient when conducting an exploratory study (Döringer, 2021; Van Audenhove & Donders, 2019).

As reshoring is a present phenomenon characterized by high complexity since various global factors may influence this process, adopting a case study approach was advisable to explore these factors in a real-life environment (Yin, 2003). By conducting a multiple case study, namely examining two case companies, it was possible to understand the dynamics underlying each step of the reshoring phenomenon better (Eisenhardt, 1989), and this approach is beneficial when asking "why" and "how" questions (Yin, 2003). Moreover, a case study approach is favorable when studying contemporary phenomena in the natural environment of specific cases and allows to study the complexity of different cases in more detail (Yin, 2003). Furthermore, since this research investigates the sustainability-related aspects influencing each step of the reshoring process, in-depth information about specific reshoring cases had to be collected to answer the proposed RQs adequately. The findings of the two cases can extend the theories and knowledge present in the academic field and allow complementarity as the cases could point out various aspects related to the phenomenon and contribute to a more holistic understanding (Eisenhardt, 1991). Concretely, a multiple case study allows to identify and discuss differences and similarities connected to the studied phenomenon. Yin's (2003) suggested replication logic was chosen to increase external validity, meaning multiple cases were studied by replicating the same study design.

The research design is based on an abductive approach which differentiates itself from an inductive or deductive approach by aiming at "generating creative and novel theoretical insights" (Timmermans & Tavory, 2012, p. 180) by developing new concepts and connecting these to established theories (Dubois & Gadde, 2002). Abductive research is characterized by a creative process of finding explanations for a surprising phenomenon or event by searching for conditions that contribute to a better understanding of those phenomena (Schwartz-Shea & Yanow, 2011). As Schwartz-Shea and Yanow (2011) explain: "In this

puzzling-out process, the researcher tacks continually, constantly, back and forth in an iterative–recursive fashion between what is puzzling and possible explanations for it” (p. 27). As Figure 3 shows, this allows the researcher to interact and move between theory and empirical findings and is suitable for case study research (Alvesson & Sköldbberg, 2018; Dubois & Gadde, 2002). Furthermore, this approach describes a phenomenon from the view of participants, and the researcher, later on, summarizes these perspectives in scientific terms (Bryman, 2012).

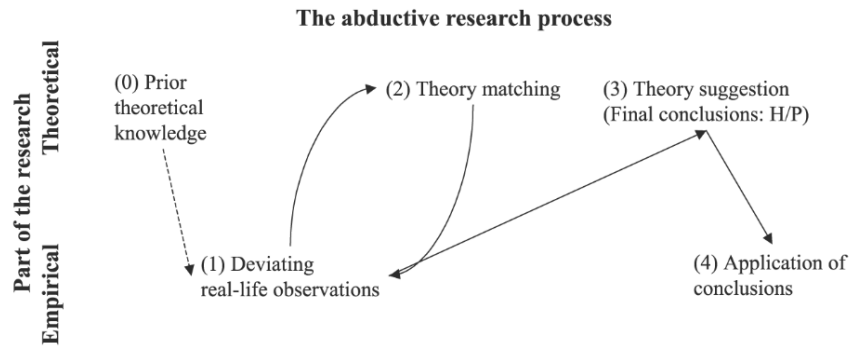


Figure 3: The abductive research process (Kovács & Spens, 2005)

3.2 Case selection

The cases were selected applying a purposive sampling approach, meaning cases are selected which are expected to provide best the information needed to answer the research questions successfully with the help of predefined criteria to increase the study’s reliability (Bryman, 2012; Etikan et al., 2016). Additionally, Bernhard (2011) stresses purposive sampling is especially used when studying “intensive case studies” (p. 698j). Since the focus of the firm-level analysis was to conduct a thorough analysis of the aspects influencing each step of the reshoring process with the help of two cases, an intensive case study approach was selected. As reshoring is a contemporary phenomenon that has not been studied sufficiently yet, purposive sampling was the suitable method for selecting cases that provide the study with sufficient information. The case selection was based on the following criteria:

1. The cases should have completed their reshoring process entirely, meaning that each step of the process, namely decision-making and implementation, was completed so that outcomes of the process could be analyzed.²

² This does not imply that all value creation activities had to be reshored, but that the reshoring process of those value creation activities, which were chosen to reshore, was completed entirely.

2. Only cases that moved their value creation activities from Asia to the EU were part of the selection.
3. The two companies should be in the same industry to ensure comparability, explicitly focusing on manufacturing and not service-based.
4. As reshoring may refer both to backshoring and nearshoring, one case was chosen which backshored value creation activities to the company's home country and the second one which nearshored those activities to a country closer to the home country. Important was that both companies have their headquarters in the EU.
5. The governance mode can influence the reshoring process. Therefore, one case was selected that relocated activities that were outsourced in the offshoring location and insourced them as a result of this process ('Reshoring for Insourcing'), and the second case that relocated activities that were outsourced in the offshoring location and outsourced them again within the EU ('Outsourced Reshoring') (Gray et al., 2013).
6. To identify the short- and long-term outcomes of reshoring, one case was chosen that completed its reshoring process more than two years ago and the other one less than two years ago.

The European Reshoring Monitor was used as a dataset to select the cases, as it is the only publicly available dataset that collected European reshoring cases from 2015-2018 (Eurofound, n.d.). Moreover, Professor Luciano Fratocchi was contacted, an expert in this field who developed the private UniAQ European Manufacturing Reshoring Dataset, the most comprehensive European dataset of reshoring. After examining the European Reshoring Monitor and assessing whether a company fulfilled the criteria mentioned above, in total 26 potential cases from different industries were contacted and cases provided by Professor Fratocchi. Since the case selection was hampered by companies having limited or no time capacities, which was further enhanced by the Covid-19 pandemic, the great majority of the contacted companies did not respond to the request or did not have time to provide information. Therefore, the initial idea of conducting a multiple case study analysis with four cases had to be adapted due to the aggravating circumstances of this research. Consequently, one of the first companies that fulfilled the criteria mentioned above and was interested in participating in this study was chosen. The second case was selected considering the selection criteria, meaning that a company from the same industry was picked, among other things.

The case selection strategy resulted in two selected cases, namely Woom and case company B (CCB) (see Table 5). Both cases are European companies operating in the bicycle industry and reshored part of their value creation activities to the EU. Hence, regarding these aspects the cases were similar, and therefore, it was possible to compare them with each other. In addition to these aspects, the cases were strategically

selected, considering differentiating characteristics to understand the phenomenon thoroughly. Therefore, driven by theoretical interest, the cases contrast each other considering the specific location decision (backshoring or nearshoring) and governance modes (insourcing or outsourcing).

Table 5: Overview of the selected case companies

	Woom	Case Company B
Home country	Austria	Spain
Foundation date	2013	
Products	Children bicycles	High-performance road and mountain bikes
Offshoring location	Cambodia, Vietnam & Bangladesh	China & Taiwan
Year of reshoring	January 2021	2012
Reshoring location	Poland	Spain
Reshoring governance mode	Outsourced reshoring	Reshoring for insourcing
Reshored value creation activities	Assembly of the bicycles	Assembly and painting of the bicycles

3.3 Data collection

In the following, the data collection, meaning the different sources of data, is explained. Data was collected by semi-structured interviews providing in-depth information (Bryman, 2012). The data sources from the two case companies and the findings on EU-level were triangulated to gain a comprehensive understanding of the influence of sustainability on reshoring, which is favorable when conducting case study research and enhances the validity (Patton, 1987; Yin, 2003).

3.3.1 Interviews with the case companies

Semi-structured interviews were conducted with employees from the case companies to answer RQs 1-3. This form of interviews was suitable as they give the interviewer the flexibility to respond to interesting aspects mentioned by the interviewee, which is important when aiming to understand an unexplored research field (Bryman, 2012). The interviews were guided by an interview guide to ensure cross-case comparability and reliability of the study (Bryman, 2012) (see Appendix B). The same interview guide was used for both case companies ensuring comparability and internal validity (Bryman, 2012).

Due to the limited availability and the distributed nature of knowledge about the reshoring process within the case companies, a different number of interviews were conducted per case company (see Table 6).

Concerning the first case company, Woom, seven interviews were performed, each interviewee working in a different department. Through this diverse sample of interviewees, sufficient information could be obtained to gain a comprehensive understanding of each step of the company’s reshoring process. Additionally, often repetitive answers were given indicating that saturation was reached and internal validity was ensured (Merriam & Grenier, 2019).

Regarding case company B, only one interview could be conducted. This restricts the generalizability of the findings. However, as the company is small, one interview with a person from the management board still provided valuable insights. Especially considering that the decision to relocate production activities is primarily taken involving people from the management board. Nevertheless, due to this fact, the comparability of both companies is limited. Consequently, the main focus was set on the first case company, Woom. After analyzing the results for each company individually, a brief cross-case analysis was performed cautiously.

The interview structure was inspired roughly by the suggested framework of Boffelli and Johansson (2020). However, as this model does not explicitly address sustainability-related aspects, only the suggested overarching reshoring steps were integrated and were generally guiding the interview. This means that concerning each step of the reshoring process, open-ended including follow-up questions were formulated to obtain in-depth and complete information. The interviews were exclusively held on Microsoft Teams and were recorded for further analysis. Therefore, the interviewees were asked for their consent before the date of the interview. Additionally, the interviewees were anonymized to ensure the participants’ confidentiality (Bryman, 2012).

Table 6: List of departments of the interviewees of the two case companies

Woom
Management board (1)
Management board (2)
Supply Chain Management
CSR
Communication & PR
Quality Assurance
Marketing
Case company B
Management Board

3.3.2 Interviews with experts at the EU-level

As part of the research objective is as well to gain an understanding of the perceived role of the EU concerning reshoring and explore the sustainability-related opportunities and risk of reshoring, multiple interviews with experts from different European countries were conducted. These insights complemented the findings at the firm-level and contributed to a more holistic understanding of the reshoring phenomenon.

In total, ten semi-structured interviews were conducted using the snowballing technique as a sampling method (Bryman, 2012). This sampling method is useful when people of a specific group are difficult to reach as one selected person can refer one to another that can contribute to the study with valuable insights (Bryman, 2012). The sampling was initiated by determining a first interviewee group. This interviewee group was selected based on people who published blog articles etc., or were involved in debates or discussions about reshoring at the EU-level. Therefore, different search websites were used, such as Google, YouTube, LinkedIn, and search engines from the EU institutions. This sampling strategy was useful since reshoring is not a widespread phenomenon, and generally it was challenging to determine who is knowledgeable about the topic or for whom reshoring is part of his/her responsibilities. Additionally, the aim was to interview experts representing different stakeholder groups, such as people working at different EU institutions, consultancies, politicians etc., and therefore search engines that solely focused on scholars were excluded. Further, snowballing allowed contacting experts representing different stakeholder groups who were referred to by other interviewees.

In total, 31 experts were contacted of which in total ten people from various countries with different positions were interviewed. The sampling method succeeded in identifying a diverse group of interviewees, which was paramount for obtaining a first notion of the reshoring phenomenon at the EU-level of various stakeholders. However, since the focus of this research was the investigation of the firm-level perspective and the scope of this research was limited, the number of interviewees was kept to ten. The final selection of the interviewees and their positions are illustrated in Table 7.

Table 7: List of interviewees on EU-level and their positions

Interviewee No.	Positions
1	Policy analyst of the Directorate-General for External Policies – European Parliament
2	Former project coordinator at the European Economic and Social Committee
3	Independent consultant at the EU-level
4	Senior advisor at a European lobby group
5	Research manager at Eurofound
6	Assistant of a MEP - Alliance 90/The Greens
7	Sustainability consultant
8	Associate Professor
9	Statistician at Statistics Netherlands
10	Professor, adviser of the World Economic Forum and CEO of a logistics company

The semi-structured interviews were as well guided by an interview guide tailored specifically to this level of research which further increased the reliability of the study (Bryman, 2012) (see Appendix C). Semi-structured interviews were chosen again as a method as it was crucial to have the freedom to explore further aspects mentioned by the interviewees to understand the specific perceptions of the interviewees regarding reshoring better and, hence, fulfill the study’s aim.

3.4 Data analysis

Overall, 18 interviews were conducted, and to analyze the data these were recorded, transcribed, and then coded in Microsoft Excel. Generally, coding refers to “the operations by which data are broken down, conceptualized, and put back together in new ways” (Flick, 2009, p. 307). The coding was structured differently depending on case companies or experts since different aspects were analyzed to differentiate between the micro- and macro-level. The interviews with the two case companies were coded along the three overarching aspects of reshoring, namely the decision-making process, implementation, and outcomes, focusing on environmental and social aspects (see Appendix D for an overview of the coding framework). The expert interviews were coded more openly, namely the role of the EU concerning reshoring and the connection of reshoring and sustainability at the EU-level. In both cases, the approach

was data-driven and can be referred to as open-coding (Gibbs, 2007). The goal was to create codes based on the raw data of the interviews without being influenced by theoretical foundations. Therefore, first, the interviews were reviewed, and codes were formulated for the different text sequences. These codes were structured by collecting the sum of codes in a table, including the initial text sequences next to them for further comprehension and underlining the precision of the research. Each interview was coded, resulting in two overviews of data, one for the case companies and one for the experts. Through axial-coding, individual codes were grouped into categories when possible (Flick, 2009). Regarding the case companies, if possible these categories were grouped along the three steps of the reshoring process, and new overarching categories were created for environmental and social aspects and other codes which did not match the others. It was crucial during the whole coding process to constantly stay close to the raw data and refine categories if needed (see Appendix E for a brief coding example). Utilizing the two overviews made it possible to examine emerging tendencies of the sustainability-related aspects influencing the reshoring process at the firm-level and the sustainability-related opportunities and risks at the EU-level.

Concerning the case companies, the responses from the different interviewees were compared with each other, and the cases were first analyzed individually, as suggested by Eisenhardt (1989). The resulting data was summarized and insights were described for each of the cases “to become intimately familiar with each case as a stand-alone entity” (p. 540). The cases were analyzed to further identify novel findings and concepts further, searching for cross-case patterns (Eisenhardt, 1989). Each reshoring process step was examined individually, and lastly, the results were compared between the two cases taking into account each case’s specific characteristics. As indicated, this cross-case analysis was done only to a limited extent as the number of respondents per case differs, which restrains the cases’ comparability.

4. Results at the firm-level

This chapter describes the results of the analysis of the two case companies, Woom and CCB. The results from each case company are outlined first, constituting the micro-level of this study, followed by a brief cross-case analysis.³

4.1 Woom

4.1.1 General introduction to the case

Woom is an Austrian children bike manufacturing company founded in the year 2013 in a garage in Vienna (Woom GmbH, 2021a). The company has been growing continuously and is now employing around 125 people, working in 30 different countries worldwide, and became “market leader in Germany, Austria and Switzerland” (Woom GmbH, 2021a). In 2020, Woom had an increase in sales of 63% compared to the prior year (Müller, 2021).

In the first year, the company worked with a small bicycle manufacturer in East Europe to produce its bicycles. However, the production capacities of the original supplier were too limited to fulfill the higher demand in the following year. Moreover, as most of the bicycle industry relocated from Europe to Asia, and more specifically to Taiwan in the 1970s, most know-how and manufacturers are located in this area. Consequently, Woom was offshoring its manufacturing activities to Asia, and over the years, the company diversified its supply chain by working with manufacturing companies from three different countries, namely Vietnam, Cambodia, and Bangladesh (Woom GmbH, 2021b).

In January 2021, the company collaborated with the German company SPRICK CYCLE GmbH and started a production line in SPRICK CYCLE’s factory in Poland (Schwarz, 2021). According to Woom, nearshoring of parts of its production, more specifically the assembly of the bikes, will result in the production of 115.000 ORIGINAL bikes at the new production site (Schwarz, 2021). This is almost half of its total production, while the rest will be continuously manufactured in Asia (Woom GmbH, 2021b).

4.1.2 Motivations and decision-making process

The decision-making process of Woom was analyzed, and the aspects that played a role during the process were identified to answer the first research question. First, the most prominent motivations to nearshore

³ It is important to stress that the focus was set on the first case, Woom, as a more comprehensive analysis could be conducted due to the higher number of interviewees.

part of its production to Poland are briefly explained. Afterward, additional essential aspects in the decision-making process, such as potential tipping points, are outlined.

In total, 18 different aspects were mentioned as motivators of the nearshoring process (see Table 8). The majority of the aspects expressed can be clearly connected to the supply chain configuration of the company, such as shorter lead times, increasing reliability in production, or having more control over the production process. In addition, however, three aspects are directly linked to sustainability-related motivations, and two aspects related to the reputation of the company such as increasing customer satisfaction or a better brand image.

Table 8: Motivations influencing the nearshoring decision-making process of Woom

Motivations influencing the decision-making process	Mentioned by number of interviewees
Move production close to sales market	5
Companies sustainability values	4
Better environmental sustainability performance	4
Minimization of transport	3
Shorter lead times	3
Risk minimization	3
More control over production	3
Independence from Asian producers	2
Better sustainability performance of the product	2
Increasing customer satisfaction	1
Predatory competition about resources and production capacities	1
Reliability in production	1
Better cashflow	1
Future investments	1
Closer collaboration with supplier	1
Better brand image	1
Increased flexibility	1
Availability of production capacities	1

Note. Orange boxes are motivations connected to sustainability

4.1.2.1 Sustainability-related aspects

Throughout the analysis, it became apparent that not only environmental or social sustainability-related aspects were the dominant factors that motivated Woom to nearshore. Portraying the decision-making process more general and describing the influence of sustainability, it appears that “*economic factors were paramount*” (IW_16), and during the whole process, Woom had to ensure that this decision was economically viable and the product stayed competitive. However, the majority of the interviewees mentioned aspects related to **sustainability** as factors included in the discussion. As one interviewee stated: “*Sustainability is part of every business decision. You don't always manage to go the more sustainable way. But we're working to make that happen. And it is the same with the production in Europe*” (IW_15). Another interviewee stressed: “*There are four, five reasons in my opinion. And one of them, I'll be honest, one of them is the environmental aspect. That is an important aspect, but not the only aspect*” (IW_11). Interestingly, another interviewee from a different department even expressed that sustainability was not a contributing factor to this decision: “*But I certainly admit, I mean, you are a specialist and it would be a falsification of the facts if I did not admit that the driver here was not sustainability*” (IW_14). However, at the same time, he/she affirms that the decision is meaningful in terms of the environmental and social sustainability of the company.

The most striking aspect related to sustainability and referred to by four interviewees is connected to the **company's values and sustainability strategy**. Several interviewees from different departments mentioned that producing children's bicycles is coupled with an intrinsic motivation to contribute to a more sustainable economy. The product itself is associated with sustainability-related topics such as green mobility and encourages children to use bicycles more frequently. One interviewee stressed that the decision to nearshore „*fits very well with our overall strategy, also with our overall communication as a company, because the topic of climate change, long-term threat to the earth, sustainability as a central future issue, and sustainability as a strategic business goal, that this fits very well with our DNA as a brand and complements each other very well*” (IW_11). Woom aims to address sustainability more in its business strategy and recognized nearshoring as an opportunity to reduce lead times and minimize supply chain risks and as a means to connect the company's values to its supply chain activities. It becomes clear that the interviewees recognized the firm's responsibility towards contributing to sustainability, as one interviewee stressed: “*Everyone has to take a look at themselves and make their contribution. And nobody is perfect. But everyone has to contribute as best they can*” (IW_15).

Along this reasoning, it is not only essential for the company to create a product that promotes a sustainable way of transportation but also to continuously improve the way it is made by striving towards more **sustainable production processes**. Consequently, the company questioned whether producing its

bicycles in Asia and selling them mainly in Europe is reasonable. The following quote underlines this reasoning:

“And restarting a European cycling industry also plays a crucial role. Even though we sell a sustainable product that will last for many generations of children and that has the potential to make the world more sustainable – through turning little enthusiastic cyclists into grown up enthusiastic cyclists who will rather cycle than drive a car – we feel that it is not enough. That is why we are constantly in the process of revising and rethinking the various production processes” (IW_12).

Even though sustainability-related aspects were not the only important factors when deciding to nearshore production, it becomes apparent that the employees clearly connected this decision to the company’s values and motivation to conduct its business activities more sustainable. As a consequence, the company’s sustainability values motivated the firm to rethink its current supply chain and consider other, more sustainable ways of configuring its supply chain.

Connected to this aspect, and mentioned by five interviewees, is the motivation to **nearshore production to establish production facilities closer to the sales markets of the company**. Woom’s primary sales market is located in Europe. Additionally, its markets in Asia and North America are growing fast. Therefore, the decision to establish a production facility in Poland is motivated by several factors. One related to the company’s sustainability performance is **to increase its environmental sustainability performance** by reducing transportation routes and hence CO₂ emissions, as the following quote emphasizes: *“The main factors behind this decision have gone in this direction. In other words, sustainability of the product, proximity to the market and also a reduction of the corresponding transportation route” (IW_16).*

Overall, it becomes apparent that when addressing sustainability-related motivations, the decision was mostly linked to environmental aspects in contrast to social ones. As one interviewee expressed: *“Social aspects, of course, also played a role, but I would say they played a subordinate role in comparison to the other aspects” (IW_11).* The company did involve aspects such as fair working conditions, wages, and control over the production facilities in its decision-making. However, these did not dominate the discussion and played a slightly more significant role during the implementation process, described section 4.1.3.

4.1.2.2 Non-sustainability-related aspects

Besides these sustainability-related aspects, other economic factors were of great importance in the process and as one interviewee summed up precisely: *“With all this, of course, you always have to remain economical and think economically. And I believe, however, that this can be reconciled” (IW_15).*

The company's greater motivation is connected to the overarching idea of establishing **production closer to the company's sales markets** to minimize factors that can hinder or slow down production when collaborating with suppliers in Asia. Half of the interviewees mentioned that through nearshoring, they hope **to minimize the risks** of supply chain disruptions in the future. Even though the company made the decision to nearshore prior to the global Covid-19 pandemic, the pandemic reinforced original supply chain disturbances resulting in production insecurities and excessively **long lead times**. As one interviewee states: *"It takes two years from the moment we order a bike until it gets delivered. Obviously, having a production closer at hand is a great thing"* (IW_15). Consequently, by having multiple production sites, the company hopes to reduce lead times and minimize global supply chain risks that affect the firm's processes, as the following quote underlines:

"Of course, it's also about minimizing risk. Because if we only manufacture in one single country, let's assume that we had our entire production in Cambodia, then with a view to what we have now experienced with Covid-19 within the year, it can be stated that Covid-19 has shown how quickly and to what extent entire sectors of the economy can be hit by the crisis and entire supply chains collapse" (IW_11).

Furthermore, by situating the production closer to the sales market, Woom aims to gain more **flexibility** and **control** over the production process *"to react more quickly and with greater agility"* (IW_15). Especially gaining control back over the production process was a factor mentioned by three different interviewees from various departments that do not work directly with these processes, such as the communication department. By controlling these processes again, the company aims to respond faster to customer demand and wishes and hopes *"to decide short-term which bike size, which model and maybe which color the bike should have"* (IW_15).

Linked to the mentioned ability to respond faster to customer wishes and, thus, seize the opportunity to increase customer satisfaction and the company's reputation, two interviewees stated that producing in Europe can **positively affect the public image of the company** and will add value to the product. As one interviewee stated: *"Of course it's nice for the image, too. To communicate that this is an Austrian company and the production sites are located in Europe has a clear advantage. "Made in Europe" helps"* (IW_13).

Additionally, the company aims to **reduce its dependence on Asian producers**, which two interviewees mentioned. When working with Asian suppliers, Woom has to accept their working conditions, and the company is more restricted in its way of operating, which can hinder a young and fast-growing company. One interviewee emphasized this dependency as follows: *"They are partially already doing what they want with us. To a certain extent, they dictate delivery conditions prizes"* (IW_13). By moving the production

partially to Europe the company aspired to gain part of its independence in the manufacturing process and continuously shape and develop its supply chain according to its future goals.

4.2.1.3 Potential tipping points

Besides these clear motivations, other economic aspects played a significant role and could be considered tipping points for Woom's decision to nearshore.

One of these factors that contributed to making the decision and connected to the offshore location are the **increasingly limited production capacities in Asia** due to the global bike boom. Many bicycle manufacturers worldwide have a quantity increase and strive to satisfy demand by increasing production activities offshore. However, the available capacities in Asia are constrained, and thus, predatory competition between bicycle companies is rising. Woom was aware of this development and consequently made the decision to nearshore as one interviewee described: *"Before they got really constrained, we had already made our decision to say, we are now looking for a factory closer to Austria where we can also transfer methods and develop know-how more easily"* (IW_11).

Additionally, the interviewees expressed that the **company size** was playing a crucial role in their decision. Woom has been growing steadily over the last years and reached a critical number of produced units. This was a determining factor when discussing the idea to nearshore with European suppliers as suppliers demanded a certain minimum number of produced units per year. One interviewee explained this process as follows: *"A few years ago, when we sold only a few thousand bicycles, it was difficult to partner up with large manufacturers. At this point, we move quantities that open doors - even to large producers"* (IW_13). Thus, it becomes apparent that the company size was a key decisive factor for Woom to start this process because through its size, they were able to reach out and generate interest within the bike industry and other industries, such as the automotive industry as potential business partners. As one interviewee stated: *"The critical quantity, the critical size we have already exceeded, now would be the right time to do the job properly"* (IW_11).

The company size opened new opportunities for Woom and enabled them to collaborate with companies and industries specialized in **automation**. The overall development of automating production processes in Europe played an essential role in its decision-making process. By having the possibility to lower the **labor costs in Europe** through automating processes in the future and hence stay competitive in the long-term, the company made this decision to produce partially in Europe. Without this possibility, the labor costs compared to Asia would raise the overall price of the bike to an uncompetitive level, risking losing customers. As one interviewee stressed: *"If one is no longer competitive, the more competitive product is bought. That's how the free market works"* (IW_15).

In conclusion, it is challenging to determine in this research which aspect eventually was the final factor that led to the decision to nearshore, as the interviewees did not have to prioritize the different aspects. However, it can be stated that the factors mentioned above build upon each other and that economic factors such as reaching a specific company size or minimizing the labor costs in Europe through automation in the future only allowed the company to consider nearshoring part of the production. It was essential for Woom to reach a specific firm size to enhance negotiation power when wanting to establish collaborations with different companies outside of the bicycle industry.

The listed motivations then contributed to the idea of establishing a production line in Europe by pointing out the potential benefits of this decision. However, the individual motivations were probably not reason enough for the company to make the decision. In line with this argumentation and connected to the sustainability motivations that the interviewees pointed out, it was decisive for the company first to establish certain economic factors to make the decision. The analysis showed that the company's values and intrinsic motivation to contribute to a more sustainable and future-proof economy by creating a product that respects environmental and social standards were not the determining factor that led to this decision but further facilitated it as this approach is in line with the firm's values and strategy.

4.1.3 Implementation process

Before describing how sustainability-related aspects were influencing the nearshoring implementation process of Woom and connected to the aspects included in Boffellis and Johansson's (2020) framework, some general findings of this step of the process are given, as they are essential to gain a comprehensive understanding of this step.

Concerning the specific **location**, like already mentioned, Woom's motivation was to establish production facilities close to its sales market. In Europe, the company did not have many options to collaborate with suppliers as the bicycle industry and consequently the know-how in Europe moved to a great amount to Asia beginning in the 1970s. One interviewee described the selection as follows:

“You don't have much of a choice. There are only a handful of companies in Europe that can build bicycles the way we want and need them. And there you can't choose the country, you have to be happy when you find someone who builds it. In our case it was Poland. Romania could have been an option, and there are companies in Portugal” (IW_13).

Additionally, Woom has **high quality standards**, which limited the number of potential suppliers even more. Consequently, Woom was in contact with suppliers that could provide the quality and have the **skills and expertise** to produce the number of bicycles they strive for, as one interviewee expressed: *“It is also*

important that the partner can deliver the quality that we demand ... because if the partner cannot deliver what we want and how we want it, he is out of question” (IW_13). Once they found a supplier that could achieve that, the company started the implementation process. Important to stress is that the decision-making process was not dominated by Woom being set on a specific country and striving to find a supplier in that country but instead, enforced by the limited number of options, Woom focused on finding a partner that could fulfill the above mentioned qualifications.

After connecting with different potential suppliers in Europe, Woom decided to partner with the German company SPRICK CYCLE operating a factory in Poland. Hence, they also **outsourced** the value creation activity under question, the assembly of the bicycles to an existing factory, just as in Asia. According to two interviewees the idea to insource this part of the production into the company’s activities was part of the debate but was then chosen to be not an option at this point of time. This is because the know-how necessary to insource this specific activity is missing within Woom and the reason most frequently stated by the interviewees. This led to Woom’s decision to search and establish a long-term partnership with a company that has already acquired a high level of expertise in this field which Woom can make use of. Complementarily, two interviewees mentioned that the focus and the competences of the company are specialized in other parts of the value chain as the following quote emphasizes: *“However, that is always a question, what do you want or what can you do? We can develop bicycles. We know exactly what we want to manufacture. But that doesn't necessarily mean that you're the best at manufacturing it” (IW_13).*

It is important to note that Woom did not terminate its business relations with its Asian assembly factory as this would contradict the company’s goal to locate production processes close to its final sales market and considering the growing market in some Asian countries. Therefore, this can be regarded as **partial relocation** as still value creation activities are maintained in the host countries in Asia. The analysis showed that in the future the company is striving towards incorporating more European suppliers in its supply chain to be able to serve the European market not only with bikes that are assembled on this continent but as well include components that are produced there. Hence, the decision to establish production in Poland is only the first step of an incremental process to receive more components from European suppliers. The company’s next milestone in this process is to produce bicycle frames in Europe.

4.1.3.1 Sustainability-related aspects

When analyzing the implementation process of Woom, it becomes apparent that again sustainability-related aspects were not the only factors in this part of the process. Instead, two interviewees explicitly mentioned that those aspects were considered subordinately in the process, as the following quote underlines:

“You have to honestly say subordinate. So of course, for us it is a basic requirement that they comply with the legal provisions of the respective country. We have also contractually secured that. Of course we also got an idea of it during a factory tour and had the data made available to use to see that this is adhered to” (IW_16).

Therefore, it becomes clear that it was not a major aspect during the implementation and that the focus was set on adhering to the **environmental and labor legislation** in the specific country.

Interestingly, the analysis showed that the company was evaluating the **risks of potential sustainability-related damage** differently when working with the new supplier. Woom decided to work with a German supplier who is operating a production facility in Poland, and one interviewee stated that due to this fact, *“we don't have the issues that something is covered up here or something like that, as it is often said in Asia” (IW_13)*. He/She elaborated that *“you can assume that everything relates to the standard anyway, but also regarding environmental aspects, will be adhered to and that you don't have to constantly check everything again” (IW_13)*. This can indicate that European suppliers are trusted more regarding sustainability-related aspects in production processes, such as labor rights or environmental requirements. At the same time, the interviewees frequently stressed that the standards in the factories are being controlled regularly by the quality assurance department independently where the site is located.

Additionally, when being asked for sustainability-related aspects during the implementation process and besides the general notion that sustainability was not the dominant factor in this process, two interviewees mentioned that special attention was given to the **working conditions** in the factories, as supported by the following quote: *“But the working environment for the employees is also a huge issue. But that's exactly the same in Asia. So it doesn't matter where you look for a new partner. At the end of the day, these criteria are always the same” (IW_13)*. This aspect is an important factor for Woom, and the company is regularly questioning and critically analyzing the standards of the production facilities they are working with. For example, when selecting and visiting the new production site in Poland, Woom did pay attention especially to the working conditions in the factory, and verified that the standards of the country are being followed. However, it was stressed that this procedure does not differ from how they work with suppliers in Asia and, therefore, cannot be considered explicitly resulting from the nearshoring process.

4.1.3.2 Non-sustainability-related aspects

Apart from the few sustainability-related aspects, other factors characterized this part of the nearshoring process. The interviewees stated that Woom developed different implementation steps for the establishment of the production facilities in Poland. The first step is linked to preparing and creating capacities in the chosen facility to start the bicycles' assembly. The second step is going further by striving to automate

specific processes in the future and building some components in Europe that are still shipped from Asian suppliers to the production facility. As already mentioned during the decision-making process, for Woom the possibility to **automate** specific production processes in the future was a crucial aspect in the process. During the implementation, the company developed this idea further by reaching out to industries dealing with less work due to the Covid-19 pandemic and specializing in automation. As one interviewee explained:

“Due to the pandemic and to the climate crisis the automotive industry cannot continue to be successful without major changes. Suppliers of the automotive industry are now ready to sit down at the table with people like us. They would have not dealt with children's bicycle manufacturers before” (IW_11).

Consequently, Woom was reaching out to companies that have more capacities at the moment and make use of the **technologies** that are of interest to them. The company believes that it is not always necessary to invent new technologies but that often challenges can be solved by searching for solutions beyond the scope of a company's industry. In this case, Woom discovered technologies that have not been integrated to a large scale in the bike industry yet. However, the company is actively striving to incorporate those in the production processes so that *“only those production steps are carried out by humans in which the human with their combination of eyes and hands are superior to the robot. That those production steps are executed by humans, with a high degree of specialization, but that those production steps in which the robot is superior to the human are carried out by robots” (IW_11).*

The approach to cooperate with industries using technologies that can make the production processes of bicycles more efficient connected with the company's aim to automate these processes further is highly linked to the **innovative** and proactive behavior of the company. This business mentality and way of thinking contributed greatly to the whole nearshoring process, and as one interviewee emphasized: *“We would not have been able to take this step without innovation. Definitely not” (IW_11).* Half of the interviewees specifically stressed that innovation was a crucial factor in the implementation process. Not only does this strategy create new business opportunities, but additionally, the company aims to gain a competitive advantage through this approach. Additionally, Woom associates this way of doing business with opportunities to make production processes more sustainable. By proactively trying to improve production processes and not simply continuing the prevalent way of operating within the industry, the company could contribute to making the manufacturing of bicycles more sustainable through innovative solutions.

The last aspect that stood out during the implementation process was the **importance of exchanging information** and knowledge with the new supplier. Since SPRICK CYCLE has great experience in bicycle

manufacturing and the factory in Poland is not a newly established manufacturing site, the focus for Woom was to share and explain the specific quality and technical requirements of its bikes. This process was connected to initial difficulties of production, and still some intricacies are to be redefined. As one interviewee described: *“But the whole thing has to settle in. Production runs smoothly in the rarest of cases overnight or does a production where many people are involved never runs smoothly”* (IW_13).

In the long-term, Woom is aiming to produce bicycle frames and forks in Europe as well. The analysis showed that it is vital to have a **close collaboration** with the supplier so that Woom can develop this together with SPRICK CYCLE as it is a production process that is technically very demanding. For Woom, it was essential that its supplier is willing to support this aim and is allowing innovative ways of thinking. The following quote underlines this process: *“The topic that was important to us here is that our partner is ready to go this way with us because Woom is fundamentally a very innovative company and always wants to implement new ideas”* (IW_16).

It can be concluded that sustainability-related aspects were not dominating the implementation process. Concerning these sustainability-related aspects, the interviewees referred mainly to working conditions taken under consideration during this step of the nearshoring process. By working together with a European supplier Woom has to follow European law and therefore assessed the risk of being linked to violating social or environmental standards as lower compared to working with Asian suppliers. Therefore, these factors were not specifically pointed out as essential aspects during the implementation.

4.1.4 Outcomes

To answer the third research question, the outcomes of the nearshoring process are outlined in the following section. The findings are differentiated between benefits and problems or challenges. Additionally, short-term and long-term aspects are explained individually. As Woom only located part of its production to Poland at the beginning of this year, long-term outcomes could not be examined. Instead, the long-term expectations of this decision are outlined.

4.1.4.1 Short-term benefits

Overall, the interviewees mentioned 18 different positive short-term outcomes (see Table 9). The aspects that have been mentioned by at least two or more interviewees are: Increasing customer satisfaction, shorter travel times, more control over production, easier communication, closer collaboration with supplier, ‘Made-in effect’, shorter lead times, and stricter labor standards.

Table 9: Short-term benefits of the nearshoring process of Woom

Short-term benefits	Mentioned by number of interviewees	Stated as initial motivation
Increasing customer satisfaction	4	x
Shorter travel times	3	
More control over production	3	x
Easier communication	3	
Closer collaboration with supplier	2	x
Made-in effect	2	
Shorter lead times	2	x
Stricter labor standards	2	
More flexibility	1	x
Easier access to production facility	1	
Knowledge transfer	1	
Less cultural differences	1	
Stricter environmental standards	1	x
Potential for further environmental improvements	1	x
Reliability of production & supply	1	x
No time difference	1	
Positive internal company reaction	1	
Discover new business possibilities without Asia	1	

Note. Orange boxes are benefits connected to sustainability

The positive outcome mentioned by most interviewees was **increasing customer satisfaction** as a result of the nearshoring process. Most of Woom’s customers reacted positively, supportive and interested to this decision and are satisfied that the bike is produced within the EU, as supported by the following quote: “They take it with a lot of interest and say that is an additional argument for me why I buy a Woom, not a [company names] or something else. Because I know that this is made under humane conditions, under social aspects in an EU country” (IW_11). Furthermore, the quote indicates that the increasing customer satisfaction is connected to the so-called ‘**Made-in effect**’, meaning that a product is gaining additional value to customers once it is produced in an EU country. Customers associate this with higher

environmental and labor standards and are often more likely to buy this product. It has to be noted that this is an additional factor that plays a role in the purchase decision, but the analysis showed that Woom does not see this as the decisive factor but an aspect that plays a more important role for some customer segments than for others.

As already mentioned, the ‘Made-in effect’ partially results from **the stricter environmental and social standards within Europe**. This was as well mentioned by some of the interviewees as a positive outcome, as emphasized by the following quote:

“The standards of how to deal with your workforce in Europe and that there are certain framework conditions that are adhered to, that there are laws that are widespread throughout Europe, which one also has to adhere to and which then meet good standards in comparison to those in Asian countries, for example. The legal regulations on social requirements are then significantly lower than in Europe” (IW_17).

The social standards in Europe that come along with better working conditions compared to Asia especially are stressed as a favorable effect of this process. It is being highlighted that those aspects can also be better controlled because the production site is located in closer proximity to the home country.

Having **more control** over the production processes was as well mentioned as a positive effect of the nearshoring process, as underlined by one interviewee: *“It has social aspects. Of course we can control the production process in a European facility more easily than in Asia” (IW_12)*. However, this is not only mentioned connected to social standards but also comes along with **closer collaboration with the supplier**. By being geographically closer to the factory, it is possible for Woom to supervise the manufacturing steps more intensively and as well work closer together with the partner company to achieve the quality and performance desired. One interviewee described this as follows: *“But we can move around freely here and have an insight from the beginning of how production is carried out, with which standards it is produced” (IW_16)*.

Furthermore, closely collaborating with the German partner company **simplified the communication** by having fewer language barriers. Almost half of the interviewees mentioned that communicating became more straightforward since they work with a German supplier, so many procedures can be discussed in the common language, German, or on a good level of English. Besides the language itself, *“the essential first simplifications [are] that we are simply much more involved in comparison to Asia and can communicate more openly than with Asian plants” (IW_16)*. This shows that geographical proximity and having a common language to work with can simplify daily business operations.

Another positive outcome that allows for this more personal working relationship and is linked to the closeness of the production site is **shorter travel times**. Three interviewees pointed out this beneficial, direct effect that simplified many initial steps when starting the partnership and enabled other factors such as having more control or a closer collaboration with the partner company. The following quote underlines those just mentioned positive outcomes:

“We were able to work very intensively on site with the operations manager and the team in order to get the plant up to speed quickly, to allow method transfer to take place, to oversee production much more intensively than we would now be able to do in Asia”
(IW_11).

The last beneficial outcome that two interviewees have mentioned is shorter **lead times**. This was one of the motivations that contributed to the decision to nearshore production and has been already observed as positive effect. This decision radically reduced the length of the lead time, as one interviewee described more concretely: *“On the other hand, of course, we also have delivery times that were previously six weeks to one day”* (IW_14).

4.1.4.2 Short-term problems and challenges

Overall, six interviewees stated various challenges and problems resulting from the nearshoring process (see Table 10). It is striking that different aspects were touched upon depending on the department in which the interviewees are working. This led to a comprehensive view on the challenging aspects of this decision ranging from site-specific challenges to others linked to the bicycle industry in general or Woom’s supply chain. The most prominent aspects are outlined in the following, meaning challenges or problems that more than only one interviewee mentioned.

Table 10: Short-term challenges and problems of the nearshoring process of Woom

Type of challenge/ problem	Mentioned by number of interviewees
Upholding dependency on Asian component producers	4
High labor costs	3
Quality issues at new production site	3
Alignment of production sites	2
Negative customer reaction	2
Difficult communication with Asian partners	1
Different working mentality in Europe	1
Long training time of workers	1
Missing know-how	1
Missing components or spare parts	1
Unexpected fast deliveries from new production site	1
Getting control over the production	1

Note. Orange box is challenge connected to sustainability

As Woom is one of few bicycle companies that now has its assembly inter alia in Europe, **initial difficulties** to start the production were common. One interviewee expressed those initial difficulties as follows:

“In terms of quality, in terms of production it was more difficult than we had imagined. I cannot answer directly why this is the case now. I do not know. So maybe we as a company took it too naively and said that now they are European partners and that is why everything will be much easier. It wasn't like that, because we had the same problems as in Asia, because at the end of the day there are as well humans on the production line who make mistakes” (IW_13).

For specific steps of the process, new technical or procedural solutions had to be found, and as mentioned, the company searched for these as well outside of its own industry.

One of the challenges that the company had to tackle when moving to Europe, which three interviewees stated, was **high labor cost**, as emphasized by the following quote: *“It also has major challenges. In any case, it cannot be achieved at the price that can be produced in Asia. This can be partially compensated*

for by less transport and less goods transport. But we believe that it can be done and will pay off” (IW_15). As the wages are “*four times as high in Poland as in Asia” (IW_11), the company had to assess early in the process how to stay competitive when producing there. For Woom, this meant to increase the use of technologies and automation to ensure that the decision to nearshore was viable also from an economic point of view.*

After starting the production in Poland, other challenges or unfavorable effects arose. As Woom has only moved the last step of the production process, the assembly of the bikes, to Europe so far, more than half of the interviewees still perceived a high **upholding dependency on Asian component producers**. One interviewee expressed this as follows: “*But for us that still means that we are always out of stock because the demand is simply so much higher and because we still cannot increase the capacity because we are missing important components. Saddles, handles, gears, drive components are things, they have incredibly long lead times” (IW_15).* Due to the missing component producers and the skills in Europe, Woom is still obliged to buy components from Asian suppliers, which are then transported to the Polish assembly factory. Consequently, the company cannot quickly increase production in Poland to satisfy the high demand for bicycles since some components are unavailable or have extensive lead times. To meet this substantial challenge, the company is increasingly looking for European suppliers and has already established collaborations with some. Additionally, as mentioned above, the company aims to integrate the frame and fork production into the factory in Poland. However, since the bicycle industry is mainly located in Southeast Asian countries, this dependency relation will most likely continue to some extent as one interviewee stressed: “*It will probably always remain a global market economy. A few components will not be able to be manufactured in Europe” (IW_15).*

Another challenge that has been expressed by three interviewees and is connected to the new production site is quality issues. As Woom has very high quality standards, the interviewees stated that after starting the production line, it took time and effort for the quality to get to the requirements of the bicycles Woom is developing, as the following quote underlines: “*It takes time, and it is still going, for the company to have production under control to such an extent that the quality is good” (IW_14).* The processes had to be supervised closely and results discussed with the partner to improve how they were operating.

An additional challenge connected to the new production line and from having more than one assembly line is to **align both sites** with each other so that the products are identical, as one interviewee expressed:

“Of course it is then a big challenge, because one production would prefer to do it this way, the other production would prefer to do it differently. And then under certain

circumstances a lot of persuasion or a certain change is necessary in order to keep things the same. So we try that it doesn't happen that there are deviations” (IW_15).

Since Woom is now producing its bikes in two different locations, the company has to coordinate processes between both, and one factory cannot alter procedures without affecting the other. Therefore, it is essential for the staff to act as an intermediary between those factories to ensure the quality and brand recognition. To address this challenge, it is beneficial that the company has the entire development and design integrated into its own business and hence, they are the owners of all needed drawings for the manufacturing.

The last negative effect introduced in this chapter is linked to the company's image and its **customer reactions**. As mentioned above, many customers reacted positively to this company's decision. However, the company as well “[...]got a shit storm that should not be underestimated” (IW_15) from customers who could not understand the reason why Woom was not moving production activities straight to Austria or, more specifically, to the company's headquarter in Klosterneuburg. Some customers seem not to have known that Woom offshored the greatest part of its production activities to Asia firsthand and were then surprised that they did not use this as an opportunity to move the assembly to Austria. This shows the complexity of a decision like this and how different the customers' reactions can be depending on their interest, understanding, and knowledge of the industry and business activities.

Finally, it has to be stressed, however, that Woom has only started with its production activities in Poland in January, meaning that many initial difficulties arose of which some have already been overcome, as expressed by an interviewee:

“Five months is not a long time or we are still struggling with initial difficulties, be it logistics, be it production stability, production processes, be it quality. We are still fighting for improvements. That is why it is perhaps a little too early and the impression a bit falsified. At the moment we just have too many topics that don't work that way” (IW_13).

Therefore, it would be interesting to continuously follow the process Woom is taking to overcome these initial difficulties and how the nearshoring process is developing in the long-term.

4.1.4.3 Long-term expectations

Even though Woom is still in the initial phases after the nearshoring process and, therefore, long-term effect cannot be analyzed yet, many interviewees still touched upon aspects referring to future expectations resulting from this. These are still important to outline, as they can indicate the company's path in the following years.

When deciding to nearshore, Woom was motivated by specific aspects introduced in chapter 4.1.2. Now, around half a year after the starting date of the production facility in Poland, certain long-term expectations of this decision can be identified. In the following section, the most prominent expectations are explained, and an overview of all provided expectations is given in Table 11.

Table 11: Long-term firm-level expectations of the nearshoring process of Woom

Long-term, firm-level expectations	Mentioned by number of interviewees
More components from European suppliers	6
Production close to sales market	4
Automation	3
Circular Economy	2
Minimization of transport	2
Implementation of more sustainable solutions in supplier factory	1
Better quality	1
Stable production	1
Production of bicycle frames in Europe	1
Expand production in Asia	1
Smaller and more local production facilities	1
Poland factory as example for other locations	1

Note. Orange boxes are expectations connected to sustainability

The expectation, which is mentioned most frequently by six interviewees, is **to receive more components from European suppliers**. The company seeks to collaborate with more firms producing bicycle components in Europe to serve its European sales market with components from the same region. This might not only reduce lead times and transportation costs but can as well contribute to the sustainability performance of the company. The interviewees agreed that it might not be impossible to produce a bicycle of which 100% of the components are made in Europe, but do not agree to the extent that that might be possible. One interviewee states that maybe 90% could be produced in Europe and 10% in non-European countries. Another interviewee hopes to bring “*some or at least 30 to 40 percent of the components to Europe*” (IW_16). Even though the interviewees did not seem to know precisely the share of the components needed to produce a Woom bike will be possible to produce in Europe, they all aim to “*to make ... as much as possible of the product's value chain in Europe*” (IW_15).

The aim of obtaining more bicycle components from European suppliers is connected to the overarching approach to **increase the proximity between the production site and the final sales market**. Launching the assembly of the bicycles in Poland was the first step in this direction, and Woom strives to use the experiences they are making there for further expansion. The company is hoping *“to find a blueprint there [Poland] as well or to gain experience of how to build something like this and establish it on every continent. And maybe even on the continent once in the north, once in the south”* (IW_15). It is essential to stress again that Woom is not aiming to remove its production activities from Asia in the long-term. As one interviewee stressed: *“We have a market outside of Europe and it makes little sense now if I start shipping components from Europe to Asia”* (IW_16). They strive to serve the Asian market with its Asian production facilities and, consequently the European market with its European facilities. In the long-term the company can as well imagine establishing a production facility in North America. This is in line with its sustainability strategy, as reshoring all its production activities from Asia back to Europe and then shipping the bicycles from Europe to its Asian sales market would have immense effects on the sustainability performance of the company.

Another important aspect to point out more elaborately, as it is connected to sustainability, is that two interviewees stated that Woom wants to address **circular economy** more in its business model in the long-term. Even though the interviewees did not connect this directly to the nearshoring process, it becomes apparent that certain benefits of this business decision enable the possibility to integrate circular economy aspects more. The nearshoring process allows closer collaboration with the firm’s supplier, which is essential for the first development and experimentation of circular products. In the future, they aim to *“build Cradle to Cradle capable complete bicycles”* (IW_14) and to achieve the disassembly and recycling of these bicycles *“it would also need workforce very close to the sales countries, which can also manage this refurbishment”* (IW_14). Similar to the reasoning of having the production close to the sales market and trying to include more European component makers into the supply chain, it would not align to the current development of the company’s strategy to ship those bicycles for refurbishment far abroad to, e.g., countries in Asia. Thus, the nearshoring process might enable Woom to integrate new sustainability aspects into its business model that could not be addressed when producing only offshore in Asia.

Lastly, it is noteworthy that the closer collaboration with Woom’s new supplier in Europe allows the company to consider additional sustainability-related aspects that the firm aims to address in the future. For example, one interviewee described that through proximity, Woom is developing a **plastic-free packaging** for its bicycles. The interviewee stated: *“In Poland we can discuss this directly with the producer and also implement it and, above all, test it”* (IW_16). Besides the proximity, the mentality, awareness, and perception of the material plastic also matter in this context, as the interviewee elaborated: *“So this thought*

concerning the subject plastic, has not gotten as far as it has here with us. For them this is self-evident and you have to be really vehemently behind it so that it is going to be abandoned” (IW_16). Additionally, closer collaboration with the supplier facilitates a joint discussion of the usage of alternative, renewable energy sources in the factory. In the long-term, Woom aims to implement more sustainable solutions together with the partner company.

4.1.4.4 Potential macro-level effects

When discussing the outcomes of the nearshoring process more generally, four interviewees referred to potential effects of this phenomenon beyond firm-level but on a larger scale that can be linked to sustainability.

One aspect which was mentioned by three of the interviewees are the **possible adverse effects of reshoring in general on the host countries**. Woom is still operating in three Asian countries, namely Bangladesh, Cambodia, and Vietnam, and is not planning to terminate its collaborations with their suppliers soon. However, when discussing reshoring in general, some interviewees stated potential effects on countries that are characterized economically to a great part by foreign investments in the manufacturing sector. If those investments are largely removed and relocated to, e.g., European countries, this could lead to detrimental effects for the local population in the initial host countries. The jobs that were generated from offshoring many manufacturing industries abroad could be removed. At the same time, this employment is much needed, and the offshoring processes in the past led to more affluence in many countries. This was observed by employees from Woom who experienced the development of the countries where their suppliers are located. One interviewee described this process as follows:

“I know Cambodia inside and out. I’ve been there forty times and I know how people are doing And I’ve seen this country in a three-year development phase. How quickly the prosperity has increased there in this country, because a lot of industry has been settled there in a very short time. And within three years houses were built there, apartment buildings, there were more and more people on mopeds and not just on bicycles, so something has developed there for the better” (IW_13).

Two interviewees elaborated on this by referring to the bicycle industry specifically. In comparison to, e.g., the textile industry, which is a sector that has been offshored to a great extent as well, the bicycle industry can be seen as a *“more developed industry”* (IW_14). One interviewee feared that if the bicycle industry would be removed to a large part that then *“really only ... the sweatshops [remain]”* (IW_14).

Furthermore, this was compared to the textile industry and how international policies and tax regulations influence where multinational companies find attractive locations to place their factories or contract suppliers.

Another aspect that two interviewees emphasized refers to the **jobs** that are possibly removed from the initial host countries due to reshoring activities back to, e.g., Europe. The interviewees stated that the number of these jobs linked to production activities is most likely not going to be the same when moved to a European country compared to Asia. Since in Europe the labor costs are higher, the reshoring process is often coupled with **automation** of production processes that result in less needed employment. One interviewee explained that: *“Every company that goes back to Europe tries as little as possible to create jobs because it is not affordable and an incalculable risk”* (IW_13). In Europe, the workforce needed in the initial host country will most likely be replaced at some point by robots in the new country of production. Automation is not as advanced yet in the bicycle industry because it is quite complex and costly, but as Woom shows, there are first approaches to automating specific production steps.

Overall, the interviewees’ sometimes critical view on the reshoring phenomenon in general, shows that it could have detrimental effects on countries that are highly dependent on foreign production activities and that it may greatly influence the level of affluence in certain countries.

However, one interviewee expressed a possible positive effect at the macro-level. Bringing production activities on a large scale back into the EU can lead to those industries becoming more **environmentally sustainable**, considering the stricter environmental legislation present. By adhering to European law, specific industries might become cleaner regarding pollutant emissions, wastewater, or renewable energy. Overall, this can have a great impact, as one interviewee described: *“That will play a major role in the short and long term, if you say you have clean energy, it can also reduce your carbon footprint”* (IW_17).

4.1.5 Interim conclusion

The thorough analysis of the nearshoring process of the main case, Woom, revealed that sustainability-related aspects were not the only dominating factors during any of the different steps of the process. However, it has to be pointed out that environmental and social aspects influenced the process at different stages and, e.g., further facilitated the decision-making process. The decision to nearshore part of the firm’s production to Poland aligned with the company’s values and sustainability strategy and, therefore, was perceived as a convincing decision, also in terms of the sustainability direction the company aims to pursue. Nevertheless, the study showed that economic factors had to be fulfilled for the company to decide to nearshore successfully. More specifically, two aspects seemed to be crucial in this step and could be considered tipping points of the decision. First, the company size Woom was reaching allowed the company

to create partnerships with well-established firms from different industries such as the automotive industry and allowed the integration of new technologies. The second aspect, which highly influenced the decision, is the possibility to automate production processes in the future to lower overall labor costs. Moreover, the decision was reinforced by increasingly limited production capacities in Asia, resulting in extensive lead times and limited flexibility.

Lastly, it is important to point out that the nearshoring decisions lead to specific short-term outcomes that could contribute to a better sustainability performance of the company in the future, such as stricter environmental and social legislation. Additionally, the proximity to the company's sales market can have multiple benefits such as reduced transportation and hence, minimizing the overall CO₂-footprint of the company. However, as most of the components are still being imported from Asian countries, the environmental benefits from reduced transportation are to be determined. Furthermore, examining the firm's expectations showed that Woom strives to profit from this decision concerning sustainability in the long-term. The company aims to increasingly reduce transportation routes by working with European suppliers, integrate sustainable solutions in production processes by collaborating closely with their partner company, and seek to implement more circular business models, which is further enabled by having production facilities close.

4.2 Case company B

4.2.1 General introduction to the case

Case company B (CCB) is a Spanish bicycle company manufacturing high-performance road and mountain bikes.⁴ The company decided to collaborate with manufacturing companies from China and Taiwan and, therefore, moved production activities to these two countries shortly after their foundation. This decision was enforced by the founders' core competencies, who decided not to establish their own factory but outsource these activities. The founders did not have any experience in producing high-performance bicycles themselves but recognized their expertise in designing and developing those. Additionally, no supplier in Spain could manufacture their bicycles. Hence, the company moved the production part of its value chain to countries where the know-how was located.

Two years afterward, the company reevaluated this decision and relocated part of its production activities, namely the assembly and painting of its bicycles, back to Spain. In this case, the founders did not contract a supplier to perform these value creation activities, but they decided to insource these activities into their company. However, their carbon fiber frames and most of the components are still being produced in Asian countries.

4.2.2 Motivations and decision-making process

In the following, the crucial aspects playing a role in the decision-making process of moving part of the firm's production activities back to their home country Spain are outlined. First, it is described whether sustainability-related aspects were considered during this process, followed by other factors that were taken into account.

4.2.2.1 Sustainability-related aspects

The interview analysis showed that sustainability-related aspects were not playing an essential role in the decision-making process of the company. The firm does connect this decision indirectly to potential positive sustainability outcomes. However, when making the decision, CCB was not considering specifically sustainability-related aspects, as the interviewee pointed out: *"We don't take big decisions for this point, but these are indirect consequences of these issues"* (IW_18).

⁴ The information given in this section is entirely retrieved from the interview with CCB's management board and, therefore, no additional sources are depicted.

4.2.2.2 Non-sustainability-related aspects

Analyzing the decision-making process in more detail, it became evident that several reasons contributed to the company's decision to move part of their value creation activities back to Spain (see Table 12).

Table 12: Motivations influencing the backshoring decision-making process of case company B

Motivations influencing the decision-making process
Establish a customization program
Create more value/ better service for customers
Differentiation from competitors
More control over supply chain and production processes
Increased flexibility
Shorter lead times

One of the dominant motivations was that CCB strived to **create more value and better service** to its customers to **differentiate** themselves **from its competitors**, as the interviewee stressed: *“But at the same time when your product is not different to the other one, so your offer is very similar, it is harder. We really understand we need to have a key factor to be different to offer more value to our customer”* (IW_18). The additional value the company was planning to offer to its customers due to its backshoring decision was a **customization program**. This means that the company's customers can personalize their bicycles and, e.g., select components or colors of their choice. As this was difficult to realize when the assembly and painting of the bicycles were located on a different continent due to extensive lead times, this new business strategy appeared to be the tipping point for the decision to relocate.

Connected to this new business strategy were specific motivations that contributed to the backshoring decision and were crucial for having a successful customization program. The interviewee emphasized repetitively that one of those motivations was to gain **control over its supply chain** and especially over its production, as supported by the following quote: *“Then for this reason we understand it was very important take the control on the production and to cover these two key process for us, painting and assembly here in Spain”* (IW_18). This led to the company considering which part of the production activities could be run in Spain by the firm itself and were most important for the customization of bicycles. Consequently, the assembly and painting of the bicycles were chosen as those value creation activities that were going to be relocated and taken back under the company's control.

Another motivation linked to establishing a customization program was gaining more **flexibility** in the production processes. Through insourcing part of the production activities and relocating those back to Spain, the company hoped to increase its flexibility when making business decisions, as described by the interviewee: *“We are more flexible in the decision when we decide to change some product on the market or to follow some trend on the market. We are very fast after taking the decision and changing the product line. This was one of the key factors”* (IW_18).

Overall, it becomes apparent that multiple factors were contributing to the company’s decision to backshore the assembly and painting of bicycles back to its home country. However, the central point seemed to be the customization of the bicycles that was linked to specific requirements in the firm’s supply chain. These requirements, such as having control over the production processes or acting flexibly to changing customer demands, were essential to fulfill when aiming to provide customers with more value through a customization program.

4.2.3 Implementation

Before explaining those aspects that were explicitly addressed in the implementation process of backshoring part of CCB’s production activities back to Spain, general aspects that explain this step of this process are given following the framework by Boffelli and Johansson (2020).

Concerning the governance modes of this decision, CCB changed from having those production activities outsourced in Asia to **insourcing** these into its company in Spain. For the company, it was essential to integrate these activities into the business to gain flexibility and control over the processes. The following quote underlines this: *“A key factor was to have the factory and to have 100% of the process under control. It was very important also, we have a problem similar to other brands, we have some material on delay, but we were able to find different material”* (IW_18).

Additionally, it is critical to point out that the company only moved back part of its production activities and that the manufacturing of the frames, as well as the majority of the components, are still being produced in Asia. Hence, part of its production activities is being **maintained in the host country**. As the interviewee described, bringing these parts of the supply chain activities back to Europe is particularly challenging since the industry and know-how are no longer located in this region. Since these activities are still located in Asia, one can describe the company’s relocation strategy as **partial backshoring**.

4.2.3.1 Sustainability-related aspects

Similar to the findings of the decision-making process, neither **environmental** nor **social aspects** played a role during the implementation process of CCB. In this context, the interviewee stated that national

environmental and social laws are being adhered to but did not have specific sustainability-related intentions in mind when relocating the production activities. As the interviewee described: *“Right now, we respect 100% the law here in Spain. And I think is similar to European Union, then we are at this level. But right now, we don't have any decision to be a neutral company. Or I think it was not focus”* (IW_18).

4.2.3.2 Non-sustainability-related aspects

The most prominent aspect considered during the implementation of the company was developing the **know-how** needed to integrate the production processes that have been outsourced previously successfully. As the interviewee stressed: *“You need to control and have the know-how for the process”* (IW_18). Since this know-how was previously located on side of the supplier, CCB had to gain the expertise about the production steps that the company insourced.

However, not only the knowledge was essential in this part of the backshoring process. Furthermore, the company had to choose the **machinery, employ qualified personnel and provide training** for those, as supported by the following quote: *“But of course when you start your industrial process, you need to have a choice about the machinery you need to do the process, you need to have the right place to do the process, you need to choose the right people, you need to training. All these aspects you don't take when you have external production”* (IW_18). This illustrates the great difference and challenges between insourcing and outsourcing production activities and how they can be connected to the backshoring process of a company.

4.2.4 Outcomes

The analysis of the effects of the backshoring decision from CCB showed that this process resulted in various positive outcomes and some challenges. It has to be pointed out that since the decision was made several years ago and the interviewee did not specify at which point in time which outcome emerged, it is challenging to differentiate specifically between short-term and long-term outcomes. In the following section, those benefits and challenges or problems are described.

4.2.4.1 Short-term benefits

The decision to relocate part of the firm's supply chain activities back to Spain resulted in numerous favorable outcomes, as illustrated in Table 13. Three of these have a link to sustainability.

Table 13: Short-term benefits of the backshoring process of case company B

Short-term benefits
Stricter environmental standards
Minimization of transport
Creation of new jobs in the home country
Less overstock
Beneficial for local industry ecosystem
Better market position
Faster response to trends and customer wishes
Shorter lead times
Increased flexibility
More control

Note. Orange boxes are benefits connected to sustainability

First, through moving these value creation activities inside the EU, the company has to adhere to **stricter environmental regulations** compared to those Asian countries where these parts of the production process were located. As the interviewee described:

“The product we use to produce the bicycle in Spain is a little bit different to the painting from China. In Europe, you respect the EU environmental law. In China, it is very different. Then I know my production impact is not similar when you produce in China. Also, the products we use in Europe are different. This is a direct consequence for the environment” (IW_18).

By following these regulations in the EU, the company may be reducing its impact on the environment compared to having these activities in a country with less stringent legislation. The regulations concerning labor and social standards are as well stricter in the EU.

This aspect is connected to the second positive outcome connected to sustainability, namely ‘**Minimization of transport**’. Even though the company is still importing most of the bicycle components from Asia to Spain, the interviewee stated that *“with a similar pollution you import much more raw material” (IW_18)*. Since only the components of the bicycles are being transported and not the final bicycles, the transports may be more efficient. However, it is not clear whether CO₂ reductions can be achieved through this as still a significant part of the components are transported from Asia to Spain.

Third, by insourcing these activities into the company in Spain, CCB **created new jobs** in its home country, positively contributing to local social sustainability. The interviewee described this as follows: *“Of course, you have a social impact because from the beginning we had a couple of workers and right now we have*

50 on players [workers]. We have an impact” (IW_18). However, it is important to note that by relocating these activities, employees previously working for the company in Asia might have lost their jobs and could be affected in their well-being. Therefore, it is difficult to say if the company is contributing to a better social sustainability performance at a global level.

4.2.4.2 Problems and challenges

Concerning the negative effects of the backshoring decision, it becomes clear that the company had to deal with various challenges, especially at the beginning of this process (see Table 14). To the question of the immediate short-term effects of the relocation decision, the interviewee answered: “*Only problems*” (IW_18). Therefore, it is important to note that for the company to yield the benefits of this decision, it had to overcome many challenges and problems beforehand.

One of the challenges emphasized as a crucial aspect to overcome for the decision to be successful was developing **expertise**, creating **new processes**, and **training people**. The interviewee explained this process as follows:

“Until this situation, you manage design and development, but after you need to manage your infrastructure process, people, training people. This point was the critical situation. But we know because we don't have any experience before or people that have this experience, we need to build our experience. This was the hardest process” (IW_18).

Since CCB did not only decide to backshore the activities to Spain but also insource these at the same time, the company had to develop capabilities that were outsourced to others before. Only after this was achieved the company could gain the benefits that led to this decision.

Table 14: Short-term challenges and problems of the backshoring process of case company B

Short-term challenges/ problems
Missing knowledge/ experience
Training of people
Implementation of new processes
Higher costs in comparison to Asia
Delay of materials

4.2.4.3 Long-term outcomes

After having initial difficulties, the company could yield the benefits of this decision, as highlighted by the interviewee: *“So I think after 6-12 months, we started to have more positive effects than negative effects. This time it takes to really start around the project”* (IW_18). In the long-term, this decision led to many positive outcomes and growth of the company and, consequently, reinforced that this was the right decision for the company. As the interviewee stated:

“We are very happy and I think is the best decision we took really. We are happy in our case, for our brand, our value proposal it was the right choice. Maybe for other industry or other companies it is not the best because it is not 100% similar. ... everybody has a different situation, but from our side it was a very good decision” (IW_18).

As described, it is stressed that it was the right decision for this specific company, but that this can differ for each company and industry. Therefore, each company has to decide concerning relocating production activities considering company-specific and industry-specific challenges and motivations.

Regarding the company’s sustainability performance, the firm hopes to invest more resources in this direction in the future after having the production activities successfully established in Spain. However, as the interviewee stressed, this is not directly connected to the relocation decision but more a future step in its business strategy:

“Probably in the next year it will be a point much more important, but it’s not for reshoring actually ... it is a moment where we start to think to do the same business but try to be much more clean. But it’s more for the culture. I think now and also in Europe in the next year I think and I hope we can do a good step in this direction” (IW_18).

However, the decision to have part of its production activities placed in Europe could be an enabler in the future to integrate sustainability aspects more easily in the company’s business model, as the great distance between production and the firm’s home country has been significantly reduced.

4.2.5 Interim conclusion

The company’s analysis demonstrated that sustainability-related aspects were not determining factors during the decision-making or implementation process and that other factors such as gaining the know-how and training personnel was needed to insource the assembly and painting of the bicycles successfully. The firm was mainly motivated by its aim to create a customization program through which it created added value for customers and secured a competitive advantage. Interestingly, some effects of the decision to

backshore can be positively associated with sustainability, such as stricter environmental standards, minimization of transport, and new employment in the home country.

4.3 Cross-case analysis

When comparing the reshoring processes of the two cases with each other, it is important to point out that this can only be done partially since the processes differ from each other. Woom outsourced the assembly of its bicycles to a German supplier operating in Poland, which can be referred to as partial nearshoring. CCB, on the other hand, insourced the assembly and painting of its bicycles to their own company in Spain, which can be considered as partial backshoring. Both are operating in the bicycle industry and offshored their production to Asia due to similar reasons, one of them being the fact that the greatest part of the industry moved from Europe to the Asian continent resulting in a lack of know-how and production facilities in European countries.

When considering to reshore part of their production back to Europe, both companies had economic aspects greatly influencing the decision-making process. While for CCB it was essential to insource these production activities for its customization program, Woom's business strategy aimed to establish a European production for its sales market on this continent. The companies' overarching motivation differed, however, both stated among other things, that they strived to gain more control and flexibility. Additionally, they intended to create more value for their customers. CCB did so by establishing a customization program while Woom focused on its sustainability performance. By producing their bicycles partly in Europe, Woom is enhancing their products' value and customers perceive this often as more sustainable. This can be described as the 'Made-in effect'.

Compared to CCB, Woom referred to certain sustainability-related aspects during the decision-making process as essential factors. As Woom is producing children's bicycles, the interviewees stated a clear intrinsic motivation to contribute with its bicycles not only to a more sustainable way of transportation but as well the bicycles' production processes should respect environmental and social boundaries for future generations. However, it has to be emphasized that as well for Woom, this did not seem to be the tipping point to make the decision to nearshore but that certain economic factors, such as the company size or the possibility of automation, had to be achieved to spark the final decision.

During the implementation process, sustainability-related aspects were not the key influencing factors for both cases. However, interestingly, both companies mentioned European environmental and social legislation as one aspect which played a role in this context. By moving their production activities to the EU, the companies pointed out that they had to adhere to stricter laws, and therefore, the impact on the environment may be reduced. Neither of the companies quantitatively defined this reduction further.

Concerning the outcomes of the reshoring processes, it becomes apparent that those differ slightly from each company. The analysis of the challenges or difficulties showed that both companies faced initial challenges that the firms had to overcome to achieve the benefits that motivated them to make this decision. As CCB insourced its activities, one of the main initial difficulties was gaining the knowledge and capabilities and training the needed personnel to operate these production processes. Interestingly, the challenge to develop new capabilities was mentioned by Woom as a reason not to insource. For Woom, the initial challenge was to achieve the quality they desired and represent as a company at the new production line. Interestingly, both companies stated that since they still receive components from Asian suppliers, which often have long lead times, they still feel a certain dependency on these suppliers.

When comparing the positive effects of their decision to relocate, both companies share certain benefits such as increased flexibility, more control, or shorter lead times. As positive sustainability-related outcomes, both companies stated that the stricter environmental and social regulations of the EU, which had to be considered during the implementation process, can positively affect the sustainability performance of the company. Furthermore, since CCB insourced the production activities, they emphasized the creation of jobs and the creation of an industry ecosystem in the home country.

The long-term effects of this decision could not be compared between the companies, as these are not determined for Woom yet and have to be investigated in the future.

5. Results at the EU-level

When analyzing the interviews with the chosen experts, the focus was set on examining the opportunities and risks of reshoring concerning sustainability at the EU-level. To better understand these aspects at the beginning the experts' perceptions of the role of the EU concerning reshoring in general are outlined. Afterward, first the opportunities are depicted, followed by the risks of reshoring concerning sustainability. Lastly, the experts positions on how reshoring could be addressed on policy level are described.

5.1. Political debate on reshoring

Overall, the analysis showed that the interviewees' perception was that no clear role or position of the EU concerning reshoring could be determined. The majority of the interviewees stressed that the opinions regarding reshoring diverge and often can be dependent on the member state, as the following quote underlines: *“If we look at different European Commission directorates, the view can be quite different. So we have some commissioners that are quite in favor of reshoring in Europe, and we have others that point to the fact that we need also foreign investments”* (IW_4). Additionally, one interviewee described that *“there is not a strong EU policy on let's say reshoring or bringing manufacturing back to Europe”* (IW_8). Moreover, by one interviewee the importance of the position of the European Commission when discussing reshoring was stressed. The interviewee elaborated and stated that *“they have a very neoliberal type of thinking ... free markets type of thinking”* (IW_3). Another interviewee specifically pointed out the slogan of the Commission, namely 'Europe that protects' when referring to reshoring. He/She described the position of the Commission as follows:

“If you think you face problems in your value chains, [we] will protect you. When you decide to come home and bring your activities with you at home, then you can always do so. But the question is, will you find the same advantages at home that you had abroad? But that's for the company to decide” (IW_1).

This quote demonstrates that reshoring is emphasized to be a firm-level decision and that the Commission would be willing to support firms' efforts to relocate value creation activities back to the EU. However, at the same time the interviewee referred to certain advantages that the company might not be able to obtain in the EU in comparison to a non-EU country. This could refer to a rather passive position from the Commission towards reshoring. This notion can be further supported by the following quote: *“What the European Union is trying to do, the member states are trying to do is to create a stable system and predictable system for them that they feel comfortable to move back if they want to”* (IW_1).

When further analyzing the different positions towards reshoring at the EU-level, it is important to point out that these may differ depending on the member state. Some interviewees differentiated between the positions and one of them expressed that *“France is one side of the scale and the Nordics and others, including Germany on the others and saying that it doesn’t actually help ... And so I think there is no EU position whatsoever”* (IW_6). The opinions may vary widely depending on the country. On one side some seem to follow a liberal, free-trade line of reasoning supporting to *“leav[e] the market do its job than having a top down decision from governments, that is very similar to political intervention”* (IW_4) and, hence, regard reshoring critically. On the other side, some countries may argue that the EU can become more resilient through reshoring and *“not being dependent on others”* (IW_6).

As the views on reshoring vary, there seem to be no policies in place at the EU-level to support or incentivize reshoring directly. The majority of the interviewees specifically expressed their concerns regarding subsidizations and state aid as they referred to European state aid rules being strict and may only be enforced under certain conditions. Hence, giving directly monetary incentives for reshoring seem not be a realistic option. This is further enhanced by potential *“institutional resistances or frictions which make that hard in terms of the World Trade Organization rules”* (IW_5).

Nevertheless, due to the Covid-19 crisis this topic received more attention from the different EU institutions and was discussed more widely. However, according to one interviewee no concrete political actions were taken: *“But then if there is not a political incentive to transform those interesting debates into policies, it leads to nowhere”* (IW_3). The interviewee further described that this is partly caused by the *“old type of paradigm where reshoring is just something to communicate on, but there is no real political motivation”* (IW_3). This may be reinforced by reshoring being *“a phenomenon of reasonably limited scope in Europe at the moment. There are some interesting examples of reshoring. But in the end the volume of offshore jobs is still way in advance of the volume of reshored jobs”* (IW_5). Additionally, the neoliberal positions concerning reshoring could be further enhanced *“by big conglomerates, business lobbies”* (IW_3) and the export strategies of a specific countries. This could contribute to reshoring being discussed but no concrete political actions may be taken. This is further supported by the following quote: *“I think there has been a lot of talk about all these three [Benefits of reshoring, strategic autonomy, sustainability] but we’ve really yet to actually see any real progress in reshoring”* (IW_10).

The interviewees mentioned that, specifically the topics of strategic autonomy and national security seem to be the focus when reshoring is being discussed and the debates revolve around the notion that *“Europe should learn how to do things on its own, and not have to rely on the states or other external powers for a lot of what it does”* (IW_5).

Enhanced by the Covid-19 crisis, the member states increasingly discussed the dependency on non-EU companies and countries for indispensable products such as masks or other medical goods as at the beginning of the pandemic severe bottlenecks of these essential products were recognized. Moreover, the idea of strategic autonomy is linked with the aim of self-sufficiency regarding semiconductors. The interviews indicate that this is a topic greatly discussed at the EU-level due to the shortages in supply resulting from the global pandemic and the *“tensions between China and Taiwan”* (IW_9). European companies may face difficulties in the supply of semiconductors which could be *“a big problem for German automotive manufacturers, and many other parts of the European industry as well”* (IW_10). Similar to certain pharmaceutical and medical goods, the EU is highly dependent on semiconductor producers from non-EU companies and is aiming to overcome this dependency by creating a semiconductor industry in Europe and securing the supply of these products. They may *“protect critical infrastructure”* (IW_1), but interestingly so far it seems to be *“not clear, what actually these critical infrastructure encompasses and where do we draw the line”* (IW_1).

In sum, for the interviewees the reshoring debate at the EU-level is diverse and no clear position can be determined. The opinions of the member states seem to differ and can be influenced by the export strategies and lobby groups. Nevertheless, the topic drew the politicians attention regarding certain industries such as pharmaceuticals or semiconductors as a consequence of supply chain disruptions due to the global pandemic. In this context, EU institutions refer to strategic autonomy and are debating how to secure the supply of critical products.

5.2 Sustainability and reshoring

Before describing the sustainability-related opportunities and risks of reshoring at the EU-level it is important to briefly illustrate the general perception of the interviewees towards reshoring in regards to sustainability. The analysis revealed that two interviewees recognize the importance of sustainability and explicitly consider reshoring subordinate when striving towards sustainability. One interviewee believed that *“reshoring will be a symptom of sustainability rather than a driver for sustainability”* (IW_7). He/She continued by stressing that *“reshoring will happen as much by as a side effect of other efforts, rather than particularly becoming an issue in itself”* (IW_7). Interestingly, another interviewee followed a similar line of reasoning by stating that he/she *“see[s] it [reshoring] more as a consequence than as a condition”* (IW_6). Both interviewees recognized sustainability as overall strategy and reshoring as one tool that might contribute to the EU becoming more sustainable. Reshoring may be one approach which could result from the EU and firms addressing increasingly sustainability-related topics such as emissions resulting from

transportation of goods or working conditions in offshore countries, but reshoring may not be a requirement to address sustainability nor it might become a motive in itself tackle sustainability.

Interestingly, the development in the following years could contribute to more companies reevaluating their production locations as more companies are including Scope 3 emissions⁵ in their calculations, meaning indirect emission from, for example, transportation. At the same time *“more and more businesses sign up for net zero carbon emissions. If they have a huge amount of either shipping or aviation in their supply chain, that’s going to be very hard to correct”* (IW_7). Including those emissions emerging from e.g. transportation in the companies’ calculations will reveal the global impact many European companies have and will demand strategies for those firms to minimize their emissions. One interviewee stated that by considering these emissions in the calculations *“we could see that by reshoring our industries, we will become more sustainable”* (IW_3).

5.2.1 Sustainability-related opportunities of reshoring

In total the interviewees mentioned 10 different aspects that could be categorized as opportunities of reshoring concerning the environmental and social pillar of sustainability at the EU-level. In the following the most prominent aspects are illustrated, meaning those aspects which have been mentioned by three or more interviewees. An overview of all aspects is given in Table 15.

⁵ “The GHG Protocol further categorizes these direct and indirect emissions into three broad scopes:

- Scope 1: All direct GHG emissions.
- Scope 2: Indirect GHG emissions from consumption of purchased electricity, heat or steam.
- Scope 3: Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities (e.g. T&D losses) not covered in Scope 2, outsourced activities, waste disposal, etc.” (Greenhouse Gas Protocol, n.d.).

Table 15: Overview of sustainability-related opportunities of reshoring at the EU-level

Sustainability-related opportunities of reshoring	Mentioned by number of interviewees
Creation of new employment	7
Reduced transportation leading to reduced carbon emissions	3
Creation of circular supply chains / Circular Economy	3
Improved environmental performance due to improved technology and production processes	2
Improved sustainability performance due to stricter regulations in general	2
Increased resilience	2
Increased control through reshoring	1
Better working conditions	1
Better safety and health at the workplace	1
Less global environmental pressure	1

The aspect being pointed out most frequently by seven of the interviewees is the opportunity of **creating jobs** when reshoring production activities back to the EU. One interviewee described this as follows: “So one positive effect of reshoring is it gives jobs, interesting jobs for people in industries which are middle class type of jobs” (IW_3). Interestingly, the interviewees mostly coincide that the jobs that could be created as a result of this relocation decision are mostly middle income jobs. One interviewee expressed that there is a gap between employment targeting the service industry (‘white collar’) and jobs in sectors including difficult manual working practices (‘blue collar’); he/she considered reshoring as an opportunity “to fill in the space in between... it will fill in that sort of middle skilled workforce, which I think will have other social benefits” (IW_7). However, it was as well pointed out that even though reshoring might contribute to the creation of jobs in the EU and therefore, could be a way to tackle the high unemployment rates in some members states, the creation of new job opportunities might be limited, as one interviewee highlighted: “the employment consequence of it are pretty minimal ... Manufacturing employment in Europe is declining, not principally for globalization reasons, but for technology reasons” (IW_5). This

apprehension is in line with findings of the first case study, Woom, and the company's endeavor to automate production processes in the future. Therefore, it is still uncertain whether reshoring would lead to creation of jobs on a larger scale.

Another aspect, mentioned by three interviewees, is connected to the environmental pillar of sustainability and is addressing **reduced transportation and consequently minimized CO₂ emissions** as a result of reshoring. As transportation routes can be reduced extensively when moving value creation activities to Europe, the carbon emissions of European companies could be reduced. However, as stressed by one interviewee this *"depends on where the final customer is located"* (IW_8). As the interviewee further elaborates: *"When doing reshoring, you locate closer to your final customer, you are reducing transportation. And so at the end, you are reducing emissions and pollution"* (IW_8). However, when reshoring is not reducing the distance between the value creation activities under question and the end consumer but is instead increasing, it could contribute to a larger carbon footprint than before. Interestingly, this is in line with the reasoning of the case company Woom. Woom's goal is to move production activities closer to the company's sales markets which led the company to establish one part of the production in Europe.

An additional overarching opportunity connected to sustainability that can stem from reshoring is the creation of **circular supply chains** or the promotion of **circular economy** in general. Three interviewees expressed that reshoring might be reinforced by the overarching aim of establishing a more circular economy. Many products that are being imported into the EU contain valuable resources and when striving towards a circular economy it is important that *"products which already contain these materials can be recycled, these rare earth metals or other metals can be taken out of them and then they will go injected back into the production process which will take place within Europe"* (IW_10). As the interviewee highlighted this extraction of resources and materials from products and integration into other production processes should be carried out in Europe and therefore, industries that can perform these activities are essential within Europe so that *"the value is not lost, and the value will stay within the EU"* (IW_10). Offshoring remanufacturing or recycling activities to, for example, Asian countries and then shipping these products back to the EU *"may become a lot less viable than if the production is closer to where the products being used"* (IW_7). Therefore, in the future, reshoring might become more important for the EU when aiming to establish a more circular economy and improving their environmental impact. However, it has to be stressed that for this to be successful technological advancements in terms of recycling practices have to be achieved first.

5.2.2 Sustainability-related risks of reshoring

Besides the just explained opportunities, the interviewees as well pointed out risks that can arise as a consequence of reshoring. Generally, these were not only related to sustainability, but in total six different aspects were mentioned that could be linked to the environmental or social pillar of sustainability (see Table 16). Those aspects that have a clear connection to sustainability are explained in more detail in the following section. They could be categorized in two different groups, namely risks and challenges that might have an impact inside the EU borders and those affecting countries outside of the EU, both as a consequence of reshoring production activities back into the EU and these are described consecutively.

Table 16: Overview of sustainability-related risks of reshoring at the EU-level

Overarching category	Sustainability-related risks of reshoring	Mentioned by number of interviewees
Potential risks inside the EU	Elevated environmental and social risk in the EU	2
	Hampering achievement of EU sustainability goals	1
	Worse environmental impact if customers are located further away	1
	Worse sustainability performance when getting involved in unfair working practices	1
Potential risks outside of the EU	Slow down international development	2
	Rise of inequalities in Asia	1

The first aspect in the category of potentially being a sustainability-related risk within the EU is that increased reshoring could lead to an **elevated environmental and social risk in the EU**. This aspect was stressed by two interviewees of which one of them raised the question: *“Do you really want in the EU an elevated environmental and social risk?”* (IW_4). He/She elaborated by describing that *“usually when the production part of the supply chain takes place, you have a concentration of these kind of risks, especially the environmental one”* (IW_4). When reshoring these production activities to a greater extent back to the EU, not only the potential benefits and opportunities could arise but those environmental and social externalities which up until now are mainly offshored to countries outside of the EU, would be brought

back into the responsibility of European companies and governments. As a result, *“the environmental pressure worldwide, will be smaller. But in Europe, it will be larger”* (IW_9).

This elevated environmental and social risk could lead to the EU not being able to reach their **sustainability goals** which is the second aspect in this category, as one interviewee described precisely:

“We have reduced carbon emission, but we have reduced our carbon emissions mostly because we have outsourced our industries to China. So we are outsourcing our CO₂ emissions. If we are reshoring, it would be that we are also increasing our carbon emissions. We have this goal of by 2050 to be carbon neutral, which will be really difficult if we reshore industries” (IW_3).

This underlines the controversy of European companies often offshoring the environmental burden of their production activities abroad. Reshoring these production activities would disclose this impact within the EU again. This might lead to the EU not being able to reach the sustainability targets they have set.

The third risk which has been expressed by one interviewee and could lead to a worse sustainability performance of companies is the possibility of getting involved in **unfair working practices**. As one interviewee described: *“For example, you reshore, but you select here in Italy maybe some companies exploiting undeclared workers or exploiting unfair work practices”* (IW_8). Even though this is a valid possibility, supporting unfair working conditions could have been present when previously having offshored production activities already. As a consequence of reshoring, these unfair working practices could then be moved inside the EU.

The last aspect of this category is the risk of **worsening the environmental impact** if final customers are located outside of the EU. As already pointed out, the decision to reshore can potentially cut carbon emissions from transportation. However, if the customer is not in the region the value creation activities are being moved to and, as a consequence, products have to be shipped further away *“from an environmental point of view it makes no sense because you have more shipment and this results also in a worse environmental impact”* (IW_8).

The second category of risks are aspects potentially affecting regions outside of the EU as a consequence of reshoring production activities back into the EU and thus is still connected to the responsibility of European companies. This category consists of two controversial aspects, which as well have been stressed by interviewees from the first case company. They refer to the risks of **slowing down international development** and **increasing inequalities in Asian countries** as a result of reshoring production activities

to a greater extent. As one interviewee stated: *“You could argue you’re taking a chance for developing countries to develop away from them by bringing business back”* (IW_7).

Concretely, another interviewee emphasized that *“you rob the people in the rest of the world of the income”* (IW_9) which may contribute to curb the development which resulted from offshoring production activities abroad. Another interviewee elaborated by expressing: *“On a more broader perspective on social sustainability, if you bring jobs back from Asia, at the end you might create higher inequality in Asia which is also another potential controversy effect”* (IW_8). These risks appear to be only possible when reshoring should become a greater global trend. Nevertheless, it is important to recognize the interdependencies between countries which were created by offshoring production activities in the first place. The assessment of especially the social aspects of sustainability that could be affected by reshoring activities at the global level might differ from the consequences at the supranational-level, such as the EU.

5.3 Suggestions for a policy framework

The interviewees suggested various different ways how reshoring could be addressed at policy level. One interviewee specifically pointed out that *“some actions are needed, both at European and at the country level”* (IW_8). More explicitly, at the EU-level three interviewees stated that it is essential that the EU *“provide[s] a framework ... for companies that they have a stable and predictable climate ... So if they decide to take the business back into the internal market, which is their home market, they should be fine”* (IW_1). Overall the interviewees seem to agree that financial incentives such as state aid should be assessed critically and are difficult to enforce. Therefore, it is preferred to support those companies that strive to bring production activities back to the EU by creating conditions for them which make it accessible and uncomplicated to do so. One interviewee described this approach as follows:

“It’s a combination of hard and soft law requirements ... you need to have the framework in place to facilitate in trade new investments, but also the conditions to give the assurances to companies that if they face problems, they can also have access to solutions” (IW_4).

He/She elaborated by stressing that this should not be done exclusively for European companies but that the EU should *“ensure a more harmonized environment for investors to come here irrespective of whether they are foreign investors, or European investors that take the decision to come back”* (IW_4).

The interviewees mentioned various ideas that could create these circumstances for firms to relocate successfully if desired. Some are related to concrete policies and others are related to soft law measurements. One of those attempts is to strengthen the European single market. The single market was emphasized as being crucial when aiming to enhance reshoring and one interviewee further highlighted this

by stating that *“the single market is a big plus for us that actually companies are encouraged to move back”* (IW_1). By empowering and improving single market dynamics, companies can move to Europe but establish business activities not in their home country but in another favorable country within the EU. This strength of having the possibility to establish business activities all over the EU is so significant that one interviewee expressed that therefore *“you don’t need to incentivize that [reshoring] because it is the companies’ wish”* (IW_1). To further reinforce these market dynamics it is important to *“facilitate a pro-investment environment in Europe”* (IW_4) so that investors recognize the EU as a single market and do not *“continue to see it as 27 different member states”* (IW_4). Connected to this point, one interviewee highlighted the need of creating *“homogeneous state policy and taxation within the European Union”* (IW_8). As this is currently not the case, there is *“this kind of competition among countries within the European Union to attract manufacturing activities or financial activities in their countries”* (IW_8).

Concerning specific policies, which could facilitate reshoring, it is essential to integrate policies in the wider context and *“connect it with other goals”* (IW_9). One interviewee expressed that for policies to be efficient they should be linked to each other. The opinions regarding the content of those specific policies diverge, possibly influenced by the personal working background of the interviewees. For example one interviewee stated that import standards might be one mean of making manufacturing in Europe more interesting for firms instead of offshoring. He/She proceeded by stating that *“what we want is that every product that enters the single market has to respect the same standards, wherever it’s produced”* (IW_6). This could have positive effects on the EU’s and the global sustainability efforts since companies which strive to export to the EU would need to comply to stricter environmental and social standards. Another idea which could facilitate reshoring and was highlighted by two interviewees refers to *“taxations for goods coming from outside ... you make obstacles barriers to the import”* (IW_2). In detail this *“trade barrier could be a carbon tax”* (IW_3), as substantiated by another interviewee. This means that companies would need to pay a tax for goods when aiming to export these to the EU depending on the carbon emissions which were caused during the production. However, the interviewee further emphasized that *“no one of the commissioners is talking about it, because it would be detrimental for the big exporter countries of Europe”* (IW_3). Nevertheless, it is important to stress that concerning these import barriers one interviewee explicitly articulated a rather critical view stating that *“you need to have the right balance in your policies. We are a market economy in Europe. We do not want to fall into the trap of becoming closed or more protectionist”* (IW_4). The interviewee pointed towards the EU’ obligations towards international organizations such as the WTO and that policies specifically enabling European firms to reshore might be challenging to execute.

A last suggestion associated with the creation of new policies potentially enabling reshoring is a “*stronger policy on ‘Made-in’ topics*” (IW_8). Currently products can be labelled as e.g. ‘Made-in the Netherlands’, even though only the assembly was performed in this specific country. The interviewee suggested that by tightening this regulation, companies may consider moving additional value chain activities to the EU to still receive the reputational benefits of the ‘Made-in effect’.

A different approach the EU could take to support companies considering to reshore is related to the provision of information and expertise. Two interviewees explicitly mentioned this as a possibility instead of enforcing new regulations or providing monetary incentives. The EU could focus on sharing “*expertise about international transfer of production one way or the other and having that as a kind of core competence*” (IW_5). Another interviewee substantiated this approach by suggesting to provide quantifications on the costs and impact a company has when choosing a certain country as production location and as well pointing out alternatives. Hereby, firms could make a decision where to place production activities not only based on costs but as well including potential aspects related to sustainability such as risk of forced labor in certain countries.

Specifically related to sustainability, one interviewee further proposed to use a similar approach of sharing information, namely by “*create[ing] some kind of successful stories or some, best practices for company reshoring their activities to show how the sustainability aspects are taken into account*” (IW_8). Further he/she suggested “*to provide kind of consultancy or supervision services to help companies in considering these sustainability or CSR topics*” (IW_8). This indicates that concerning sustainability-related aspects during the reshoring process, companies may be best advised by the EU through collecting and sharing know-how and learning processes of companies that have been relocating value creation activities. Thereby, firms may be supported in making well thought out decisions on whether or not to reshore and may be aware of and overcome challenges and potential obstacles during the relocation process. At the same time, this service could point them towards integrating sustainability-related aspects in the process.

In sum, the interviewees gave recommendations for various ways to address reshoring at the policy level. As the suggestions differ greatly, it is not possible to propose one approach that policy-makers should follow. The feasibility and effectiveness of these should be assessed further.

6. Discussion

The purpose of this study was to explore the role of sustainability at the firm- and supranational-level when reshoring value creation activities to the EU. In this chapter, the key findings of this study are interpreted and discussed by reflecting on recent literature concerning reshoring and related theories. Then, implications for policy-makers and managers are given followed by describing limitations and future research streams.

6.1 Theoretical contributions

This study contributes to the state-of-the-art research about reshoring in several ways. In the following, the main contributions to each reshoring step are given with a specific focus on sustainability-related aspects.

At the firm-level, the findings indicate that neither environmental nor social sustainability-related aspects were the most important factors during the reshoring processes of the two investigated case companies. However, for the first case, Woom, aspects such as the company's sustainability values and strategy were essential factors that further facilitated the decision-making process. Nevertheless, economic factors had to be fulfilled first for this decision to be considered. Interestingly, when examining the outcomes, some of the challenges and benefits both companies experienced are related to sustainability independent of whether the decision was, among other things, explicitly motivated by sustainability-related aspects. This may indicate that the decision to reshore could influence sustainability-related outcomes.

Regarding the motivations and decisions to reshore, the findings of this study support the results from Fratocchi and Di Stefano (2019), who state that sustainability is not “the most relevant in terms of backshoring drivers/motivations, outcome/benefit and/or barrier/enabler” (p. 449). However, this research indicates a certain influence of sustainability-related aspects during the decision-making process and outcomes. During the decision-making process, this might be dependent on the company's sustainability ambitions. The interviews with the first case company clearly demonstrated a motivation for the business to enhance its environmental sustainability performance, and therefore, the decision to reshore contributed positively to this aspiration. This motivation is rooted in the company's values connected to sustainability and congruent with their main product being bicycles. Further examining other motivations influencing the decision-making process, for the first case, clearly, proximity to the sales market stands out and supports the results by Johansson et al. (2019) that this aspect can be a relevant factor when reshoring production activities. In line with Boffelli and Johansson's (2020) reasoning, for both cases, more than one factor was influencing the decision-making process, but several which appeared over time. This study underlines the diversity of motivations affecting the decision-making process of firms aiming to reshore and supports the

statement by Di Mauro et al. (2018), who describe reshoring as “a very heterogeneous phenomenon” (p. 110). Lastly, concerning this step of the process, it is important to point out that the findings suggest that in both reshoring cases, the companies based their decision on a change in the business strategies (Bals et al., 2016; Di Mauro et al., 2018) and not on the correction of the previous offshoring decision (Gray et al., 2013; Kinkel & Maloca, 2009). More concretely, Woom strived to establish production facilities closer to the company’s sales market, and CCB aimed to gain a competitive advantage by establishing a customization program that was only possible when reshoring and insourcing specific production processes. This endorses the research by Hilletofth et al. (2019), who express that the increasingly challenging and personal customer wishes such as customization of products require production activities to be located closer to the customers themselves.

In this specific case of the two companies, the findings are best explained by the RBV rather than the TCE perspective or the OLI framework. In the case of Woom, the firm was experiencing limiting production capacities in Asia while having increasing unsatisfied demand. In Europe, the company found free capacities and additionally the needed skills and technology to produce cost-efficiently in the long-term. CCB wanted to enhance its competitive advantage through a customization program which was only possible by integrating the production, resources and skills into the existing company’s activities. These motivations support the recent findings by McIvor and Bals (in press), who highlight that RBV regarding reshoring is “linked with strategic concerns such as building capacities and competitive advantage, changing strategic priorities, and resource allocation” (p. 16).

As already indicated, sustainability-related aspects were not dominating the implementation phase of the reshoring processes. Both companies focused on preparing the reshoring process, which is an essential step first pointed out by Boffelli and Johansson (2020). As most of the bicycle industry relocated to Asia and with it a great part of the skills and know-how, the firms had to establish a new network which was a challenging part of the process and is in line with the findings by Ashby (2016). Woom solved the challenge of having limited know-how in Europe by partnering with one of the few companies experienced in this industry and searching for additional expertise in automation outside of the bicycle industry. In this case, Woom is benefitting from the developments of automation in other industries in Europe, and, hence, it is crucial to consider the regional context of firms reshoring. This finding confirms the conclusions by Lund and Steen (2020), who point towards the importance of integrating regional and global factors in research about reshoring. Woom decided to outsource the assembly to a German supplier who has the expertise and is willing to collaborate and develop with the company in the long-term. It was central for the firm to collaborate with a supplier who has this ambition to form a long-term and close partnership, as Woom is striving towards establishing additional production activities in Europe. Ashby (2016) as well stresses the

importance of these “socially complex, long-term relationships in developing and managing a sustainable supply network” (p. 85). Thus, creating this network might further facilitate the company’s ambitions to establish a more local supply chain. By contrast, CCB decided to insource the assembly and painting of its bicycles. This was crucial for the firm to create additional value for its customers. Consequently, the implementation process was characterized by acquiring the knowledge and train its employees to carry out the new production processes.

Overall, the analysis of the outcomes of the reshoring processes expands the current literature in this field as these have been rarely investigated. The positive outcomes of reshoring, in both cases, are in line with recent literature stating that reshoring leads to increased flexibility and shorter lead times (Johansson et al., 2019; Johansson & Olhager, 2018; Stentoft et al., 2015) and contradict the findings of Stentoft et al. (2018) who could not report evidence regarding these aspects improving due to reshoring. Better quality, which has been stressed as one aspect by inter alia Johansson and Olhager (2018) as another benefit of reshoring, could not be proven by either of the two cases. On the contrary, Woom reported quality issues as challenging aspects in the new production site and ensuring that quality standards were the same at both locations.

In more detail, this research provides new insights into sustainability-specific short-term outcomes at the firm-level. Interestingly, some of the findings at the firm-level correspond with the expressed sustainability-related opportunities at the EU-level. The findings show that reshoring can possibly lead to benefits that are connected to sustainability. Interviewees from both companies specifically stressed the direct benefit of having stricter environmental and social laws in the EU. This positive outcome relates to lower environmental and social standards at offshoring locations compared to the EU. Often, these lower standards can have a negative effect on the sustainability performance of a company (Ashby, 2016).

Additionally, as Fratocchi and Di Stefano (2019) and Engström et al. (2018) suggest, moving production activities back to the EU can create a positive image towards consumers concerning sustainability resulting from the ‘Made-in Europe effect’. Specifically, in the case of Woom, the company mainly received positive feedback to its decision, confirming the findings from the just mentioned authors and reinforcing the presumption that customers give higher value to products made in Europe as well regarding environmental and social standards. However, it is interesting to point out that the company did not only receive positive feedback, as the nearshoring process led customers to question its decision to establish production in Poland and not in Austria, where the company is located.

Another benefit connected to the social sustainability pillar is the creation of new jobs. CCB pointed out that the decision to backshore created new employment opportunities. Furthermore, the creation of employment was expressed as a sustainability-related opportunity of reshoring at the EU-level. This aspect

is controversially discussed in research, and some studies found supporting evidence for the creation of new employment possibilities in the home country as a result of backshoring (such as Bals et al., 2016; Fratocchi & Di Stefano, 2019). However, at the same time, scholars stress the possibility of jobs being replaced by increasing automation when relocating production activities back to Europe (Foerstl et al., 2016; Fratocchi & Di Stefano, 2019; Krenz et al., 2021; Stentoft et al., 2015; Wiesmann et al., 2017). Indeed, reshoring implies that wages for personnel go up, which may incentivize firms to introduce automated production techniques. In this research, this assumption is further supported by the ambitions of Woom to automate production processes in the future to lower labor costs. However, CCB did not specifically express this aspiration despite operating in the same industry and having to cope with higher labor costs in Europe. Therefore, it is difficult to deduce on which factors the ambition to automate depends. Interestingly, the recent study from Cosimato and Vona (2021) stresses the potential of innovation and automation for sustainability during reshoring. The authors argue that “these technologies are mostly eco-friendly, or in other cases, do not have direct environmental negative externalities” (p. 12). Therefore, the effects of automation resulting from reshoring might be beneficial from an environmental point of view and, at the same time, could still lead to a reduction in employment. Therefore, environmental and social aspects, which might be affected by automation, are recommended to be investigated and discussed individually and deserve more attention in the reshoring debate.

Moreover, the long-term benefits of Woom concerning sustainability are interesting to point out and add to the body of literature. The company is further striving to establish production closer to its sales markets and therefore hopes to minimize transportation and, hence, CO₂ emissions resulting from it. This aspiration was as well identified as an opportunity at the EU-level. Interestingly, the experts also expressed that the EU might be exposed to elevated environmental and social risks through reshoring. Reshoring production activities might bring back certain environmental burdens which have been offshored previously but can reduce transportation routes. At the same time, it is noteworthy that reshoring might become more relevant for specific industries resulting from the current Covid-19 pandemic and the EU’s ambition to relocate critical industries, which are threatened by global supply chain disruptions, back to Europe (Raza et al., 2021). Barbieri et al. (2020) expressed their presentiment “that Covid-19 can be associated with the role of a trigger for reshoring decisions” (p. 132). Additionally, Scope 3 emissions are becoming more relevant for the economic sector, revealing the responsibility and impact European companies have on other continents (Greenhouse Gas Protocol, n.d.; Hook, 2021). All these aspects might contribute directly or indirectly to firms considering to reshore production activities back to the EU, possibly enhancing the environmental impact these companies have within Europe. Until now, it is uncertain what consequences reshoring has for the environmental performance at the EU-level.

Finally, another interesting possible long-term benefit of reshoring was expressed by Woom. The company recognized the nearshoring decision as a possibility to integrate circular business strategies into its supply chain. The results of the expert interviews support this and acknowledge the potential of bringing production activities back to Europe to contribute to the EU's ambition towards a circular economy. As circular supply chains require facilities for refurbishment and remanufacturing, reshoring certain production activities may facilitate the transition to a more circular economy. To the best of my knowledge, the connection between reshoring and circular economy has not been studied thoroughly yet, and this research gives a first indication to explore this connection further.

6.2 Managerial implications

The findings at the micro- and macro-level provide several valuable insights for managers considering or being in the process to reshore. First, it is important to point out that the motivations for reshoring and circumstances influencing this decision differ greatly per industry and company strategy. The findings support the notion that reshoring has to be evaluated carefully, as it is not the best decision for each company. Moreover, the degree of reshoring value creation activities is dependent on the firm's strategy and industry ecosystem. Reshoring can be seen as an incremental process, meaning firms may start by partially reshoring value creation activities while still having a great part of the value chain offshored and moving additional parts of the value chain in the future. In any case, it is essential to recognize reshoring as a learning process for firms and as a continuous search for the best location, taking various factors into account. Overall, the micro- and macro-level findings indicate that location decisions are important to assess critically and that instead of necessarily reshoring production activities, the idea of right-shoring should be considered (Tate & Bals, 2017). Hence, the final sales market is one aspect essential to consider when locating business activities, but as well proximity to expertise, resources, and suppliers, among other things. All these influence a company's costs and transportation routes and impact a firm's sustainability performance.

Second, during the decision-making process, it is crucial for firms to identify and acknowledge the resources, skills, or capabilities needed for a successful reshoring process and assess whether these can be developed in-house or if new partnerships have to be established. Concerning the latter, a proactive and cross-industry exploration might be helpful. Generally, the skills and capabilities might differ depending on which reshoring strategy a company is following. Concretely, when a firm, during the reshoring process, decides to insource value creation activities that have been previously outsourced, the company has to gain different expertise and capabilities than a firm that continuously outsources these activities. In any case,

reshoring is a demanding process, and the arising challenges and obstacles and the resulting reaction to overcome those may vary depending on whether the activities have been insourced or outsourced.

Third, in terms of a company's sustainability performance, reshoring cannot be viewed solely as beneficial. Environmental and social aspects are impacted differently by this decision and have to be assessed individually. In addition, company-specific aspects such as the location of the primary sales market, the company's values, or its tendency to innovate may influence the impact on sustainability-related aspects that the reshoring decision can have.

Lastly, it is essential to point out that reshoring can be linked to potential sustainability-related opportunities and benefits. Since sustainability is becoming increasingly prominent for European companies, firms are advised to assess whether those opportunities and benefits could be achieved through partial or complete near- or backshoring. Additionally, reshoring can be made an integral part of a firm's marketing strategy, which emphasizes sustainability. By adhering to stricter European social and environmental regulations and stressing that products are 'Made-in Europe', companies may enhance their brand image. However, when a great part of the value chain is still offshored, it is recommended to be transparent to prevent negative customer reactions.

6.3 Policy implications

The findings of this study provide several policy implications. First, it is important to point out that Covid-19 has an impact on the reshoring phenomenon and will most likely continue to have an influence on companies' decision to relocate in the next years, as Barbieri et al. (2020) state: "We can foresee different types of relocation initiatives triggered by Covid-19" (p. 132). Especially critical industries such as the pharma industry or medical production companies are of interest to the EU institutions to relocate back to the EU (European Commission, 2020).

Additionally, this study revealed that reshoring is associated with sustainability-related opportunities both at the micro- and macro-level, such as reduced emissions resulting from transportation at the firm-level or the possibility of creating circular supply chains at the supranational-level. However, on both levels, sustainability-related risks and challenges, such as having an elevated environmental and social risk in the EU resulting from, e.g., the relocation of energy and resource-intensive industries, may be taken into account. Therefore, it is important for policy-makers to recognize, understand and further explore these sustainability-related opportunities and risks of reshoring. Then, it is essential to develop strategies to minimize the likelihood of these risks at the EU-level while enhancing the probability of gaining sustainability-related benefits. Hence, if companies decide to reshore, policies can support them in a way that they contribute to the sustainable development of the economy. Put differently; policies may not

stimulate reshoring per se but leverage the potential sustainability benefits so that firms, when reshoring, contribute to social and environmental sustainability.

One approach to achieve this could be the formulation of a carbon tariff on imports entering the EU. This could reduce the cost advantage of producing offshore in non-EU countries compared to manufacturing in EU member states. Additionally, it could initiate companies to reevaluate the advantages of producing offshore if the cost advantage is diminishing and could contribute to firms assessing the benefits of locating production activities inside the EU. However, as supported by the findings, this has to be evaluated carefully since it could restrict international trade. Interestingly, a similar approach that may influence reshoring and firms' sustainability performances is the 'carbon border adjustment mechanism' proposed by the Commission in July this year (European Commission, 2021).

Another step not directly enabling reshoring but addressing firms' responsibilities in their supply chains offshore could be the proposed mandatory legislation on due diligence at the EU-level or the German 'Lieferkettengesetz' ('Supply Chain Law'), which strive to minimize the risk of sustainability-related issues such as human rights violations or environmental damage. Furthermore, besides policies directly facilitating sustainable production processes, the EU could establish an entity advising European firms that are willing to reshore and informing them about different possibilities, advantages, and risks and presenting them with best practices.

Furthermore, the study's findings emphasize the view of reshoring being a firm-level decision. The decision to reshore may be taken solely by companies; therefore, policy-makers are advised to be cautious with providing non-targeted monetary incentives or subsidies. Direct support would also be inconsistent with Europe's strict state-aid policies. It is central that companies evaluate the decision to relocate carefully, considering multiple factors as reshoring is not always the right decision for their business model or sustainability. In this view, policy-makers could focus on supporting firms to make such decisions by providing them with information on conditions and opportunities for reshoring as well as on the environmental and social standards that apply in the EU and its member states.

Moreover, to enhance the potential benefits and increase the attractiveness of reshoring, policy-makers could aim to improve and enhance the single market dynamics within Europe continuously. The single market is a great opportunity for reshoring as companies can backshore and nearshore production activities and use the single market to move goods, use skills, and obtain resources from other member states. Hence, the expansion of infrastructure, access and growth of research and development activities, and availability of suppliers are crucial for firms choosing production locations, and therefore, is advised to be a priority for policy-makers. Also, for a circular economy, the single market and the just mentioned aspects are vital

in establishing circular supply chains as they allow cross-country and cross-industry linkages which are essential when aiming to re-purpose, recycle or reuse materials and products.

Lastly, Eastern European countries may be interesting locations for companies that consider to reshore as the labor costs are not as high as in other parts of Europe. Therefore, at the EU- and national-level efforts to further strengthen manufacturing industries in these areas might be beneficial for firms to nearshore to these countries. This could contribute to an economic upswing in these areas while firms can benefit from shorter supply chains and lower labor costs. Furthermore, governments may consider focusing on specific sectors such as the bicycle industry to establish an industrial ecosystem attracting various firms operating in this industry. Thus, besides Portugal being an interesting country for bicycle production due to firms relocating to a specific region and creating a ‘bike valley’ (Morris et al., 2021), the agglomeration of Eastern European countries could become more important in this industry through reshoring.

6.4 Limitations

This research has to be viewed taking into account its limitations which are outlined in the following section.

First, the case study design limits the generalizability of the findings. Due to the restricted availability of potential case companies, which was further enhanced by time constraints, only two companies operating in the same industry were involved in this research. Therefore, first insights about reshoring processes and the role of sustainability in the bicycle industry can be given, but these are not generalizable to the whole industry or other industries. However, it is important to stress that the bicycle industry may be a representative industry for other manufacturing sectors with similar characteristics as bicycles are assembled products consisting of multiple components which various suppliers mainly produce. Thus, to enhance the validity and extend the findings of this research, further multiple comparative case studies in the same industry and in different sectors are desirable.

Second, the comparability of the two cases is restricted since a different number of interviews were conducted per case company. As only one interview could be carried out for the second case company, the main focus was set on the first case. Nevertheless, the one interview for the second company was informative as this company was much smaller. Yet, through having the possibility of speaking to more employees from the second case company, additional aspects could have been discovered, increasing the validity of the results.

Third, the comparability of the outcomes of the reshoring processes is restricted as the first case company only finalized its implementation in January this year, whereas, for the second case company, the reshoring process was completed already several years ago. Concerning the second case, the interviewee did not

specifically distinguish between short-term and long-term outcomes, making it challenging to differentiate between them. Additionally, in this specific case, the internal validity of the short-term outcomes is limited as only one interviewee was providing insights and the completion of the reshoring process was already some years ago, which could have affected the perception of these short-term benefits or challenges. The interviewee might have had a biased view towards these aspects due to the time which has passed and the company's development since then.

Fourth, it is essential to point out that only interviews with employees from the chosen case companies were conducted for the firm-level analysis and not with other stakeholders collaborating with those firms. This approach did result in valuable findings; however, these could be extended by collecting data from additional actors to prevent a biased view of the process. Also involving other stakeholders who were included or affected by the reshoring process, such as the suppliers of the previous host countries or in the recently chosen countries, could reduce the risk of a possible bias.

Lastly, concerning the expert interviews, it has to be stressed that the sample is not representative of the stakeholder groups each interviewee represents. Nevertheless, the findings give a first notion of opinions, but further research with more actors from each stakeholder group could consolidate the presented insights and provide additional aspects.

6.5 Future research

As reshoring is a contemporary phenomenon, several future research streams were identified during this study.

First, generally, the environmental and social outcomes of reshoring are recommended to be investigated in more detail. Concerning environmental sustainability, quantitative analyses examining the change of environmental issues influencing the company's sustainability performance could provide insights into whether and how much the reshoring decision affects a firm's overall environmental impact. A Life Cycle Assessment (LCA) of a specific product might be one potential method to calculate its environmental impact after reshoring certain production activities compared to the previous production location.

Additionally, outcomes related to social sustainability deserve great attention. More research is necessary to study the potential effects of reshoring on a macroeconomic scale. Specific focus could be set on the effects on employment and other related aspects in previous host countries where the former production activities were located. It is fundamental to understand the sustainability-related outcomes of this phenomenon at a global level, not only firm or national level.

Moreover, future research could advance the examination of the development of the outcomes over time. This research pointed out that the case companies had to overcome or are in the process of tackling specific challenges and problems to yield the benefits, which led the companies to initiate this process. A more detailed analysis of these outcomes, their causes, and how firms solve these could provide managers with valuable knowledge about successfully performing reshoring steps.

Additionally, the connection of reshoring, sustainability, and circular economy is an interesting relation that is becoming more relevant in the future. Therefore, an investigation of whether reshoring could enable more circular supply chains in Europe and what conditions are needed to do so in a sustainable manner is desirable.

Lastly, additional multiple case studies, including various industries and specifically integrating the sustainability dimension in the reshoring process, are required to substantiate this study's findings and give further information about what sustainability-related aspects influence each step of the process. Moreover, these can shed more light on how sustainability-related aspects could be integrated to a greater extent during the process.

7. Conclusion

This study contributes to the widely unexplored field of reshoring and sustainability by exploring the influence of sustainability-related aspects during the reshoring process at the firm-level and expanding this scope by investigating reshoring in relation to sustainability at the EU-level. Hence, a more holistic understanding of the reshoring phenomenon could be achieved. The study aimed to answer the overarching research question: “*What is the role of sustainability at the firm- and supranational-level when reshoring value creation activities to the EU?*” To do so, a micro-level analysis was performed, scrutinizing the reshoring process of two case companies, Woom and case company B, complemented by interviews with experts from all over Europe, reflecting the macro-level of the research.

The analysis at the firm-level, guided by the framework developed by Boffelli and Johansson (2020), indicates that sustainability-related aspects were not the critical factors in each step of the reshoring process and that economic factors mainly drove the decision-making and implementation process. The influence of sustainability-related aspects differed per case company, indicating that aspects such as the company’s values or sustainability strategy contribute to the firm’s evaluation to reshore; however, those could not be identified as decisive factors or tipping points. In both cases, reshoring stemmed from a deliberate decision linked to the firm’s specific strategy. For Woom, the primary motivation was to establish production activities close to one of the company’s final sales markets, and among other things, to improve its environmental performance, reduce lead times and regain more control over the production processes. Regarding case company B, reshoring allowed to gain a competitive advantage by creating a customization program and hence, delivering higher value to its customers. Interestingly, the decision to reshore could be connected to certain sustainability-related benefits such as stricter environmental and social standards, minimization of transport, or new jobs when insourcing production activities. Finally, both firms recognized future opportunities linked to sustainability by having production activities closer or located in the home country. Nevertheless, it is crucial to stress that the development of these benefits deserves more attention from academia in the future.

The in-depth interviews with experts provided insights about the role of reshoring and sustainability at the EU-level, explicitly focusing on the exploration of sustainability-related opportunities and risks. The findings further support the firm-level results, as several sustainability-related opportunities such as creating new employment, reduced emissions resulting from minimized transportation, or the potential to create circular supply chains could be identified. At the same time, sustainability-related risks concerning potential adverse effects inside the EU, for example, having an elevated environmental and social risk, or effects

outside the EU borders, such as the risk of slowing down international development stemming from reshoring production activities back to Europe, have to be considered in the debate.

This research highlights the importance of a more differentiated debate of reshoring in academia, at the policy- and firm-level. Concerning the micro-level, this entails the view of reshoring being a challenging, dynamic, and complex process, which may be executed differently depending on a company's motivation and strategy. Furthermore, it is fundamental to emphasize that reshoring production activities back to the EU can have certain benefits but might not inevitably be the most favorable decision, neither for a company's development nor for sustainability-related aspects. Importantly, while companies recognize (small) potential sustainability benefits, it does not seem to be the main driver for reshoring. Hence, it seems ill-founded for the EU to legitimate support policies for reshoring with sustainability arguments. Accordingly, it is crucial to be aware of the potential positive and negative consequences of large-scale reshoring at the macro-level. Reshoring may be beneficial in terms of environmental sustainability at the global level if companies consider aspects, such as proximity to the final sales market, resources, and suppliers, but may be detrimental for previous host countries from a social sustainability point of view. These findings underline the significance of recognizing the effects and interdependencies of reshoring not only at the firm but also at the national and global level, especially in terms of sustainability.

Conclusively, this research further calls for greater inclusion of the sustainability dimensions in research, policy-making, and management. To refer back to the beginning of the study, the impact and the location of a firm's value chain on society and the environment are of immense importance. Therefore, instinctively reflecting upon sustainability when studying supply chains in academia, advocating policies facilitating sustainable production processes at the policy-level, and creating strategies to internalize equally all three sustainability pillars at the firm-level is to be strived for.

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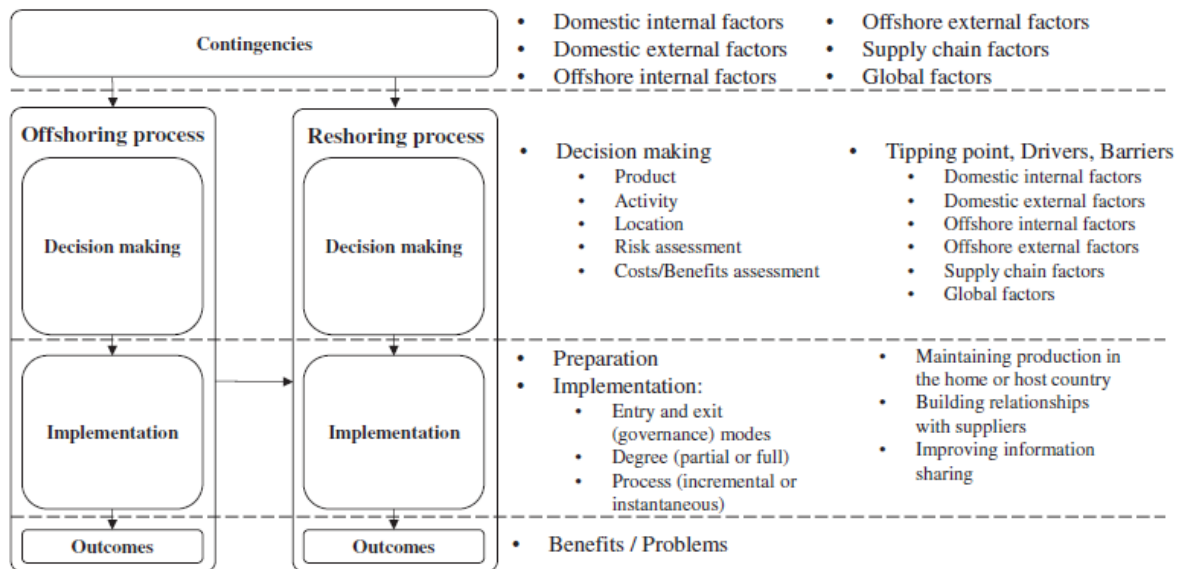
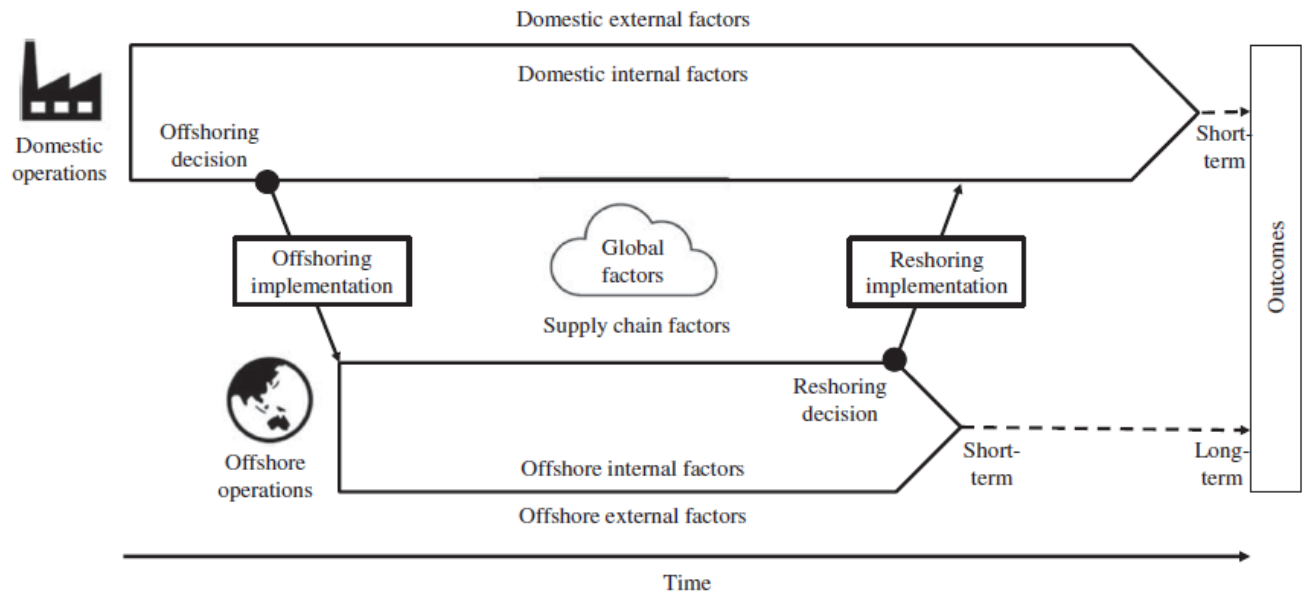
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Appendices

Appendix A: Original framework of the offshoring and reshoring process by Boffelli and Johansson (2020)



Appendix B: Interview Guide Case Companies

Julia Mayer
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General introduction:

1. Explain purpose and topic of the research
2. Ask permission for recording the interview
 - a. The personal data of the interview will be anonymized
3. Always ask for explanation/examples

Company details:

1. Can you give me briefly some information about the company?
2. What is your position in the company?

I. Offshoring:

1. Can you tell me a bit about the offshoring process?
 - a. What activities were offshored?
 - b. When were production activities initially offshored?
 - c. How long were these activities offshored?
 - d. To which countries were these activities offshored?
 - e. Did you contract suppliers?
2. What events lead to offshoring production activities to XYZ?

II. Reshoring: Decision-making

1. Why did the company decide to reshore these activities?
 - a. Were specific events contributing to reshoring the production activities to XYZ?
2. How was the decision made to reshore?
3. What aspects were taken into consideration when making this decision?
 - a. Were environmental aspects playing a role?
 - i. And if so, which?
 - ii. Why were these aspects playing a role in the decision making process?
 - iii. What role did these aspects play in the decision making process?
 - b. Were social aspects playing a role?
 - i. And if so, which?
 - ii. Why were these aspects playing a role in the decision making process?
 - iii. What role did these aspects play in the decision making process?

III. Reshoring: Implementation process

1. Can you tell me about the implementation process of moving production activities?
 - a. What steps did you take?
 - b. Were the production activities insourced or outsourced in the home country?

- c. Who was involved in the implementation process?
2. What aspects were taken into consideration during the implementation process?
 - a. Did environmental aspects play a role during the implementation?
 - i. And if so, which?
 - ii. Why did you take these into consideration?
 - iii. What role did these aspects play in the implementation process?
 - b. Did social aspects play a role during the implementation?
 - i. And if so, which?
 - ii. Why did you take these into consideration?
 - iii. What role did these aspects play in the implementation process?
 - c. Did innovation play a role during the implementation?

IV. Reshoring: Outcomes

1. What were the immediate short-term effects after reshoring on firm-level?
 - a. Did any unexpected effects occur?
 - b. Did any unforeseen challenges arise as a short-term consequence of reshoring?
2. What are the long-term effects on firm level? So what are the outcomes now?
 - a. Did any unexpected effects occur?
 - b. Sustainability connection
3. Did the reshoring process have effects on the environmental performance of the company?
 - a. If so, which aspects have changed?
4. Did the reshoring process have effects on the social performance of the company?
 - a. If so, which aspects have changed?
5. Was the company confronted with any difficulties or problems during the process?

V. Government/ Policies

1. What role did governments play a role during the reshoring process?
 - a. Which level (EU, national, regional?)
 - b. In which stage of the process?
 - c. Did they provide you with support and/or incentives in any way?
 - i. If so, how?

Closing

1. Are there any questions you would like to come back to?
2. Do you have any other comments or issues you want to share?
3. Do you have anybody in mind to whom I could talk about this in your company or outside?

Appendix C: Interview Guide Experts

Julia Mayer
j.m.mayer@students.uu.nl
Utrecht University

Introduction

1. Explain purpose and topic of the research
2. Ask permission for recording the interview
 - a. The personal data of the interview will be anonymized
3. Always ask for explanation/examples

Personal details

1. Can you give me briefly some information about the organization you work/worked for and what your position in this organization is/was?

I. Role of EU and Reshoring

1. What do you think are the motivations for companies to reshore back to Europe?
2. As reshoring is a topic discussed more and more by EU institutions what do you think is the role/ position of the EU concerning reshoring of European companies?
3. Do national or supranational governments actively incentivize or support reshoring activities of European companies?
 - a. If so, why? And how?
 - i. What is your perception of the effectiveness of these incentives or support?
 - b. If not, why?
4. Do firms negotiate with EU level or lower level governments?
 - a. If so, what do they negotiate about?
5. Do you think greater efforts are needed on national and supranational level to motivate firms to move value creation activities back to Europe?
 - a. If so, how could this look like?
 - i. In which stage of the reshoring process do you think efforts are needed?
 - b. If not, why?

II. Sustainability and Reshoring

1. How could the EU ensure that sustainability-related aspects are taken under consideration and are executed in the reshoring process of companies?
2. What is your perception of reshoring as strategy for the EU to become more sustainable?
 - a. Social sustainability
 - b. Environmental sustainability

III. Effects of Reshoring

1. What positive effects of reshoring do you perceive? (Local, national and supranational level?)
2. What negative effects of reshoring do you perceive? (Local, national and supranational level?)
3. What do you think are long-term effects of reshoring?

Closing

1. Are there any questions you would like to come back to?
2. Do you have any other comments or issues you want to share? ?
3. Do you have anybody in mind to whom I could talk about this in your organization or outside?

Appendix D: Overarching coding framework of the firm-level analysis

Case Company	<i>RQ1: How do environmental and social sustainability-related aspects trigger the reshoring decision-making process at the firm-level?</i>											
Interviewee	General finding	Themes	Offshoring information	Themes	Motivations to reshore	Themes	Decision-making general	Themes	Aspects in decision-making			
									Environmental	Themes	Social	Themes

Case Company	<i>RQ2: How do environmental and social sustainability-related aspects influence the reshoring implementation process at the firm-level?</i>										
Interviewee	Implementation general (Steps, Governance mode etc.)		Themes	Aspects in implementation							
				Environmental	Themes	Social	Themes	Innovation	Themes		

Case Company	<i>RQ3: What are the long-term and short-term outcomes of reshoring, and how does reshoring influence environmental and social sustainability-related outcomes?</i>											
Interviewee	Short-term effects						Unforeseen challenges	Themes	Long-term effects	Themes	Long-term expectations	Themes
	Positive	Themes	Negative	Themes	Neutral	Themes						

Appendix E: Coding example Woom

Interviewee	Aspects in decision-making			
	Environmental	Codes	Social	Codes
11	<p><i>"To say "Is what we're doing there actually sustainable in the long term? Does it fit in with our corporate strategy? Does it fit in with our corporate values? Then I said no for myself. And I said we build products for children." I also have children myself. So I do care what happens to this environment and what I leave behind in terms of livable environment for my children or following generation. And if you manufacture products exclusively for children, I think you have a completely different relationship concerning sustainability, as if you were doing it for yourself now."</i></p>	<p>Company values considered in decision making</p>	<p><i>"Social aspects, of course, also played a role, but I would say a subordinate role compared to the other aspects, to be honest, because our motivation was not to leave Asia. We are not leaving, we are building it up."</i></p>	<p>Social aspects during decision-making playing subordinate role</p>
15	<p><i>"So one reason was sustainability. One reason in general was the advantages that you have from shorter routes, that you have fewer delivery routes and, thus, burn less CO₂, which is a great plus."</i></p>	<p>Potential to reduce CO₂ footprint</p>		