



## **SSCM practices and supplier's sustainability management**

Benchmarking study

Lappeenranta–Lahti University of Technology LUT

Master's Programme in Supply Management, Master's thesis

2021

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## **ABSTRACT**

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### **SSCM practices and supplier's sustainability management - Benchmarking study**

Master's thesis

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Keywords: Sustainable supply chain management, SSCM practices, monitoring, collaboration

This thesis studied what kind of sustainable supply chain management (SSCM) practices organizations implement to ensure the sustainability of their supply chain. The thesis focuses on practices related to the upstream supply chain and the SSCM practices are categorized into monitoring and supplier collaboration. The supporting research questions study the drivers and challenges of SSCM.

A qualitative study was conducted to answer the research objectives. The study was done for a case company, and it utilized a benchmarking method to study four additional companies. Seven semi-structured interviews were held to collect the empirical data.

Based on the study, the legislation sets the minimum requirements for corporate sustainability activities. Companies are pressured by different stakeholders, such as (corporate) customers, local communities, and media. Sustainability values can be also included in companies' strategy and the results indicate, that some companies recognize that sustainability can lead to a competitive advantage. Based on the empirical results, Finnish companies mainly use monitoring practices in SSCM that focuses on the supplier base. Code of Conduct is recognized to be the most important tool to communicate sustainability expectations to suppliers. Companies can also require different certificates from their suppliers. Companies do a risk assessment to identify the suppliers that need more monitoring. Other monitoring methods, auditing, or sustainability surveys are also utilized. The benefits of supplier collaboration are discussed in the theoretical background, but it was noticed, that most interviewed companies do not emphasize collaborative practices. Sustainability issues are discussed in meetings or during auditing, but not many companies provide support to the suppliers or rewards the suppliers for improvement. Companies also come across different internal and external challenges as they aim to be sustainable. Monitoring and collaboration require resources. Supply chains are often complex, and thus it is difficult to have efficient monitoring and comprehensive traceability on all tiers. Companies also recognize that suppliers need to have the capabilities to be sustainable. The leverage in the buyer-supplier relationship also impacts, if the buyer can demand sustainability from its suppliers.

## **TIIVISTELMÄ**

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### **Toimitusketjun vastuullisuuden käytänteet ja toimittajien vastuullisuuden hallinta – vertailuanalyysi**

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Tässä työssä tutkittiin, millaisia vastuullisen toimitusketjun käytäntöjä yritykset käyttävät yrittäessään varmistaa toimitusketjunsä vastuullisuuden. Tämä työ keskittyy käytäntöihin, jotka liittyvät ylävirran toimitusketjun vastuullisuuden johtamiseen. Käytännöt on jaettu monitorointiin sekä yhteistyöhön toimittajien kanssa. Muut tutkimuskysymykset käsittelevät toimitusketjun vastuullisuuden motiiveja sekä haasteita.

Tutkimuskysymyksiin vastattiin käyttämällä laadullista menetelmää. Tämä tutkimus laadittiin toimeksiantajayritykselle, ja neljää muuta yritystä tutkittiin vertailuanalyysia hyödyntäen. Datan keräämiseksi toteutettiin seitsemän puolistrukturoitua haastattelua.

Tutkimuksen perusteella, lainsäädäntö asettaa minimivaatimukset yritysten vastuullisuudelle. Yritykset kokevat myös painetta erilaisten sidosryhmien suunnasta, kuten (yritys)asiakkailta, paikallisilta yhteisöiltä, ja medialta. Vastuullisuus voi sisältyä myös arvona yrityksen strategiaan ja tulokset indikoivat, että osa yrityksistä ymmärtää, että vastuullisuus voi johtaa kilpailuetuun. Empiiristen tulosten perusteella, suomalaiset yritykset käyttävät toimittajakentän vastuullisuuden johtamiseen pääasiassa monitorointia. Eettinen ohjeisto on tärkein väline kommunikoida vastuullisuuteen liittyviä odotuksia toimittajille. Toimittajilta voidaan myös vaatia erilaisia sertifikaatteja. Yritykset tekevät riskiarviointia tunnistaakseen lisähuomiota vaativat toimittajat. Monitorointiin käytetään myös auditointia ja vastuullisuuskyselyitä. Toimittajayhteistyön hyötyjä käsiteltiin laajasti kirjallisuuskatsauksessa, mutta tutkimuksessa tunnistettiin, etteivät monet yritykset hyödynnä yhteistyötä. Vastuullisuudesta keskustellaan tapaamisissa tai auditoinnin osana, mutta moni yritys ei tarjoa toimittajille tukea tai palkitse toimittajia kehityksestä. Yritykset kohtaavat organisaation sisäisiä ja ulkoisia haasteita yrittäessään toimia vastuullisesti. Monitorointi ja yhteistyö vaativat resursseja. Toimitusketjut ovat usein kompleksisia, mikä vaikeuttaa kaikkien tasojen toimittajien monitorointia ja jäljitettävyyttä. Myös toimittajilla täytyy olla kykeneväisyyttä toimia vastuullisesti. Lisäksi, ostajan vaikutusvallalla on merkitystä, jotta yritys voi vaatia toimittajiltaan panostusta vastuullisuuteen.

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Lastly, I'm grateful for my friends, boyfriend, and family, who have provided support, when I have been struggling with writing and staying concentrated. I hope we can have a celebration soon!

Helsinki, 1.9.2021

Riikka Tuomi

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# 1 INTRODUCTION

Sustainable management of supply chain has increased its importance in the past two decades. Because supply chains have become more complex and decentralized, due to outsourcing and globalization, purchasing and supply management functions do play a significant part in mitigating increased sustainability related risks in the supply base (Foerstl, Reuter, Hartmann & Blome 2010, 118). As many companies have decided to outsource their operations, the environmental impacts of supply networks cumulate to focal companies (Tate, Ellram & Dooley 2012, 173). This applies especially in manufacturing industries, where most of the value-adding work is done at the first stages of the supply chain, and the final product is only assembled at the buyer's facilities (Tate et al. 2012, 173). A company is said to be only as sustainable as its supply chain (Krause, Vachon & Klassen 2009, 18). Hence, if a company aims to be sustainable, it has to monitor the environmental impacts of its supply chain.

Furthermore, nowadays misconducts related to social responsibility draw a lot of attention, thanks to social media and increased consumer awareness. Stakeholders, such as media, NGOs and customers, consider focal companies responsible for the actions of their supply chain partners, which has increased the importance of sustainable supply chain management practices (Paulraj, Chen & Blome 2017, 241). In particular, large companies are targeted by stakeholders, in order to gain more visibility to the sustainability issues (Paulraj et al. 2017, 241). As competition gets tougher, organizations are more concerned about corporate reputation (Saeidi, Sofian, Saeidi, Saeidi & Saaeidi 2015, 343). With supply chain sustainability companies protect the long-term viability of their business and secure their "license to operate" (UN Global Compact & BSR 2015, 7).

Sustainable supply chain management can be understood as the specific managerial actions which are made in order to create a truly sustainable supply chain (Pagell & Wu 2009, 38). The purchasing and supply management function has a central role in implementing the sustainable strategy of a company, as they are involved with so many internal and external stakeholders (Krause et al. 2009, 18). The buying organization is also responsible for developing and setting the conditions in buyer-supplier relationships (Leire & Mont 2010, 28). In practice, a company has many ways to improve the sustainability of their supply chain. However, as a lot of the issues emerge at upstream supply chain, it is



justifiable to focus on external practices. Meqdadi, Johnsen, Johnsen and Salmi (2020) categorize these external sustainable supply chain management practices to monitoring the supply chain and collaboration with the supply base. The aim of the research is to understand what kind of sustainable supply chain management (SSCM) practices organizations implement to ensure the sustainability of their supply chain.

### 1.1 Background of the study

The term sustainable supply chain management (SSCM) combines traditional supply chain management with the triple bottom line framework. Multiple authors have participated in developing the definitions of SSCM, such as Seuring and Müller (2008), Carter and Rogers (2008), Ahi and Searcy (2013). During recent years, sustainable supply chain management has gained even more attention in the research community, which can be seen in the Figure 1 below.

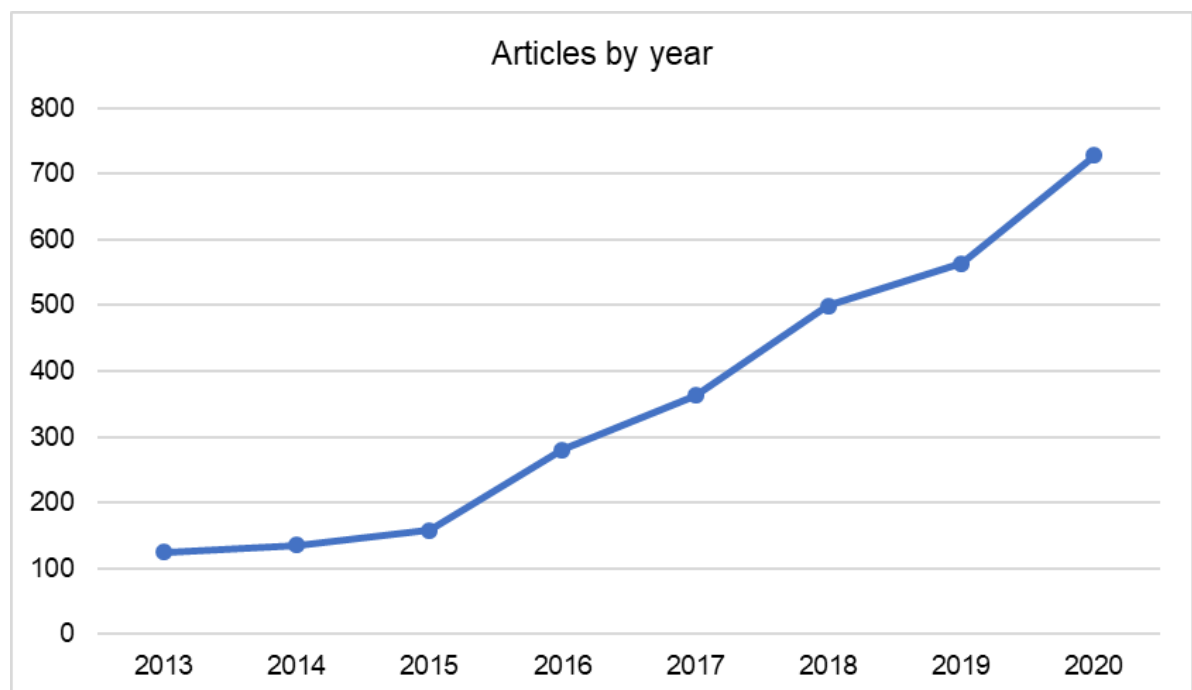


Figure 1. The number of published SSCM articles in years 2013-2020

Sustainable supply chain management is motivated by many reasons. For instance, according to the stakeholder approach, which was already presented in 1984 by Freeman, organizations are required to consider the different stakeholders, groups or individuals,

which affect or are affected by organization's actions (Freeman 2005, 229). Twenty years later, due to reasons like globalization, improved information technologies, and ethics-related scandals, the stakeholder approach is even more essential and unavoidable for organizations (Freeman 2005, 233). Moreover, managing sustainability-related risks in the supply chain is very important, as stakeholder reactions can have negative implications for the focal firm (Hofmann, Busse, Bode & Henke 2014). Because customers and other stakeholders tend to consider focal companies responsible for their supplier's behavior (Seuring & Müller 2008), paying attention to supply chain sustainability protects the buying organization from public backlash. Thus, environmental management is a strategy to create competitive advantage, as it answers to stakeholder expectations (De Giovanni 2010, 267). There are multiple other motives for corporate sustainability activities, such as responding to legal requirements and innovation benefits (Funk 2003, 67). Environmental responsibility can work as an image differentiator, which strengthens the company's position amongst both internal and external stakeholders (Heikkurinen 2010, 149). So, improved reputation and its effect on sales can lead to competitive advantage (Morali & Searcy 2013, 647). However, according to Walker, Di Sisto and McBain (2008, 79), public organizations do not value competitive advantage as much as a motive for SSCM because the competition is more limited.

Furthermore, many researchers have studied the relationship between green supply chain management and company's economic and environmental performance (Rao & Holt 2005; Zhu & Sarkis 2004; De Giovanni 2010). Contradictory results exist, as De Giovanni (2010, 282) suggests that internal and external environmental initiatives do not have direct positive effect on economic performance. On the other hand, environmental focused practices can decrease costs and increase operational efficiency, which leads to improved economic performance (Rao & Holt 2005; Hollos, Blome & Foerstl 2012, 2979). However, Rao and Holt (2005, 900) state that involving the suppliers in greening the supply chain is critical for the success of green initiatives. Similarly, according to Hollos et al. (2012, 2981), supplier collaboration is required to realize the benefits of green supply chain practices.

Social practices are not recognized to have a direct impact on company's economic performance (Hollos et al. 2012, 2979; Carter 2005). Nevertheless, paying attention to employee health and safety impacts employees' satisfaction and motivation, leading to increased operational performance, especially if the environmental aspect is considered simultaneously (Pagell & Gobeli 2009, 290). Co-operation with the supply base can improve the social behavior of the whole supply chain (Hollos et al. 2012, 2982). Moreover,

purchasing social responsibility practices support organizational learning within the supply chain, which can lead to improved supplier performance (Carter 2005). In conclusion, internal and external environmental management impacts economic performance indirectly as environmental and social performance are improved (De Giovanni 2010, 282). Therefore, it is interesting for companies to implement SSCM.

Companies have multiple ways on how they can incorporate sustainability into their business operations. Sustainable supply chain management (SSCM) practices include both internal and external methods (Gualandris, Golini & Kalchschmidt 2014, 260). In addition, SSCM practices can be categorized in terms of whether they focus on economic, environmental, or social aspects (Hollos et al. 2012, 2970). As the competition is nowadays considered between supply chains, it is reasonable to focus attention on inter-organizational practices (Paulraj et al. 2017, 241). Narrowing the focus to external sustainable supply chain practices, they can be divided into two categories, which are monitoring and collaboration (Meqdadi et al. 2020). In this research, we study how organizations monitor and assess their suppliers. However, collaboration with upstream supply base is discussed widely in SSCM research and the benefits of this method are better than simply monitoring (Gimenez, Sierra & Rodon 2012, 157; Meqdadi et al. 2020, 740; Tachizawa, Gimenez & Sierra 2015, 1559), hence supplier development and collaboration are also discussed in this study. Supplier collaboration can have an effect on the buying organization's green and social performance (Hollos et al. 2012, 2979), but it can also improve the performance of suppliers (Sancha, Wong & Gimenez 2019) and helps to diffuse sustainability to sub-tier suppliers (Meqdadi et al. 2020). Therefore, both practices should be used to complement each other (Lee & Klassen 2008, 584). The study offers some insights into how Finnish companies combine these practices to manage their supply chain sustainability.

Seuring and Müller (2008, 1702) noticed in their literature review, that most of the articles related to sustainable development are focused on the environmental dimension. This indicates a clear need for a more holistic approach to research sustainability in the business context. This study considers all three pillars of sustainability, as they are required to create a truly sustainable supply chain. Moreover, the case company operates in the Finnish energy sector, and provides services to the public related to the production, transmission and distribution of heat and gas. Therefore, its business environment is more regulated. Other interviewed organizations are companies operating in different industries, so there are differences between the case company and other studied companies. For example, The Act on Procurements and Concession Contracts of Entities Operating in the Water and

Energy Supply, Transport and Postal Services Sector (1398/2016) requires, that the case company has to follow procurement procedures, if the procurement exceeds the European union threshold value. Moreover, the EU's legislation determines that public tendering processes are transparent and open to achieve the best possible prices (Arbjorn & Freytag 2012, 204). Section 2 of 1398/2016 also describes, that environmental and social aspect need to be considered in procurement activities. Therefore, the purchasing processes and their minimum requirements for sustainability are somewhat different between the companies included in this study. Therefore, we fill an interesting research gap by studying what kind of SSCM practices Finnish companies, operating in both public and private sectors, use to monitor and manage their supplier base.

## **1.2 Objectives, research questions and limitations**

The aim of the study is to provide more in-depth information about how companies monitor and manage their upstream supply chains, and what practices are used to ensure the sustainability of the suppliers. The case company operates in the Finnish energy industry. In addition, a benchmarking method is utilized to study four additional companies and their SSCM practices. The case company wants to improve its performance in monitoring its supply base, as possible areas of improvement have arisen in earlier sustainability audits. However, both monitoring and collaborative SSCM practices were chosen to be studied as earlier research emphasizes combining both approaches. By understanding the multiple SSCM practices in interviewed organizations, suggestions are made to the case organization about possible improvements, and how to better monitor and manage the upstream supply chain's sustainability. The study also tries to answer, what motivates Finnish companies to develop sustainable business practices. We also try to understand the possible barriers and challenges of sustainable supply chain management, which can prevent companies from effective SSCM.

To conclude, this study aims to answer the following main research question:

*How sustainability of the suppliers can be monitored and managed to ensure the sustainability of the supply chain?*

The main objective of this research is to identify ways to monitor and manage supplier sustainability more efficiently. SSCM practices are commonly categorized to monitoring and

collaboration practices (Sancha et al. 2019, 2). Companies need to monitor their supplier's compliance, but it is also necessary to make actions based on observations to truly improve performance.

In addition, the following questions were formulated to support the main objective. These secondary objectives help us to understand the phenomenon more in-depth and answer to why, how and what questions. Supporting research questions are presented below.

*What are the drivers and motives for sustainable supply chain management?*

Previous research has listed a lot of motives that drive organizations towards sustainability. However, as the case organization operates in the energy sector, which is critical for infrastructure, we can analyze whether the drivers for sustainable practices are different from other companies' motives. The drivers include both internal and external drivers.

*What kind of SSCM practices are used to assess and manage the supplier base?*

Organization can implement both internal and external sustainable practices. In this research we focus on the SSCM practices, which target to improve sustainability performance of upstream supply chain and exclude different internal SSCM practices. The aim is to recognize how SSCM practices are used to monitor and manage the supplier base, including the practices starting from the offer phase and during the buyer-supplier relationship.

*What kind of challenges exist related to the implementation of SSCM practices?*

Incorporating sustainability to supply chain management is by no means self-evident, as it does require resources such as money, time and effort. This question tries to answer, what kind of barriers the buying organizations come across, as they try to improve the upstream supply chain's sustainability. These barriers may be internal and external.

This study includes three all dimensions of triple bottom line performance; environmental, social and economic. However, the study mainly includes discussions about environmental and social perspectives, as they are considered more important from the sustainable development point of view. Moreover, this research focuses solely on the SSCM practices, that are targeted to supplier base. Internal supply chain management practices are decided

to be left out, meaning that focus is on purchasing and supplier management. However, both internal and external drivers and challenges are included in the research. This thesis does not discuss, what kind of opportunities the company might have after implementing sustainable supply chain management.

### **1.3 Research methodology**

The research questions are answered by conducting qualitative research. According to Koskinen, Peltonen and Alasuutari (2005, 16), qualitative research can be used to increase understanding of business practices, without trying to explain or control them. The case study approach was chosen as a research strategy, as according to Yin (2009, 2) case study approach is suitable when the researcher tries to answer “how” and “why” questions. Moreover, this study focuses on a contemporary phenomenon, for which case study method can be applied (Yin 2009, 2). For the empirical part of the study, primary data is collected through interviews. To gather rich and extensive information about the SSCM practices, semi-structured interviews are conducted with seven interviewees from five different companies. The interviewees work in different positions in the companies, but all have valuable knowledge related to purchasing, supply chain management, quality management, and sustainability. As interviewed employees work in different positions and levels in the organizations, it gives us a wide understating of the drivers, used SSCM practices, and possible challenges. The data is transcribed and coded for further analysis and interpretation. Research method, data collection, and data analysis processes are discussed more in-depth in chapter 3.

### **1.4 Conceptual framework and definitions of key concepts**

The study builds on previous research related to sustainable supply chain management (SSCM). This study aims to understand the different SSCM practices used to monitor and manage upstream supply chain sustainability. The conceptual framework, presented in Figure 1 below, describes the relationship between earlier research and the aims of this study. At the beginning of the paper, the triple bottom line framework and the definition of supply chain management are presented, before introducing the SSCM definitions. After that, the drivers and challenges which impact SSCM are discussed. The last part of the theoretical background discusses different SSCM practices, which are categorized into monitoring and collaboration. Following that, the key concepts of this thesis are explained.

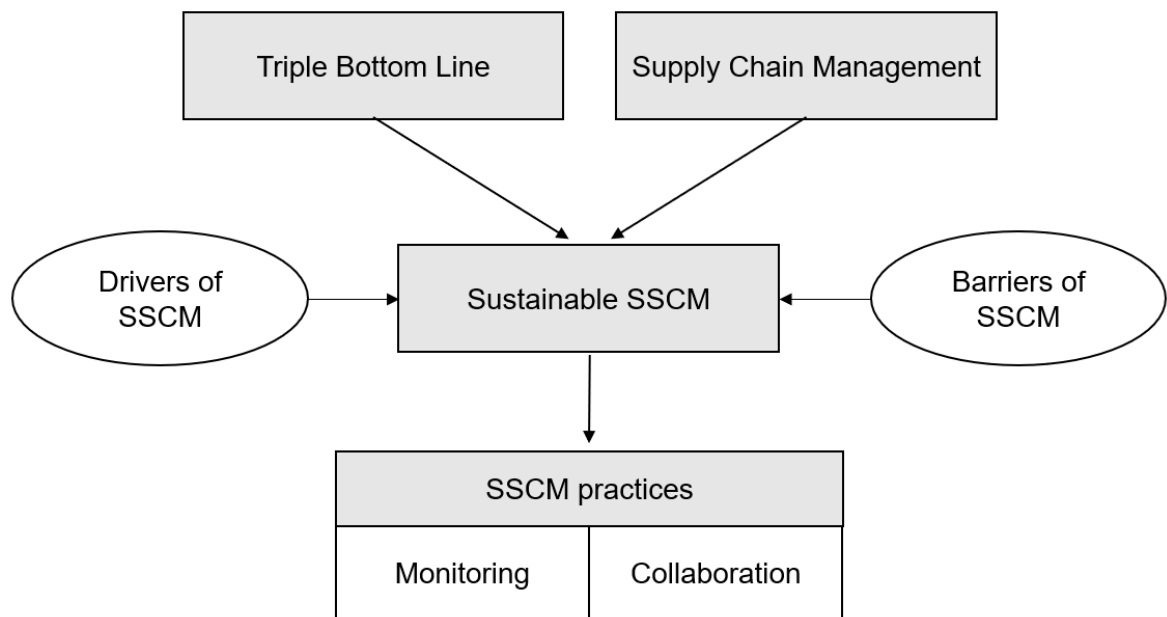


Figure 2. Conceptual framework

### **Sustainable supply chain management (SSCM)**

“The management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e., economic, environmental and social, into account which are derived from customer and stakeholder requirements” (Seuring & Müller 2008, 1700).

### **Sustainable supply chain**

“To be truly sustainable a supply chain would at worst do no net harm to natural or social systems while still producing a profit over an extended period of time; a truly sustainable supply chain could, customers willing, continue to do business forever.” (Pagell & Wu 2009, 38). However, Pagell and Wu note (2009, 38) that these truly sustainable supply chains do not exist, but in practice a sustainable supply chain performs well when evaluating all three dimensions of triple bottom line.

### **SSCM practices**

According to Li, Fang and Song (2019, 606) “SSCM contains a number of practices, for instance, sustainable product design, sustainable supplier selection and evaluation, sustainable production, sustainable transportation, etc.” In this research, focus is on practices that involve upstream supply chain.

## 1.5 Structure of the thesis

The thesis consists of both theoretical and empirical parts. The theoretical background is introduced in Chapter 2, and it includes topics such as corporate sustainability, supply chain management (SCM) and sustainable supply chain management (SSCM). The drivers and challenges of SSCM are also discussed. In addition, different SSCM practices are presented. Following that, Chapter 3 includes discussion about methodological choices and justifies them. Chapter presents the case companies, in addition to data collection process and data analysis methods. Moreover, reliability and validity of the research are evaluated in this chapter. In Chapter 4, primary data gathered from interviews is presented, and the results are divided into three different themes, according to the supporting research questions. In Chapter 5, the results of the study are compared to the previous research on the topic. This is followed by conclusions and answering the research questions. Additionally, suggestions are made for the case company based on the results of the study. Finally, limitations of this study are analyzed and suggestions for future research are made.

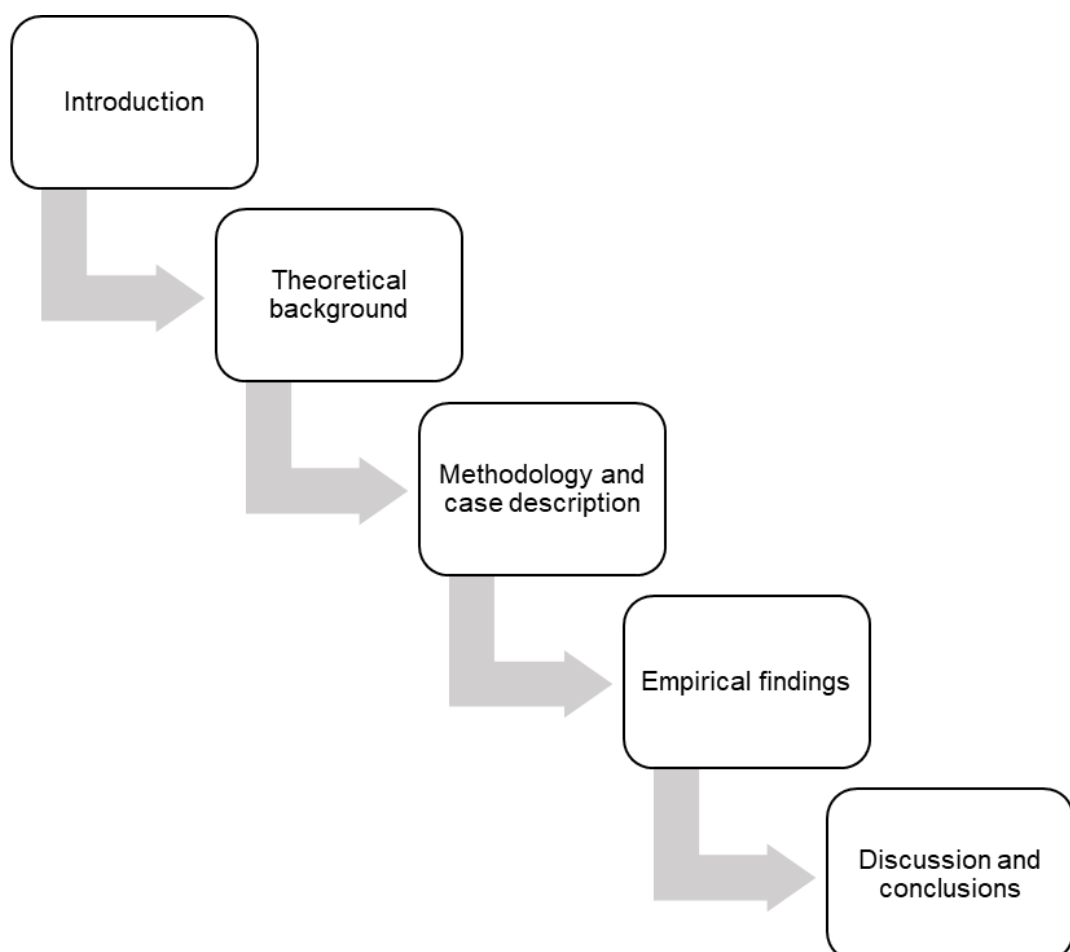


Figure 3. Structure of the thesis



## 2 SUSTAINABLE SUPPLY CHAIN MANAGEMENT

### 2.1 Corporate sustainability

The Triple Bottom Line (TBL) is probably the most referred sustainability framework in a business context. TBL is a sustainability accounting framework, presented by John Elkington in the 1990's, which examines company's impact on three factors: economic, environmental and social responsibility, also known as profit, planet and people. According to Elkington the existing methods of financial reporting were no longer sufficient and a new, more holistic and long-term approach was required from companies, governments, communities and individuals. Elkington (1999, 19) stated twenty years ago, that the most direct contribution a company can make to support sustainable development is to create long-term value on an economically, socially and environmentally sustainable basis. Thus, 'Sustainable value creation' and considering all three dimensions of sustainability, profit, people and planet, is required from the companies of the 21st century. To achieve this, organizations are required to identify accurate indicators related to economic, environmental and social dimensions to be able to manage them and perform efficiently. (Elkington 1999, 19) One can expect that in the past twenty years, sustainability has become an even more evident phenomenon to consider for companies.

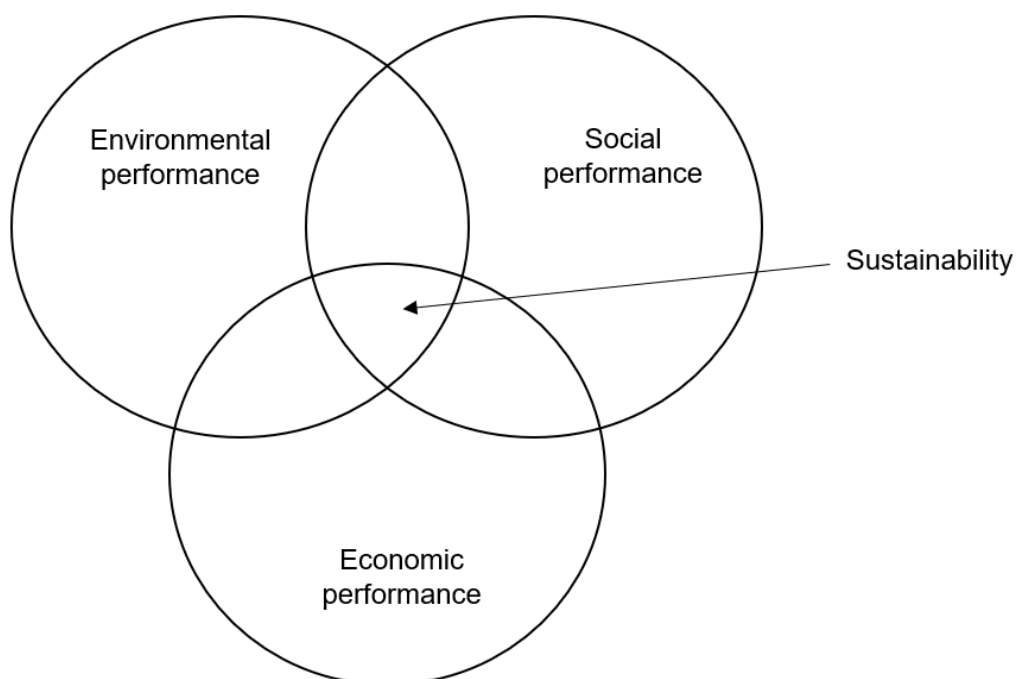


Figure 4. Triple bottom line (Carter & Rogers 2008, 365)

Sometimes one can consider corporate sustainability (CS) and corporate social responsibility (CSR) as synonyms. However, van Marrewijk (2003, 102) distinguishes these two terms by defining that CSR can be understood as the communication aspect of organizations, including phenomena of transparency, stakeholder dialogue and sustainability reporting. Dyllick and Hockerts (2002, 131) expand the traditional definition of sustainability (WCED, 1987) describing that corporate sustainability means meeting the needs of a firm's direct and indirect stakeholders without compromising its ability to meet the needs of future stakeholders. This can be achieved by integrating people, profit and planet aspects into a triple bottom line, and stopping overvaluing short-term profits over long-term success (Dyllick & Hockerts 2002, 132).

There are many reasons why organizations should rule in the CSR approach. Porter and Kramer (2006, 81) narrowed them to four, which are moral obligation, sustainability, license to operate and reputation. First of them refers to that organizations are obliged to do the right thing. Second reason, sustainability, refers to the definition of sustainable development, which means maintaining the resources of the planet for future generations. In addition, organizations need approval from governments, society and other stakeholders to exist. Lastly, reputation can be used as an argument to justify CSR actions, as they have an impact on the company's image and thus have other implications such as influence on brand and sales. (Porter & Kramer 2006, 81-82) Attention to CSR has not always been voluntary from companies' side, but many companies have understood its importance after public scandals (Porter & Kramer 2006, 80). Nowadays, so-called greenwashing practices are not enough, as stakeholders, including customers and employees, demand transparency and the internet enables them to address issues more easily (Gardiner, Rubbens & Bonfiglioli 2003, 67). Funk (2003, 69) names other drivers for corporate sustainability as; minimizing the environmental impact, innovation benefits, risk management approach and care of the public image. In addition to answering to customers' expectations, corporate social responsibility helps to maintain talented employees, which are needed to remain competitive (Gardiner et al. 2003, 68).

Companies might associate sustainable operations, such as environmental compliance, with increased costs (Funk 2003, 66), but this is not necessarily the case. Externalities cause internal and external costs for the companies, even when there are no regulations or taxes which can act as drivers for more environmentally efficient operations. For example, the packaging of products, wasted energy and greenhouse gases deriving from transportation cause costs to the environment and business. (Porter & Kramer 2011, 67-

68) It is important to note that addressing societal problems does not necessarily create costs for companies, as it enables organizations to innovate new technologies, operating methods and management approaches. This can lead to differentiation from competitors, improved productivity and even expansion of markets. (Porter & Kramer 2011, 65) Moreover, environmental responsibility can differentiate company's image amongst both internal and external stakeholders. As company becomes more preferred employer or partner, in addition to other benefits, it strengthens its competitive position (Heikkurinen 2010, 149).

Many researchers have studied if sustainable practices have an impact on company's financial performance and increase competitive advantage. According to Saeidi et al. (2015, 347) CSR actions increase customer satisfaction, which leads to improved reputation and gaining competitive advantage. These three contribute to firm's financial performance (Saeidi et al. 2015 ,347). According to Funk (2003, 66), organizations that manage a great variety of different sustainable business indicators actively, for example innovativeness or ability to attract talented employees, are more likely to create extensive stakeholder value in the long-term. Additionally, Lo and Sheu (2007, 355) found out in their study concerning publicly traded US companies, that there is a significant positive relationship between corporate sustainability and corporate market value, which is also reinforced by the growth of sales. This further indicates that the market rewards organizations if they actively include all three aspects of triple bottom line into their development strategies (Lo & Sheu 2007, 355).

## **2.2 Supply chain management**

In order to define supply chain management, we need to understand what is meant by supply chain. Supply chain can be defined as "as a set of three or more entities (organizations or individuals) directly involved in the upstream and downstream flows of products, services, finances, and/or information from a source to a customer." (Mentzer, DeWitt, Keebler, Min, Nix, Smith & Zacharia 2001, 4). Moreover, supply chains consist of members who are indirectly linked to supply chains through other members, and Lambert and Cooper (2000, 70) define these supporting member as "companies that simply provide resources, knowledge, utilities, or assets for the primary members of the supply chain". Supply chains thus consist of multiple different stakeholders, but to make it more

manageable, Lambert and Cooper (2000, 70) suggest definition between primary and supporting members.

Mentzer and his colleagues (2001) have identified three different levels of supply chain complexity and define supply chains as a “direct supply chain”, an “extended supply chain” and an “ultimate supply chain”. In this study, when talked about supply chains, we refer to an ultimate supply chain, which consists of “all the organizations involved in all the upstream and downstream flows of products, services, finances, and information from the ultimate supplier to the ultimate customer” (Mentzer et al. 2001, 4) The ultimate supply chain is illustrated in the figure 5 below, demonstrating a simplified example of supply chain when compared to complex multi-tier supply chains in real life.

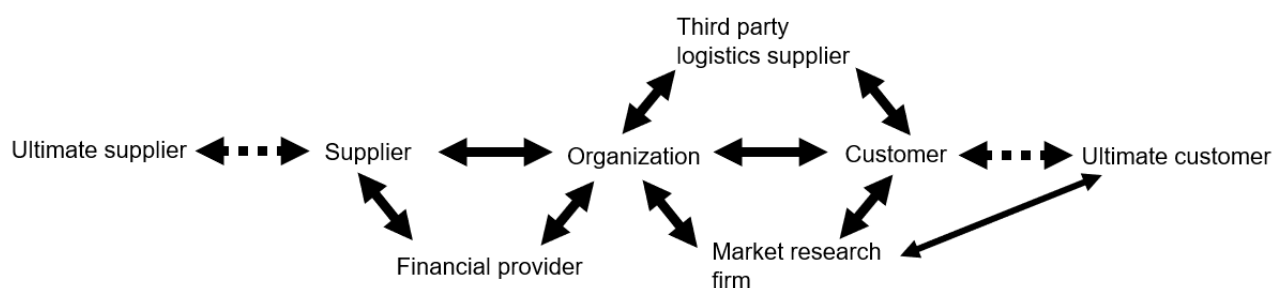


Figure 5. An ultimate supply chain (Mentzer et al. 2001)

Including the members of ultimate supply chain, supply chain management (SCM) is defined according to Mentzer et al. (2001, 18) as “the systemic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole”. Describing SCM more simply, Cooper, Lambert and Pagh (1997, 2) define SCM as integration of business processes from suppliers to the end user, emphasizing the importance of having a value adding purpose.

The traditional, internal supply chain management activities consist of purchasing, production and distribution (Chen & Paulraj 2004, 120). However, within the organization, supply chain management does have an influence on the whole organization, and this applies both ways. For example, in order to manage inventory levels efficiently, communication and transparency is required between sales organizations, marketing, information systems and production (Cooper et al. 1997, 5). The main focus for purchasing

managers has traditionally been cost reductions, but the management focus has shifted (van Weele 2014, 55). Risk management has proven its importance when organizations have reorganized their vertical supply chains to outsourcing and offshoring and, after that, have come across sustainability-related issues. According to van Weele (2014, 53), the main responsibilities of the purchasing department are taking care of operational excellence, cost control and reduction of all purchasing related costs, in addition to risk management and continuous improvement. Van Weele (2014, 3) states that the purchasing organization does not only improve the bottom line but can also significantly affect company's top line. This is because supply chain management can have an influence in both qualitative and quantitative ways (van Weele 2014, 18), meaning for example purchasing prices, product quality and lead times. Chen and Paulraj (2004, 124), name the components of supply chain strategy as quality, flexibility, innovation, speed, time and dependability. Keeping a customer focus is also one of the responsibilities of SCM (Lambert & Cooper 2000, 67)

However, nowadays the competition is not between individual companies, but between the supply chains (Lambert & Cooper 2000, 65). Single companies can be considered as links in larger networked supply chains, as supply chains have become more global, vertically disintegrated, and companies focus more on their core competencies (Chen & Paulraj 2004, 119). Increased demands from consumers' side have driven companies to operate more efficiently, and to secure the flow of materials, companies are required to coordinate with suppliers and build a closer relationship with its supply base (Mentzer et al. 2001, 2). Mentzer et al. (2001, 2) state that because customers expect to receive their goods faster, preferably just in time and in perfect condition, an effective supply chain is no longer a source of competitive advantage, but a requisite to stay in the market. Hence, the structure of the supply chain, meaning processes and relationships, and integration of key business processes with partners are vital for the success of the company (Lambert & Cooper 2000, 81). According to Chen and Paulraj (2004, 122), managing the internal and external capabilities and seeking for better performance is required to create a seamlessly coordinated supply chain. In conclusion, the success of an organization is dependent how it succeeds to cooperate with its network consisting of different relationships. (Lambert & Cooper 2000, 65) Lambert and Cooper (2000, 69) note the importance of recognizing the suppliers which are critical for the company's success and focusing the managerial attention and resources in the right places. Not all relationships require close coordination and integration (Lambert & Cooper 2000, 69).

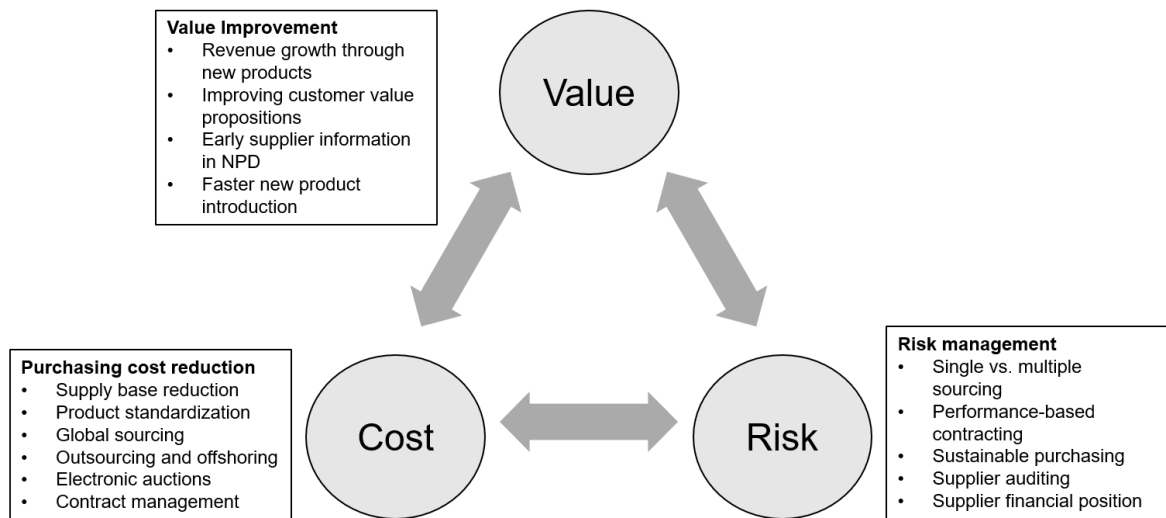


Figure 6. The purchasing agenda (Modified from van Weele 2014, 55)

In conclusion, supply chain management practices, such as cooperation, integration of key processes and building long-term relationships, will lead to lower costs, improved customer value and customer satisfaction. These lead to improved competitive advantage and increased profits. (Mentzer et al. 2001, 15) Lambert and Cooper (2001, 72) state that effective SCM is capable of controlling uncertainty in customer demand, manufacturing process and supplier performance. The figure 6 above shows, how purchasing professionals need to balance between the agenda of cost reduction, risk management and value improvement (van Weele 2015, 55).

### 2.3 Sustainable supply chain management

The need for sustainable business practices transfers to the different functions of organizations, one of them being the organization responsible of logistics and procurement. The PSM function has a strategic orientation and thus it has to adapt and implement the strategy of the company, in this case the increased appreciation of sustainability (Holloos et al. 2012, 2974). Sustainable supply chain management (SSCM) combines the traditional SCM and triple bottom line approach. Four definitions of SSCM are presented in the table 1 below.

Table 1. Sustainable supply chain management (SSCM) definitions

Source of definition	Definition
Carter & Rogers (2008, pp. 368)	<i>"The strategic, transparent integration and achievement of an organization's social, environmental, and economic goals in the systemic coordination of key interorganizational business processes for improving the long-term economic performance of the individual company and its supply chains."</i>
Seuring & Müller (2008, pp. 1700)	<i>"The management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e., economic, environmental and social, into account which are derived from customer and stakeholder requirements."</i>
Pagell & Wu (2009, pp. 38)	<i>... "the specific managerial actions that are taken to make the supply chain more sustainable with an end goal of creating a truly sustainable chain."</i>
Ahi & Searcy (2013, pp. 339)	<i>"The creation of coordinated supply chains through the voluntary integration of economic, environmental, and social considerations with key inter-organizational business systems designed to efficiently and effectively manage the material, information, and capital flows associated with the procurement, production, and distribution of products or services in order to meet stakeholder requirements and improve the profitability, competitiveness, and resilience of the organization over the short- and long-term."</i>

Sustainable supply chain management research has not always succeeded in considering all three dimensions of sustainability, and a lot of earlier research has emphasized the environmental aspect (Seuring & Müller 2008, 1702). Thus, it might be beneficial to define green and socially responsible supply chain management. According to Walker et al. (2008, 75) "green supply chain management (GSCM) practices are understood as supply management activities that attempt to improve the environmental performance of purchased inputs, or of the suppliers that provide them." Green purchasing can include practices such as waste reduction at production facilities, substituting materials to more environmentally friendly options (Rao & Holt 2005, 900), recycling and reusing input materials and gathering data about the environmental performance of suppliers, products or processes (Walker et al. 2008, 75). Moreover, Linton, Klassen and Jayaramanm (2007, 1080) state, that managers need to extend their views of traditional supply chain management to consider

by-products of production and the entire lifecycle of the product. Total costs should be considered over current costs, including the generated by-products in the process that are not captured and recycled, such as waste and pollutants, in addition to consumed resources (Linton et al. 2007, 1080).

Purchasing social responsibility (PSR) means the involvement of purchasing function in socially responsible activities (Carter & Jennings 2002, 38). Carter (2005, 178) lists a few activities of PSR as sourcing from minority-owned suppliers, considering human rights and safety, and philanthropy. In addition, environmental purchasing is included as one of the PSR practices (Carter & Jennings 2002, 38). Most importantly, social sustainability considers both internal and external stakeholders (Pullman, Maloni & Carter 2009, 41), and on the health and well-being of these stakeholders, and how the organization impacts the society (Marshall, McCarthy, Heavey & McGrath 2015, 674). To implement socially responsible purchasing practices, organizations need to develop internal policies, set purchasing criteria that include social sustainability, apply monitoring practices, manage their supplier relationships with long-term perspective, and build internal capacity (Leire & Mont 2010, 27).

In this study, we consider sustainable supply chain management (SSCM) as the management of material, information and capital flows including the cooperation with the supply network, while considering sustainable development and the triple bottom line approach, which arises from customer, and other stakeholder requirements (Seuring & Müller 2008, 1700). In practice, sustainable supply chain management refers to managerial decisions and behaviors, which aim to generate a sustainable supply chain (Pagell & Wu 2009, 38). In addition, we can notice that the definitions of SSCM presented earlier, by Carter and Rogers (2008), Seuring and Müller (2008) and Ahi and Searcy (2013), all include the coordination aspect with other organizations.

### **2.3.1 Motives and drivers of SSCM**

As outsourcing and globalization have led to more complex and dynamic supply networks and shifted the position and nature of risks in the supply chain (Harland, Brenchley & Walker 2003, 51), the significance of SSCM has increased. Due to outsourcing, much of the value-adding works is done at the supplier base, hence suppliers influence significantly the environmental impact that the supply chain has (Tate et al. 2012, 173). PSM function has



the responsibility of managing and selecting suppliers and is therefore able to influence the level of sustainability in supply chain, whether it means supervising environmental practices, financial performance of both buyer and supplier, and following social standards. (Tate et al. 2012, 180) In addition, focal companies are often regarded accountable for the actions of their suppliers (Seuring & Müller 2008, 1699; Rao & Holt 2005, 899), as according to Rao and Holt (2005, 899) customers do not consider the company and its suppliers separately. Organizations are aware that they are under public scrutiny and of the reputational damage that supplier's poor environmental performance can cause (Walker et al. 2008, 78). Therefore, to mitigate the reputational damage to the buying company, resulting from unacceptable environmental and social standards at supplier location, supplier misconducts can be avoided by responsible managing of purchasing and suppliers (Foerstl et al. 2010, 118).

Multiple studies have recognized reasons, which drive organizations towards sustainable supply chain management. Paulraj et al. (2017, 242) discuss the motives of SSCM from business ethics perspective, categorizing drivers to instrumental, relational and moral motives. Instrumental motives are driven by self-interest, meaning that the companies believe that they benefit from sustainability initiatives (Paulraj et al. 2017, 242). Relational motives connect to stakeholder theory, meaning that companies recognize the interests of different stakeholders. Especially customers and competitors can be considered as stakeholder groups, that act as significant drivers (Paulraj et al. 2017, 243) Moral motives imply that organizations are not only driven by self-interest, but consider CSR and SSCM as an ethical duty and "the right thing to do" (Paulraj et al. 2017, 242).

According to Seuring and Müller (2008, 1703), responding to legal demands and regulations are the most significant driver for SSCM. Regulatory compliance is also prioritized in the study by Walker et al. (2008, 78), which focuses on GSCM. Supporting this, Giunipero, Hooker and Denslow (2012, 266) found out, that government regulations are the second most important driver to sustainability efforts. Moreover, Sajjad, Eweje and Tappin, D. (2015, 652) name tools such as grants, fiscal measures and direct regulations as mechanism how governments can stimulate the adoption of SSCM.

Walker et al. (2008, 78) categorized the drivers of green supply chain management to internal and external drivers, and external pressure from consumers was the second most mentioned driver for GSCM. Customers and other stakeholder's expect companies to consider sustainability (Sajjad et al. 2015, 650). Ciliberti, Pontrandolfo and Scozzi (2008,

1580), state that SMEs are pressured by their supply chain partners, meaning their large corporate customers, to develop sustainability practices. Similarly, according to Seuring and Müller (2008, 1703) the second pressing reason for organizations is to respond to customer and other stakeholder demands. Likewise, in Morali's and Searcy's (2013, 647) research, external and internal pressure from stakeholders was recognized as the most important motivator to adopt sustainability initiatives.

According to Zhu and Sarkis (2004, 282) internal environmental management practices, meaning top and middle management support, are very important in order to carry out environmental strategy. Giunipero et al. (2012, 266) similarly highlight the importance of top management initiatives in order to mobilize sustainability in organizations. Sajjad et al. (2015, 649) also identify commitment of top management as a predominant motivator for company to implement SSCM practices. Sustainability can be a core value for the organization that is integrated in strategic and operational activity (Morali & Searcy 2013, 647). Integration of sustainability with business model means that the strategic goals include economic and noneconomic elements, and achievements in each field support each other (Pagell & Wu 2009, 48). Miemczyk and Luzzini (2019, 251) conclude in their study, that as companies include sustainability in their strategy, they naturally implement the strategy through different environmental and social practices. Lee and Klassen (2008, 580) also recognized top management support as an internal driver to develop environmental management capabilities, as top management is responsible for identifying the need for sustainability and has an integrative role within the organization and within the supply chain. However, Preuss and Walker (2011, 503) noticed that personal interest drives sustainability in organizations, as individuals who have interest in the topic will more likely implement sustainable procurement.

Gaining competitive advantage is also considered as one motive of sustainable supply chain management practices (Seuring & Müller 2008, 1703; Giunipero et al. 2012, 266; Walker et al. 2008, 71). Sustainable supply chain practices can reduce costs when operational efficiency is improved (Morali & Searcy 2013, 647; Giunipero et al. 2012, 267). Rao and Holt (2005, 911) name the benefits of green supply chain management as improved resource utilization and economic performance, which are the results when attention is paid to the externalities caused by production. As organizations proactively aim to improve their operational performance compared to their competitors, it can lead to gaining competitive advantage (Walker et al. 2008, 72). In addition, competitors might lack capabilities to implement similar behavior, so socially responsible practices can act as a

barrier for potential competitors (Awaysheh & Klassen 2010, 1261). Sajjad et al. (2015, 650) also mention brand differentiation as a benefit, that is followed by long-term implementation of SSCM. As company's reputation improves, it can lead to competitive advantage (Morali & Searcy 2013, 647). However, Walker et al. (2008, 79) found out, that gaining competitive advantage is less important, if the organization operates in the public sector where competition is limited.

Risk management approach is also cited regularly as a motive for sustainability initiatives (Morali & Searcy 2013, 647; Walker et al. 2008, 78; Sajjad et al. 2015, 650). Traditional supply risk management approach considers supply risks such as quality, price development and delivery reliability (Manuj & Mentzer 2008, 138), but Harland et al. (2003, 60) conclude in their study, that as the complexity of supply network increases, so does the sources and types of risks. This and previously discussed reasons prove, that sustainability has to be considered as a component in risk management. Risk management is one of the four aspects, which support sustainability, in addition to transparency, strategy and culture (Carter & Rogers 2008, 369). Sustainability-related supply chain risks can have a similar effect on focal firm as the traditional risk management issues, such as quality issues or delayed deliveries and thus they should be prioritized similarly (Hofmann et al. 2014, 167).

Hofmann et al. (2014, 168) define sustainability risk as "a condition or a potentially occurring event that may provoke harmful stakeholder". Sustainability-related supply chain risk sources, when assessing upstream supply chain, include:

- social issues, which refer to working conditions and remuneration
- ecological issues, referring to inputs and outputs of productions, such as energy consumption or pollution
- ethical business conduct issues, meaning corruption or otherwise questionable connections. (Hofmann et al. 2014, 166)

Foerstl et al. (2010, 122) name other factors that can be considered to evaluate the probability of sustainability-related risks; physical characteristics of the good, production process (production's labour intensity or chemical use), supplier's geographic location and past performance. Hofmann et al. (2014, 161) suggest new approach to sustainability-related supply chain risk management, which includes involving stakeholders in the process. Stakeholders view the sustainability-related issues according to their own expectations (Hofmann et al. 2018, 166), and we can assume that different stakeholder groups have different expectations, and each group prioritize matters differently. The main

reason to value sustainability-related risks, is that stakeholders react strongly to the issues, and these reactions cause negative implications for the focal firm (Hofmann et al. 2018, 168). Supply chain risk management is important, as failures in supply chain can cause reputational risks (Walker et al. 2008, 78) and NGOs and media are recognized to have an indirect influence on the focal firms' performance, as they can influence the opinions of other stakeholders (Hofmann et al. 2014, 167). Surprisingly, reputations loss was not valued high when considering the motives for sustainable supply chain in the study by Seuring and Müller (2008, 1703). Morali and Searcy (2013, 647) state, that organizations do recognize that corporate image and brand are factors which translate to economic performance. Nevertheless, according to Foerstl et al (2010, 127), sustainability risk assessment protects the company from reputational damage. Moreover, assessing suppliers that require more attention leads to supplier development, thus increasing capabilities and operational performance (Foerstl et al. 2010, 127).

### **2.3.2 Barriers of SSCM**

There are multiple internal and external barriers of sustainable management of supply chain, otherwise every company would incorporate these practices successfully. Seuring and Müller (2008, 1704) noticed, that the most frequently mentioned barriers from buyer's perspective were increased costs, coordination effort and complexity, and difficulties in terms of communication.

Increased costs act as a big internal barrier for organizations to include social and environmental factors in the purchasing process (Seuring & Müller 2008, 1704; Walker et al. 2008, 74; Brammer & Walker 2011, 466; Giunipero et al. 2012, 267). In addition, it is challenging for both buyers and suppliers to measure the return of investment (Giunipero et al. 2012, 267; Pullman et al. 2009, 48), making it more difficult to recognize the benefits of green and social initiatives and justify increased sustainability efforts. Moreover, incorporating sustainability practices into supply chain management requires resources of time, people and financial investments (Morali & Searcy 2013, 649). This causes uncertainty and unwillingness to invest, especially in times of economic recession (Giunipero et al. 2012, 267). Furthermore, organizations find it difficult to balance shareholders' short terms profit expectations with long term sustainability targets (Giunipero et al. 2012, 267). Buyers have to balance sustainability targets with traditional procurement's cost savings targets (Preuss & Walker 2011, 504). Supply chain managers feel the pressure of cost reductions,

while they are simultaneously expected to increase the sustainability level of supply chain (Giunipero et al. 2012, 268). Buyers also consider that suppliers charge higher prices to cover their own costs of compliance (Sajjad et al. 2015, 651) and it is possible that suppliers charge a more premium price for products as their own costs increase (Krause et al. 2009, 21). In public organizations, budgets should have more flexibility in order to make sustainable investments (Brammer & Walker 2011, 471).

Additionally, there is a lack of quantitative performance measures, when it comes to measuring the success on sustainability initiatives in the supply chains (Morali & Searcy 2013, 647; Grosvold, Hoejmose & Roehrich 2014, 302) Organizations do know that there is a need to measure the progress, but success is usually evaluated through green procurement policies, market success and brand recognition (Morali & Searcy 2013, 647). Grosvold et al. (2014) noticed, that companies collect data but do not necessarily know how to use it, especially in a systemically way. In addition, supplier performance indicators are often related to environmental dimension of sustainability, such as waste reduction and carbon footprint (Morali & Searcy 2013, 650), instead of measuring the whole triple bottom line performance. Moreover, Morali and Searcy (2013, 650) noticed a lack of indicators that evaluate the performance throughout the whole product lifecycle. More focus is also required on evaluating supplier performance, rather than focusing only on company's own success (Morali & Searcy 2013, 650).

Buying organizations also face communication-related challenges, when they are collaborating with their upstream supply chain to improve supplier's social and environmental performance (Seuring & Müller 2008, 1704). Touboulic and Walker (2015, 187) note, that communication about sustainability is usually one-way, top-down, which acts as a barrier in the involvement of supplier in sustainability strategy. When suppliers do not fully understand the what is expected and the reasons behind sustainability targets, they are more reluctant to change (Touboulic & Walker 2015, 187) and can even fabricate their sustainability (Jiang 2009). Lack of legitimacy (Walker et al. 2008, 80) and unilateral approach to communication are thus barriers of sustainability-related collaboration (Touboulic & Walker 2015, 188).

Buying organizations may also face the situation, that the number of available suppliers is not very abundant (partner scarcity) and finding suppliers that already meet the sustainability requirements is difficult (Touboulic & Walker 2015, 187; Sajjad et al. 2015, 651). Touboulic and Walker (2015, 187) also note, that suppliers and buyers can have

different amount of financial resources, when it comes to investing in technologies and infrastructure. The compliance costs are higher, especially for SMEs and suppliers in developing countries (Sartor 2016, 172). Lee and Klassen (2008, 584) recognized that SME suppliers require assistance from the buyer organization, as they lack necessary resources to invest in environmental management. The external support of buying organization might be needed to develop supplier's environmental capabilities, meaning abilities and skills on environmental management (Lee & Klassen 2008, 584).

Preuss and Walker (2011, 503) discuss, that managers in buying organizations need more training related to sustainable procurement. Sustainable strategy needs to be put into practice in the whole organization, not only discussed at the top-management level. Sustainable procurement needs to be included in planning, strategies and goal setting (Brammer & Walker 2011, 472). This way results can be achieved. Morali and Searcy (2013, 649) also mention supplier's lack of knowledge about sustainability as one key barrier. Sartor (2016, 171) discusses Social Accountability 8000 standard in their article, and state, that most of the workers at supplier's usually have low awareness of the standards and practices, even in the case when they are certified.

Yet, according to Morali and Searcy (2013, 650), sustainability initiatives have been primarily focused on the first-tier suppliers. In addition, many of the sustainability initiatives are still voluntary. Juutinen (2016, 194) states that if the company only recognizes and monitors the first-tier of the supply chain, it does not manage the supply chain in a truly sustainable way.

## **2.4 SSCM practices**

Gualandris et al. (2014, 260) and Gimenez et al. (2012, 150) categorize SSCM practices, by dividing them if they are used within the company or among organizations. Internal practices include methods that decrease the company's direct environmental and social impact, using practices such as life cycle analysis and environmental management systems. External practices, such as Supplier Code of Conduct or supplier co-operation, have an impact at the supplier level, and additionally increase the sustainability level at the leading organization. (Gualandris et al. 2014, 260)

Because a lot of the earlier research has focused on the economic dimension of TBL, Hollos et al. (2012, 2970) suggest a categorization by the dimensions of sustainability. In terms of green supply chain management practices, both internal and external, the purchasing organization can improve for example product packaging or optimize transportation routes, which decrease the carbon emissions and the environmental impact of the supply chain (Carter & Rogers 2008, 361, Walker et al. 2008, 69). Social practices can include for example supervising working conditions (Carter & Rogers 2008, 261) or paying fair wages to workers, and following high safety standards at their own and supplier premises. (Hollos et al. 2012, 2974) Social issues cover both individual-level and community-level well-being and development (Awaysheh & Klassen 2010, 1248).

Marshall et al. (2015, 682) divide environmental and social supply chain management practices into process- and market-oriented. Process-oriented practices include monitoring and management systems, which are focused on supplier base, and market-oriented practices include new product and process development and redefinition of the business model (Marshall et al. 2015, 682). Beske, Land and Seuring (2014, 132) divided the SSCM practices including both strategic and operational aspects. These SSCM elements include strategic orientation, continuity, collaboration, risk management, and pro-activity for sustainability (Beske et al. 2014, 132-133).

Pagell and Wu (2009, 37) conducted research studying sustainable supply chain management practices and concluded them being equal to best practices in traditional supply chain management. They could recognize five different themes of management practices, which are presented in Figure 7 below. The studied supply chains varied in terms of complexity and supplied goods or services, yet common attributes could be recognized, especially in terms of management attitude and incorporating sustainability approach in decision-making (Pagell & Wu 2009, 47).

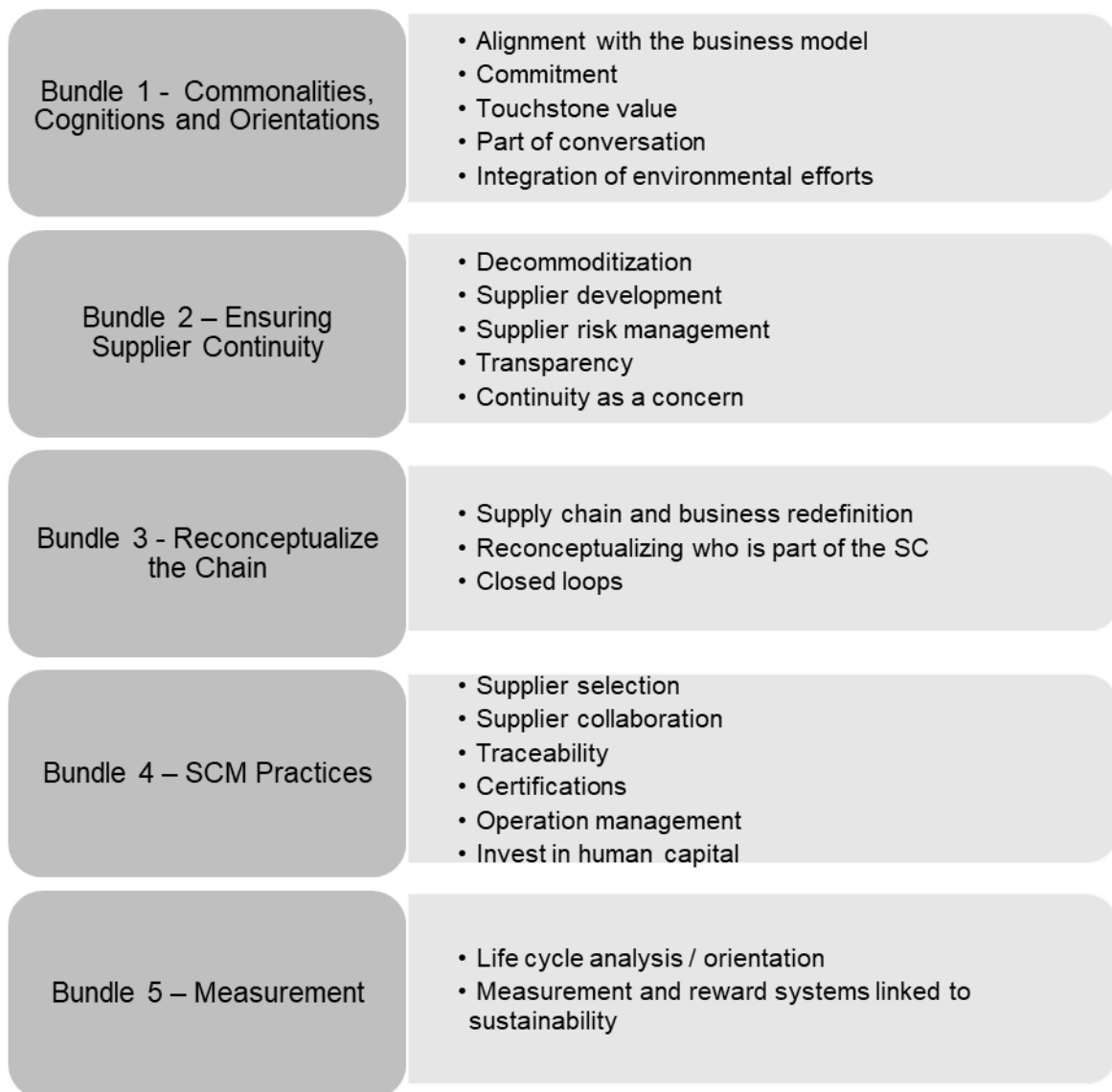


Figure 7. Bundles of sustainable supply chain management practices (modified from Pagell & Wu 2009, 47)

Explaining the SSCM bundles more in-depth, Pagell and Wu (2009, 48) noticed that in sustainable-oriented organizations, commitment and integration of sustainability are present in the daily work throughout the organization, and these values are considered when making decisions. Bundle two, ensuring supplier continuity means that the buying companies want to maintain a long-term relationship with their suppliers, and some buying companies also support suppliers in innovation and growth. Practices that especially contribute to long-term supply availability are for example supplier collaboration, selection of the right supplier, and supplier development. Additionally, Pagell and Wu (2009) found out, that some buying organizations treat their suppliers of commodity inputs in the same



way as strategic suppliers, which is contrary to the traditional Kraljic's matrix. (Pagell & Wu 2009, 48-49) In addition, reconceptualizing the chain is one of the bundles, and it refers to changing the operating ways of the supply chain and moving towards closed-loop systems. Sustainable supply chain management also includes a shift from traditional supply chain management to the realization that other organizations such as NGOs, local governments, or consortiums can be a part of the supply chain. (Pagell & Wu 2009, 50) However, many of the sustainable supply chain management practices can be considered as "traditional supply chain management", including TQM or lean management (Pagell & Wu 2009, 45) Additionally, sustainable companies emphasize employee wellbeing and engagement, and perhaps drive a social agenda, making human capital an important factor in the sustainable supply chain. (Pagell & Wu 2009, 50-51). Referring to the last bundle, organizations may be committed to sustainability values and to become truly sustainable, but still lack consistent measurement and reward systems. Measuring noneconomic performance is required to be able to benchmark a firm's impacts compared to other companies in the industry. To guide employee behavior organization-wide and to engage employees with sustainable values, noneconomic sustainability goals can be linked to other incentives. (Pagell & Wu 2009, 51)

These bundles presented by Pagell and Wu (2009) include many intra-organizational practices that contribute to the sustainable supply chain. Sustainability practices include various methods. However, if the supply chain is as strong as its weakest member, and as sustainable as its suppliers (Holloos et al. 2012 2979; Krause et al. 2009, 18), companies need to adopt a wide range of inter-organizational practices related to their supplier network. Nevertheless, internal orientation for sustainability is required as a first step, before integration and collaboration with the supply base (De Giovanni 2010, 281).

Organizations nowadays focus more on their core competencies and have thus become more dependent on their supply base, and therefore they need to ensure the performance level and capabilities of suppliers (Krause & Ellram 1997b, 39). According to Tate et al. (2012, 173) "*sustainable firms require sustainable supply networks.*" The environmental impact of the focal organization is determined by the suppliers it chooses, the standards it sets for suppliers, and the collaboration activities it engages with its supply base (Tate et al. 2012, 173). Moreover, sustainable SSM practices focusing on the downstream of the supply chain, for example improving the transparency to the end-customer, does not have a significant influence on the company's sustainability performance, when compared to practices concerning the upstream of the supply chain (Kähkönen, Lintukangas & Hallikas

2018, 526). Therefore, it makes sense to focus on the supply network and external sustainability practices. Still, it does not downplay the importance of supply chain transparency for consumers, but it's more a means of CSR communication (Kähkönen et al. 2018, 526).

Hollos et al. (2012, 2970) state, that in order for firms to increase the sustainability level of the supply base, they have two main options; only selecting sustainable suppliers and dropping those that do not meet sustainability criteria, and co-operation with current and entering suppliers to meet the required level of sustainability. Sancha et al. (2019, 2) describe that to diffuse sustainability to upstream supply chain, the interaction can be described at two levels, which are assessment and collaboration. Rao and Holt (2005, 901) divide green purchasing strategies into evaluation of supplier's environmental performance or mentoring to improve performance. Similarly, Vachon and Klassen (2006, 796) categorize inter-organizational green supply chain practices as environmental monitoring, which can be described as supervising the supplier, and environmental collaboration, which can be described as collaborative problem-solving. According to Meqdadi et al. (2020, 730-732), monitoring strategy aims to control and assess supplier's sustainability performance, whereas mentoring strategy aims to increase supplier's capabilities in the long term. Next, we discuss these practices more carefully.

#### **2.4.1 Supplier standards & certifications**

Supplier standards are a commonly used category, which can include a wide range of different practices. Standards include Codes of Conduct (CoC), product- or process-related certifications, and different management systems and initiatives (Morali & Searcy 2013, 650-651). Buyer organizations can set sustainability, such as complying with the code of conduct, as a prerequisite for suppliers for them to act as suppliers of materials, products, or services (Morali & Searcy 2013, 648). Codes of Conduct, standards, and industry norms help focal companies to manage asymmetries within the decentralized supply chains (Castka & Balzarova 2008, 275). In addition, standards and codes are beneficial for communication reasons. Certification increases trust and credibility amongst stakeholders (Székely & Knirsch 2005, 635). Commonly used standards include the Social Accountability 8000 (SA8000) international workplace standard and different ISO standards. The UN's Global Compact Principles is also one of the more all-encompassing guidelines. Also, sector-specific standards exist, such as the Rainforest Alliance (RA) in the food industry to

ensure sustainable ingredients and the Forest Stewardship Council (FSC) for sustainable wood sourcing (van Weele 2014, 316). Buyers can include sustainability-related product certificates as a criterion for purchasing. For example, Fairtrade is a common agricultural certification used for food commodities, for instance, coffee and cocoa (Awaysheh & Klassen 2010, 1247).

### **Supplier Code of Conduct**

According to Hoejmose and Adrien-Kirby (2012, 236), Codes of Conduct are the most implemented way to incorporate sustainability in the buyer-supplier relationships. As organizations have outsourced their operations, many in developing countries, organizations had to establish ways to monitor the labor standards in response to the pressure from media and consumers (Gould 2005, 25). Codes of conduct can be described as a set of written principles, guidelines, or standards, which in the supply chain context include social and environmental requirements for suppliers (Pedersen & Andersen 2006, 229). Code of Conduct of ethical sourcing includes details related to compliance of labor standards, environmental issues at supplier facilities, or economic situations of suppliers (Preuss 2009, 739), clarifying the expectations that the buyers have for its suppliers (Lee & Kashmanian 2013, 4). According to Preuss (2009, 743) employment conditions seems to be the most mentioned issue in ethical sourcing codes, but environmental issues come a close second. However, supplier's economic situations seem to be rarely addressed by codes (Preuss 2009, 744). According to UN Global Compact and BSR (2015, 24), the Supplier Code of Conduct should include themes such as human rights and labour, environment, and anti-corruption.

Code of Conduct can be communicated in multiple ways, for example when making the first contact with a supplier (UN Global Compact & BSR 2015, 27). According to Leire and Mont (2010, 31), Code of Conduct is usually attached to the contract with the supplier. It can be also integrated in a purchase order or reviewed regularly in meetings between organizations. Buyers can ask supplier's commitment annually online or in a written form. (UN & BSR 2015, 27).

One of the problems of code of conduct is, that they are voluntary and lack sanctions in the case of non-compliance (Preuss 2009, 737). Pedersen and Andersen (2006) argue, that codes of conduct lack agency and commitment. In addition, codes are not drafted to match the organization they are directed to but are very general. The buying organizations do not monitor efficiently whether codes are followed, which impacts the level of commitment

(Pedersen & Andersen 2006, 231). Moreover, organizations are very often geographically and culturally far away, which affects the way codes are perceived by suppliers, and whether codes are followed (Pedersen & Andersen 2006, 237). Thus, governing or auditing is required from buying companies to verify compliance with codes (Jiang 2009, 77). Pedersen and Andersen (2006, 238) suggest multiple ways, which help the effectiveness of codes. Penalties, such as direct sanctions, and incentives, such as joint investments, can safeguard the buying organization from non-compliance (Pedersen & Andersen 2006, 238). Industry-wide Code of Conducts can help to minimize the burden on suppliers (UN Global Compact & BSR 2015, 23). Third-party audits help to verify compliance and potentially prevent violations, and they are also perceived as credible. In addition, a trustful relationship that is established over time between buyer and supplier decreases the costs of monitoring. (Pedersen & Andersen 2006, 235-236)

In conclusion, Codes of Conduct are an important tool for buying organizations. In a longitudinal study, Egels-Zandén (2014, 68) found out that Codes of Conduct have improved workers' conditions at Chinese toy factories over time. In the study, it was recognized that suppliers are not as deceptive in audits as before and transparency between organizations has increased (Egels-Zandén 2014, 68).

### **ISO standards**

ISO standards are developed by International Organization for Standardization. ISO 14001 is the most used international environmental management systems (EMS) standard, which provides a framework for companies to develop their own EMS (De Jong, Paulraj & Blome 2014, 131). ISO 14001 certification encourages organizations to evaluate their environmental inefficiencies, to monitor, and improve environmental management, processes and performance (De Jong et al. 2014, 133). ISO 14001 is a suitable standard from SME's to MNC's, and it can be applied in many industries (SFS 2021). From buying company's perspective, ISO 14001 ensures the supplier's sustainability performance (van Weele 2014, 316). Rao and Holt (2005, 901) note, that external certifications, such as ISO 14001 might be especially important to western companies who have suppliers far away, such as in the South East Asia region. However, Grosvold et al. (2014, 298) note in their research, that small- and medium-sized enterprises might not have the resources to invest in ISO 14001 certification, which could then limit the number of available suppliers.

According to De Jong et al. (2014), ISO 14001 certificate directs organizations to set environmental goals, then monitor execution and make corrections when deviations occur.

Additionally, certifications go beyond legislative requirements and require commitment from multiple functions within the organization, which can lead to performance benefits (De Jong 2014, 134). However, Hoejmose and Adrien-Kirby (2012, 237), argue that ISO 14001 does not include any performance measurements, but only certifies that the specific organization has an environmental management system, which aims to improve the environmental performance. The areas include, for instance, GHG emissions, water use, waste disposal, or resource efficiency (SFS ry 2021). Thus, organizations having the ISO 14001 certification are not comparable as requirements differ depending on the organization (Hoejmose & Adrien-Kirby 2012, 237) and organizations set their own targets (De Jong et al. 2014, 133). De Jong et al. (2014, 133) also criticize, that organizations use certifications to improve their public image, rather than focus on environmental and financial benefits. Nonetheless, ISO 14001 can be argued to have a positive impact on financial performance, as in the long term a sustainable company image can lead to increased sales. In addition, paying attention to resource use and processes helps organizations to improve their operational performance. (De Jong et al. 2014, 143).

Moreover, International Organization for Organization has developed the standard 26000 to answer to the need for a management system in the field of social sustainability (Castka & Balzarova 2008, 276). However, it has not been as widely adopted as SA8000, a social standard that is discussed next.

### **Social standards**

Multiple social standards and social management systems are available for companies to help them improve their sustainability performance and to communicate this behavior to stakeholders. Social standards, codes of conduct, and management systems include for example Social Accountability 8000 (SA8000), Global Reporting Initiative (GRI), ISO 26000, Global Compact, and FLA Workplace Code in the textile and apparel industry. (Sartor 2016, 165) In addition, International Labour Organization (ILO) develops standards related to social responsibility (Leire & Mont 2010, 30). However, the social aspect is less often included in purchasing criteria, especially when the purchase is less significant (Leire & Mont 2010, 32).

SA8000 is one of the most applied of these social standards, as it was one of the firsts in the world. SA8000 is considered trustworthy, as compliance is verified by an independent organization, and because the standard can be applied in different industries. (Sartor 2016, 165) Based on ILO conventions, national laws, and the Universal Declaration of Human

Rights, the certification includes the following aspects, requirements that the company and its suppliers should respect; child labor, forced or compulsory labor, health and safety, freedom of association and right to bargain collectively, discrimination of employees, disciplinary practices, working hours, remuneration, and management system (Social Accountability International 2021). If we compare SA8000 to other social standards, we can state that SA8000 is very effective. For example, Global Compact lacks quantitative benchmarks (Sartor 2016, 173) and ISO 26000 lacks explicit requirements because it is only providing guidance and is not certified by third parties (Castka & Balzarova 2008, 277).

Social practices, which focus on health and safety, improve working conditions and can increase worker's motivation or satisfaction, which leads to improved operational performance (Pagell & Gobeli 2009). Likewise, implementation of for example SA8000 standard can improve operational performance, as employee wellbeing increases and workplace safety decreases accidents at the production sites. The SA8000 is recognized to increase communication and collaboration between the certified company and its upstream supply chain, as the standard comprises the whole supply chain. (Sartor 2016, 170) Moreover, SA8000 is recognized to improve the relationship between the certified company and other stakeholders, including customers, NGOs, governmental organizations, as open dialogue is established, which increases trust between the parties (Sartor 2016, 171). Miemczyk and Luzzini also note (2019, 251), that social sustainability practices can also impact environmental performance. This might be because some social standards include environmental aspects, whereas environmental standards are more focused, for instance on resource use (Miemczyk & Luzzini, 2019, 251). When organizations are already familiar with the quality and environmental management systems, for example, ISO 9001 and 14001, it can help the organization in the implementation of social standards, such as SA8000 (Sartor 2016, 172).

However, social practices, such as supplier and certifiable safety standards, do not have a significant impact on the financial performance of the buying company (Hollo et al. 2012, 2979). Carter (2005) also did not recognize a direct relationship between purchasing social responsibility and cost reductions. On the suppliers' side, implementing standards, such as SA8000, can lead to higher labor costs and reduce the flexibility of the supplier (Sartor 2016, 173). Supporting this, Pullman et al.'s (2009) research did not recognize any direct link between social initiatives and cost benefits. However, the study focusing on the food industry indicates, that internal social practices can improve quality and thus lead to cost reductions (Pullman et al. 2009, 48). Carter (2005) suggests, that organizations improve

their financial performance over time through organizational learning within the supply chain, which improves supplier performance and reduces costs. In addition, prevention of the use of child labour and providing safe workplaces do guard the buying company against costly worker injuries and reputational harms (Hollos et al. 2012, 2981). Hence, paying attention to upstream supply chain conditions protects the corporate image and prevents public scandals (Sartor 2016, 171).

It is good to note, that according to Kähkönen et al. (2018, 257), standards and certifications do not necessarily affect the company's overall sustainability performance, due to the mandatory and reactive nature of these methods. One can say that including standards as a supplier criterion requires significantly fewer resources versus cooperation methods, which are more efficient in developing sustainability capabilities.

#### **2.4.2 Supplier monitoring and auditing**

Supplier monitoring activities include assessment guides or sending out questionnaires, in addition to verification of third-party certificates. Monitoring can also include auditing and social impact assessments. Supplier auditing does require plenty of resources and might be considered intrusive from the supplier's side, why it is not always the method chosen to monitor. (Morali & Searcy 2013, 651) However, auditing for compliance with codes of conduct is a common practice to monitor labor standards, especially for MNCs which have global supply chains (Locke, Qin & Brause 2007, 20)

Meqdadi et al. (2020, 740) discuss in their article, that monitoring strategies do not have any impact on sustainability beyond first-tier suppliers. Monitoring practices are not enough to change the supplier's reactive attitude towards sustainability, and thus sustainability is not passed on to the supplier's sub-suppliers (Meqdadi et al. 2020, 740). Meqdadi et al. (2020) note, that out of monitoring practices, auditing requires interaction and is thus able to increase supplier's capabilities to some extent.

#### **Questionnaires**

Questionnaires are one tool to identify suppliers, that require more attention (UN Global Compact & BSR 2015, 39) Self-assessment questionnaires also help to address buyer's expectations for suppliers (UN Global Compact & BSR 2015, 39). In addition, before selecting new suppliers, a sustainability self-evaluation questionnaire can act as a

gatekeeper, protecting the focal company from engaging with riskier suppliers (Foerstl et al. 2010, 124). Identifying capable and high-quality suppliers, which have already adopted SSCM practices, can positively affect buyer organization's competitiveness (Li et al. 2019, 607). Li et al. (2009, 619) emphasize that buyers should include evaluating SSCM practices of the supplier's as a criterion for supplier selection, considering economic, environmental, and social practices equally.

Questionnaires also work as a risk management tool. If a critical supplier is recognized, for example, based on the sourcing location, the buyer can send a questionnaire related to sustainability practices to find out how the supplier deals with waste, hazardous materials, and labour practices. If problems are identified, an audit will follow. (Foerstl et al. 2010, 124) Moreover, self-assessment questionnaires help buying companies to assess a large portion of their supply base in a shorter time and with significantly fewer resources. Self-assessment questionnaires are a relatively cheaper option compared to audits (UN Global Compact & BSR 2015, 39)

Fraser, Müller and Schwarzkopf (2020, 139) found out in their study, that the questionnaire design and assessment process, i.e., the order of questions and whether they are open or closed-ended questions, can influence supplier's responses. Suppliers are also aware of the desired answers, but questionnaires design can limit social desirability bias. Some suppliers have to fill questionnaires for multiple buyers, and the authors suggest the standardization of assessments and questionnaires and sharing results within the industry to decrease supplier fatigue. (Fraser et al. 2020, 139) In addition, if suppliers are aware that their responses are validated, the results can differ as suppliers pay more attention to answering (Fraser et al 2020, 139; UN Global Compact & BSR 2015, 39). The reliability of results is impacted by supplier's expectations on how their answers are being used, for example, whether they are being punished for non-compliance or supported to meet customer's targets (UN Global Compact & BSR 2015, 39). Genovese, Lenny Koh, Kumar and Tripathi (2014, 1203) discuss, whether using a questionnaire is enough to measure supplier performance and suggest developing a scorecard instead if the organization wants to improve its performance.

### **Audits**

Audits, which are used to assess supplier performance, can be categorized into three methods, which are product audit, process audit, and systems audit (van Weele 2014, 230). To verify that suppliers are complying with the Codes of Conducts, auditing might be



required. As a part of a Code of Conduct or other contracts between organizations, suppliers have to accept that they can be audited (Gould 2005, 26). Auditing can be carried out internally or by third-party organizations, and according to UN Global Compact and BSR (2015, 41), there are advantages in both. Auditing can include tasks such as factory visit, conversations with managers, interviewing the factory employees, and verifying documents. (Gould 2005, 25; UN Global Compact & BSR 2015, 41). In supplier's site, multiple issues can be inspected, for example working hours, working conditions, and health and safety issues (Locke et al. 2007, 6). Audits can be executed without notice to get reliable results, but most supplier audits are announced in advance (Gould 2005, 25). When an audit is conducted, the auditor compiles a list of issues that need to be fixed and these should be reported to both supplier and the buying company (Jiang 2009, 86; UN Global Compact 2015, 41). Results and corrective actions should then be discussed together (van Weele 2014, 316).

Some companies, such as IKEA, audit all of their suppliers but some organizations focus only on those suppliers which are considered critical (Leire & Mont 2010, 33). Auditing requires a lot of resources (time) from both auditor and supplier, and because of this, buyers often have to trust the information they are provided (Leire & Mont 2010, 33). Auditing is not necessary in the case of every supplier, and buyers need to estimate the importance auditing, based on the importance of supplier and other risk factors, such as factory location and local laws. In the case of a critical supplier, sustainability audits should be conducted and followed up with an action plan. If misconduct is still observed at re-auditing, the buyer will then likely consider it as a reason to discontinue the contract. (Foerstl et al. 2010, 124.)

Focal companies can come across monitoring and audit-related challenges, as suppliers don't always view auditing positively. Additionally, auditing and monitoring do require transparency and sharing information from the supplier's side (Morali & Searcy 2013, 649). If we assess the reliability of auditing, Locke et al. (2007, 5) note, that both buyer and supplier organizations have an agenda, and would rather hide the violations than report them. Suppliers have developed skills to seem compliant, as they feel the pressure to fill the requirements to stay as suppliers (Jiang 2009, 88; Gould 2005, 28). Also, the buying organizations or suppliers pay for third-party auditors to receive certificates or stamps of approval, which can be considered as a conflict of interest (Locke et al. 2007, 5). Short, Toffel and Hugill (2016, 1890) found out in their study, that factors such as auditor's experience, gender diversity of auditor teams, or the previous experiences with auditee impact in which level violations are identified and reported.

Awaysheh and Klassen state (2010, 1260) that the importance of auditing increases, when there are multiple tiers in the supply chain. Having a local supply chain reduces the need for supplier socially responsible practices (Awaysheh & Klassen 2010, 1251), as domestic supply chains are less risky compared to global supply chains, which require more coordination, communication and monitoring (Manuj & Mentzer 2008, 134). The complexity and distance of the supply chain can have an impact on the amount of communication between buyer and supplier. When there is less collaboration and trust established between organizations, auditing is required. (Awaysheh & Klassen 2010, 1260). Castka, Searcy and Mohr (2020, 9) suggest, that technology-enhanced auditing, such as blockchain technology or environmental sensors, can help organizations to collect and evaluate data more easily. Adding technology to auditing can impact the volume, timeliness, and veracity of the data, which could be utilized to improve social and environmental supply chain performance (Castka et al. 2020, 9).

Simply conducting audits is not usually enough to improve working conditions, but collaboration between organizations is needed to fix identified problems (Locke et al. 2007, 20). Unfortunately, buying companies or third-party auditors do not always assist their suppliers (Jiang 2009; Gould 2005). The issue is that suppliers might not have the know-how to make changes sustainably and might also lose their competitiveness in local markets if they are expected to finance the increased costs (Jiang 2009, 86; Gould 2005). Gould (2005, 26) states, that suppliers have little or no power to influence how audits are conducted, what is realistically achievable, and in what time frame changes can be realized. Hence, to increase compliance and decrease audit frauds, open dialogue is needed so that suppliers understand buyer's expectations and are also supported to meet them (Jiang 2009, 88). Jiang (2009, 87) suggests making step-by-step goals and working on actions plans together. In addition, suppliers feel frustrated if they do not benefit from increased efforts and complying with buyer's requirements should be perhaps rewarded with a long-term contract and stable order flow (Gould 2005, 27). Suppliers should not be punished for the problems, but a partnership approach and working together can attain better results (Gould 2005, 29; Jiang 2009, 87).

### **Measuring**

It is said that you cannot manage what you don't measure. Hence, it might be necessary to develop quantitative metrics to improve the sustainability of the supply chain. Székely & Knirsch (2005) argue, that standardized measuring procedures are needed to support sustainable development. Monitoring performance is strongly linked to improving

performance (Funk 2003, 66). Metrics help decisions-makers of the company to set targets on sustainability, measure yearly progress, benchmark and compare different alternatives (Székely & Knirsch 2005, 641). In addition, measuring supports organizations to communicate their performance and continuous improvement to stakeholders (Hervani, Helms & Sarkis 2005, 339). Furthermore, Juutinen (2016, 240) states, that reporting the sustainability development and change is important. To achieve results, measuring and reporting is needed at both strategic and operative management level (Juutinen 2016, 239). Reporting works as a tool that enables monitoring the progress, which enables active management and further development (Juutinen 2016, 240).

According to Björklund (2010, 357), a benchmarking tool can help to evaluate performance, enables comparison between companies, and increases transparency. Genovese et al. (2014, 1206) suggest benchmarking by comparing performance to the industry average or benchmarking against the closest competitor.

Right KPIs, which thus help decision-making, benefit companies as they aim to manage the sustainability of their supply chains (Bai & Sarkis 2014, 277). Epstein and Wisner (2001, 5) note, that having too many measures takes the attention away from focused strategy. Complex performance measurers decrease the efficiency of supply chain management (Bai & Sarkis 2014, 277). Nevertheless, KPIs can make it easier for managers to evaluate and compare sustainability performance (Bai & Sarkis 2014, 287). According to Székely & Knirsch (2005, 641), indicators should be simple, understandable, easy to repeat, comparable, cost-effective, supplementary to legal compliance, and support decision-making. In addition, indicators need to be reliable and they should timely alarm about unwanted activity or development (Juutinen 2016, 240). KPIs should also be revised on a regular basis, so that they match with the current environmental targets (Genovese et al. 2014, 1206). Juutinen (2016, 239) suggests using action limits, meaning that when a certain specified level is crossed, the company will act. The expectation is that development happens and if not, the company will take action. It is also important to determine, whether indicators or results are evaluated daily, monthly, every quarter of a year, or every year (Juutinen 2016, 240).

However, Genovese et al. (2014, 1200) state, that in practice companies find it difficult to include environmental or sustainability criteria in supplier performance evaluation. One of the difficulties of indicators is that they need to be comparable and flexible at the same time. An organization with multiple facilities should be able to measure and compare performance

across different locations, but still be able to modify indicators based on location's regulations, operations, and other variables (Székely & Knirsch 2005, 642). If organization measures supplier performance, it is likely that different suppliers provide different goods and services to the buyer. Hence, it is difficult to use the same indicators or compare performance amongst suppliers. (Genovese et al. 2014, 1204) Hervani et al. (2005, 330) state, that measuring performance is difficult within the organization, but even more so between organizations. There are multiple reasons why performance measurement is not straightforward between organizations, such as lack of technological integration, non-standardized data, and not understanding the need for inter-organizational performance measurement (Hervani et al. 2005, 330). Genovese et al. (2014, 1205) noticed, that organizations do not necessarily validate the data that suppliers provide to them.

Székely & Knirsch (2005, 645) argue, that performance is largely measured in terms of environmental footprint, meaning the externalities of business operations. To determine the right performance measures, managers are required to understand the relationship between sustainability actions and their impact on operational performance, sustainability performance, financial performance, and customer value (Epstein & Wisner 2001, 2). Björklund (2010, 346) states that benchmarking tools should not only measure the performance of one supply chain actor, such as supplier, but it should also include the buyer and the link between these two organizations. More focus is required on lifecycle assessment, and not measuring only short-term impacts. In addition, social sustainability measures include work-safety issues, such as incidents at the workplace, or diversity issues, such as equality regarding gender or ethnicity. Especially social performance is not as easily quantifiable, as it is affected by procedures, policies, and management practices (Székely & Knirsch 2005, 643). In the case of social purchasing, it is necessary to support qualitative information with quantitative data (Björklund 2010, 357; Székely & Knirsch 2005, 642).

It is noteworthy, that organizations focus more on lagging indicators instead of leading organizations (Székely & Knirsch 2005, 642). Leading indicators are usually input or process indicators related to operations (Epstein & Wisner 2001, 2). Lagging indicators, such as facility's emissions, indicate the outcomes of management of the leading indicators (Epstein & Wisner 2001, 2), which means that indicators measure what has happened and are reported after an impact occurs (Székely & Knirsch 2005, 642). Székely and Knirsch (2005, 642) state that when lagging indicators are combined effectively with leading

indicators, such as following auditing numbers, better results can be achieved in terms of risk prevention and improved performance.

In addition to questionnaires, scorecards are one method to measure supplier's performance systematically. Scorecards can help organizations to measure resource use, such as energy or water consumption, greenhouse gas emissions, or re-use of materials in production (Lee & Kashmanian 2013, 15). Lee and Kashmanian (2013, 16) state that scorecards encourage improvement, as they measure performance development annually. The buying company can also reward improved performance (Lee & Kashmanian 2013, 16), which might be encouraging for suppliers. Internally, a scorecard can include measures such as the number of supplier audits, the percentage of certified suppliers, or the number of audits completed (Epstein & Wisner 2001, 9).

According to Grosvold et al. (2014, 293), a sustainable supply chain consists of three elements, which are SSC management, SSC measurement, and SSC performance. Elements of SSC management and SSC measurement influence each other, and both impact SSC performance. The relationship of these elements is described in Figure 8 below. The better management methods and measurements tools are aligned, the better results company will achieve in SSC performance (Grosvold et al. 2014, 295).

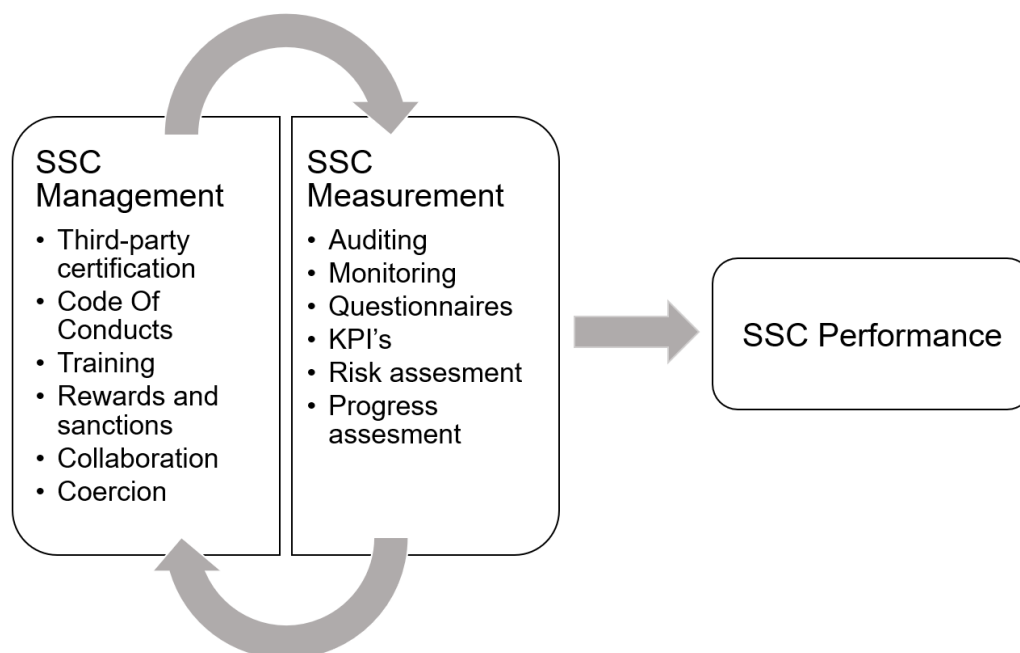


Figure 8. Relationship between SSC Management, SSC Measurement and SSC Performance (Grosvold et al. 2014, 295).

To conclude the discussion about monitoring practices, the study by Sancha, Gimenez and Sierra (2016, 1943) found no significant relationship was between monitoring practices and suppliers' social performance. However, Sancha et al. (2016, 1994) describe, that monitoring practices help to improve buying firm's social performance by improving the company's social reputation. When discussing the mitigation of sustainability related risks, Hajmohammad and Vachon (2016, 58), state that in the case of low-perceived risks, monitoring approach might be sufficient, but in high risk situations, a collaborative approach should be perceived. In conclusion, monitoring is required to identify improvement areas (Sancha et al. 2016, 1944), but collaboration is needed to improve both buyer's and supplier's sustainability performance (Tachizawa et al. 2015, 1560).

### **2.4.3 Supplier collaboration and development**

As previously mentioned, when the focal company comes across shortcomings in supplier performance, it can either choose to drop the supplier or collaborate to fix the problems (Holloos et al. (2012). However, Krause (1997a, 22) mentions that withdrawing from an existing supplier relationship is not beneficial in the long term, although it might offer short-term solutions. Supplier development practices add to the capabilities of the supply base, and it can be described as the efforts of buying organizations to increase supplier's performance and/or capabilities, to secure buyer's short and/or long-term supply requirements (Krause & Ellram 1997b, 39). Krause, Handfield and Scannell (1998, 40) define supplier development as activities by the buying firm, which identify, measure, and improve supplier performance and facilitate continuous improvement, leading to the increased overall value of supplied goods and services. Development practices can include, for instance, auditing, supplier training, recognition, and performance measurement (Krause et al. 1998, 40), a few of which have been discussed earlier. Krause et al. (1997a, 21) also mention direct capital investments or sending out buyer's staff at supplier facilities as possible activities. An important aspect of supplier development is not only focusing on supplier improvement, but improvement is required from both organizations (Krause et al. 1998, 51).

In the SSCM context, development efforts to increase supplier's sustainability performance are similar to traditional supplier development practices. Klassen and Vachon (2003, 339-340) categorize supplier development practices related to environmental management as evaluative and collaborative activities. Transactional, evaluative practices include, for

example, questionnaires or third-party audits which aim to decrease the need for inspection. Relational practices focus on collaboration and providing resources, in addition to educating the suppliers. (Klassen & Vachon 2003, 349). It might be difficult to distinguish between monitoring and collaborative practices as some monitoring practices require cooperation between organizations. According to Awaysheh and Klassen (2010, 1260), collaboration does not eliminate the need for auditing, because buying companies have to confirm that specified standards are met. However, a strong relationship can lessen the need for auditing, or auditing practices can encourage stronger collaboration. (Awaysheh & Klassen 2010, 1260).

Many researchers have included supplier collaboration as one of the SSCM practices, such as Zhu and Sarkis (2004), Gimenez et al. (2012), and Meqdadi et al. (2020). Zhu and Sarkis (2004, 267) state in their article concerning GSCM practices, that all recognized major practices are integrative and require cooperation across functions, not only the efforts of one organization. Activities of environmental collaboration can include, for instance, knowledge sharing and planning together to green the products and processes (Vachon & Klassen 2006, 799), and collaboration to develop and explore alternative materials or processes (Lee & Klassen 2008, 574). Compared to environmental monitoring that only supervises supplier compliance, Vachon and Klassen (2006, 799) describe, that environmental collaboration focuses more on the long-term results and the development process. Hollos et al. (2012, 2969) defines sustainable supplier cooperation as a process which creates benefits for both buyer and supplier as it increases the sustainability of the supply base.

Jiang (2009, 87) and Grosvold et al. (2014, 298) equally note, that education of suppliers is necessary to achieve results in sustainable supply chain management. Foerstl et al. (2010, 129) found out in their research that sustainable supplier assessment and development methods help to mitigate corporate reputational risk and enhance operational performance. When comparing monitoring and collaboration methods, more significant results are achieved with supplier collaboration (Meqdadi et al. 2020, 740; Tachizawa et al. 2015, 1559). According to Meqdadi et al. (2020, 740), mentoring strategies and collaboration with first-tier suppliers can help diffuse sustainability to their sub-suppliers. In addition, supplier development is beneficial for practical reasons. When the supplier is found out to be non-compliant with sustainability requirements, the buying company usually wants to allow them to improve their performance because eliminating an existing buyer-supplier relationship and finding a replacement supplier is very costly for the focal company (Foerst et al. 2010,

124). Supplier development practices help to ensure supply base continuity, which aims that the whole supply base would succeed and grow, rather than only stay in business (Pagell, Wu & Wasserman 2010, 64).

Increased collaboration with suppliers is recognized to have many other benefits. Supplier coordination combined with efforts of green practices has an influence of cost reduction and operational performance (Holloos et al. 2012, 2979). Supplier development, for instance, an improvement of product quality or more secure supply, tend to lead to spill-over effect, which means improvement in operational performance (Foerst et al. 2010, 126). Vachon and Klassen (2006, 811) found a relationship between technological integration and environmental collaboration, stating that knowledge sharing, and auditing tends to lead to improved environmental performance. Gimenez et al. (2012) found out that supply chain assessment has no impact on the triple bottom line, while supply chain collaboration improves social, environmental, and economic performance.

Tate et al. (2012, 177) noticed, that supplier involvement and development are less used practices amongst organizations. They evaluate, that this is due to the resources that collaboration requires. Also, trust, mature relationships, and mutual capabilities are components needed for supplier involvement and development (Tate et al. 2012, 177). Krause & Ellram (1997a, 29) also state that companies buying a large percentage of supplier's total sales have better bargaining power for development initiatives, as they are an important customer to the supplier. Supplier collaboration and development are quite often carried out with partner-like, long-term suppliers (Grosvold et al. 2014, 298) and organizations that are involved in supplier development tend to consider these suppliers as partners (Krause et al. 1997a, 30). However, not every supplier can be managed as a partnership, as relational management does require a lot of resources. Regardless, purchasing portfolios can be reconsidered as according to Pagell et al. (2010, 64), even suppliers of commodities can be treated like strategic partners to ensure supply-base continuity. In the study by Pagell et al. (2010, 58), all organizations that treated commodity suppliers as strategic, performed well when evaluating financial performance, such as revenue growth and net income. However, forming a collaborative relationship is not something that happens overnight. Partnerships usually take time to evolve, and developing a partnership usually involves ups and downs (van Weele 2014, 354).

Moreover, the concentration of supply base might decrease the need for environmental monitoring, as closer relationships are more likely to form, leading to increased trust



between buyer and supplier. This allows the buying organization to allocate more resources for improvement efforts and collaboration. However, if the size of the supply base decreases, it is important to monitor the suppliers to prevent supply disruptions. (Vachon & Klassen 2006, 803) Nevertheless, according to Vachon and Klassen (2006, 812), a smaller supply base and upstream integration might result in better environmental collaboration, amongst other operational benefits.

Liker and Choi (2004) studied Japanese auto manufacturers, which are known for their supplier collaboration. They state, that understanding the supplier's business is an important starting point to develop the relationship and to help suppliers increase their capabilities (Liker & Choi 2004). Krause and Ellram (1997a, 27-28) state, that organizations that were satisfied in their supplier development efforts, emphasized open communication, top management support, and cross-functional teams as important elements from the buyer's side. The suppliers need feedback and recognition from the buyer's side for encouragement for better performance (van Weele 2014, 229). Continuous feedback and open communication are viable to keep track of supply chain compliance and keep suppliers committed to sustainability values (Hollos et al. 2012, 2982). Krause and Ellram (1997b, 50) describe successful communication between buyers and suppliers as timely, frequent, informal, and between multiple individuals. The buyers need to make sure that information is shared in the right amount and at right time, rather than providing unnecessary information (Liker & Choi 2004). Touboulic and Walker (2015, 186) also emphasize the benefits of communication and information sharing, when studying the environmental collaboration between a multinational company and smaller suppliers.

To conclude, buying companies that place more effort to development initiatives and communication, for example, formal evaluation and feedback, supplier recognition, site visits, and training of supplier's staff, succeed better in supplier development, according to Krause and Ellram (1997b, 50-51). Gualandris et al. (2014, 260) argue that orientation to long-term relationships, sharing information, and supplier coordination directly improves the company's sustainability performance and can further spark SSCM practices. The authors note that the organizations which support their SSCM with supplier cooperation practices, such as supply base development, perform better than their competitors on sustainability. (Gualandris et al. 2014, 267). When aiming to gain the best results from SSCM practices, mutual understanding, goal alignment, and information exchange are important elements between the buyer and supply base (Gualandris et al. 2014, 267). In addition, supply management practices, which enhance buyer-supplier relationships, should be linked with

sustainable supply chain management to achieve the best possible results (Gualandris et al. 2014, 268).

All things considered; a collaborative approach is recommended to achieve the best results in sustainable supply chain management. SSM organizations and their practices have a positive correlation on a company's sustainability performance but especially proactive, dynamic SSCM practices, that develop capabilities through collaboration, are seen to have a significant effect on the improvement of sustainability performance in long-term (Kähkönen et al. 2018, 526). A lot of the earlier research has studied whether collaboration improves the performance of buying company or supply chain. The collaboration between buyer and its suppliers also positively impacts supplier performance, including social, operational, and economic dimensions (Sancha et al. 2019, 6). Ultimately, if organizations want to truly improve supply chain performance and extend sustainability to suppliers, collaboration is required as suggested by Sancha et al. (2016, 1943). At its best, supplier and buyer organizations can have complementary resources (Touboulic & Walker 2015, 187). Through sustainable supply chain management and inter-firm collaboration, the supply chain can develop capabilities and resources, that are difficult to imitate (Gold, Seuring & Beske 2010, 239). Communication helps to transfer knowledge, and thus increases inter-organizational learning which may lead to inter-firm competitive advantage (Gold et al. 2010, 233).

## 3 EMPIRICAL STUDY

### 3.1 Research methodology and process

The empirical part of the thesis was conducted as qualitative research. The quantitative approach can be used for statistical analysis or testing hypotheses, whereas qualitative research is exploratory and flexible, making it a practical approach when not much information exists about the studied phenomenon (Eriksson & Kovalainen 2008, 5). According to Koskinen et al. (2005, 16), qualitative research can be used to increase understanding about business practices, without trying to explain or control them. To answer the defined research questions of this study, qualitative data was considered to be more suitable for the purpose.

Moreover, the case study is chosen as a research strategy. According to Voss, Tsikriktsis and Frohlich (2002, 195), case research has been used to develop and test new theories in the field of operations management. This is because case study strategy helps to gather rich empirical data about the phenomenon, which helps to achieve an in-depth understanding of the issue (Kähkönen 2011, 33). Case study can help to collect detailed explanations of best practices (Ellram 1996, 115), and the method is pragmatic in a real-life context (Yin 2009, 2). The case study research can perhaps be criticized due to its lack of rigor (Ellram 1996, 94), but Seuring (2008, 128) states that if the research is conducted in a structured manner and is well documented, case study research helps to conduct an in-depth analysis of contemporary phenomena. Due to this and because of the flexibility of research design, case study method is a good option in the field of supply chain management (Seuring 2008, 135). When studying the SSCM practices in supply chain, a case study strategy helps to gain more understanding of the specified topic. According to Seuring (2008, 133), a case study research can also enable to gather additional data about a longer part of the supply chain, beyond first tier.

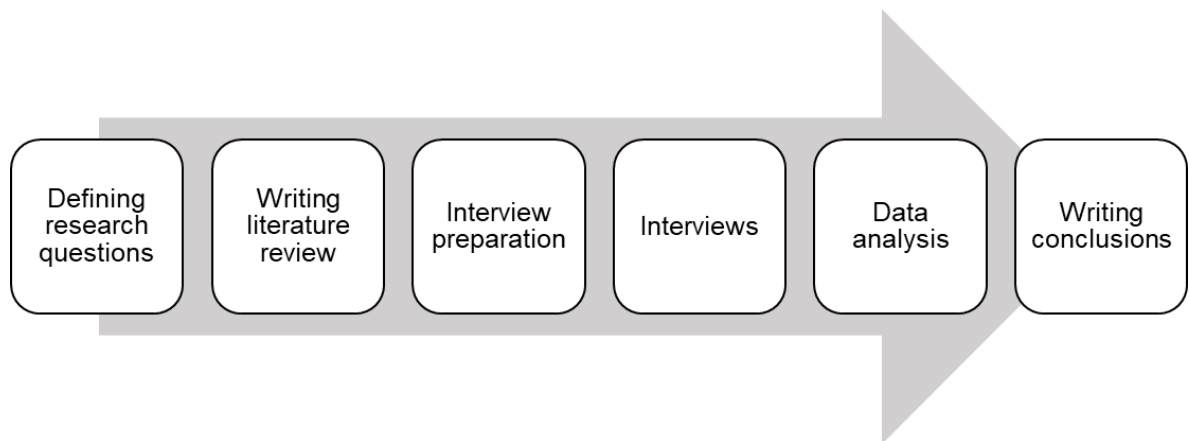


Figure 9. Research process

This research studies five different organizations. A multiple case study helps to identify similar results between organizations or to find explainable differences (Ellram 1996, 102) and it is therefore appropriate for the objectives of this research. According to Eisenhardt and Graebner (2007, 27), when multiple cases are studied, the results are more generalizable for theory building. Five organization was considered as a satisfactory amount of cases to respond to the research questions. For this research, primary data was collected through seven semi-structured interviews, which were conducted via Teams. Interviews were transcribed after the interviews, as transcribing helps to further analyze the information. After transcribing, the data was colour-coded and categorized to find similar patterns in the answers. This was followed by comparing the results to earlier research and then making conclusions based on the results. The key steps of the research process are presented in Figure 9 above.

### 3.2 Case description

In this study, benchmarking is used to make improvement suggestions to the case company. Benchmarking can be used in SME's and larger organizations, and in both public and private sectors (Kyrö 2003, 219). Bhutta and Huq (1999, 254) describe benchmarking as identifying the best practices concerning products, services or processes. In benchmarking, only evaluation and comparison of practices is not enough (Andersen & Pettersen 1995, 4), but after practices have been identified, improvements can be made in order to perform according to the highest standards (Bhutta & Huq 1999, 254). Study of best practices can be conducted at the company, process, function, product (Bhutta & Huq

1999, 256) or network level (Kyrö 2003, 219). In this study, process benchmarking (Bhutta & Huq 1999, 257) is used, meaning that methods and processes are compared in order to improve the processes in the benchmarker company. However, improving practices does not mean copying other companies' best practices, but they must be adapted to match organization's culture, technology and employees (Bhutta & Huq 1999, 259) According to Björklund (2010, 357), benchmarking can help organization to identify and understand their strengths and weaknesses. Björklund (2010, 341) states, that benchmarking is essential for CSR management.

A benchmarking project can be described to have five different stages:

1. Studying and understanding organization's own processes
2. Finding benchmarking partners
3. Studying the partner's processes
4. Analyzing the differences between organization's processes
5. Implementing improvement based on the study.

(Andersen & Pettersen 1995, 13)

Bhutta and Huq (1999, 266) state, that benchmarking is only beneficial, if organization takes action on implementing the improvements, in addition to measuring performance development. In addition, benchmarking should not be considered as a onetime project, but continuous improvement should be targeted (Butta & Huq 1999, 266). Using benchmarking as a tool supports continuous improvement, enabling the company to gain competitive advantage (Bhutta & Huq 1999, 259).

This research could be described as generic benchmarking (Andersen & Pettersen 1995, 6), as it is not focused on companies on a specific industry. Andersen and Pettersen (1995, 4) suggest extending the study and evaluation beyond industry boundaries, to truly gather information from best performing companies. However, Andersen and Pettersen (1995, 7) note, that transferring knowledge across industries can be difficult. If organizations work in different industries, they need to be comparable (Koskinen et al. 2005, 50). However, when new technologies or practices have been identified by generic benchmarking, breakthroughs have occurred (Andersen & Pettersen 1995, 7).

### **Case companies**

The case organization is a company operating in the energy sector. The company produces and distributes electricity, district heating and district cooling and other services to

households and businesses. Energy and heat production sector is a big producer of greenhouse gas emissions. According to IPCC report (2014, 9), the energy supply sector is responsible for 35% of the total direct GHG emissions, which makes it the largest contributor compared to other industries such as transportation and agriculture. At the moment, the energy business is in transition to use more renewable energy sources and decarbonizing electricity generation. In addition, according to the current Government Programme, Finland will be carbon-neutral by 2035 and first fossil-free society in the world (Ministry of the Environment 2021), which affects the case company's business remarkably. The current state of case company's SCM and SSCM practices are discussed comprehensively later in the empirical part of the study alongside other empirical findings.

Table 2. Studied companies

<b>Company</b>	<b>Industry</b>	<b>Yearly Turnover 2020</b>
Case company	Energy production	< EUR 1000 mil.
Company A	Manufacturing	< EUR 100 mil.
Company B	Telecommunications	> EUR 10 000 mil.
Company C	Retail	> EUR 1 000 mil.
Company D	Renewable energy production	> EUR 500 mil.

Four additional companies were interviewed for benchmarking purposes. Table 2 above presents all five case companies and describes their industries. Selected companies vary in terms of their industries, the number of people employed, and yearly turnover. The organizations remain anonymous and therefore the turnover is described only at indicative level. The studied organizations were chosen based on the discussions with the case company. Two of the benchmarked companies are suppliers of the case organization and were chosen because of this. Only one of the organizations, company D operates in the energy industry, however focusing more on energy production from renewable sources when compared to the case company. In addition, two of the companies were chosen as they had a sustainable reputation and have been awarded for their sustainability reporting. These companies in various industries were chosen to be interviewed, to understand different perspectives on sustainable supply chain management.

### 3.3 Data collection and data analysis

The data was collected in semi-structured interviews. Interviews as a data collection method helps to gather valid and reliable data, which is relevant regarding the defined research questions and objectives (Saunders, Lewis & Thornhill 2015, 388). The interviews were semi-structured interviews, and a list of themes and key questions were covered in order to answer the research questions. The interview questions were formed based on the theoretical background of the study. Saunders. et al. (2015, 392) describe that semi-structured and in-depth interviews helps to understand why, what and how questions. According to Koskinen et al. (2015), semi-structured interviews allow the researcher to determine the questions, and at the same time it allows the interviewees to describe events in their own words. This further helps to understand the reasons behind interviewees actions and attitudes (Saunders et al. 2015, 394).

The interview questions can consist of different kinds of questions. For example, use of open questions allows the interviewee to describe a situation or event, and it encourages to more extensive or developmental answers (Saunders et al. 2015, 408). However, at some points, specific and closed questions are useful to gain specific information (Saunders et al. 2015, 409). The order of the questions may differ between interviews, if necessary, for the flow of conversation. Highly structured question lists and only following them can prevent gathering valuable information (Stuart, McCutcheon, Handfield, McLachlin & Samson 2002, 425). Moreover, it is important to provide time for open discussion, as according to Saunders et al. (2015, 394), it can lead the discussion into new directions, which the researcher might not have realized earlier, to cover topics which may be relevant for the research and even reshape research questions. The interview questions are listed in Appendix 1.

Total seven interviews were conducted for this research. In this study, having a variety of interviews increases the validity of the results. As each of the interviewee worked in different positions in benchmarked companies, they have different knowledge based on their own background. In the beginning of the interview, interviewees were asked to explain their role in the organizations. The interviewees worked in positions such as buyer, head of procurement and sustainability director, and all interviewees were familiar with the topics of supply chain management and sustainability. In order to limit interview bias, Eisenhardt and Graebner (2007, 28) suggest interviewing multiple interviewees from different hierarchical

levels or functional areas, who provide different, but knowledgeable, perspective to the study.

Interviews were held during end of June and in the beginning of August 2021. Some of the interviewees were postponed to August due to interviewees' summer holidays. First, the employees of the case company were interviewed to understand the background and aim of this research better. This helped to mirror their experiences compared to other interviewed companies. The table 3 below shows the company, interviewees role in the organization and the duration of the interview. In total the interviews lasted four hours and 55 minutes. To ensure companies' and interviewees' willingness to participate in the study and share valuable, confidential information, the companies and interviewees' roles are not described at a detailed level. However, in order to get an idea about the interviewees' suitability to the study, interviewees' roles are described in table 3. When benchmarking, Bhutta and Huq (1999, 267) suggest letting the other companies known beforehand, what is studied and what is wished to accomplish by benchmarking. This way the other organization knows what is needed and can decide what information they are willing to share (Bhutta & Huq 1999, 267).

Table 3. Interviewees, their organizations and positions

Organization	Interviewee	Position	Duration of the interview (mins)
Case company	Interviewee A	Head of Business Unit	22 min
Case company	Interviewee B	Business Development & Support Manager	32 min
Case company	Interviewee C	Buyer	61 min
Company A	Interviewee D	Sustainability & Quality Director	68 min
Company B	Interviewee E	Head of Procurement Management	48 min
Company C	Interviewee F	Sustainability & Quality Manager	39 min
Company D	Interviewee G	Business Manager	25 min
In total: 7			295 min

The interviewee had a question list in the interview, to make sure that all necessary questions and themes were answered. Interviews questions were formed based on the theoretical background presented in the first part of this paper. In addition, as this research is conducted to benchmark, it was made sure with the case company, that all valuable questions were included. The question list (appendix 1) was sent to interviewees before the meeting, so that the participants could prepare for the interview. However, as the interviewees organizations and roles were different, minor modifications and specifying



questions were made during the interview. A conversation-like interviews was aimed and if the conversation included necessary themes, following an exact list of questions was not compulsory. However, conversation was directed to the right path if interviewee discussed matters that were not relevant. It was important to try to remain neutral. In the end of the interview, the main themes were revised to make sure if the interviewee had anything to add. The interviews were held in Finnish, both interviewees' and interviewer's native language. This was decided so that interviewees could express themselves more freely and in-depth.

In order to analyze the data, the interviews were audio-recorded. This was followed by transcribing the interviews. The analysis of the data was done in Finnish, and the results were translated to this paper in English. During and right after the interviews, notes and initial ideas were written by hand. However, recording the interviewees supported, that the researcher could transcribe the data and could return to the interviews to identify similar patterns and differences between organizations. This more in-depth analysis was conducted soon after the interviews. Total 55 pages of data were produced during transcriptions. Kähkönen (2011, 27) describes, that reading and re-reading the transcribed data helps the researcher to familiarize with it, and thus structuring and organizing the data in meaningful units. Moreover, the data was coded using colour-coding. Each research question had an appointed colour. Colour-coding helped to analyze the data by bringing visual clarity and highlighting patterns and differences concerning each research question, which allows efficient analysis. After coding, notes were written on the side of transcriptions before the analysis.

### **3.4 Reliability and validity of the research**

Reliability and validity of the research need to be analyzed in to evaluate and improve the quality of the study (Koskinen et al. 2005, 253). It is also important to conduct the study in a structured manner to increase the reliability and validity of the results. Voss et al. (2002, 196) and Kähkönen (2011) discuss the importance of following a process. According to Kähkönen (2011, 32), the process includes: literature review, defining research question(s), selecting the research methodology and selecting cases. For instance, when multiple case study design is to be completed, one has to evaluate how many cases are necessary to generalize the results. This question has to be answered before any data collection (Ellram

1996, 100). After this, the next steps are followed: defining data collection method, collecting data, analyzing data and drawing conclusions (Kähkönen 2011, 32).

### **Reliability**

It is important to evaluate, whether it is possible to replicate the same study and produce the same results (Ellram 1996, 104). This research was conducted by following a similar process, as described above. Moreover, in this research, all interviews followed the same semi-structured question pattern. In order to get reliable results, the interviewees could answer to the questions openly. After the interviews, main points were discussed shortly together with the interviewees, verifying that the interviewee had not forgotten anything, and that the interviewer understood main points correctly. The interviews are held in Finnish language, which could affect reliability as the interviews had to be translated. However, having the interviews in Finnish language, the interviewees native language, can help to gather more in-depth information. To increase reliability of the study, data collection and data analysis process are described in the previous chapter.

### **Validity**

According to Yin (2009, 40) three types of validity can be analyzed in case study research. Construct validity includes three main elements which are multiple data sources, establishing and maintaining a chain of evidence and draft review by key informants (Ellram 1996, 105). Additionally, both internal and external validity can be assessed. Ellram (1996, 107) states that internal validity has to be assessed only in the case of explanatory case studies. Internal validity does not have to be assessed in the case of descriptive or exploratory studies (Yin 2009, 40). External validity includes analyzing the generalizability of the results. This means evaluating whether the results of the study reflect the studied phenomenon (Ellram 1996, 104), and whether the results apply beyond the study conducted (Voss et al. 2002, 211). In this study, multiple interviewees were conducted to gather rich and in-depth data. Single case study limits the generalizability of the results (Voss et al. 2002, 201), which is the reason why the study includes five organizations. According to Stuart et al. (2002, 426), the diversity of interviewees is valuable to answer to research objectives and emphasis should not be put too much on the randomness of the samples. However, even more companies could be studied to increase the validity and generalizability. Moreover, the studied companies work in different industries, which allows for comparison of different practices and developing new ideas. Nevertheless, benchmarking could be done by evaluating several companies in the same industry.

## 4 EMPIRICAL FINDINGS

### 4.1 Drivers of sustainable supply chain management

The first supporting research question is “*What are the drivers and motives for sustainable supply chain management?*”. To answer the research question, the interviewees were first asked to describe what kind of role sustainability has in their organization. This includes both at the company level and their department. After that, the drivers of sustainability were discussed.

Three interviews were conducted in the case company. This helped to get an in-depth understanding of how employees view sustainability in different organizations and responsibilities. Interviewee A has observed, that sustainability and complying with laws, are more important values in their company “*than in many other companies*”. They state that sustainability is at the same strategic level as in multinational companies. However, because the organization is not that big, they are not as advanced as some MNCs, where the interviewee has their past work experience. Interviewee notes, that there is an ambition to be sustainable. According to interviewee A, sustainability is driven by top management, but also strongly driven by their past work experience in companies, where sustainability has been an important value. In addition, sustainability is required, as the industry is highly competitive. The company wants to compete with quality and safety, rather than price and thus does more than required by legislation. Additionally, recently NGOs have been interested in sustainability issues, as the interviewee’s organization had to answer Finnwatch’s questions regarding their operations.

Interviewee B also states that sustainability has a significant role in the case company, as the organization is an actor at a societal level, whose role involves taking responsibility and playing a certain role in society. In addition, the organization operates in the energy production business, and environmental issues and issues related to fossil fuels are today’s political issues. Through the political discussion, sustainability is thus “*inherently*” considered. Hence, stakeholder pressure also is one motive to be a responsible company. Interviewee B evaluates, that because the company works in the metropolitan area, the stakeholder pressure is different and bigger. Stakeholders include many groups, such as locals, political groups and media. The organization is a very visible operator in the city,

hence the company does not want to cause any inconvenience to local communities with their operations and draw any unwanted attention. In addition, corporate customers value sustainability. Therefore, sustainability is an important part of the company's strategy, and interviewee B states, that the company wants to build a brand on this value (and utilize it as a competitive advantage). Interviewee B notes, that because the company aims to be carbon-neutral in 2035, sustainability is already part of their core business and has become an integrated part of the business. Sustainability has increased its importance and has become part of "*basic everyday life*" in the company. However, they recognize that the requirements will get stricter over time, also through EU legislation.

*"Nowadays, issues related to the environment and fuel are the political issues of the day, and through that sustainability emerges as an inherent thing for us. Unlike, perhaps in many companies, this may be wrong to say, but it (sustainability) is added on top of things. But for us it (sustainability) is part of the core business."*

Case company

*"We have certain obligations to the owner and the residents. If I compare to our competitors who might be listed companies, then they have slightly different requirements."*

Case company

Interviewee C describes that sustainability is driven by legislation, as public procurement has certain requirements. Interviewee C recognizes that sustainability has increased its importance. Management has also become more serious and professional, even though sustainability has had a role in their company for a longer time. They recognize that it is driven by stakeholder pressure, which includes society and competitors. In addition, they note, that when one familiarizes themselves with sustainability, it comes up more independently.

Interviewee D works as a Director of Sustainability and Quality in the benchmarking company A. Interviewee D states, that interest in sustainability issues in the company was initially driven by financial institutions and big, multinational companies, who were asking about sustainability management. However, the interviewee notes, that earlier customers did not care deeply about environmental issues, but it was something that had to be in order. In addition, the company has mainly corporate customers, which means that they are regularly audited or asked to answer different questionnaires. Paying attention to environmental issues works as a "*license to operate*". Recently, the role of sustainability has clearly changed, and it is a lot more talked about. However, the interviewee states that

corporate sustainability is not about saving the world, but organizations are interested in how it can be utilized in marketing. Thus, sustainability can provide a competitive advantage. Moreover, the more customers are requesting it, the more valuable it becomes for the company. The interviewee states, that company works as a sounding board for the customers and what issues they are interested in/requesting.

*“In all corporate activities, in ours and others, the starting point is that you have to do a profitable business... There are many sides to sustainability, and we are very excited about it, such as about quality and environmental issues back in the day. That how it can be marketed and what kind of market advantage one can gain.”*

Company A

Interviewee E works as a Head of Procurement in company B. Interviewee has also noticed, that the importance of supply chain sustainability has increased in the past 10 years. They state that governmental and non-governmental organizations are very interested in sustainability issues and follow activities. Interviewee E states, that if mistakes happen, the organization is likely to find itself in the news, which is one of the reasons why it's important to pay attention to these issues. In addition, they consider, that the company represents its supply chain to end consumers, thus, they are held accountable and have the responsibility. Furthermore, the company recognizes that as they have corporate customers, they have to make sure with their operations that the customers don't get in trouble because of them. They can also be pointed out, if they have left something undone and it impacts the customer.

Interviewee F works in company C in a manager position, in Sustainability & Quality organization. Interviewee notes that in their company, sustainability has a long history. In company C, there are a sustainability strategy, clear targets, and principles, and sustainability is an important part of the company's annual reporting. Interviewee F notes that legislation is an important driver at least from the financial reporting perspective. However, the company also wants to be a “pioneer” and as a big company, it wants to lead the way in Finland. Interviewee F recognizes the importance of top management support. Interviewee F points out, that sustainability efforts do not always directly generate profit, and therefore management dedication is required. In company C, there is management support that drives sustainability forward. Moreover, if the company is sustainable, customers are more likely to purchase from them. However, customer pressure was not highlighted as the most significant driver. Sustainability has been a “hot topic” for a few

years, and when the issue gets more visibility, and stakeholders become more interested, sustainability-related work gets more support.

*“When you talk to colleagues from other firms, you know well, that in many places sustainability is seen as compulsory. If there is no management will behind it, then it is like fighting windmills.”*

Company C

Interviewee G works as a Business Manager, and they are superior to three buyers. Interviewee G understands that corporate sustainability is a *“license to sell the product”*. Nowadays, sustainability is a very integral part of the company’s operations. It is primarily requested by legislation, but customer pressure is a large motivator to do things voluntarily, beyond legislation. The interviewee recognizes, that during the past 10 years, customers have started to value sustainability more.

*“If we think that no customer demanded these things from us... Would it change our operations? I do believe that it might change a bit, but I still want to believe that we would operate responsibly nonetheless.”*

Company D

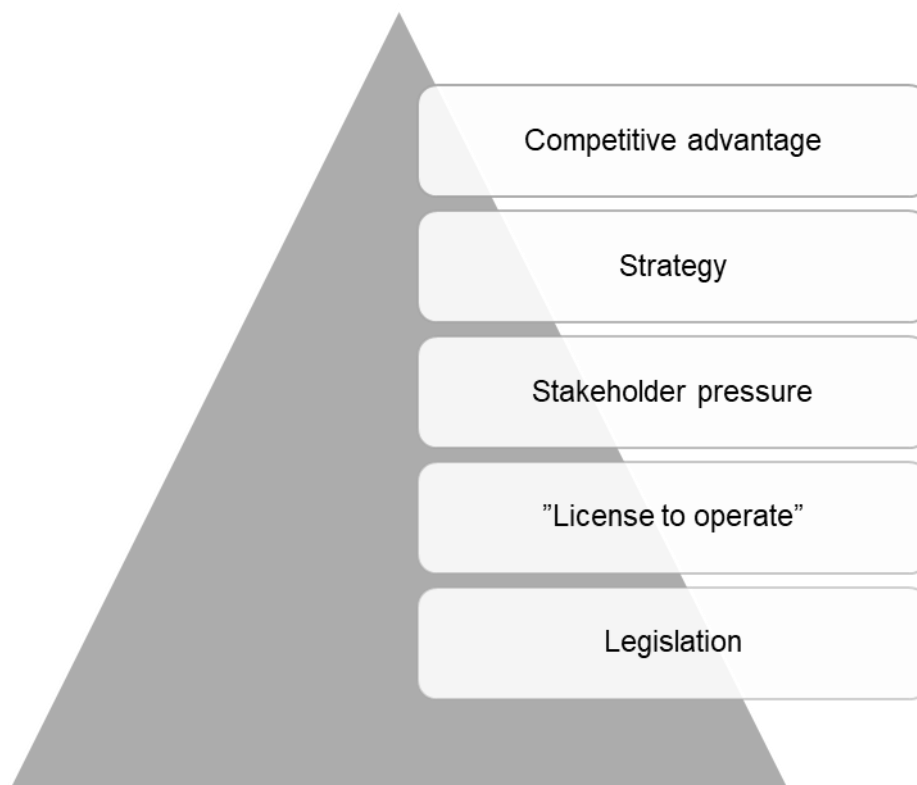


Figure 10. Drivers of sustainable supply chain management

The identified drivers from the empirical part of the study are included in Figure 10 above. At the bottom, the legislation sets the basis for sustainability and the minimum requirements that the companies have to meet. In the case company, sustainability is particularly important as it has a vital role considering the infrastructure of the city and the operations impact a lot of people. Moreover, companies recognize sustainability as a license to operate or license to sell. Companies also feel pressure from different stakeholder groups, including customers, competitors, society, media, or NGOs. On top of that, some companies have noticed that they can utilize sustainability values in marketing practices. Sustainable can be considered in developing a company strategy, and ultimately it can provide a competitive advantage.

## 4.2 SSCM practices

The next theme of the interview questions focused on SSCM practices. First, the interviewees were asked what kind of sustainability criteria they have set for their suppliers, including the offer request phase and contracts. This theme included different standards, certificates and Codes of Conduct.

As the case company operates in the energy sector, which is considered as a utility sector, the minimum requirements are set by EU/ETA's legislation concerning public procurement. When the value of a purchase exceeds the threshold value, public tendering is the form of purchasing. If the supplier does not fulfill the minimum requirements, they can't participate. However, other interviewed companies' suppliers have to follow local laws as well. For instance, an interviewee from Company A mentioned that suppliers need to comply with local legislation and the UN's Universal Declaration of Human Rights. However, they note *"It can be discussed, if that is enough."*

*"There are also sustainability criteria, but not under the name. Financial criteria; that you pay all taxes, pension contributions, and employee safety issues are fine and there are no violations. And the company does not have fines, and the financial solvency is sufficient."*

Case company

Code of Conduct is one of the most important SSCM practices according to the theoretical background. Similarly, during the interviews, all organizations mentioned that they have a Code of Conduct. Internally, the Code of Conduct is a guideline for procurement. To

suppliers, the Code of Conduct is introduced at different stages. In the case company, a Code of Conduct is presented to suppliers at the offer phase and they have to approve it when they leave the offer. In Company A, purchase orders include the Supplier Code of Conduct and a request that suppliers read them and approve them. In Company C, the suppliers approve the attached Code of Conduct when they sign the agreement. Similarly, Company B describes, that company has very extensive contracts which have a lot of clauses related to sustainability.

Company B describes that the company sets certain requirements even before the offer request. They send out a Request for Information (RFI), including sustainability-related themes, such as health and safety, and anti-corruption, before the actual offer request. This helps to identify bigger problems well in advance. In company C, RFI is also sent out before tendering or if a supplier approaches the company.

*“This RFI precedes the bidding phase... We'll find out if there are skeletons in the supplier's closet so to speak.”*

Company B

Different ISO standards, for example, ISO 14001 and ISO 9000, have been discussed in the theoretical part of this study, as they are management systems related to quality and environment. The case company applies ISO requirements, quality and environment management systems, in “*bigger tenders*”. Companies B, C and D tell that they are interested whether the supplier has quality or environmental management systems, but if not, suppliers are not disqualified. For example, in company D, ISO certification is not requested from suppliers but is appreciated. Company B notes, that ISO certificates are not expected from suppliers, as the company has developed its own requirements. However, if the supplier has an ISO certification, it does ensure some level of sustainability. Company C recognizes that smaller companies do not necessarily have the resources for the bureaucracy, that is required for ISO management systems standards. The case company also describes they have included other sustainability-related criteria in purchasing; however, they are not disqualifying requirements.

*“If the supplier is ISO qualified and the supplier has certain certifications in place, then it immediately tells us that the basics are in order. Then we can focus on those issues that are important to us and important to our industrial sector.”*

Company B



Only one of the companies, company D, requests a certain product-related certification from all suppliers, PEFC, which is international forest certification. Interviewee G describes that in their industry everyone has to have the certification; if the supplier would not have it, they should do a similar extensive audit as for the PEFC certificate. Other companies did not name specific product-related certifications, that they would require from all of their suppliers. On the other hand, interviewed companies' product portfolios are quite wide and include different products and services. Company B has developed some of its own standards. Company C requires amfori's BSCI audit certificate from all suppliers in risk classified countries. The case company utilizes HSEQ evaluation by Kiwa, which is mainly voluntary, but in operations of the case company, the HSEQ certification is required from all contractors.

Next, the interviewees were asked, "*How do you monitor supplier sustainability in practice?*". The case company, Company A and B tell that they send out sustainability surveys to their suppliers. The case company utilizes surveys in bigger tenders, already at the offer phase to evaluate supplier sustainability risk. Risk assessment is mentioned also by companies A, B, C and D, and it can initiate other actions, such as auditing or sending out questionnaires. Company D states that they would rather visit suppliers to discuss sustainability issues. In addition, Interviewee E describes that company B evaluates continuously their supplier base and whether the geographical location or other activities causes risks, and that certain supplier groups are monitored more carefully. The case company describes that a sustainability questionnaire is used as a risk monitoring tool, which indicates if there are issues that need to be discussed with the supplier. Moreover, in company D PEFC is a certificate, that is required from all suppliers and the validity of the certificate has to be verified annually, hence the supplier base has to be reviewed every year. Company C describes that they follow certain KPIs, one of them including the amount of BSCI audits. Third-party tools are not mentioned by other than one of the interviewees. In company B, EcoVadis and Carbon Disclosure Projects serve as tools to collect and monitor data about sustainability performance.

Audits are mentioned in interviews as one of the methods, which are needed to verify supplier compliance. In the case company, most of the previous audits have focused on quality checking, rather than on sustainability issues. Supplier "on-site" audits quite often include both themes, which is noted also by companies C and D. In all of the interviewed companies, because of the Covid-19 pandemic, the number of audits has decreased significantly as employees or auditors have not been able to travel. In addition, the case

company, companies A, B, C and D use third-party auditors, for example in remote locations, such as in Asia. In company C, all new suppliers which are in risk countries are required to have Amfori BSCI audits. Company A describes that auditing mostly focuses on the same group of suppliers, which means that not all suppliers are audited. Company A continues, that compared to the size of the supply chain, the number of yearly audits is not high or even enough. Likewise, the case company states that they will increase the number of sustainability-focused audits in the future, however focusing their efforts wisely. Company C and D consider that the number of auditing has been enough, before the Covid-19 pandemic. In company D, the majority of the supplier base is located in Finland, which is said to decrease the risk and need for auditing.

*“As part of factory auditors, we check HSEQ things and check ISO standards, which are environmental issues, it (sustainability) is involved in that way. And of course, we confirm compliance with the product requirements. It is also sustainability not to import or market products, which are not safe.”*

Company C

Interviewees also describe, how they decide what suppliers they monitor and audit. The value of yearly purchases, supplier's location, and type of business are factors that impact which suppliers get audited. The case company states, that if the supplier provides main components, the quality has been verified. In company B, audits are done if high-risk suppliers are recognized, for example, the suppliers provide goods such as conflict minerals for the company. In company C, amfori's or World Bank's risk country lists give guidance on which suppliers have to be audited. Similarly, the risk country list is mentioned by the case company and company A. As company D states, auditing is done based on perceived risk. Interviewee E from company B describes that auditing can be done at the very early stages of the relationship if RFI highlights some issues that require attention.

*“If there is something here (RFI) that attracts our attention, then we go on the spot and make an audit. For example, high-risk suppliers, especially those who supply us with something tangible, such as iron, because that tangible good goes forward to the customer and that's where the responsibilities grow.”*

Company B

*“When you look at European suppliers, for example, X, we don't have the ability or, in the end, the need to audit big firms like that, who by their activities already ensure their responsibility.”*

Company C

It was also asked whether companies monitor their second-tier or third-tier suppliers. The case company, and company D state that their contracts reserve the right to audit the supplier and their supply chain. Moreover, in all companies, the Code of Conduct or other contract requires, that suppliers monitor their supply chain. This way, the main responsibility of monitoring sub-suppliers is transferred to suppliers. It can be understood that companies do not utilize a lot of resources to monitoring second- or third-tier suppliers. As Interviewee D states, they are not aware of every supplier's supply chain actions. However, at least in Company B, some of the sub-suppliers are audited. Company B states, that in the future more resources will be put into monitoring second- and third-tier, because the material shortages, due to the Covid-19 pandemic, have increased the importance of knowing and monitoring the supply chain beyond the first tier.

One of the questions was, what happens if a supplier is found out to be non-compliant. This is related to the theory of supplier collaboration and development. Interviewee D in company A recognized, that there is not much they can do if the supplier is very far away and a third-party auditor recognizes nonconformities during audits. In company A, action plans are approved but in practice improvement actions are difficult to monitor. Company C describes that they do follow the suppliers' corrective action plans. Other companies, such as the case company, describe that they have conversations with suppliers about development actions, which are agreed together. In addition, the case company, companies B and D describe, that if suppliers are deceitful or do not make improvements, it authorizes that the company can terminate the contract.

*"If there are misconducts, then sure, we primarily try correcting and directing."*

Company D

Supplier development and collaboration were also discussed topics in the interviews. Company B describes that they have started to have yearly Supplier Awards and give recognition to the most sustainable and innovative suppliers. This aims to motivate the supplier base to follow the company's requirements and improve their performance. In addition, company B has an online learning center for suppliers. Company C also provides training and does collaboration with its suppliers and describes that they do development plans together with the suppliers. Supplier development and collaboration require resources, which is noted by the interviewees. Company A states, that they have told the suppliers that they are available if any questions arise but collaboration has not been initiated actively, as it requires resources. In company A, the buyers should discuss

sustainability issues together with suppliers, but it is noted that they also have other topics to discuss in supplier meetings. Company D operates in the forestry industry and points out that the suppliers can get help from other organizations. Meetings are the main way to discuss development actions that arise from monitoring, the case company and company B describe. Providing resources to suppliers in form of personnel is not described by any of the companies, but suppliers are more expected to make the improvements on their own.

*“We do cooperate in development projects, but even though we discuss partnering and partnership, there is a customer-supplier relationship. We are the customer, so we decide where the money goes.”*  
Company B

In addition, interviewees were asked if they have a clear protocol for actions in the case of non-compliance. The case company, company A and C describe that situation is evaluated case-by-case. For the reason that there are so many possible deviations, so it is difficult to define exact rules. Company B states, that because they have a process for supplier management (including RFI) and performance evaluation, they rarely come across non-compliance by surprise. Likewise, the case company notes that if a supplier does not abide by the law and fulfill the minimum requirements, they can't make an offer. However, the case company aims to define more specific rules for the cases, when the supplier does not meet the buyer's targets.

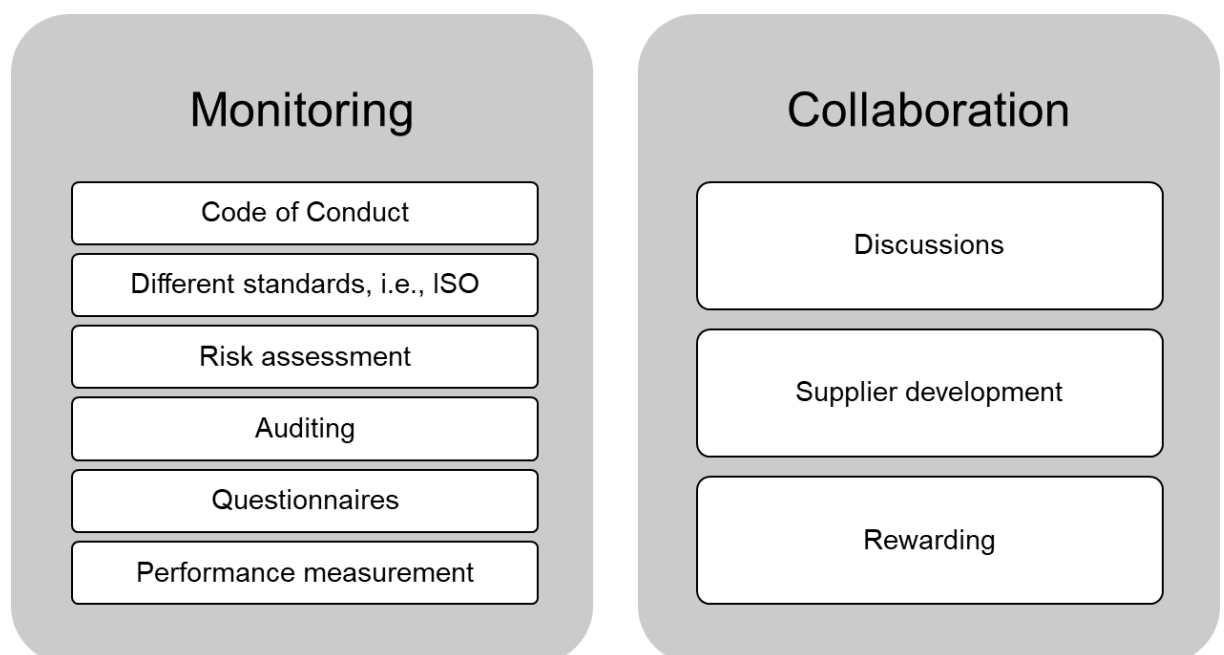


Figure 11. Monitoring and collaborative SSCM practices

The used SSCM practices are presented in figure 11 above. Based on the theoretical background, these are categorized into monitoring and collaborative practices. The practices are sorted in a manner, that the most used are on top of the list.

### 4.3 Challenges in SSCM

The third supporting research question is “*What kind of challenges exist related to the implementation of SSCM practices?*”. During the interview, interviewees were asked if they had come across internal challenges, related to their organization and sustainability management.

The amount of available resources, meaning the personnel, is recognized to be one challenge related to supply chain monitoring and managing. For instance, interviewee A states that their business unit is supported by one buyer, but there could be more employees. However, interviewee B from the case company considered that they get more resources if needed and it is justified. Similarly, the interviewee from company C notes, that asking for more resources (recruiting employees) always has to be well justified. Additionally, Company C states, that it is difficult to acquire good resources. Company A states that currently, they meet the sustainability requirements coming from the markets with minimum resources. Interviewee G was the only, who considered that sustainability did not cause resource problems regarding personnel. Furthermore, in the case company, company B, and company D, interviewees note that requirements (regarding reporting and measuring) are only increasing, which means that the need for resources is also increasing. However, interviewee G states that when requirements increase, they put in extra effort for a while, and then the new practices become everyday life.

*” Of course, there is a certain kind of learning curve, and it adds some amount of bureaucracy in this chain. But in a way, it (sustainability) is an integral part of our operations, so I can’t fathom it in such a way that it would make operating more difficult at the moment.”*

Company D

*“The more it (sustainability) professionalizes, the more it involves the challenge, whether your own competence is enough of, and have the professional staff to do it.”*

Case company

In addition, interviewees recognize that sustainability and supplier management requires time and money. Company B considered that the purchasing organization has to balance between cost pressure and sustainability requirements. This is supported by the buyer working in the case company, who describes that sustainability issues, such as asking suppliers to answer the questionnaires, are just one element of their daily job. So, there is a trade-off, because buyers and supply chain managers primarily focus on ensuring low purchase prices and high quality. When it comes to investing in sustainability, company A notes, that sustainability should be managed cost-effectively, so that the gained value and cost are balanced. Sustainability practices should provide a competitive advantage in the long term, according to Company A.

*“This is a pretty complex entity, there are a lot of things. You can never say that everything is under control, and correctly balanced... It also requires top management to be able to see the big picture. That things are balanced, that sustainability issues and other things are emphasized correctly. From down here, it may be harder to see.”*

Case company

*“Challenge is, in the long run, how we are capable to invest in the right things that are visible enough and provide competitive advantage but save the world for future generations.”*

Company A

An interviewee from the case company suggests, that their goals related to sustainability could be more measurable. As the organization has set a long-term goal for 2035, it would be valuable to set additional short-term goals. Measuring would increase transparency and help to communicate progress internally to employees and other stakeholders. Related to measuring, Company B has KPIs that are used to monitor suppliers. Company B specifies, that indicators are not always that sensitive. More sensitive KPIs could help to recognize problems earlier.

*“Indicators do not tell the whole truth... If the indicator looks bad, then it tells you that there’s something seriously wrong.”*

Company B

Internally, the focus is also needed to improve the flow of information within a company. An interviewee from the case company hopes that flow of information and gathering data needed for reporting is transparent, systematic, and more process-like, which could increase efficiency. Transparency and more systematic processes could make working

clearer and leaner. In addition, if the information is not transparent, specific people hold the information. Interviewee D company A also hopes for a system, where all information could be saved.

*“When we do not have transparency, some things done transparently enough, then they are really dependent on specific people.”*

Case company

When it comes to internal challenges and employees’ professional skills, interviewees B and F describe that level of understanding about sustainability varies throughout the organization. Interviewee D has noticed the same issue, that sustainability views are subjective, even when the company has a yearly online training regarding sustainability. Interviewee B suggests that company could have increase training related to sustainability, for example in the form of online training. Interviewee C also recognizes the need to develop their own professional competence as the requirements increase.

*“Internalizing sustainability, the lower you go in the organization the weaker it is. That you don’t necessarily understand the whole thing; what is being sought, how it influences the firm, and how it affects your own work.”*

Company C

*“For me, certain things are extremely self-evident... If you ask this same question from the employee side, there could be very different answers.”*

Case company

In addition, interviewees were asked to describe, if there are any challenges related to the upstream supply chain. One of the difficulties is the traceability of raw materials. This problem is mentioned by the case company and Company A and C. For example, cotton, silicon, and iron ore are raw materials that are required in companies’ supply chains. However, metal materials have very long supply chains, as they are first mined and then processed. According to interviewees A and D, it is hard to get a certificate for these (metal) materials and have traceability along the supply chain, which has multiple tiers. In practice, the company is aware of the first-tier supplier, but tracing beyond that requires effort. Similarly, company C describes that it is “nearly impossible” to track all suppliers, including the supplier’s sub-suppliers.

*“According to the report, there were international consultants, Gartner and others, who discovered the situation is that silicon is ordered from here and there, that everyone is ordering from here and there. It's very difficult to get that kind of certification. Even when the suppliers claim that things are fine... tracing raw material chains (is difficult).”*

Case company

Company A states, that the supply chains are very complex, and it is difficult to gather all the information related to sustainability, have the information saved and keep up to date. For example, in Company A the products are installed from many components, i.e. small screws, which makes it difficult to have traceability on every part of one product. Updating the information is described to be laborious, and IT systems should support it. Similarly, company C thinks that having a database that would include suppliers and their suppliers would be very difficult to update.

The case company and other companies, such as Company A, note, that when suppliers are asked to comply with the company's Code of Conduct, they are not able to monitor every supplier and verify that all suppliers act responsibly. This applies especially in the offer request phase, where suppliers often tick a box that they accept the terms of Code of Conduct. Therefore, Code of Conduct is complemented with other monitoring methods, such as questionnaires. However, the case company and company A do recognize that even sending out sustainability questionnaires is not enough to monitor suppliers.

*“One can be dishonest and answer cleverly (to questionnaires). Which why we need to have other tools, such as auditing, to verify that everything is ok.”*

Case company

Moreover, monitoring problems include auditing problems. The number of auditing is somewhat restricted, as it requires resources and staff to visit the supplier's site. Covid-19 pandemic is recognized to decrease auditing significantly in all companies. According to the interviewee from company A, if the supplier is located, for example, in China, it makes monitoring more challenging due to distance, because someone has to visit on-site. An interviewee from the case company also mentions, that to discuss sustainability issues with non-local suppliers, they need language skills and an understanding of the culture. Hence, organizations use third parties to support auditing.



*“You have to note that suppliers are far away, so you can’t audit them on the spot. There is an intention to audit, but in practice, we don’t, at least not in my area. Then it rests on the fact that we have made a contract and we trust that suppliers comply.”*

Case company

Related to supplier challenges, Company B describes that they set the same sustainability requirements for SME suppliers, and notices that suppliers do not have the same resources as bigger companies. Interviewee from company B states that the requirements should sometimes be set according to the local circumstances and “reality”. It can be understood that Western standards are rather high, and suppliers have difficulties in meeting them. Similarly, the case company and company C recognize that smaller suppliers are capable to follow the legislation and fulfill those requirements, but do not have the resources to do more than that. Company B suggests that the demand level should grow at the same pace as the company grows, however they have not adjusted their requirements so far.

Furthermore, the leverage in the buyer-supplier relationship is also one factor, that affects how buying company can influence its suppliers. Company A recognizes, that if they do not purchase high volumes, the supplier might not be interested to communicate or discuss sustainability issues. For example, suppliers do not want to fill sustainability questionnaires all the time. On the other hand, Company B notes that as they are a big multinational company and spend millions on purchases, they have the leverage to make the rules. However, Company B has recognized that existing suppliers are not always willing to change their old practices and make investments to meet growing requirements. The demands and leverage have to be evaluated case-by-case. Company C also describes its strategy and states that suppliers should be chosen to fit the company’s size. If the company is a significant customer, they can influence the supplier and collaborate.

Customers are also recognized to have a role when it comes to making sustainability efforts. Interviewees from the case company and company A state that customers make purchasing decisions largely based on price. This is contradictory, as sustainability efforts do require resources and they should be included in the price of a product.

*“Essentially, customers decide where and what issues companies stress. If we have a target to purchase from a short supply chain, but the customer base just wants cheap products. It makes our targets disappear rather quickly. And then we buy the component from China, even when we would like to buy local to have better supply chain transparency”*

Company A

*“We have these issues in order, so I hope that the whole industry will go in that direction and appreciate it (sustainability) more. Now, often, customers make the decision based on the cheapest price.”*

Case company

*“The biggest challenge is, that sustainability and sustainability monitoring don’t come for free. One can’t get a higher price for the product, which makes it an impossible equation.”*

Company A

Lastly, one of the questions was what organizations do when suppliers are found out to be non-compliant. Company A states, that monitoring a supplier that is far away is more difficult. In addition, if the company chose to end the relationship, it is very difficult to find a replacement supplier. So, finding a new supplier, ensuring the quality, and setting up logistics takes time, and it is also very costly. This was one of the challenges, that came up in the interviews.

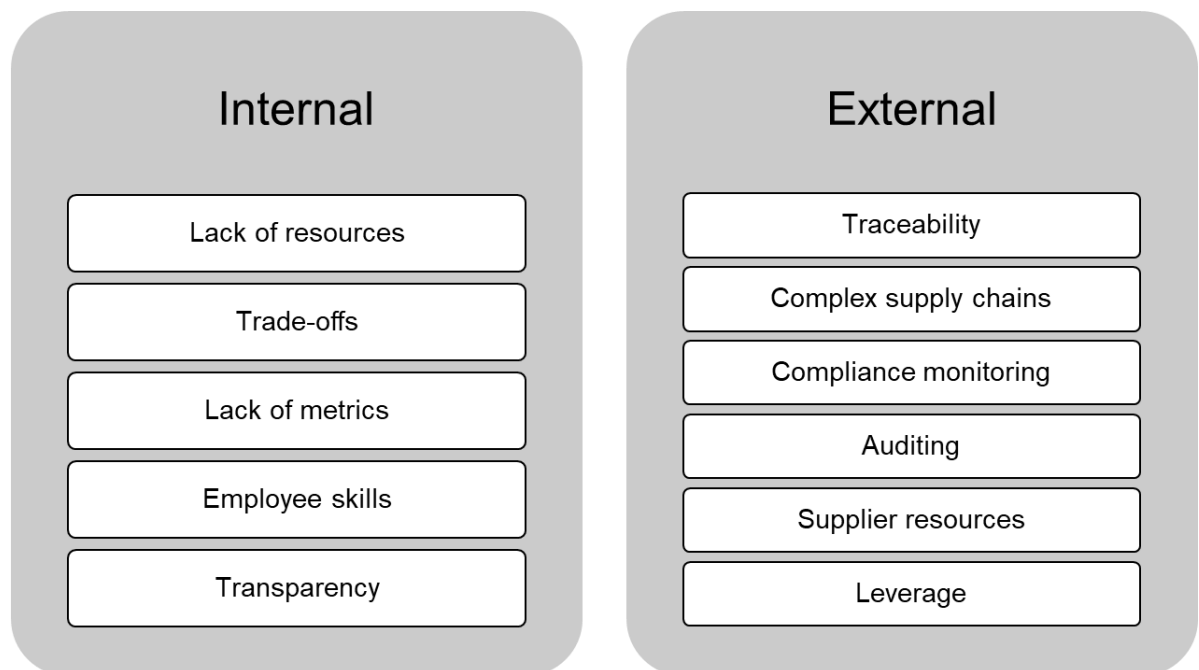


Figure 12. Internal and external challenges

The challenges of SSCM recognized through the interviews are described in the Figure 12 above. The challenges were categorized into both internal and external challenges.

## 5 DISCUSSION AND CONCLUSIONS

### 5.1 Summary of the findings

This chapter concludes the main findings, combining both the theory and the results from the empirical part. The objective of this research is to find out how organizations manage and monitor their upstream supply chain's sustainability. Accordingly, the main research question is formulated as "***How sustainability of the suppliers can be monitored and managed to ensure the sustainability of the supply chain?***". Three supporting research questions were formulated to answer the main objective and to understand the studied phenomena more in-depth. The first supporting research question is discussed below.

#### ***What are the drivers and motives for sustainable supply chain management?***

Many similar drivers for sustainable supply chain management can be identified from the literature review and the empirical part of this study. According to the previous research on SSCM drivers, legislation is a large driver for companies to consider sustainability (Seuring & Müller 2008; Walker et al. 2008; Giunipero et al. 2012). According to Seuring and Müller (2008), responding to legal demands is in fact the most important factor to consider SSCM, and the results of the empirical part also support the statement. For example, the case company operates in the energy sector and thus must adapt to the decisions made on the EU level (i.e. Paris Agreement). The energy sector is a big producer of CO<sub>2</sub> emissions, and Government policies are a big reason for the case company to develop new supply chain management practices to decrease its environmental impact. Moreover, as the case company's business environment is regulated, they have to follow EU legislation concerning public procurement and consider environmental and social dimensions in tendering. However, other organizations are similarly required to follow national laws, which are recognized to set the basis for the sustainable supply chain management. In addition, interviewed companies note that the requirements are getting only stricter over time. Two of the companies did mention the role of EU's taxonomy and directives, and as Sajjad et al. (2015) note, grants, fiscal measures, and direct regulations are mechanisms that drive to adopt SSCM.

Stakeholder pressure is also highlighted in the earlier studies concerning SSCM drivers (Rao & Holt 2005; Walker et al. 2008; Morali & Searcy 2013). This is also supported by the empirical study; stakeholder pressure was recognized as an important driver for the companies. Stakeholders include many groups, such as customers, local communities, competitors and NGOs. Sustainability has notably increased its significance, particularly during the past ten years. Four of the interviewees mentioned the role of corporate customers as stakeholders, as they are regularly audited or monitored by their partners. According to Ciliberti et al. (2008), especially SMEs are pressured by their large customers to develop SSCM practices. The results indicate, that larger and smaller companies get audited by their customers equally, and thus organizations need to monitor their upstream supply chains. On the other hand, the case company recognizes, that is more likely to be targeted by stakeholders as they have a significant role in the city and at a societal level. Similarly, company B noticed that company will likely end up in the news if they make mistakes. The case company, companies B and C are larger by revenue, and as Paulraj et al. (2017) note, those are more likely to be targeted by stakeholders.

Moreover, sustainability can be part of a company's strategy (Carter & Rogers 2008). Based on the empirical study and literature review, organizations can do more than requested by legislation and utilize their efforts, for example, in marketing. According to Porter and Kramer (2011), companies can innovate new technologies or operating methods, as they consider sustainability, leading to differentiation from competitors. Therefore, considering social initiatives is important due to its impact on the company's reputation and potentially its impact on the company's sales (Gimenez et al. 2012). In the empirical findings, the case company, companies A and C believe that they can utilize sustainability practices for differentiation, to gain competitive advantage. For example, the case company states that they compete with quality rather than price. However, companies B and D did not mention the competitive edge, that could be provided by sustainable activities. It can be hypothesized, if sustainability operations are already considered as a standard in the whole industry. Internally, top management support is needed to develop a strategy and to invest resources in sustainable initiatives (Zhu & Sarkis 2004; Miemczyk & Luzzini 2019). This was also recognized in the study. As top management support exists, sustainability is included in the company's activities inherently and over time, it can become a core value.

Sustainable business practices are also important from the risk management perspective (Carter & Rogers 2008; Hofmann et al. 2014). Recognizing sustainability-related risks and managing the supply chain effectively can protect the focal company from potential

damages, more specifically from stakeholder reactions (Hofmann et al. 2014). This calls for that the buying firms need to recognize these potential risks in their supply chain. As Hofmann et al. (2014, 167) suggest, more attention should be paid to sustainability-related supply chain risks, as stakeholders react strongly if issues emerge. Thus, supply chain monitoring and collaborative practices are important. In the empirical study, the case company and company B noted, that they are likely to be on the news, if misconducts happen. This implies, that some of the companies recognize the importance of sustainability also from a risk management perspective.

In contrast to the earlier research, none of the interviewees mentioned increased operational efficiency as a motive for sustainability practices. Many earlier studies have identified a link between environmental supply chain practices and operational performance (Zhu & Sarkis 2004; Vachon & Klassen 2006), thus it is justifiable for organizations to dedicate resources to green initiatives. For example, green supply chain management enhances environmental performance, reduces waste and creates cost savings (Rao & Holt 2005). Gimenez et al. (2012) studied the relationship between internal and external initiatives and triple bottom line performance. Environmental programs, i.e. Code of Conducts and collaboration can have a positive impact on environmental, economic and social performance. Environmental practices also improve working conditions by decreasing pollution, which can improve the local community's quality of life. While social programs do contribute to social and environmental benefits, they might create costs at least from the short-term perspective. Nevertheless, considering social initiatives is important due to the impact on the company's reputation and potentially the impact on the company's sales. (Gimenez et al. 2012) Improved working conditions affect employees' satisfaction and motivation, leading to increased operational performance (Pagell & Gobeli 2009). However, interviewees did not mention these operational and financial benefits recognized from the literature as drivers. This might be because, as Pullman et al. (2009, 47) state, that the effects of environmental and social practices can be indirect, making it difficult to measure and evaluate the impact on firm performance.

### ***What kind of SSCM practices are used to assess and manage the supplier base?***

Throughout this research it was recognized, that SSCM practices can be categorized into two types of management styles, monitoring and collaboration (Rao & Holt 2005; Vachon & Klassen 2006; Meqdadi et al. 2020). According to the empirical study, interviewed Finnish organizations emphasize the monitoring approach in SSCM. The monitoring approach

includes selecting sustainable suppliers (Hollos et al. 2012), evaluation of supplier's performance (Vanchon & Klassen 2006), and controlling supplier's sustainability performance (Meqdadi et al. 2020), and these methods were also recognized in the empirical study.

All the interviewed organizations had a Code of Conduct, that guides both buying company's and supplier's behavior. Similarly, Hoejmose and Adrien-Kirby (2012, 236), state that the Code of Conduct is the most used tool to extend sustainability values in buyer-supplier relationships. More so, Code of Conduct is used to communicate expectations. However, organizations use the Code of Conduct differently. Some interviewed companies ask suppliers to sign them, and other companies expect suppliers to read them and approve them. In the study, it can be recognized that compliance with Code of Conducts is not always verified. Pedersen and Andersen (2006) similarly note, that Code of Conduct does lack agency and commitment, which ultimately decreases its efficiency.

Organizations can also set other sustainability-related standards and certificates as criteria for suppliers. However, as the empirical study included companies from various industries, it was difficult to identify exact standards and certificates that are expected from suppliers. According to the literature review, ISO 14001 is the most used environmental management system (De Jong et al. 2014). The result of the study show, that companies value ISO management systems, such as 14001 or 9001, but seldom require it from suppliers. However, if suppliers have ISO certification, it assures the buyer that the supplier has a good foundation for sustainability practices. Because the certification is verified by an independent, third-party organization, it increases credibility and trust (Sartor 2016; Székely & Knirsch 2005). However, rather surprisingly, companies did not name specific standards as compulsory. Speculatively, if the study would focus on one industry, perhaps more specific standards and certifications could be recognized.

In addition, Morali and Searcy (2013) describe, that monitoring practices are mainly focusing on first-tier suppliers, and the results are in line with the earlier research. Based on the empirical findings, companies include conditions in contracts or Code of Conducts, that suppliers should monitor their sub-suppliers. Thus, the supplier has the obligation to monitor their supply chains and this is trusted. This is an interesting finding, that most companies do not monitor their second- or third-tier suppliers, and at least, meticulously. Consequently, organizations need to have other tools than the Code of Conduct to support monitoring. For instance, buying companies can ask suppliers to fill questionnaires. The

results demonstrate that companies use questionnaires to serve different purposes and at different stages of the buyer-supplier relationship. For example, in the case company, a questionnaire is used as a risk management tool, which initiates further development actions, as UN Global Compact & BSR (2015) propose. In company A, a questionnaire is used to communicate buyer's expectations to suppliers and to make sure that suppliers understand them. In company B, a questionnaire is used as a gatekeeper at the offer phase, like Foerstl. et al. (2010) suggest. However, it appears that if the buyer only relies on results collected by questionnaires or signing a Code of Conduct, there is a possibility that suppliers are not trustworthy.

Auditing is largely used to monitor risky suppliers, which is noted in many earlier studies (Gould 2005; Jiang 2009) and in the empirical study. All the interviewed companies audit themselves or have third parties to audit for them. However, it was noticed that usually, supplier on-site audits combine both quality and sustainability issues, rather than focusing on sustainability. The interesting novel finding in this study was, that during the past year and a half, auditing has decreased significantly due to the Covid-19 pandemic. The long-term effect of decreased monitoring can be only speculated at this time. Moreover, some of the interviewed companies note, that they do not do enough auditing considering the size of their supply network. Nevertheless, it is not necessary or possible to audit every supplier, but it is important to recognize the ones that require more attention. Companies also describe the reasons, that initiate audits. In conclusion, companies do auditing based on risk assessment, which is an important tool to evaluate the supply base. Similarly, Foerstl et al. (2010) state that in the case of critical suppliers, audits should be conducted. In practice, companies evaluate the risks in their supplier base by using corresponding criteria, as Foerstl et al. (2010) names. According to the empirical study, the criteria that initiate auditing are, for example, suppliers' location and type of business. Certain suppliers, those who provide high-risk minerals and those who are located, for instance, in Asia, are considered to require more monitoring, whereas suppliers from Finland are considered to be less risky and to require less monitoring. Like Hajmohammad and Vachon (2016, 58), state that in the case of low-perceived risks, a monitoring approach might be sufficient, but in high-risk situations, a collaborative approach should be perceived.

Based on the theoretical background of this study, collaboration was recognized as an important tool, which improves supplier's social and environmental performance (Sancha et al. 2016; Gimenez et al. 2012). Monitoring is not the best method to identify the root causes behind problems (UN Global Compact & BSR 2015, 47). Sancha et al. (2019, 3)

discuss that if the buying firm takes the approach of supplier assessment, they expect the suppliers to meet the set criteria and make the efforts to fill the requirement. Sancha et al. (2019) state that if the buying company is making the supplier pay for the efforts, it can negatively affect the supplier's performance. Therefore, as Jiang (2009) proposed, the focal companies are required to train their suppliers in order to meet the goals. Gould (2005, 29) suggests cooperative methods to support or replace auditing, for example, workshops and training, in-factory consulting, project work, distance consulting and providing manuals. Monitoring strategies, such as third-party auditing or signing a Code of Conduct, require little interaction between the buyer and supplier organization. Therefore, the buyer organization is not able to influence the mindset of the supplier in order to change the attitude towards sustainability. (Meqdadi et al. 2020, 742.) Based on the literature review it seems, that supplier collaboration and mentoring are the best strategies in order to increase supplier capabilities. However, monitoring is required to implement collaborative practices, as assessment practices, such as questionnaires and audits help to identify improvement areas (Tachizawa et al. 2015; Sancha et al. 2016). In conclusion, to achieve the best results, the buying organization can use assessment and collaboration strategies as complementary practices, as suggested by Lee and Klassen (2008) and Meqdadi et al. (2020).

This study provided information, whether Finnish companies harness collaboration and supplier development as a sustainable supply chain management practice. Based on the interviews, only companies B and C already provide training for the suppliers to increase their sustainability performance. Company B also has annual Supplier Awards and recognizes suppliers based on sustainability and innovation. In other organizations, sustainability-related issues are usually discussed in meetings – when making a contract, or if problems arise through questionnaires, or during audits. Interestingly, one interviewee from the case company recognized that they can also learn something from their suppliers, who might be pioneers in sustainability management. Therefore, as Touboulis and Walker (2015, 186) suggest, more effort should be put into two-way communication and information sharing. This also helps to motivate the supplier in sustainability investments. Moreover, communication helps to transfer knowledge and increases inter-organizational learning, which can lead to inter-firm competitive advantage (Gold et al. 2010, 233). Partnerships, deeper engagement, and open communication are needed for continuous improvement (UN Global Compact & BSR 2015, 47).



Based on the empirical study, appropriate preparation; including sustainability criteria already at the offer phase seems to protect companies from adding riskier suppliers to their supply bases. In the case company, tendering does disqualify the suppliers that do not meet the minimum requirements. Companies B and C send out the RFI before offer requests, where they similarly recognize suitable suppliers. These companies also describe that because of the process, they rarely come across bigger surprises. This was an aspect, that was not considered during the planning of the research but came up during the interviews as an practical SSCM practice.

***What kind of challenges exist related to the implementation of SSCM practices?***

The objective of the third research question is to explain, what kind of challenges organizations come across, as they aim to be sustainable and manage their supply chains accordingly. Through the literature review and empirical research, we can identify both internal and external barriers. In the empirical study, many of the challenges were in line with the earlier research.

There are many reasons, why companies are not able to manage supply chain sustainability efficiently. One of the biggest challenges recognized from the empirical study was, that organizations lack resources to truly monitor and manage the sustainability of their suppliers. As Morali and Searcy (2013) note, sustainable supply chain management requires resources, more specifically, time, people and financial investments. This is revealed to be one of the biggest barriers to implement SSCM. Only one of the companies in the empirical study considered, that they had no resource problems to answer to increasing sustainability requirements.

Yet, supply chain managers primarily need to make sure, that purchases are cost-efficient (van Weele 2014), that goods arrive on time and meet the quality requirements (Mentzer et al. 2001). During the interviews, one of the interviewees described that supplier monitoring is done alongside other job tasks. Giunipero et al. (2012) and Preuss and Walker (2011) similarly note the conflict between cost reductions and increasing sustainability. Vachon and Klassen (2006, 801) estimated earlier, that the environmental criteria and goals will not surpass the primary operational performance criteria of SCM, i.e., cost, quality and delivery accuracy, which seems to be true. One of the interviewees stated, that sustainability efforts should bring some value to the company. To make sure that sustainability values are considered in SCM, Krause et al. (2009) state, that sustainability and innovation should be

included as similar purchasing criteria as the traditional cost, quality, delivery time and flexibility components. When it comes to balancing costs, earlier research has discussed the economic benefits which are a result of environmental purchasing (Lo & Sheu 2007). At this point, it is important for the buying companies to evaluate the life-cycle costs of purchased products and services, as Linton et al. (2007) propose.

Moreover, based on the empirical study, companies do not necessarily recognize the benefits that they can acquire in the short or long term from sustainability practices. This could be explained by lacking measurement, which can be observed in the empirical study. As Székely & Knirsch (2005) argue, indicators are important to set targets and measure progress. Van Weele (2014, 316) suggests following the number of audits and how many of the suppliers sign the Code of Conduct. Measuring and reporting are needed in both strategic and operative management level, so sustainable management can be further developed (Juutinen 2016). Székely & Knirsch (2005, 630) state that sustainable business is not a one-time management decision but requires continuous assessment. Thus, companies could benefit from developing KPIs that are related to sustainable development and supply base's sustainability and revise them regularly. The progress can be then communicated internally, but also used in supplier discussions.

The study also provides evidence, that capabilities related to sustainability management are needed to implement sustainability practices. This was mentioned by a few of the interviewees, for instance, currently the understanding of sustainability differs in the organizations. Earlier research indicated that suppliers need to have capabilities to implement sustainability practices, but, similarly, top management support is needed to develop the same capabilities internally (Lee & Klassen 2008). Thus, it can be concluded that employees also need to have the training to include sustainability values in their daily tasks, and the lack of capabilities can hinder effective SSCM.

In addition to internal challenges, companies have challenges monitoring their upstream supply chains to ensure supplier compliance. As Pedersen & Andersen (2006, 237) state, it is difficult for organizations to monitor supplier's compliance, if they are located geographically or culturally far away. This was also observed in the empirical study. Nowadays, the supply chains are complex, which makes it difficult to have traceability. Companies demand the suppliers to diffuse sustainability to upstream supply chain, but buying organizations do recognize, that they cannot trust their suppliers blindly. Some of the interviewees describe that suppliers can be dishonest when they answer sustainability

surveys or sign a Code of Conduct. Thus, setting requirements through contracts and monitoring supplier performance with questionnaires is not enough. As Gould (2005) and Jiang (2009) suggest, buying companies have to complement Codes of Conduct with other tools, such as auditing. However, in practice, auditing is not something that is done every day as it does require resources. This is also noted by Morali and Searcy (2013). To conclude, the amount of auditing is not very high, as the riskier suppliers are located far away, and as a result, monitoring requires resources.

Additionally, this study provided more evidence, that smaller suppliers have difficulties in developing the sustainability practices that the buyers require. Similar difficulties have been mentioned by earlier research (Touboulic & Walker 2015; Lee & Klassen 2008). As discussed earlier in the literature review, with supplier cooperation both the buying and supplier organization can improve performance (Sancha et al. 2019). Jiang (2009) suggests, that buying organizations should understand the pressure they set for the suppliers and therefore provide assistance in meeting them. Collaboration also helps to diffuse sustainability to suppliers' sub-suppliers (Meqdadi et al. 2020). Therefore, it is proposed that companies should collaborate with their suppliers to improve the sustainability performance. However, this study indicates, that most of the interviewed Finnish organizations do not truly collaborate with their suppliers to develop sustainability performance. Only two organizations, which are the largest companies, seem to provide training for suppliers. Only one of the companies, one with most international operations, is awarding suppliers based on sustainability performance.

According to the empirical study, the focal company's size and purchasing volumes also impact, if the buyer can demand sustainability from their suppliers. During the interviews, it was discussed whether suppliers are interested in the sustainability initiatives and willing to invest in development. As a consequence, three of the interviewed companies highlighted the role of leverage. The leverage was not considered as a barrier of SSCM before the empirical study, so it came up as a surprise to the researcher. However, Krause & Ellram (1997a, 29) state that companies buying a large percentage of supplier's annual sales have better negotiation power for development initiatives, as they are an important customer to their supplier, supporting the empirical findings.

## 5.2 Recommendations for case company

This chapter describes the managerial recommendations made to the case company, based on the theoretical background and empirical results. This research aimed to explain, how different organizations monitor and manage the sustainability of their supplier. Moreover, the case company was interested in sustainability assessment criteria, that are applied in benchmarked companies. The case company was also interested, how companies utilize these evaluation criteria: what actions are made if a supplier is not as sustainable as preferred?

Based on the empirical study, the most sustainability-related indicators, that initiate further actions, such as auditing, are similar to traditional risk management criteria. Interviewed organizations evaluate, for example;

- supplier's country of origin (Amfori's or World Banks country risk)
- type of provided goods (conflict minerals, other raw materials e.g. cotton, fuels)
- significance to their business
- existing certificates,

as they assess the risk level of suppliers.

Moreover, the following sustainability-related supply chain risks were identified from the literature:

- production process (input; labour intensity or chemical use, or outputs; emissions)
- corruption and otherwise questionable connections to individuals or firms
- past performance (Foerstl et al. 2010; Hofmann et al. 2014).

These criteria could be something, that alert the buyers in the case company to scrutinize the supplier. Mostly, according to the empirical part of this study, the decisions to collaborate with suppliers, initiate supplier development, or withdraw from the contract are made case-by-case. For example, company A has not decided what deviations initiate actions. Based on the previously mentioned factors, the case company should define what are those criteria, that are considered as compulsory. As Hofmann et al. (2014) argue, it is also valuable to include stakeholders in the process, when evaluating the most important risks.

However, the information gained from the interviews and identified assessment criteria is rather generic, and some are suitable only in the case of interviewed company and their

business. Therefore, based on the empirical results, it is difficult to make suggestions about precise indicators, that could be applied in the case company as such. The next process is proposed for the organization and its sourcing department, as the case company should start defining metrics, based on its sustainability targets and industry expectations. After that, it should be in a written form and discussed within the organization. Criteria do not have to be fixed, but the company should re-evaluate them and refine them after some progress. After the indicators are defined, they need to be applied in supplier evaluation, for example, included in tendering or in the sustainability questionnaire. When suppliers are not performing well, the company should take action, through auditing or conversations with the suppliers. Most importantly, if some development actions are agreed upon, the company should follow supplier compliance. The case company has already recognized that they should increase sustainability-related auditing in the future. When quality-focused audits are conducted, sustainability issues should be included and talked about.

Moreover, it was recognized in the empirical study, that some organizations have defined a supplier management process, which includes the sustainability dimension. This is also recommended for the case company. The process presented next is adapted from UN Global Compact and BSR's (2015) guidelines for supply chain sustainability and continuous improvement. The steps that buying companies should take to engage suppliers with sustainability improvement are presented in Figure 11 below. The objective of the process is to influence supplier's mindset regarding sustainability and increase supplier's accountability and ownership.

The first step of the process includes developing a Code of Conduct and communicating expectations to suppliers (UN Global Compact & BSR 2015, 37), which the case company currently does. Verifying that the supplier has read the Code of Conduct and approves it, could be done, for instance, every second year, not only at the beginning of the relationship. Moreover, benchmarks regarding performance level can be agreed at this stage. The second step comprises the risk assessment process; organizations should evaluate the likelihood and impact of risks in their supply base. The case organization does use a questionnaire to identify supplier-specific risks, however, it is also necessary to have a lighter tool to evaluate the whole supply base. The next step includes assessing supplier's performance, by using auditing, self-assessments, and other monitoring methods based on the needs. Following that, remediation includes cooperation with suppliers to discuss the identified problems and defining a roadmap together to improve performance. After that, performance can be improved in collaboration with the suppliers. This could be achieved by

investing in training, and building supplier's capabilities, for example, through workshops, consultation, and increased communication. Finally, improvements should be evaluated, and results should be utilized for continuous improvement and redefining new targets. (UN Global Compact & BSR 2015, 37.)

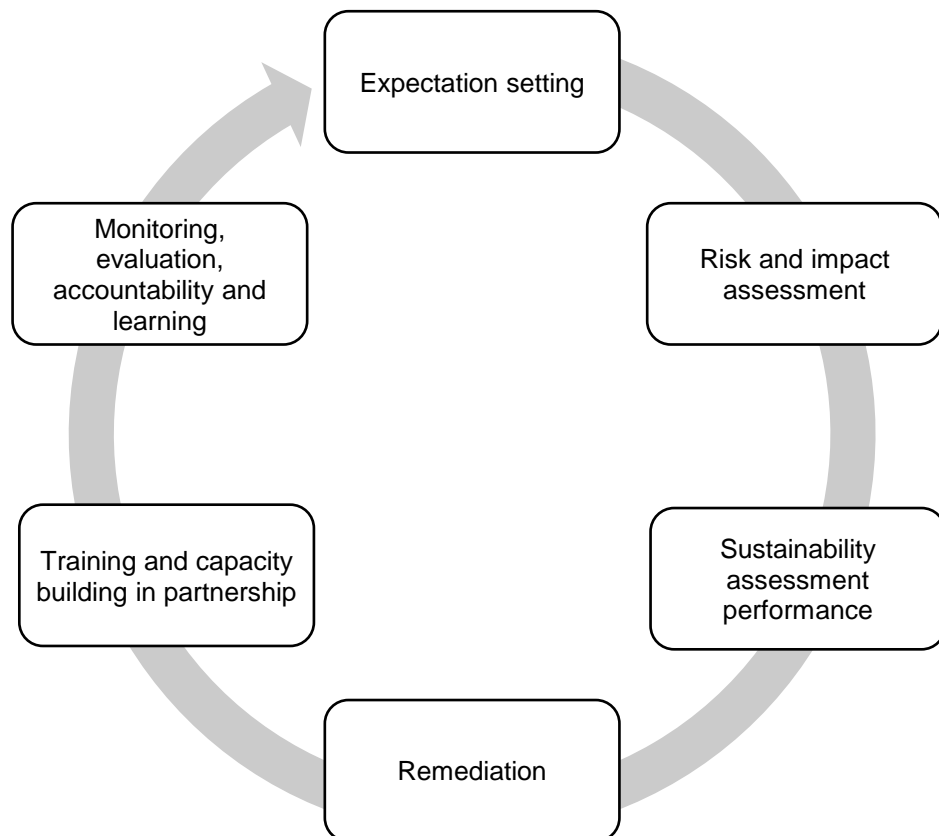


Figure 11. Supplier engagement and continuous improvement (UN Global Compact & BSR 2015, 37)

Furthermore, based on the study it can be deduced, that a well-defined RFI protects the company from adding riskier suppliers to the supply base. Therefore, some managerial implications are suggested. The case company could consider whether more sustainability-related criteria can be added to tendering. In addition, previous research emphasizes the importance of supply chain collaboration and supplier development to achieve a sustainable supply chain. If the organization has neglected this approach and focused more on assessment practices, it should reconsider its supplier management style. Reward suppliers based on sustainability and innovation performance is an approach to consider in the future. It is also important to continuously update employee's skills, as the requirements to include sustainability aspects in decision-making increase.

### 5.3 Conclusions

This study contributes to the existing research by providing more understanding about sustainable supply chain management practices. More specifically, this study focuses on practices that are used to monitor and manage upstream supply chains. Moreover, it also aimed to understand the reasons behind sustainability activities. In summary, considering the upstream supply chain is vital for companies. The supply network plays a significant role in the company's success, as many of the value-adding stages are outsourced to suppliers. Furthermore, if the supply chain is non-ethical, it poses a significant risk to the focal company, which is most often held responsible by stakeholders (i.e. customers, NGOs, local communities). Other significant benefits of sustainability practices, such as the impact on operational performance, were recognized in the literature review. For larger companies, it is especially important to be sustainable, as they are more likely to be targeted by stakeholders. However, it is important for both MNCs and SMEs to implement sustainable supply chain management (SSCM) practices, as they are often audited by their customers. Finnish organizations do recognize the importance of sustainability, and that the requirements are only increasing, through legislative decisions and stakeholder pressure.

Organizations need to adopt different kinds of tools to manage and monitor the sustainability of their suppliers. The SSCM tools include a Code of Conduct, social and environmental standards, sustainability questionnaires, risk assessment, developing KPIs, and auditing. These tools are also utilized in the companies included in this research. However, the empirical study recognized that companies use these tools differently and many could improve and increase their monitoring practices. In addition, earlier research indicates that monitoring practices are not enough to improve supplier's social or environmental performance. Thus, buying organizations should also collaborate with their suppliers and engage in supplier development activities to increase suppliers' capabilities. In the empirical part of the research, it was recognized that only the larger organizations truly collaborate with the suppliers and invest in supplier development, such as in training, to increase supplier capabilities. At the start, it suggested that organizations emphasize sustainability issues more in discussions and audits. To conclude, through this research, organizations can gain new ideas, how they could improve their upstream supply chain management and incorporate sustainability values into it.

#### **5.4 Limitations and suggestions for further research**

To clarify the limitations concerning this study, the answers of the empirical study represent only the interviewed companies and the sample is limited to five different organizations, which operate in different industries. In order to gain more knowledge about SSCM and monitoring and collaborative practices in Finnish companies, more companies and respondents could be included in the research. The study also tries to answer, what are the drivers and motives of corporate sustainability and monitoring the supply chain. The drivers of sustainable business practices can vary in different industries, as noticed in the empirical study, which can make it more difficult to make interpretations. For example, this empirical research included companies that have corporate customers. Therefore, the results of the study could be different, if interviewed companies would target their products and services only to consumers. It was also studied, what are the barriers of sustainable supply chain management. Two of the interviewed companies have been awarded for their sustainability reporting, and the companies that are not recognized to be sustainability pioneers can be in different stages of transitioning their business to become more sustainable, thus experiencing different challenges. Consequently, the results should not be generalized to all Finnish companies. Moreover, in order to gain comprehensive knowledge about specific industry, the study could have focused exclusively on companies operating in the energy sector.

There are several possible directions for future research to gather more in-depth information about SSCM practices, and how organizations monitor their suppliers or collaborate with them. One interesting topic to study would be tendering and private companies purchasing processes, to understand the role of sustainable supplier criteria already at the beginning of the relationship. It is also valuable to understand the differences between public and private organizations regarding SSCM. In addition, the empirical study showed that the organizations manage their supply chains differently and have dedicated different amounts of resources to sustainable supply chain management. Therefore, it would be interesting to focus the study on “best of the best”, who have been recognized to be forerunners in sustainable supply chain management. Research could also focus solely on MNCs, who are recognized, in this research, to have more defined SCM processes. In the future, it is also important to study the practices which companies employ to monitor second-tier or third-tier suppliers.



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## Appendix 1. List of interview questions in Finnish

### **Esimerkkejä kysymyksistä**

1. Kertoisitko itsestäsi?

(roolisi yrityksessä, organisaatiosi, kuinka kauan kyseisessä yrityksessä, alaiset)

2. Millainen rooli vastuullisuudella on yrityksessänne tai omassa yksikössäsi? Miten se näkyy?

3. Minkä takia uskot, että näin on? Onko vastuullisuuden rooli muuttunut viime vuosina?

4. Miten vastuullisuus näkyy omassa työssäsi?

5. Minkälaisia vastuullisuuskriteerejä asetatte toimittajillenne? (standardit, sertifikaatit, sopimuslausekkeet, Code of Conduct)

6. Kuinka toimittajien vastuullisuus käytännössä varmistetaan?

7. Keskityttekö vastuullisuuden seurannassa ensimmäisen asteen toimittajiin vai seuraatteko toimitusketjua pidemmälle?

8. Millä aikavälillä toimittajien vastuullisuutta seurataan? Koetko seurantavälin riittäväksi?

9. Kuinka toimitte, jos monitoroinnin kautta ilmenee, että toimittaja ei täytä asettamianne vastuullisuuskriteerejä? Missä vaiheessa haasteet tunnistetaan?

10. Oletteko luopuneet toimittajista epäkohtien perusteella?

11. Teettekö toimittajien kanssa yhteistyötä vastuullisuuden toiminnan kehittämiseen liittyen? Jos kyllä, miten?

12. Liittyykö toimittajien vastuullisuuden seurantaan ja johtamiseen haasteita?