Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

Department of Economics

Dynamic capabilities in sustainable supply chain management
- a multiple case study of small and medium-sized enterprises in the apparel sector

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Master's thesis • 30 credits

Agricultural programme – Economics and Management

Degree project /SLU, Department of Economics, 1218 • ISSN 1401-4084

Uppsala, Sweden 2019

Dynamic capabilities in sustainable supply chain management - a multiple case study of small and medium-sized enterprises in the apparel sector

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Credits: 30 credits
Level: A2E
Course title: Master thesis in Business Administration
Course code: EX0904
Programme/Education: Agricultural programme**-** Economics and Managment
Course coordinating department: Department of Economics

Place of publication: Uppsala
Year of publication: 2019
Name of Series: Degree project/SLU, Department of Economics
Part number: 1218
ISSN: 1401-4084
Online publication: http://stud.epsilon.slu.se

Keywords: dynamic capabilities, sustainable supply chain management, apparel sector, SME

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Abstract

This study provides a better understanding of how Small and Medium-Sized Enterprises (SMEs) in the apparel sector, manage their suppliers and what dynamic capabilities that might be of importance. The topic can be empirically relevant for policy makers and managers in the private and public sector in order to understand how companies manage their supply chain in a changing business environment in general and develop insights for SMEs' Sustainable Supply Chain Management (SSCM) practices and dynamic capabilities in the apparel sector in particular. Concluding this study, it can be argued that SSCM practices and dynamic capabilities can be important for SMEs in the apparel sector.

Dynamic capabilities play a central role in maintaining competitiveness and working successfully with SSCM in changing market environments. Although companies have started to implement more SSCM practices, it is not significant in SMEs. Despite the fact that SMEs in the apparel sector are facing the same dynamic market challenges of increased competition, stakeholder pressure and changing business environments as large companies, they have different capabilities to implement SSCM practices.

The aim of this study is to identify SMEs' practices in the apparel sector for sustainable supply chain management and analyze their relation to dynamic capabilities. By using a qualitative approach based on semi-structured interviews, a multiple case study was conducted on three Swedish SMEs in the apparel industry. By applying both within and cross-case analysis, the study provides a deeper contextual understanding of the phenomena of SSCM practices and its relationship to dynamic capabilities for SMEs in the apparel sector.

Acknowledgement

While conducting this thesis, I have received great support from people contributing in different ways with valuable input, experience and time. Without them, this study would have been impossible to conduct.

First and foremost, I want to thank the participants of my study consisting of representatives from Tierra, Houdini and Sandryds. Thank you for taking the time and for generously sharing knowledge and insights about sustainable supply chain management from the perspective of small actors in the apparel sector.

I also want to thank Maria Karlsson at MKA Hållbarhet especially for initial idea and brainstorming during the early stages of my thesis project and continuously support along the way. Furthermore, I want to thank my supervisor Dr. Per-Anders Langendahl at the department of Economics at Swedish University of Agricultural Sciences, for helping me out along the way by providing input, interesting insights and steering my master thesis in the right direction.

Lastly but not least, I want to thank my friends and study companions at Swedish University of Agricultural Sciences in Uppsala. You have been invaluable in the daily work by providing feedback, meaningful discussions and insightful coffee breaks along the way.

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Abbreviations

BSCI: Business Social Compliance Initiative
CoC: Code of Conduct
CSR: Corporate Social Responsibility
FLA: Fair Labor Association
GDPR: General Data Policy Regulation
GOTS: Global Organic Textile Standard
ICT: Information Communication Technology
RBV: Resource Based View
REACH: European Union regulation of Registration, Evaluation, Authorization and Restriction of Chemicals
SCM: Supply Chain Management
SME: Small and Medium-sized Enterprise
SSCM: Sustainable Supply Chain Management

1 Introduction

In this chapter, the background of the subject of the study is presented which formulates the basis of the problem statement. Based on formulated problems, the aim and research questions of the study are formed. Subsequently, the thesis delimitation and outline are presented in order to give the reader a clear picture of the study's content and process.

1.1 Background

Companies today are facing business and market environments that are changing faster than ever. Globalization is driving increased worldwide competition, and technological development is providing new challenges and possibilities for people, companies and societies (Beske, Land & Seuring., 2014; Ma, Lee & Goerlitz, 2016). Environmental issues such as climate change, pollution and resource scarcity are also becoming bigger concerns every day (Rockström *et al.* 2009). Companies need to evolve and adapt to these changes to stay in business. One sector which is exposed to significant transformation is the apparel industry where digitalization and e-commerce are starting to have a real effect on business environments, society and everyday life (Hagberg *et al.* 2016). Digitalization connects consumers and producers in a new way where information is always available and easily accessed. The apparel industry, which includes companies that design and manufacture or sell fashionable clothing (Sen 2003), is moving towards increased competition when consumers can order and compare products online from all over the world (Jakhar, 2015). Another example for a changing business environment within the apparel sector is the responsibility pressure from a growing number of stakeholders (Andersen & Skjoett-Larsen 2009).

Besides, consumers are getting more conscious, demanding ethically produced products (Porter & Kramer 2006). The apparel industry is facing challenges when it comes to several sustainability issues in the supply chain and has been accused of inhumane working conditions and clear environmental impacts due to the usage of chemicals and pollution (Jakhar 2015).The apparel supply chain usually consists of many intermediaries between producer and final consumer which makes it very complex to manage. Together with pressures regarding sustainability from customers, governments, shareholders, employees and other stakeholders demanding more socially and environmentally produced products, companies have to consider their current business operations (Carter & Rogers 2008).These business operations do not only mean taking care of the company’s internal processes. Companies are also, to a greater extent, responsible for how their products are produced and sourced along the supply chain.

Supply chain management (SCM) can be described as all activities related to the management of the flow of goods and services including all processes related to transformation of raw materials into final products (Lummus & Vokurka 1999) An efficient and well-managed supply chain can be beneficial for all included parties. However, recognition of negative environmental and social impacts made by businesses shed light on the importance of more efficient and effective supply chains (Eitiveni *et al.* 2017).The global nature of the supply chain has increased the complexity of SCM in ensuring high ethical standards. Traditionally, companies mainly focused on economic aspects related to their supply chain, but social and environmental issues have been neglected (Carter & Rogers 2008; Zhu *et al.* 2012).The integration of sustainability in the supply chain is fundamental for companies to reach sustainable business development (Correia *et al.* 2017; Eitiveni *et al.* 2017). Sustainable supply chain management (SSCM)

allows companies to implement corporate responsibility practices while achieving efficient resource usage taking economic, social and environmental issues into account (Seuring & Müller 2008; Beske *et al.* 2014). By integrating economic, social and environmental aspects together with a multiple stakeholder view in the strategy of managing their supply chain, companies can meet the demands from stakeholders. Sustainable supply chain practices, such as supplier selection and evaluation, supplier development, and purchasing processes can have a big influence on the company's overall sustainability performance (Walton *et al.*, 1998). (Walton *et al.* 1998). The rapid development and uncertainty in forecasting future demand implies challenges for apparel companies to adapt to the changing environment in order to stay competitive (Wang 2016). How a company performs in a changing business environment is, according to Teece *et al.* (1997), related to the company's dynamic capabilities.

Dynamic capabilities can be described as organizational and strategic routines to integrate, build and reconfigure internal and external competences to address rapidly changing business environments (Teece *et al.* 1997). According to Beske *et al.*, (2014) dynamic capabilities should be seen as bundles of capabilities, not single processes. The dynamic capabilities are related to soft assets like values, culture and organizational experience, which makes them hard to imitate. They cannot be acquired but need to be built within the organization (Teece *et al.* 1997). By focusing on developing dynamic capabilities, companies can adapt to new challenges that might arise and maintain competitiveness. Due to the dynamic nature of the apparel sector, it is relevant to study the context from the dynamic capabilities perspective (Wang 2016). Companies that target customers with a high level of awareness regarding sustainability need to apply SSCM practices (Beske *et al.* 2014). This indicates that there is a link between SSCM and dynamic capabilities (Mathivathanan *et al.* 2017).

Regarding environmental and social impacts, the focus is usually on large multinational companies which seem to have the power to make a difference, while smaller companies are neglected (Johnson 2015). However, small and medium sized enterprises (SME) play a key role in most economies regardless of sector and country, as they constitute a big part of the economy (Kot 2018). Additionally, according to Johnsson (2015), SMEs are estimated to contribute to 70% of global pollution. This indicates the importance of the SME sector for both the economy and the environment, which makes it highly relevant to provide a deeper understanding of these companies. Compared to large companies, SMEs possess a set of characteristics that makes them face a unique set of challenges such as: a lack of financial resources, accessing finance, invest in research and time to comply with environmental regulations (Tilley 2000).Although the benefits of SSCM, it can be difficult for SMEs to manage sustainability issues that exist which is out of their direct control in different geographical, economic and political settings (Rahbek Pedersen 2009).A reason for this could be that larger firms may have more human, financial and technological resources available that can be deployed for SSCM practices. Moreover, there might sometimes be economies of scale for some practices that could be relatively cheaper for large companies. Additionally, SMEs must overcome structural barriers such as lack of management, technical skills and accessing labor. In order to meet consumer demand and pressure from stakeholders and stay competitive, apparel companies need to develop dynamic capabilities for more SSCM practices (Jakhar 2015). The apparel sector usually consists of many SMEs (Sen 2003) who sometimes have limited resources to evaluate and manage their supply chain (Kot, 2018). Due to the limitations in size and resources SMEs sometimes lack dynamic capabilities for SSCM practices (Ciliberti *et al.* 2008; Kot 2018)

1.2 Problem statement

Dynamic capabilities play a central role in maintaining competitiveness and successfully work with SSCM practices in changing market environments (Defee & Fugate 2010; Beske *et al.* 2014). Although companies have started to implement more SSCM practices, it is not significant in SMEs (Hong *et al.* 2018). Despite the fact that SMEs in the apparel sector are facing the same dynamic market challenges of increased competition, stakeholder pressure and changing business environments as large companies (Hong *et al.* 2018) have different capabilities to implement SSCM practices (Golicic & Smith 2013).

Even though SSCM is a research area that have grown rapidly in recent years, it is still considered as a fairly new area (Beske 2012; Eitiveni *et al.* 2017). Several studies on SSCM have focused on developing theoretical frameworks for SSCM (Carter & Rogers 2008; Seuring & Müller 2008; Pagell & Wu 2009). In regard to dynamic capabilities, the topic has been studied intensively because of its accepted relevance for companies' competitiveness in rapidly changing business environments (Teece *et al.* 1997; Defee & Fugate 2010b; Teece 2017). As the apparel industry is characterized by a very dynamic market environment with rapid changes in customer demand and stakeholder pressure (Jakhar 2015), the dynamic capabilities theoretical lens is suitable to explain what SSCM practices are relevant (Teece *et al.* 1997; Beske *et al.* 2014). Although, only a few studies have yet considered the relationship between dynamic capabilities and SSCM (Beske 2012; Beske *et al.* 2014; Land *et al.* 2015).

Furthermore, Golicic and Smith (2013) describe that there is still need for further research on SSCM in relation to firm size. SMEs are not that well represented in the literature and there is still a very limited number of studies on SMEs in the context of supply chains (Kot, 2018). Because of the focal nature of many supply chains, scholars regarding SSCM have focused on multinational companies (Walton *et al.* 1998; Andersen & Skjoett-Larsen 2009; Pagell & Wu 2009; Ageron *et al.* 2012). Some studies have investigated the role of SMEs as suppliers and their role in the supply chain (Lee & Klassen 2008). However, a few studies focuses on more downstream buyer-oriented SMEs. According to Rahbek Pedersen (2009), firm size is a factor that helps explaining why a majority of SMEs do not engage in SSCM. Despite the benefits of SSCM, it is hard for SMEs to manage sustainability issues which are out of their direct control in different geographical, economic and political settings. The results from their study of Danish SMEs indicate that larger SMEs are more likely to manage their supply chain than smaller. Additionally, most SMEs prefer to focus on internal operations before expanding their sustainable activities to the rest of the supply chain and SMEs have, to a lower extent, implemented SSCM practices (Hong *et al.* 2018). There is a need of new frameworks and tools that fit small enterprises and can reduce transaction costs of implementing SSCM practices (Rahbek Pedersen, 2009). Furthermore, there is a very limited number of studies focusing on SMEs in regard to dynamic capabilities (Inan & Bititci 2015).

In spite of the opportunities of dynamic capabilities in relation to SSCM practices changing market environments, identified by previous studies, the research on the subject is very limited (Beske 2012; Beske & Seuring 2014; Gruchmann 2018). While other related studies have focused on the food sector (Beske *et al.* 2014; Gruchmann 2018) and the automotive sector (Land *et al.* 2015), none of existing studies have been conducted on SMEs in the context of the apparel sector. As SMEs are lacking SSCM and since there is a need of new theories on the subject, an empirical study is appropriate (Ageron *et al.* 2012). Furthermore, Beske *et al,.* (2014) demand further case-based empirical research to validate current theoretical models of dynamic capabilities and SSCM. By using qualitative approaches, it is possible to provide

deeper contextual understanding of the phenomena of SSCM practices and its relationship to dynamic capabilities for SMEs in the apparel sector.

By analyzing SSCM practices for SMEs in the apparel sector by using a qualitative approach, it is easier to understand the relationship between SSCM and dynamic capabilities and how it is relevant for other companies in this context. If this study could provide a better understanding on how SMEs in the apparel sector manage their suppliers regarding sustainability, it could be valuable both empirically and theoretically. Theoretically the study can be relevant for the emerging research of SSCM literature and dynamic capabilities and understand how SMEs operate in this context. The topic can be empirically relevant for policy makers and managers in the private and public sector in order to understand how companies manage their supply chain in a changing business environment in general and develop insights for SMEs' SSCM practices and dynamic capabilities in the apparel sector in particular.

1.3 Aim and research questions

The aim for this study is to identify SMEs' practices for sustainable supply chain management and analyze their relation to dynamic capabilities, in the apparel sector.

1. How do SMEs in the apparel sector manage their supply chain regarding sustainability?
2. What dynamic capabilities do SMEs in the apparel sector have and how are they related to sustainable supply chain practices?

1.4 Scope and delimitations of the study

In order to provide meaningful answers to the research questions and a deeper understanding of this vast subject, the scope and delimitations made for the study will be presented in the following section.

1.4.1 Theoretical delimitations

Theoretically, this study focuses on the SSCM, the capability theory of the firm and the relationship between SSCM and dynamic capabilities. However, despite the fact that capabilities are often mentioned in relation to competitive advantages (Teece, 1997) this study will not look at any measurement of firm performance. Furthermore, the study will not provide a full spectrum of capabilities for SSCM practices that can be generalized to companies in other industries. It will rather focus on SMEs within the apparel industry. This could affect the result in terms of industry specific contingencies.

Practices by this means can be described as informal or formal day-to-day routines that the company possesses internally or are outsourced to external parties. However, the study will not consider the actual practices of the company but only the managers' perception of their work with sustainable supply chains. Regarding capabilities, this study will only look at the dynamic capabilities related to the internal processes of SSCM and the relationship to internal dynamic capabilities of the company, but not at its relations to suppliers or other stakeholders of external character. Regarding SSCM practices, this study does not regard the different aspects of TBL (Triple Bottom Line) but considers all SSCM practices equally.

1.4.2 Empirical delimitations

The scope of this study is to focus on three Swedish SMEs (Tierra, Houdini and Sandryds) that operate within the apparel sector and are actively working with sustainability. Companies with an active sustainability work are assumed to also have implemented SSCM practices to a greater extent. This study will only focus on apparel brand companies that conduct operating design and manufacturing processes and will consider these companies internal and external SSCM practices. The study will not take into account the rest of the supply chain like producers, manufacturers, distributors or retailers. The study does not focus on how well-established practices the companies might have but only if they have an established routine or strategy for working with the issue.

1.5 Thesis outline

In order to provide an overview of how the report is structured, the thesis outline is presented below (Figure 1).

Figure 1. Study report outline. (Own illustration)

An introduction to the study's problem, purpose, questions and delimitations are given in chapter one (1). Chapter two (2) contains a literature review of existing research on SSCM practices, SME characteristics and dynamic capabilities, and provides the conceptual framework that will be used in this study. Chapter three (3) describes the methodological choices regarding research design data collection, analysis, quality criteria and ethical aspects and how it is connected to the aim, research questions and research philosophy. Further, in chapter four (4), a description of the apparel sector is provided regarding its supply chain and related sustainability issues, in order to provide a contextual understanding of the study. Chapter five (5) contains descriptions of the cases followed by a within-case and cross-case analysis. Furthermore, the analysis is discussed in relation to the research questions in chapter six (6) and finally the conclusions are presented in chapter seven (7) together with limitations and suggestions for future research.

2 Theoretical framework and literature review

This chapter starts with a brief illustration of how the thesis is positioned in the literature and how the theoretical domains are related to each other. A presentation of the existing literature from the three theoretical fields of SSCM, dynamic capabilities and SME characteristics will follow. The chapter will end with a theoretical synthesis which will build the conceptual framework that will be used in this thesis.

To develop SSCM practices for SMEs, it is necessary to discuss SSCM practices from multiple perspectives. The research conducted in this thesis belongs to the domains of supply chain management and sustainability. The study also gains insights from the Capabilities Theory and the literature of SME characteristics. The following picture (Figure 2) shows the thesis position in the literature at the intersection between the three research areas.

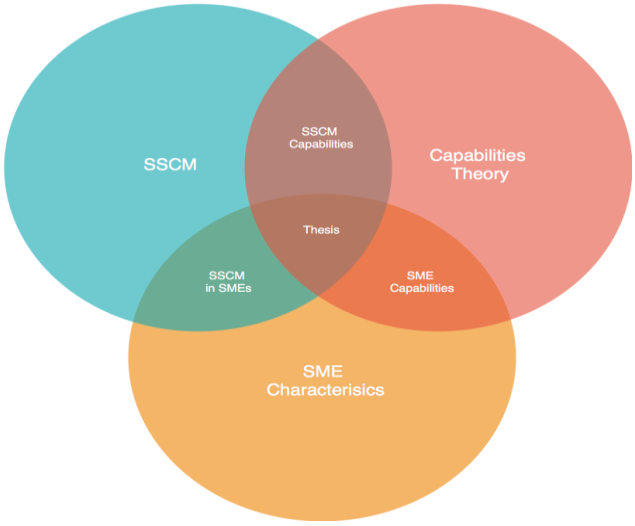

Figure 2. Thesis position in the literature (Own illustration)

2.1 Sustainable Supply Chain Management (SSCM)

In the neoclassical economic perspective, the main purpose of a company is to provide profits for its shareholders due to superior economic performance (Paulraj 2011). Supply chain management (SCM) relates to the processes of managing the total flow of distribution channels from suppliers to end customers. Lummus & Vokurka (1999) provides a definition derived from a SCM literature review and define SCM as:

"all the activities involved in delivering a product from raw material through to the customer including sourcing raw materials and parts, manufacturing and assembly, warehousing and inventory tracking, order entry and order management, distribution across all channels, delivery to the customer, and the information systems necessary to monitor all of these activities." (Lummus & Vokurka, 1999).

Managers along the supply chain find interest in the success of other companies and need to work together in order to make the supply chain competitive in order to satisfy customer needs. Thus, companies can no longer prioritize short-term profits that simultaneously cause negative effects on the environment or society (Porter & Kramer, 2006). The environmental and social impact of a company does not only rely on its own operations but also on the impact caused by

its supply chain (Paulraj, 2011). The performance of a supply chain is as good as the weakest link (Beske & Seuring 2014). A supply chain should be managed, not only in order to optimize financial performance, but also regarding its impact on environmental and social issues (Pagell & Wu, 2009). Sustainable development is commonly known as defined in the Brundtland commission as: *the development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987).*

By integrating this approach of sustainable development into the field of business administration, scholars usually depart from the TBL approach (Elkington 1998) which considers the three dimensions of sustainability (social, environmental, economic) equally. However, the TBL has been criticized as being such a simplified approach regarding the complexity of sustainability. In the field of SCM, the TBL was integrated fairly recently and there is no common agreement upon definition of the SSCM construct in the literature. Today there are several definitions of SSCM but, overall, one can say it is about how to manage the supply chain with a long-term perspective according to economic, social and environmental aspects. Carter & Rogers (2008) defines SSCM as:

"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. "(Carter & Rogers, 2008).

Another definition is made by Seuring and Müller (2008) which integrated a wider stakeholder perspective and included the three dimensions of sustainability; economic, environmental and social aspects of the supply chain operations. They define SSCM as the following;

"the management of material, information and capital flows as well as cooperation among companies along the supply chain, taking into account the economic, environmental and social dimensions, based on customer and stakeholder requirements." (Seuring & Müller, 2008).

The first definition only indicates that the goal of SSCM is to improve economic performance whereas the second definition includes a wider stakeholder perspective which can include more than economic motives. The second definition will be the one used in this paper as it provides the transparency aspect and a multi-stakeholder view into the construct. How well do companies manage their supply chain is due to their implementation of SSCM practices (Beske & Seuring 2014). Practices in this sense can be seen as *"the customary, habitual or expected procedure, or way of doing things"* (Beske & Seuring 2014). They can also be seen as management practices consisting of day to day-routines and how things are being done in the company. SSCM practices is commonly initiated by a focal company that wants to increase its own sustainability performance. The success of SSCM practices are highly related to the quality of the relationship between actors in the supply chain as well as with external stakeholders. In a meta-analysis by Golicic & Smith (2013), the authors looked at the research on sustainable supply chain practices by summarizing the results from over 200 articles from over the last 20 years. The study showed a positive link between sustainable supply chain practices and firm performance, regarding all the three aspects of sustainability. Characteristics that are related to sustainable supply chain practices are cooperation and long-term relationships with suppliers, top management support and communication. Other practices are monitoring and evaluating of suppliers which are important in order to achieve improved SSCM practices (Correia *et al.*, 2017).

Beske and Seuring (2014) propose a framework where they identified five categories of SSCM and related practices. This framework has been well cited as a starting point for research in the emerging field of SSCM practices and capabilities and will therefore be used in this thesis. Table 1 gives an overview of the SSCM categories originally proposed by Beske and Seuring (2014).

Table 1. Overview of SSCM practices according to Beske and Seuring (2014)

SSCM Category	Explanation	Related practices
Supply chain orientation	The organization's dedication to sustainability and SCM and how well it is incorporated in their overall strategy. The orientation category is highly related to the top management and their ability to incorporate the TBL in their daily activities.	Supply chain management
		Triple bottom line
Supply chain continuity	Regards the structure of how the supply chain and the way different actors interact with each other. This often indicates good mutual relationships that benefits the whole supply chain. Long term relationships between partners facilitate trust, common goal setting and investments such as IT infrastructure which can lead to competitive advantages by reducing transaction costs and uncertainty. Partner development can lead to increased performance by educating and developing processes at the supplier. Also, the number of suppliers might be considered by partner selection. Vachon & Klassen (2006) finds that a reduction of suppliers might lead to increased environmental performance	Long-term relationships
		Partner development
		Partner selection
Collaboration	Focus on coordination and collaboration practices along the supply chain through by sharing resources and information across companies. One practice is joint development where the design and product development processes are shared between actors in the supply chain. Involving partners in forecasting and planning can be described as a practice of logistical integration. Another important factor for collaboration regards information sharing where enhanced communication is important for passing on sustainability requirements to suppliers.	Joint development
		Technical integration
		Logistical integration
		Enhanced communication
Risk management	Implementation of risk mitigating practices deriving from companies in the supply chain. By monitoring suppliers social and environmental risks can be reduced but this is usually a very costly procedure. Pressure groups such as NGOs play a central role in identifying risks where they can pressure companies to implement more sustainable practices but also, they can be a valuable asset by providing knowledge about risks and legitimacy to the supply chain. One common, relatively simple, risk reduction practice is the usage of standards and certifications schemes. Standards add legitimacy and facilitates integration and communication with external stakeholders. Code of conducts is one example of standard companies use which is a mean to ensure that all members of the chain behave according to the company's sustainability strategy.	Individual monitoring
		Pressure group management
		Standards and certification
Pro-activity	Pro-activity is related to businesses engaged in sustainability practices (Pagell & Wu 2009). In order to improve and develop products, services and operations for higher sustainability performance the willingness to learn from other actors in the chain and have the ability to use new knowledge is crucial. By exercise stakeholder's management by involving more stakeholders and consider their different views becomes important in order to be proactive. Proactivity are also enhanced as companies use tools to foster innovation to adapt new technologies and methodologies to embrace sustainability. Innovation can also be related to the possibility of reusing and recycling which is connected to life cycle assessment which informs the environmental impact of in the product cycle.	Learning
		Stakeholder management
		Innovation
		Life cycle assessment

2.2 Dynamic capabilities

The Resource-Based View (RBV) is an influential theoretical framework that is widely used for understanding firms' competitive advantage (Eisenhardt & Martin 2000).The theory explains that firms' competitive advantage depends on their unique tangible and intangible assets and their performance depend on of how they allocate their unique resources. However, the RBV has not adequately explained how firms have competitive advantage in rapidly changing environments. One complimented theory is the one of capabilities which can be defined as: "*a firm's ability to deploy its resources, tangible or intangible, to perform a task or activity to improve performance*" (Teece *et al.*, 1997).

Instead of focusing on resources which can be seen as tangible and intangible assets that the firm can deploy and control, the capability-based view is focusing on capabilities. The capability-based theory of the firm is, according to Teece (2017), an indicator that firms are differentiated by their capabilities of how they allocate their resources which requires effective coordination as well as renewal of internal and external competences. Many capabilities become embedded in routines and standard operating procedures while some reside with the top management team. Organizational capabilities are a firm's capacity to deploy its resources using organizational processes to reach a desired outcome (Qaiyum & Wang 2018). Teece (2017) makes a distinction between two types of organizational capabilities; ordinary capabilities and dynamic capabilities. The concepts are often interconnected but can be analytically separated.

Ordinary capabilities are the current operations within a business which consist of administration and governance of the firm's activities and are considered as best practices. Because ordinary capabilities have relatively low strategic value, they can often be outsourced to expert suppliers that achieve economies of scale by serving multiple customers. Dynamic capabilities have been defined as "the ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments" (Teece, 1997). This basically means the ability to determine whether the organization is performing the right activities or not, in order to address the necessary change. The basic assumption of the dynamic capabilities' framework is that core competencies should be used to modify short-term competitive positions that can be used to build longer-term competitive advantage.

According to Beske (2012), SSCM are related to dynamic capabilities in the sense that they both examine strategies to adapt to a changing business environment, managing risks and how businesses can affect its environment. SSCM capabilities can be seen as strategic and organizational routines by which firms achieve new resources for SSCM (Beske *et al.*, 2014). If the capabilities are used in an active search for new opportunities and knowledge to solve a special challenge and change the practices, it can be seen as dynamic. In other words, if the capabilities are used to change the business environment, the resource base of the supply chain, or to adapt to sudden changes from the outside, they can then be considered as a dynamic capability (Beske *et al*, 2014).

Capability in relation to a supply chain is "an organization's capacity to deploy its resources exercised through organizational processes involved in sustainability practices" (Rudnicka 2018). However, capabilities regarding SSCM can be described as divided into a range of different categories and constructs, and there is no consensus in the literature regarding this (Beske *et al.*, 2014; Kurnia *et al.*, 2014; Vargas & Mantilla, 2014). Mathivathanan *et al (*2017) see dynamic capabilities as inherent capabilities developed through implementation of SSCM

practices, which leads to continuously improved practices and adopted capabilities. Beske (2012) proposed a framework of dynamic capabilities for SSCM where the company is the focus. The framework lists a number of categories or micro foundations (Teece 2007) as proposed by (Beske 2012). The following table (Table 2) will present an overview of the SSCM-related dynamic capabilities.

Table 2. SSCM Capabilities according to Beske (2012)

SSCM Capabilities	Explanation
Knowledge Management	Is about how companies' access, understand and acquire knowledge internally and from partners in the supply chain. Basically, the ability to evaluate information given by suppliers and understanding their needs.
Partner development	The supply chain is as strong as its weakest member and the competitive advantage of the firm is dependent on the development of all parties in the chain. It is necessary to develop partners in order to be able to fulfill their purpose in the supply chain in line with the company's sustainability strategy.
Supply chain re-conceptualization	The capability to involve a broader stakeholder perspective and not only traditional partners in the supply chain. This could be by involving local communities or NGOs in order to achieve new knowledge or contacts
Co-evolution	Achieving synergies between actors in the supply chain by connecting partners and collaboration regarding development of new products and processes
Reflexive supply chain control	The capability to ensure transparency along the supply chain which allow the company to monitor and evaluate the supplier's business practices and strategies.

2.3 Small and medium sized enterprises (SME)

Regarding environmental and social impacts, it is easy to focus on large multinational companies which seem to have the power to change, while smaller companies are neglected (Johnson 2015). However, small and medium sized enterprises (SME) play a key role in most economies regardless of sector and country (Kot, 2018). In 2015, enterprises employing fewer than 250 people represented 99% of all enterprises in the EU (Eurostat 2018). Additionally, according to Johnsson (2015), SMEs are estimated to contribute to 70% of global pollution. This indicates the importance of for the economy and the environment, which makes it highly relevant to provide a deeper understanding of these companies.

2.3.1 Definition of SME

Despite the fact that SME is a widely used term and have been an object of research for a long time, there is no unitary, widely accepted definition (Kot, 2018). Generally, the definition can be based on qualitative, quantitative or mixed criteria. In this study, the definition of SME by the European Commission will be used with the criteria presented below (Table 3).

Table 3. SME definition

Company Category	**Staff Headcount**	**Turnover**	**Or Balance Sheet Total**
Medium-sized	< 250	≤ €50 m	≤ 43 m
Small	< 50	≤ €10 m	≤ 10 m
Micro	< 10	≤ € 2 m	≤ 2 m

The definition is based on quantitative measures where main factors are staff headcounts together with either turnover or balance sheet total. SMEs are, according to the definition, those enterprises employing fewer than 250 persons that have an annual turnover of less than 50 million euros and/or an annual balance sheet total of less than 43 million euros (Eurostat, 2018). In literature, there are different views on what should be considered as a small firm (Tilley, 2000). A small firm is not only a big firm in smaller form, but also has other characteristics. Despite this, the size of the firm seems to matter as well. But it might be problematic to generalize this to SMEs because of the unique nature of every company and because of other factors that influence the outcome. There are some characteristics that can be general for small firms when compared to firms of a bigger size.

2.3.2 Characteristics of SMEs

A frequent question in literature regarding SMEs is if management theories based on large firms are applicable in the context of SMEs (Hong & Jeong 2006). One way to do this is to compare SMEs to large firms in terms of strategic and operational choices. Despite the fact that every company is unique, and that it is hard to generalize across industries only according to firm size, some general characteristics can be found that are significant for SMEs. In the study conducted by Hong & Jeong (2006), the authors did such a comparison and examined differences between large firms and SMEs in the context of SCM. One major difference identified regards the information and production flow. Large companies tend to have much more complex relationships within the supply chain and more formalized documentation practices than SMEs. Other characteristics are that SMEs tend to centralize their strategic operations for example purchasing, planning and technology (Hong & Jeong, 2006).

Inan & Bititci (2015) found some general characteristics that separate companies according to firm size. Their findings are presented in the table (Table 4) below:

Table 4. SME characteristics based on Inan and Bititci, (2015)

Characteristic	Large company	SME
Leadership	Leaders are more involved with strategic activities	Leaders are more involved with operational activities than strategic activities
Strategic Planning	Participative management	Mixture of empowered supervision and command and control
Organizational Structure	Hierarchical with several layers of management	Flat with few layers of management
System & Procedures	Formal control systems, high degree of standardization	Personal control Some degree of standardization and formalization
Operational Improvement	Vast knowledge of understanding of operational improvement activities	Training and staff development is adhoc and small scale
Innovation	Innovation based on R&D	Innovation based on clusters and networking
Networking	Extensive external networking Better understanding of support available from local government.	Limited external networking Limited knowledge of funding and support available from government

SMEs are to a larger extent influenced by the values and actions of their owners and managers, which affects the culture of the organization and the strong priorities by the owners (Kot, 2018). Many founders and managers of SMEs are not running businesses in order to increase financial results but deal with other factors that are important. Owners of SMEs understand the social aspects of their own activity and how their business is a part of the context (Kot, 2018).

2.3.3 SMEs & SSCM

Many SMEs fear to lose their competitive advantage in national and international markets if they invested too much in meeting the social and environmental requirements from customers and suppliers (Morsing & Perrini 2009). Compared to larger companies, SMEs face a unique set of challenges which is described in literature as a lack of financial resources, accessing finance, invest in research and time to comply with environmental regulations (Tilley, 2000). Additionally, SMEs must overcome structural barriers such as lack of management and technical skills as well as accessing labor. Due to the limitations in size and resources, SMEs sometimes lack capabilities for SSCM practices (Ciliberti *et al.*, 2008; Kot, 2018).

The reasons for SMEs to managing their supply chain are described by Kot (2018) where the benefits include higher quality of products, lower costs, better customer service and lower risk. Improved relationship to the suppliers, shorter product development, increased market participation are other factors. Despite the benefits of SSCM, it is difficult for companies to manage sustainability issues that exist and are out of their direct control in different geographical, economic and political settings (Rahbek Pedersen, 2009). A reason for this could be that larger firms may have more human, financial and technological resources available that can be deployed for SSCM practices. Moreover, there might sometimes be economies of scale for some practices that could be relatively cheaper for large companies. For example, implementation of a certified management system or an IT system for evaluation of suppliers

(Eitiveni *et al.* 2018). However, this does not mean that SMEs are not engaged in SSCM but they rather sometimes lack formal structures and practices. This indicates that they might work with these issues but in informal and unconventional ways. Implementing efficient SCM practices also have a direct effect on increasing the operational activity of companies from the SMEs' sector (Kot, 2018). Despite the identified benefits for SMEs to engage in SSCM practices, most of the literature focus on large firms which may affect that most theories are developed for larger firms as well (Rahbek Pedersen, 2009). SCM within smaller firms receive little attention and there is a lack of studies of SMEs' SSCM practices (Quayle 2003).

In a study of how Danish SMEs by Rahbek Pedersen (2009) the author found that more than three out of four SMEs do not have SSCM practices and those that do have some are more likely to be large SMEs in terms of employees. The motive for interacting in SSCM were related to moral or ethical concerns rather than business purposes. This comes hardly as a surprise as several studies show that there is a close link between adopting sustainability in supply chains and the values of the owner or top managers.

2.4 Synthesis of conceptual framework

To answer the proposed research questions of how SMEs in the apparel sector manage their supply chain regarding sustainability and how they are related to dynamic capabilities, a conceptual framework was developed. The synthesis of the conceptual framework is displayed below (Figure 3):

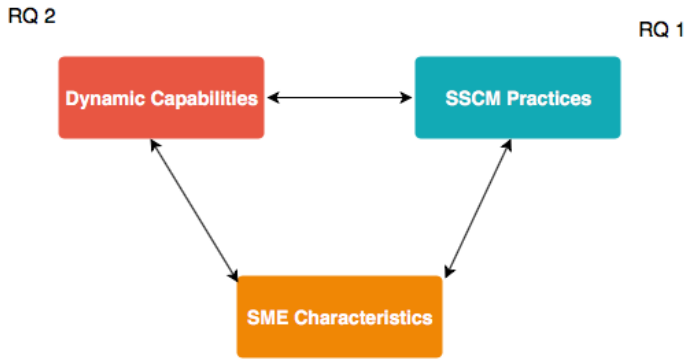

Figure 3. Conceptual framework. Own illustration.

Companies' ability to manage their supply chain is derived from what practices they have for SSCM. The identification of practices is related to the first research question (RQ 1). The framework builds on the theory of Beske (2012) where dynamic capabilities and SSCM practices are linked together and can be seen as being embedded as an iterative process of changing the company's resource base. The second research question (RQ 2) is dedicated to the identification of dynamic capabilities related to overlapping routines of SSCM and is focusing on the relationship between SSCM and dynamic capabilities. In addition to the theory by Beske (2012), the dimension of SME characteristics is added to the conceptual framework. SME characteristics are seen as factors that might affect companies dynamic capabilities (Inan & Bititci 2015) and SSCM practices (Hong & Jeong 2006; Kot 2018). The practices are affected by the companies' developed dynamic capabilities as well as their SME characteristics.

3 Methodology

In this chapter, the study's research methodology is presented and discussed. The chapter starts with the description of research philosophy and design of the study and its implications for the choice of methods. Furthermore, the methods and strategies for collection and analysis of data will be presented together with quality criteria and ethical aspects that has been considered.

3.1 Research philosophy

The research philosophy, which means the researcher's ontological and epistemological views, are important factors to consider when choosing the methodology for a study (Guba & Lincoln 1994). The ontological and epistemological views are clearly connected to what methodology that can be used and what assumptions that are provided by the different perspectives. Ontology describes the nature of reality, what counts as real and what can be known about it (Guba & Lincoln, 1994). Epistemology describes the view of knowledge and what we can know and do not know and if knowledge can be seen as something objective or subjective. The ontological perspective of this study is grounded in the constructivist approach because it will contribute to an understanding of the perceived dynamic capabilities for SSCM practices. It would be challenging to have a positivistic standpoint due to the complexity of studying internal and external processes consisting of human behavior in a company and its interactions with suppliers.

According to Mackenzie & Knipe (2006) the constructivist approach is equal to the interpretivist but there are different views in the literature on the concepts. In the constructivist paradigm, human beings are seen as individuals which are a part of their social structures and all decisions are influenced more or less by their context (Mackenzie & Knipe 2006). Constructivist relativism assumes multiple subjective realities which are produced by the human intellect and can sometimes be conflicting. According to Mackenzie & Knipe (2006) the meaning and purpose and their relationship to activities is crucial when studying human behavior and can't be neglected in social science research. This is why qualitative data can provide rich insights when trying to understand human behavior.

3.2 Research design

Since comprehensive conceptual frameworks for SSCM is lacking and there's a need of new theory building on the subject, an empirical study is appropriate (Ageron, et al 2012). An inductive approach was used to generate theory from the collected data and observations which is appropriate when the research field is fairly new (Given 2008). A case study is suitable when the researcher wants to be able to find out complex contextual relationships between certain phenomena that are relevant to the study (Yin 2009). Case studies have clear boundaries and a well-defined unit of analysis (Yin 2013).To understand the phenomena of SSCM capabilities in the context of SMEs in the apparel industry, an instrumental case study is suitable because the focus of the study is known (Creswell *et al.* 2007). An instrumental case study is when a case is studied to represent certain phenomena that are of interest for the researcher. Case studies are usually related to "how questions" (Yin, 2009) which is in line with the aim of this study. In order to provide a deep understanding of SMEs' dynamic capabilities in relation to SSCM practices, a broad contextual description of characteristics of SMEs and the apparel industry a case study is appropriate. Eisenhardt (1989) mentions that one strength of building theory from cases are that they can generate creative insight of contradictory evidence. Few

cases are appropriate when trying to get in-depth answers which lead us to the sampling strategy of the study. A multiple case study will be used to simultaneously identify themes and patterns of apparel companies' capabilities for working with SSCM. The boundaries for each case in this study is the companies in the study and the unit of analysis will be their applied capabilities for SSCM practices. The multiple case study design is supposed to be conducted as replications where the same study is conducted several times but with different cases (Yin 2009). There are several disadvantages with a multiple case study compared to a single case study. First, the uniqueness of the single-case cannot be neglected, also when conducting multiple case studies there is a process of learning where the collection of data can be affected as the project are proceeding. However, a multiple case study design is usually considered to be more robust and compelling compared to a single case. It also allows the researcher to do both internal and cross-case analysis which can be valuable which is the reason for why this design is appropriate for this study.

3.3 Literature review

A literature review has several purposes where it works as a foundation for the thesis by searching current literature to deepen the knowledge about complex issues of a phenomenon (Given, 2008). Furthermore, it aims to create a theoretical framework by defining boundaries of what issues to address and find relevant objectives and research questions. In this study a narrative literature review was conducted on each of the subjects covered by this thesis; SSCM, organizational capabilities and SME characteristics. The narrative literature review does not use quantified parameters of what to include and not which make it more flexible than other methods (Allen 2017). Instead, the focus in a narrative literature review, is to critically reflect and deepen the understanding of the theory of interest and find a gap in current knowledge. This is appropriate for an inductive approach since it is not known beforehand what will be relevant for the study. The literature review has worked as a point of departure for this thesis and a basis for the aim and research questions. The main source of literature is from peer reviewed articles accessed through the databases Google Scholar, Web of Science and Primo. Focus has been on a combination of highly cited articles for grounded theory combined with more focused up-to-date articles to narrow down the field of research. Following keywords were combined in different constellations to find the relevant articles: Sustainable Supply chain + (Management, Practices, Dynamic Capabilities, SMEs).

Also, a literature review regarding methodological aspects were conducted in order to provide knowledge of research designs and methods available for the study. This is in line with Given (2008) who means that literature reviews regarding methodology often are neglected by researchers. The methodological part of the literature review consisted of search words regarding multiple case study designs, sampling methods, qualitative data collection and analysis, quality criteria and ethical considerations.

3.4 Data collection

The study will use a mix of methods for data collection to provide a broad and detailed picture of the case (Eisenhardt, 1989). Interviews are generally used as a methodology in qualitative research to produce knowledge (Alvesson, 2003) The collection of data will mainly consist of semi-structured interviews with people engaged in supply chain management or other relevant position at the company. In addition, secondary data was collected from sustainability reports, website and internal company documents.

3.4.1 Sampling strategy

In a qualitative case study, it is not necessary to use a sampling logic as in quantitative studies where the goal is to provide a statistically significant outcomes and conclusions (Yin, 2009). Instead the reflection in a multiple-case study design should be on how many replications of the case that is needed to provide the same outcome. Since the study is about companies' capabilities for SSCM practices which is a quite complex phenomena (Beske *et al.* 2014), a smaller amount of cases is suitable. The cases are selected using a replication logic were expected outcomes are similar for each case which is in line with Yin (2009). This study is focusing on Swedish SMEs in the apparel sector in order to minimize disturbing factors that can affect the result. By focusing on a single industry, it is easier to draw conclusions since it is easier to control for economic conditions, environmental regulations and other industry specific variations. The apparel sector was chosen because its supply chain has a clear impact on both environmental and social issues (Jakhar 2015). Furthermore, the apparel sector serves as an example of an industry that has a number of dynamic characteristics. The characteristics include challenges of the transformation to online retailing and transparency pressure from conscious consumers (Wang 2016). Also, there are many small actors on the distribution side of the industry.

Three cases were selected which is appropriate when conducting a literal replication (Yin, 2009). The companies were selected by a purposively sample regarding their size according to the definition of SME, industry, availability, closeness and outspoken active work with sustainability. Given these constraints a number of potential case companies were identified through the database Retriever. A review of the companies was conducted by searching the company's websites and news articles, to get a perception of the companies' outspoken sustainability work. The companies that fit the requirements were contacted, and the ones approved the invite to participate were contacted for deciding appointments for interviews.

3.4.2 Semi-structured interviews

There are different strategies for conducting interviews where they can be either structured or unstructured (Bryman & Bell, 2015). Structured interviews mean that the interviews are based on pre-defined questions and alternatives for answers and can be compared with filling in a questionnaire or survey. Unstructured interviews are more similar to a normal conversation where the outcome of the interview is harder to predict. Semi-structured interviews on the other hand are something in between where some themes of interest are pre-defined, but the responder has the possibility to answer accordingly to his/her own belief which is in line with a qualitative and inductive approach. Semi structured interviews should be conducted with open ended questions in order to provide a depth of the subject and avoiding leading questions (Creswell 2012).

The interview guide (Appendix) consists of open-ended questions that are related to the research questions and the conceptual framework derived from the literature review and problem statement. The questions consisted of general question regarding SSCM practices, for example motivations, benefits and barriers and specific questions related to ordinary and dynamic capabilities for implementation of those practices as well as acquisition of new capabilities. The questions were complemented with follow up questions in order to provide interesting details about the subject as suggested by Kvale & Brinkmann (2009). Some specific background related questions were asked in order to provide a rich contextual description. These questions were saved to the end of the interview in order to not affect the answers in the

beginning. The interviews were conducted in line with the list of criteria posed by (Kvale & Brinkmann 2009, 166) in an attempt to avoid mistakes and ensure a high quality of the interviews.

Table 5: Conducted interview

	Tierra	**Houdini**	**Sandryds**
Interview conducted	4/4	12/4	10/4
Interview length	52 minutes	47 minutes	50 minutes
Interviewees position	Production & Buying Manager	Material Development Manager	Purchasing & Sustainability Manager
Years in the company	6 years	5 years	12 years
Method	In person	In person	By phone

The initial ambition was to make all interviews (Table 5) in person, in order to keep a high quality of the interview and not miss out the benefits of body-language and contextual settings that can be of importance (Alvesson, 2003). Due to logistical challenges and availability of the respondent, one interview was held by phone. However, telephone interviews can be a good choice when social cues are less important to the problem and standardization of the interview situation is not necessary (Opdenakker 2006). The interviews were conducted in the language preferred by the respondent in order to facilitate the way of expression for the respondent's in order to make them more comfortable. The interview with Tierra was conducted in English and the rest was in Swedish. During the interviews, notes was taken, and voice recording was used after asking the participant for permission. In addition, a short summary of the interview was done right after the interview situation to be able to keep the essential parts from the interview together with notes about contextual observations that can be of importance. The recording was transcribed in order to catch the precise formulations from the interview from which central parts relevant for the analysis was translated into English. The interviews were conducted with the person responsible for supply chain management or other manager with responsibility for inter-organizational supply chain practices as suggested by (Defee & Fugate, 2010). By limiting the interviews to one person the resulting answers are very dependent on that person's perception. It could be interesting to study more representatives from the cases to provide a thicker description. However due to the small organizations studied the people involved in these questions are rather limited to one person for each company.

3.5 Data analysis

To get a deep understanding of the issue investigated, a holistic data analysis will be used to be able to identify and analyze the required capabilities and the contextual influences from the apparel sector (Creswell *et al.* 2007). A content analysis will be used to define different themes and patterns from the interviews and is a suitable tool for qualitative data as it provides a rich description of the case (Zhang & Wildemuth 2009). According to Zhang & Wildemuth (2009), content analysis provides a tool that can help researcher understand social reality in a subjective but scientific manner. Furthermore, they suggest that a systematic procedure will be used as a foundation for the data analysis process. An inductive analysis including open coding, creation of categories and abstraction (Zhang & Wildemuth, 2009) will be used to identify key capabilities for SSCM practices. Coding qualitative data is the process of transferring ideas and

concepts from qualitative raw data into systematic categories by labelling the data to be able to find similarities and differences (Given, 2008). In quantitative research codes are usually created before the data collection whereas in qualitative research the codes can be developed during the data analysis. There is also possible to use initial coding categories from the literature and then in the analysis let themes to emerge from the data as an inductive process (Zhang & Wildemuth 2009).

The analysis will be following a two-step process as suggested by Eisenhardt (1989) by first conduct a deductive, within case, analysis and then a cross-case inductive analysis. The within-case analysis will be based on deductively coded categories for SSCM practices provided by Beske (2012) and focus on the first research question of how the case companies manage their value chain. The choice of using deductive coding can be questioned as this is not usually used within the constructivist paradigm and in an inductive qualitative approach (Creswell 2012). On the contrary there are several authors that proclaim that even though a qualitative approach is usually related to inductive coding, it is possible to use existing theory for the coding process (Eisenhardt 1989; Zhang & Wildemuth 2009). The purpose of using existing categories is that it makes it easier to compare the empirical findings to other studies based on the same theory (Zhang & Wildemuth 2009). However, using deductive coding can also limit the unique findings from the empirical cases. Due to the complexity of dynamic capabilities theory (Teece *et al.* 1997; Beske *et al.* 2014) and the limited number of studies of dynamic capabilities related to SSCM practices within the apparel sector there is room for misinterpretations of the findings of this study.

A cross case analysis will then be used to identify any dynamic capabilities and similarities and differences that can be of interest for the study which is appropriate for a multiple case study (Miles & Huberman 1994). Cross-case analysis will be conducted and displayed as described by Miles & Huberman (1994). A cross case analysis is suitable when it is interesting to find patterns and differences that are similar for other cases in the same settings. However cross-case analysis will not provide statistical generalizability but can give insights about under what conditions the findings may occur.

3.6 Quality criteria

Due to the complex nature of qualitative interviews big emphasis need to be put on the interpretation of the interview result in order to analyze the meaning of the results and how they can be used for the purpose of the study (Alvesson, 2003). In qualitative research due to subjectivity there are several ways to describe the social reality about a phenomenon and therefore quality criteria is needed which is suitable for such research.

To provide a good quality study four qualitative criteria for trustworthiness constructed by Lincoln & Guba in an article from 1985 and described by (Shenton 2004) are going to be used which are considered appropriate for qualitative research. The four criteria are;
credibility, transferability, dependability and confirmability showed in the following table (Table 6).

Table 6 Criteria for trustworthiness of qualitative research

Criterion	Strategy employed
Credibility	- Respondent validation - Triangulation - The same researcher collected the data
Transferability	- Purposive sampling - Detailed description of context and method
Dependability	- Recorded and transcribed interviews - Detailed method description - Triangulation
Confirmability	- Practice reflexivity

Credibility describes how congruent the findings are towards reality. To strengthen the credibility a respondent validation was used in order to ensure that the participants of the interviews confirm the findings and that they represent the participant's perception of reality. The empirical summary of each case (Chapter 4) was sent to the respondents in order to make sure that the interpretations of the results are in line with their view. Also, triangulation, by collecting data from different sources such as the companies' websites and sustainability reports, will be used when possible in order to ensure the quality of the data (Eisenhardt 1989). For example, the data provided from the interviews will be compared to information from secondary data sources such as web-pages and sustainability reports when available. Transferability concerns how well the conclusions are possible to apply to other contexts. One way to increase transferability is to have a well described selection of participant together with detailed method contextual description in order to give the reader the opportunity to understand under what circumstances and assumptions the conclusions are made (Shenton, 2004). Dependability is about whether the same results would be obtained if the study was carried out once more, with the same participants, same method and the same context.

By using a multiple case study design the methods and researcher are the same which will enhance dependability. Also, recording and transcription of interviews facilitates the data to stay consistent. A good and detailed method description would enhance dependability and triangulation of methods used can work as tools to make it easy for someone else to replicate the study. This is the reason why the methods used is explained in detailed in this thesis. Confirmability is about how much the researcher's personal opinions influence the findings and the concern to objectivity. To be fully objective is impossible and also not even desirable in the interpretivist paradigm (Bryman & Bell 2015). One solution to this could be the researcher's reflexivity. Reflexivity can be described as the ability to enter a state of consciousness for the purpose of understanding others (Lincoln 1995).It is important to be aware of how the study is affected by the participants in it, including the researcher. Alvesson (2003) means that

reflexivity means to acknowledge all uncertainty of any empirical material and knowledge claims but also try alternative interpretations of how to use the data collected from the interviews.

According to Yin (2013), generalization of research results in case studies is challenging, especially when the number of cases is very few. A generalization of the result may mean that the level of abstraction is increased, which may lead to the motivation for the choice of case study being lost as a method. Furthermore, Yin (2013) pose an alternative to traditional generalization which is called analytical generalization, which means that the extraction of research results takes place at another level of abstraction. Instead of achieving a numerical generalization which is usually the goal in quantitative research, a conceptual abstraction of the result is made. This means that the results can be conceptually applied to other cases in similar situations even if there are some aspects that are unique for the single study. Another interesting take on generalization in case studies is the perspective provided by Flyvbjerg (2006). The author means that traditional formal generalization is overrated whereas the power of example is underestimated and that it is possible to generalize on the basis of a single case alone. However, the same quality measures that are used in quantitative research are not applicable in this type of generalization. But if something exist empirically one can generalize according to the specific circumstances of that particular result. If the result exist empirically it can say something about other cases with similar characteristics. This perspective will be applied in this study where the cases will be examples of how SMEs in the apparel sector can work with SSCM.

3.7 Ethical considerations

It is important to take into consideration the ethical issues that can arise when conducting a study (Bryman & Bell, 2015). Several ethical aspects were considered in this study. Participation in this study is voluntary which is in line with good ethical standards (Robson 2016). According to Kvale and Brinkmann (2009), it is important to consider the participants integrity and that they are aware of the purpose of the study and how the data will be used. In order to ensure a good ethical position for the participants in the study confidentiality and anonymity was offered to all respondents before the interviews. The information provided from the interviews was treated carefully and only in the relevance of the study. Summaries of the transcripts were sent to the respondents to ensure that the interpretations of the interviews are in line with the respondents' perceptions. In order to ensure the integrity of the participants and protection of their personal data according to GDPR (General Data Protection Regulation) a letter of consent was signed by each respondent before the interviews.

4 Empirical background and findings

This chapter starts with an empirical background about the apparel industry in order to provide a contextual understanding of the business environment the studied cases are operating in. The empirical background provides an overview of the apparel industry, its supply chain and sustainability issues that are related. Afterwards the findings, based on conducted interviews and secondary sources, from the case studies are presented and analyzed.

4.1 The apparel industry and its supply chain

There are many overlapping definitions of the industry in focus. The textile industry, clothing industry, fashion industry is some concepts commonly used (Ma *et al.* 2016). While the definition of textile industry is very broad, and the definition of clothing and fashion industries can be considered too narrow. In the meantime, apparel companies include both clothes and footwear and focus on the companies that are designing and distributing clothing (Sen 2003), which will be in focus for this study. In this study the concept of apparel industry will be used in order to provide consistency even though other concepts could be used as well.

Globalization has played a central role in the relocation and outsourcing of parts of the apparel supply chain (Kumar *et al.* 2017). Many apparel companies have moved their manufacturing activities abroad, especially to Asian countries, due to lower operational costs derived from the labor-intensive nature of apparel production. Even though the industry has been undergoing a technological development, much of the production is still made by hand, for example sewing and weaving. As the apparel supply chain has been undergoing this huge globalization process, many related issues has emerged (Ma *et al.* 2016). To remain competitive in the global business environment apparel companies are generally keeping contract prices low which often leads to social injustices and bad working conditions for the workers. At the same time apparel companies need to adapt to quick changes in customer preferences in demand due to fashion trends that come and go. Consumers choices are unpredictable and unstable which makes it hard for apparel manufacturers to plan their production (Nayak & Padhye 2015). Garments are usually made from various components which includes many stages of processes and different suppliers cooperating. This is especially challenging as the lead-times are expected to be as short as possible and the market opportunity is only there for a limited amount of time.

SMEs in the apparel sector are to a great extent in need of outsourcing their production (Egels-Zandén *et al.* 2015). Outsourcing has the benefits of reducing costs, enabling larger quantities and minimizing risks for the company. On the other hand, outsourcing implies lowering control of production and manufacturing processes. When the company does not own the manufacturing process it needs to rely on external parties to maintain the right quality of the products. There are also risks related to regulatory compliance during production and material sourcing processes (Kumar *et al.* 2017).

The apparel supply chain includes very inflexible and long processes with a numerous of business partners and are covering design, material sourcing and manufacturing, distribution and retailing (Ma *et al.* 2016). The chain is illustrated in the figure below (Figure 4):

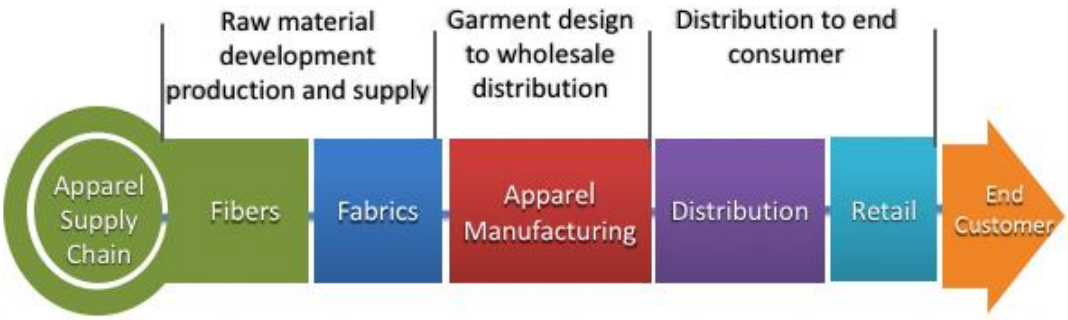

Figure 4. The apparel supply chain. Own illustration based on description in Sen (2003).

In the beginning of the supply chain is the fiber producers who are producing natural or synthetic fibers from raw materials (Sen 2003). Natural fibers are usually from plants produced by agricultural firms which include cotton, linen, jute and cellulosic fibers but also animal fiber such as wool. Synthetic fibers include nylon, polyester and acrylic. Both natural and synthetic fibers are converted into yarn using different conversion processes. The fibers can be blended together in different combinations. The next step in the supply chain is the fabrics producers who are transforming the yarn into fabric by weaving, knitting or using non-woven processes. Yarn may either be woven to a generic good and then dyed for a specific fabric, or the yarns are dyed first and then woven together. The non-woven processes include compression of fibers by using mechanic, thermal, chemical or fluid methods.

Apparel manufacturers includes companies that are designing the garments, handling production and material sourcing, as well as marketing of the final good. The design consist of the processes of analyzing markets and trends and develop patterns aligned to customer needs. The fabrics are cut and sewed according to the pattern design to make garments. These processes can be done in-house by brand owners or outsourced to external parties and is the most labor-intensive part of the supply chain. Much of the production are outsourced to contractors which are not responsible for material sourcing or the design and marketing processes. This segment consists of many different actors and have fairly low barriers of entry since capital and knowledge requirements are limited. The assembled garments are labelled, packaged and shipped through by distributors where they are stored. The finalized products are made available to the end consumers through a variety of retailing channels. The products are sometimes sold in the brand company's own physical or online store or they are sold by different retailers that sell different brands either in their physical stores or digitally at an ecommerce platform.

4.2 Sustainability issues related to the apparel industry

There are several sustainability issues that are related to sourcing and manufacturing in the apparel supply chain (Jakhar 2015). Environmental aspects are related to intensive usage of energy, natural resources and chemicals during the production process. One significant issue is the usage of chemicals within textile processing which can be harmful both for workers and the environment (Kumar *et al.* 2017). Unsafe disposal of wastewater is one example where toxic

chemicals can be released into the nature which can affect both animals and local societies (Nayak & Padhye 2015). European regulations such as REACH have put the responsibility on the industry to minimize risks of hazardous chemicals and maintaining a safe management and control of the supply of chemical related products, including textiles. Chemicals are mainly related to the early stages of the supply chain during coloring and dyeing processes in the fabric production.

Another relevant issue in the apparel sector is waste, where a high amount of the garments produced, are thrown away when they go out of fashion (Nayak & Padhye 2015). At the end of their life, most of the garments goes into landfill sites which is problematic as landfill materials have the potential of having environmental impacts by polluting air and water. However, there is an increasing amount garments being recycled and many companies within the apparel sector are looking at more circular flows of resources. To address sustainability issues there are many initiatives and certifications relevant.

4.3 Case descriptions

The data was collected from three SMEs in the Swedish apparel sector and were chosen according to the sampling strategy mentioned before (Chapter 3.4.1.). Table 7 provides an overview of the cases:

Table 7. Overview of cases

	Tierra	Houdini	Sandryds
Number of Employees	8	45	35
Turnover (MSEK)	27	168	135
Balance Sheet total (MSEK)	15	75	88
Customer focus	Consumers	Consumers	Businesses
Products	Outdoor	Outdoor	Promo-wear
Number of suppliers	15	10	15

All three cases can be categorized as SMEs according to the definition mentioned earlier (Chapter 2.1.1). Tierra is the smallest company but is operating as a part of a bigger group. Even though all three companies are operating within the apparel sector the cases can be divided into sub-sectors were Tierra and Houdini are working with outdoor apparel for consumers and Sandryds with promo wear mainly for businesses. Even though the number of suppliers is fairly similar between the cases it appears that Houdini, who is the biggest (in terms of employees and turnover) has the lowest number of suppliers.

4.3.1 Tierra

Tierra is an outdoor apparel brand founded in 1993 that develops high tech garments for outdoor activities like skiing, climbing and hiking. The company was acquired 2001 by Fjällräven when they started growing and are now a part of the global Fenix Outdoor Group. Today, the Fenix Outdoor group holds many individual private brands. Each individual brand has their own individual brand power and identity as well as cost and profitmaking centers. Tierra has seven employees, all of them placed in Solna, Stockholm. Some managerial activities are shared between the brands and also distribution and sales are coordinated on the group level. For example, the group has a clear standpoint in taking responsibility and having an ethical way of doing things both considering social and environmental aspects. Tierra see sustainability as a competitive advantage as the industry is getting more competitive with similar quality and consumers are getting more conscious and demand more responsible sourced products. They have a holistic stakeholder approach and include sustainability in decisions regarding their supply chain. As a small niche brand, Tierra believes they need to be actively working with sustainability in everything they do, for example, the design and how the products are used and what materials they are made of. However, all the companies in the group are responsible for their own supply chain and their SCM activities. The strategy is filtered to the brands and are customized to fit the brands´ identity. Each brand has to report to the brand level CSR director for their entire process which is included in the group's sustainability report.

Tierra's supply chain

The fabrics are bought from suppliers located in Asia which consists of two-three converters that are connected with multiple mills in Japan, Taiwan, China & Thailand. The reason for going to a converter instead of directly to the mill is to consolidate the work locally instead of going to the different mills individually. This will lower the costs and environmental footprints by reducing the need for travelling and transportation to each mill. The garments are produced mainly in Europe, but also a bit in China and Vietnam. The products are distributed and sold by Fenix Outdoor owned retail chains in countries where they operate in, or contracted with exclusive rights to sell their products, to external retail chains in other countries. They also sell their products online though the groups' e-commerce platform.

Tierra's SSCM practices

Tierra are using several SSCM practices for their supply chain where all individual factories are going through the process. When Tierra is selecting their suppliers, they try to squeeze them together and compact them as much as possible in order to keep the CO2 footprints low. By limiting the number of suppliers, they also get a bigger impact on the production by being a bigger buyer from the suppliers' point of view. In the selection process they use an internal developed form for a risk assessment of the potential suppliers. On the group level the company has access to a quality team that is based in Shanghai which is conducting the first evaluations and audits of the factories and reporting the results to Tierra. Tierra has the ambition to have a long-term relationship with their suppliers and are trying to educate their suppliers. The education consists of improved production practices, quality processes and sustainability performance. Since both parties are investing a lot of time and money into the relationship there is an incentive to keep a good relationship. If there's a problem with a supplier, they always try to solve it and only as a last resort they end the relationship if things are not working out. Tierra has the ambition to always improve their current practices and on the group level they have a maintenance process were each brand does their own evaluation on their supply chain.

"I would say 95% are all controlled and nominated by us, so we develop our suppliers, we check the suppliers. For example, with the Code of Conduct and with our chemical guidelines which is even higher than the REACH European guideline." (Production & Buying Manager, Tierra)

During this process they review their suppliers on a yearly basis on how the suppliers perform and if they have any comments. The information is then shared between the different brands. Tierra is evaluating all their products according to something they call green certification where they make sure all products are in line with their standard. For evaluating their supply chain, they also use the Higgs index which is an assessment tool for the supply chain environmental footprint. During the sourcing of materials Tierra consider certifications like Euro certified organic cotton or Fairtrade labels but they do not certify their own products. They also use a code of conduct that are general for the whole group. The reason behind this is that they trust their own internal process of evaluating their suppliers together with the available contacts on the group level. For the internal learning, Tierra rely on training from the group level where they get to attend to seminars and conferences arranged by the sustainability department on the group level also FLA is offering different trainings. Examples of what they learn is the evaluation process, how to conduct audits and how to act if something is wrong at the factory. For their supply chain and sustainability work, Tierra is striving for a proactive approach rather than reactive. One example is that they are working on phasing out materials with a high

environmental impact like cotton and introducing new products made of hemp instead. By using innovative products and life cycle assessment they can develop more sustainable products that the customer demands. They are still reliant on some products with high environmental impact such as Gore-Tex which is dependent on big amount of crude oil in the production process.

4.3.2 Houdini

Houdini is an outdoor company founded in 1993 with a complete range from underwear to shell garments. Their vision is to help people experience more, perform better and have more fun without any negative environmental impact. The starting point for developing new products are always based on their design philosophy with key words such as versatility, timelessness and sustainability. Houdini's sustainability work is integrated in the whole organization as it is based on the core values in how they are doing business. Therefore, they do not have a sustainability manager or sustainability departure. Instead sustainability is meant to be operationalized in all their business activities, from production, accounting to sales. By integrating sustainability, faster decision-making processes are facilitated since all employees are working towards the same target. Similar to the sustainability work, their supply chain management is an integrated part of the organization where the tasks are shared between several functions within the company. From designers, product developers and production manager are all involved in the work with the supply chain and the work are done within the team.

Houdini do see themselves as a small actor in the industry, thus, at the same they perceive they can have a significant influence on their suppliers. One challenge with being small is the workload for a few persons and the fact that it is hard to prioritize other things except for the core business. Mentioned opportunities with being a small actor is that it is easy to take decisions and implement them fast into the organization.

"So, I think, the suppliers we have worked with also realize the value of working with us because it also makes them come further and be competitive towards other suppliers whom may not have worked with sustainability in that way at all. We may not be the biggest, but I think we have strong values and thoughts that our suppliers appreciate very much."
(Material & Production Manager)

Houdini's supply chain

Regarding their material suppliers, these are mainly located in Europe, Japan and Taiwan but also a small part in the U.S. For other components such as buttons and bands are manufactured in Portugal and Asia. The garment producers are all located in Europe mainly in the Baltics and Portugal except from a small part in Vietnam. Houdini's products are sold through other retailers, as well as through their own E-commerce site and through their own stores.

Houdini's SSCM practices

In general, Houdini wants to keep the number of suppliers down and invest more into building strong long-term relationships with their suppliers. They do not look for new manufacturers for producing a new collection but are trying to use their existing suppliers for new products and improve their practices. This is one of the reasons for why they want to keep the suppliers close in order to be able to visit them more regularly.

"We do not have many different suppliers, we try to keep down, both the number of suppliers of materials and the number of factories that produce the garments, and instead we invest more in long-term relationships and we may be a little cautious about bringing in new producers before we know that they work in a way that we feel we can stand for." (Material & Production Manager)

Another reason to keep the number of suppliers low, is to be able to increase traceability and maintain control of where the different parts are sourced from. Houdini has established processes for tracing their products and they show all their suppliers on their webpage. They are developing a transparency and traceability system to increase their own work but also to facilitate and standardize reporting practices for suppliers. They only add new suppliers if their current suppliers cannot deliver what they demand. The process of selecting suppliers are based on several factors. They are actively avoiding suppliers from countries where there's uncertainty about working conditions. Usually they choose suppliers based on recommendations from relationships and contacts. All suppliers have to commit to their code of conduct, but they do not have any formal practice for following up the requirements. They try to inspire their suppliers to improve their production practices regarding for example renewable energy and water management. The approach is inspiring rather than demanding and they try to have an open dialogue with the suppliers.

Sandryds use a code of conduct that all suppliers must approve but they do not have a following up practice. Instead they focus on trust and relationship building by discussing issues or finding new ideas for developing the production processes. Regularly visits to the suppliers are conducted but no downright audits are performed. The sewing factories are visited three times a year and the material producers about once a year. Houdini prefer having a direct dialogue with the supplier instead of working with external audit organizations. However, they know that many of the suppliers they work with are connected to different certification bodies that are conducting audits.

Regarding certifications Houdini does not work with any certifications for their products nor standardized management system. Thus, they do consider certifications when they source their materials, for example, Blue Sign which is a certification body for chemicals. Houdini does not have any formal practice for internal training regarding sustainability. But their cross functional working environment facilitates knowledge sharing between employees so they can learn from each other. Being a small business facilitates working towards the same goals and knowledge sharing between employees and promotes innovation.

In the design process they want to make as minimalistic and durable products as possible with various different applications. They are not driven by delivering a new collection each year and the development can take its time and only when they have a good product they go to the market. Houdini has a formalized process when started designing a new collection where they use a form with several environmental requirements including the ability to repair and possibility to recycle.

4.3.3 Sandryds

Sandryds is a promo wear apparel company that was established in 1991. They are providing a variety of promotional clothing including everything from simple t-shirts and sweaters to trousers and exclusive jackets but also other promotional material under their own brands. Today they are 35 employees and their headquarters are located in Kungsbacka in western

Sweden. They offer customized products by providing everything from conceptualization and design to distribution. Sandryds has worked with sustainability for a long time. In general, they view that sustainability aspects might be unnoticed in the promotional clothing sector due to their business-to-business centered business model.

"In this industry sustainability is not always a priority on the agenda when our end customer is going to make his choice of product, instead it often comes down to the price."
(Buying & Sustainability Manager)

For Sandryds they started to change towards more sustainable practices but have mostly worked on their own processes and within their company. During the last three years they have also started to communicate their sustainability work to a greater extent to their external stakeholders as well. The company perceive themselves as a relatively small actor in the context of the apparel sector.

Sandryds' supply chain

Sandryds manufacture all their products from a total of 15 suppliers in Bangladesh and China. 70 percent of their total production is from four suppliers that are making everything in-house. Except from knitting, they are doing everything, the coloring, cutting and sewing, under the same roof. The products are stored and distributed from their facility in Sweden. All their products are being sold through partners and retailers mostly to the Scandinavian market but also internationally.

Sandryds' SSCM practices

For Sandryds it is a conscious choice to keep their number of suppliers low and centered in order to facilitate control and follow up. By keeping the number of suppliers low Sandryds believe they can exercise greater power in order to improve sustainability to their suppliers under long lasting relationships. Sandryds has been a member of The Business Social Compliance Initiative (BSCI) since 2007 which is a non-governmental organization whose purpose is to drive improvements of social performance in global supply chains. By being a member of BSCI Sandryds are committed to their code of conduct which is based on the ILO conventions of fair labor. This include commitments to ensure basic human rights such as minimum wages, no child labor, social security and employment policy.

When selecting suppliers BSCI membership is an important factor for Sandryds. They also have a policy that they want to visit the supplier before they sign any contract. By having all suppliers gathered under the BSCI standard they can ensure that they are following the same code of conduct and auditing processes. The audits are shared between the BSCI members in a database which reduces costs for both the supplier and the buyers since they do not have to audit all the factories themselves. After the audits the supplier gets a rating depending on how well they fulfill their commitments and the buyer company can decide how they want to address any issues that need improvement. However, their processes for supplier selection and evaluation are mainly informal due to the complexity of the process and consists of a qualitative assessment based on experience. For educating the suppliers Sandryds use a digital platform called Quizrr where the workers are educated for rights and obligations. All from the top management down to the factory workers. They see a transition from auditing and monitoring to more capacity building practices.

"So, we now see that we move from having only audited and complained to the factories, to realize that we must also teach them certain things as well. So now it is stated that more and more tools are developed to ensure capacity building." (Buying & Sustainability Manager)

When it comes to environmental issues, they consider the OEKO-TEX standard when selecting their fabric producers. OEKO-TEX is a certification system for testing the production of textiles and their usage of chemicals. The standard is following the requirements of the (REACH) and is prohibiting several hazardous chemicals and provides awareness of the usage of chemicals. However, they do not yet consider social issues at their fabric producers. Regarding their internal learning processes, they focus much on informal processes of networking, but they also try to implement a discussion about sustainability on their weekly meetings. In addition, they educate their salesmen about sustainability in order for them to promote more sustainable choices to their customers. When they need additional competence, they can hire consultants in order to develop a new policy or provide knowledge of an area that is unknown for example chemicals. When taking in a consult they usually provide a formal procedure of how to tackle the problem for the future.

5 Analysis

In this chapter the findings from previous chapters are analyzed based on the conceptual framework. The two-step analysis is presented by starting with a within-case analysis with focus on SSCM practices and dynamic capabilities respectively. After, a cross-case analysis is presented based on a dynamic capabilities' perspective. Last, is a synthesis of the analysis is presented to show the relationship of SSCM categories to different dynamic capabilities.

5.1 Within-case analysis

The within-case analysis is conducted based on the framework introduced by (Beske *et al.* 2014). The analysis only considers if the company has a developed practice and not how well it is implemented because it is not fit for this study. For example, some of the companies have implemented standards or certifications in parts of their supply chain but not as a whole. Furthermore, the practice can be of both informal (routines, experience) and formal outspoken routines, policies, documents) nature. The practices can be outsourced to an external party and are still considered as a practice since the company has a strategy to solve the problem. In the case of Tierra since they are part of a bigger group where some of the practices are being conducted on the group level. The level of each SSCM practice and dynamic capabilities is rated as high (observed in all three cases), medium (observed in two of the cases), low (observed in one case) or none (does not exist in any of the cases). An overview of the results from the within-case analysis is presented in the following table (Table 8).

Table 8. Identified SSCM Practices

SCM Categories	Identified SSCM practices	Level	Tierra	Houdini	Sandryds
Supply chain orientation	Supply chain management	Medium	Management decisions are made by taking aspects of SCM into account	A cross-functional integration of SCM in company's business activities	Not yet integrated
	Triple bottom line	High	Sustainability is incorporated in the business strategy	All dimensions of TBL are incorporated in the business strategy	Trying to implement sustainability in their daily activities
Supply chain continuity	Long-term relationships	High	Investing in educating suppliers for the long term	Strive for long term relationships with all suppliers	Trying to keep their suppliers for the long term
	Partner development	High	Educate their suppliers and their production practices in terms of quality and sustainability	Dialogue with their producers and suppliers about improving sustainable production practices	By being a member of BSCI Sandryds develop their partners Also, by using the software Quizrr
	Partner selection	High	Established selection process by having the suppliers close together	Informal supplier selection process, few suppliers based on recommendations	Informal selection practice based on experience and if the suppliers are connected to BSCI
Collaboration	Joint development	Low	Not integrated	Integrated by involving suppliers in design and production processes	Not integrated
	Technical integration	None	Not integrated	Not integrated	Not integrated
	Logistical integration	None	Not integrated	Not integrated	Not integrated
	Enhanced communication	High	Information sharing from FLA	Collaborating regarding transparency system	Information sharing system from BSCI
Risk management	Individual monitoring	Medium	Outsourced monitoring FLA Higgs index (Group level)	No downright audits are performed	Audits performed by BSCI
	Pressure group management	Low	Collaborating with FLA which pressure the industry regarding labor rights	Not integrated	Not integrated
	Standards and certifications	High	Using their own CoC, chemical guidelines, also considers other standards (Group level)	All suppliers must commit to their CoC Considers Bluesign when purchasing	Using several standards including BSCI CoC, GOTS, OEKO TEX
	Risk assessment tools	Medium	Fully developed internal risk assessment tools	Not integrated	BSCI provides a risk assesment tool
Pro-activity	Learning	Low	Perform continuously training in sustainability (Group level)	Not yet integrated	Not yet integrated
	Stakeholder management	Medium	Considers different stakeholders in their strategic decisions	Trying to integrate all stakeholders in their strategic decisions.	Not yet integrated
	Innovation	Medium	New materials and product development like using hemp and phasing out cotton	Innovative business models by using innovative new materials and design	Not yet integrated
	Life cycle assessment	Medium	Designing processes and products by choosing materials according to sustainability	Life cycle assessment is included in their design process	Not yet integrated

Analyzing the single cases it can be seen that the cases apply SSCM practices and further extend them to the apparel industry. The SSCM practices are displayed according to the categories developed by Beske *et al.* (2014).

5.1.1 Supply chain orientation practices

In general, all cases have a supply chain orientation based on SCM and TBL (high and medium) which is in line with previous assumptions that top management support is important to achieve successful SSCM (Beske *et al.*, 2014). Houdini use a cross functional team for their supply chain management and Tierra considering SCM activities in their management whereas Sandryds work with SCM is more separated. Regarding integration of TBL into SSCM all case companies are actively working with the three aspects of sustainability.

5.1.2 Supply chain continuity practices

Supply chain continuity is significant (high) in all cases where all case companies strive for having long-term relationship with their suppliers as an active strategy. They also have active practices for selecting and developing suppliers by focusing on a few number of suppliers. Although all three cases have practices for partner development, they have different approaches of how they are doing it. Tierra and Houdini are educating their suppliers in how their production can be improved in terms of quality and sustainability aspects such as renewable energy, material efficiency and waste management. Sandryds are also actively working with partner development themselves but also by using the third party BSCI and the software Quizrr to educate the workers. Regarding partner selection practices Tierra tries to keep their suppliers close together in order to reduce unnecessary costs and emission due to transportation. Houdini and Sandryds rely on experience and relationships as informal practices for selecting new suppliers.

5.1.3 Collaboration practices

When it comes to collaboration practices they are underrepresented (none and low) in the cases. Houdini is working actively with joint development practices by including their suppliers in the product development process and focus much of their innovation on the capabilities of their current suppliers. There is no sign of investments in technical and logistical practices such as implemented common ICT systems. However, the case companies have practices for enhanced communication by sharing information between actors even if the information is sometimes accessed from third parties, as in the cases of Tierra and Sandryds.

5.1.4 Risk management practices

Regarding risk management practices, adoption of standards and certifications are deployed to some extent by all cases. By using CoC the companies can ensure transparency and minimizing risk in their supply chain (Egels-Zandén *et al.* 2015) which is a practice observed in all cases. In contrast to Tierra and Houdini who use their own developed CoCs, Sandryds is using the CoC developed and standardized by BSCI which facilitate following up and monitoring practices. By using the same CoC it is easier for the suppliers to prepare for the audits as they know the prerequisites beforehand. Regarding pressure group practices Tierra are collaborating with FLA which to actively improve working conditions at the suppliers. Sandryds are

collaborating with BSCI but as it is more of a network and certification body than an NGO it is not considered here. The companies are not using certifications on their own products to any great extent but are considering it as a quality factor during purchasing.

5.1.5 Pro-activity practices

With regard to practices for proactivity, life cycle and innovation practices (Medium) are introduced at the two outdoor brands. Learning practices, (Low) were not implemented to any great extent except for Tierra who has continuous training sessions for their staff. It is mostly related to the design and production and might be related to their different sub-industries where outdoor apparel (Tierra and Houdini) produce more long-lived and quality-based products with a higher price whereas promo wear (Sandryds) is mostly products with a shorter life-time and price.

5.2 Cross case analysis

In this section the cross-case analysis will be displayed. The analysis is focused on finding key capabilities and routines that were identified to gain insights of how SMEs in the apparel sector manage their supply chains by applying a dynamic capabilities theoretical lens.
Table 9 summarizes the cross-case analysis for each dynamic capabilities' category:

Table 9. Observed Dynamic Capabilities

Dynamic Capability	Identified routine	Level	Tierra	Houdini	Sandryds
Knowledge Management	Knowledge sharing	High	Get knowledge about the supply chain from FLA.	Shared knowledge of production processes and sustainability impacts	Sharing knowledge about supply chain from BSCI
	Knowledge acquisition and evaluation	Low	Internal education on SSCM from FLA (group level)	Not integrated	Not integrated
Partner development	Educating suppliers	High	Actively trying to educate suppliers	Actively trying to develop their suppliers by educating and involve them in design and developing processes	Use IT systems like QuizRR to develop their suppliers
	Improving environmental performance	Medium	Better production processes,	Promoting renewable energy at suppliers	Not integrated
Supply chain Re-conceptualization	Inclusion of NGOs	Medium	Including partners such as FLA	Not integrated	Collaborating with BSCI
Co-evolution	Joint development of products	Medium	Are working closely with their suppliers	Work closely with producers to develop products	Not integrated
	Regular visits	High	Visits the suppliers regularly	Visits the suppliers regularly	Visits the suppliers regularly
Reflexive supply chain control	Transparency	High	Code of Conducts	Working actively with a transparency and traceability system	Code of Conducts
	Qualitative control/auditing	Medium	Regularly audits suppliers (group level) and FLA	Not integrated	BSCI are conducting audits

5.2.1 Knowledge Management capabilities

Regarding knowledge management capabilities the studied companies use some processes to access, evaluate and achieve new knowledge (Beske & Seuring 2014). All companies are sharing knowledge (high) between suppliers and the company to increase the supply chain sustainability performance. For the apparel industry their knowledge management capabilities can be accessed from external parties such as FLA and BSCI. Further knowledge acquisition and evalutation capabilities was not found.

5.2.2 Partner development capabilities

Partner development capabilities promotes routines that enables suppliers to be able to follow common goals that that are in line with the company's sustainability strategy (Carter & Rogers 2008; Defee & Fugate 2010a). In this regard all case companies are trying to educate their suppliers (high) in some regard but have different approaches for doing this. Tierra and Houdini are actively working with improving design and production processes as well as improving environmental performance at their suppliers (medium) whereas Sandryds are using an IT education platform for educating their suppliers in labor rights.

5.2.3 Supply chain Re-conceptualization capabilities

Involving a broader stakeholder perspective and not only traditional partners by involving local communities, NGOs and certification bodies in the supply chain are related to Re-conceptualization capabilities *(Pagell & Wu 2009; Beske 2012).* An actively inclusion of NGO's in the supply chain (Medium) are made by Tierra and Sandryds.

5.2.4 Co-evolution capabilities

Co-evolution capabilities aims for achieving synergies between actors in the supply chain by connecting partners and collaboration regarding development of new products and processes (Pagell & Wu 2009; Defee & Fugate 2010b; Beske 2012). All companies are building long term trusting relationships which can enable joint development of products (Medium) and enhancing personal communication by regular visiting the suppliers (High). In line with Beske *et al., (*2014) the case companies focus on practices related to supply chain continuity and follow-up routines.

5.2.5 Reflexive supply chain control

The reflexive supply chain control capability means to ensure transparency along the supply chain which allow the company to monitor and evaluate the supplier's business practices and strategies (Beske 2012; Egels-Zandén *et al.* 2015). All companies use CoC to ensure transparency (High) and Houdini also has a project with increasing transparency through their supply chain by integrating ICT. The findings is in line with (Egels-Zandén *et al.* 2015) who propose that companies in the apparel supply chain must choose between compliance and collaboration regarding transparency. Houdini has a collaborative approach whereas Tierra and Sandryds use external third-party certifications and standards to monitor and audit their suppliers.

5.3 Synthesis of analysis

The results from the analysis provides interesting insights to how apparel SMEs manage their supply chain and what dynamic capabilities they possess. In this section the results will be synthesized to provide an overview of how the different SSCM practices are related to specific dynamic capabilities. The following matrix (Table 10) presents the relationship between SSCM practices and dynamic capabilities in the way described by Miles & Huberman (1994).

Table 10. Synthesis of analysis

	Dynamic Capabilities					
SSCM Practice Categories	**Overlapping Routines**	**Knowledge Management**	**Partner development**	**Supply chain Re-conceptualisation**	**Co-evolution**	**Reflexive supply chain control**
	Supply chain orientation					
	Supply chain continuity	Long term relationships enhance	Long term relationships enhance partner development		Relationships enhanced by regular visits promotes joint development of products	Long relationship facilitates transparency and auditing.
	Collaboration		Partner synergies by development of new products	Information sharing with NGOs through enhanced communication		
	Risk management		Standards and certifications might help for partner development	Including NGOs could contribute with risk management capabilities		Standards and certifications might help improving risk factors and
	Pro-activity	Enhanced knowledge management through learning		Including NGOs that can provide knowledge and provide stakeholder views	Innovation can promote co-evolution by developing new products	

Even though supply chain orientation might not be linked to any SSCM specific dynamic capability it can be seen as a basic foundation for other SSCM practices (Beske *et al.* 2014).The empirical findings show that supply chain continuity practices mainly in terms of long-term relationships are important for development of several dynamic capabilities (Knowledge Management, Partner Development, Co-evolution). Moreover, it can be stated that collaboration with NGO's or external certification bodies can be very important for SMEs in the apparel sector. It does not only provide risk management practices such as auditing and monitoring but also contribute with internal learning processes and partner development capabilities. Collaboration practices between other supply chain actors are used to any great extent and ICT systems are used only to a limited extent. Innovation can promote development of new products that can be beneficial for both the buying company and the supplier.

6 Discussion

The chapter provides a discussion and critical reflection of the results and how they are related to existing literature. The starting point for the discussion is the two research questions: (1) How do SMEs in the apparel sector manage their supply chain regarding sustainability? (2) What dynamic capabilities do SMEs in the apparel sector need in order to achieve a more sustainable supply chain? Finally, the study's limitations and method are discussed.

In regard to the discussion of SMEs limited resources to implement sustainable business practices (Golicic & Smith 2013), the need for dynamic capabilities in changing business environments (Teece *et al.* 1997) and the need for more SSCM practices in the apparel supply chain (Jakhar 2015), this study provides insights on how SMEs in the apparel sector can manage their supply chain and what dynamic capabilities are related. The empirical findings of this study indicate that dynamic capabilities are important to enforce SSCM practices which validates previous studies (Beske 2012; Beske & Seuring 2014; Gruchmann 2018a). While other related studies have focused on the food sector (Beske *et al.* 2014; Gruchmann 2018a) this study focuses on SMEs in the apparel sector. Due to the limited amount of studies regarding the topic of SSCM practices and dynamic capabilities within the apparel sector and especially on SMEs in this context, this study fills a gap in current literature.

6.1 How SMEs work with SSCM in the apparel supply chain

In contrast to (Rahbek Pedersen 2009) who found that most SMEs have not implemented SSCM practices, this study shows that SMEs in the apparel sector do have several practices implemented. Although, this study was conducted on three companies that are actively working with sustainability, which indicates that they also have SSCM practices (Beske *et al.* 2014). The empirical findings indicate that SMEs are working with SSCM by applying a number of SSCM practices in line with (Hong & Jeong 2006; Kot 2018).

The findings identified SSCM practices related to the categorization by Beske *et al.*, (2014): *Supply chain orientation, Supply chain continuity, Collaboration, Risk management and Pro-activity.* The study identified practices in all categories but to a different extent in each the study companies. Based on the findings, one can see that there are different approaches on how SSCM practices are implemented.

6.1.1 Supply chain orientation

This study confirms (Beske *et al.* 2014) suggestions that supply chain orientation practices is essential for further development of SSCM practices. As all three companies are working actively with sustainability, they are also committed to have practices regarding their supply chain. This can almost be seen as a prerequisite for further development of SSCM practices.

6.1.2 Supply chain continuity

One significant approach for the studied SMEs is the focus on supply chain continuity practices, by keeping the number of suppliers low and maintain long-term relationships. This finding is in contrast to the assumptions within the neo classical economic paradigm where lower costs of production is the main goal in traditional strategic management (Paulraj 2011).

This study shows that long-term relationships are crucial in order to build other SSCM practices which is in line with Lummus & Vokurka (1999) who sees long-term relationships as a foundation for building competitive advantages by reducing uncertainty and transaction costs. Furthermore, keeping the supply base low might increase the risk of logistical problems. Keeping the supplier base low is related to increased environmental performance (Beske & Seuring 2014) which is also in line with the findings of this study, as the case companies perceive it as an important factor for their sustainability work. It also facilitates focusing resources in terms of fewer suppliers to audit and collaborate with. However, few suppliers might lead to increased risk by focusing on too few suppliers. If some problem occurs, either from production, sustainability or logistics, it can be crucial for the company.

6.1.3 Collaboration

Collaboration practices were not implemented to any great extent in the studied cases and the use of technical and logistical integration were non-existent in contrast to findings in previous literature (Beske *et al.* 2014). This could be due to the lack of implemented ICT systems in the studied companies. Shared ICT systems can be beneficial for increased collaboration between supply chain actors(Eitiveni *et al.* 2018). Factors that might hinder the implementation of such practices could be high investment costs. The reason could also be the size of the companies, as ICT systems are more commonly implemented in large focal companies. The lack of collaboration practices could also be related to sector specific characteristic, as other studies founded that collaboration practices are fairly high in, for example, the food sector (Beske *et al.* 2014; Gruchmann 2018b). Due to the fact that companies in the apparel sector usually are outsourcing their production to a large extent (Egels-Zandén *et al.* 2015), collaboration practices becomes important in order to ensure sustainability. Technological development in terms of digital ICT systems can facilitate collaboration and monitoring practices. How this can be done would need further investigation.

6.1.4 Risk Management

Regarding risk management practices, there are two approaches where some companies (Tierra & Sandryds) are relying more on auditing and certifications, while others are relying more on collaboration (Houdini). This is in line with previous studies (Egels-Zandén *et al.* 2015) that show that there is a tradeoff between collaboration and auditing, and that companies need to choose the way to go. Other approaches that derived from the analysis is the outsourcing of certain practices to external parties such as NGOs. By collaborating with NGOs and external certification bodies, the SME can minimize their risk by having a third party organization conducting certain practices (Beske & Seuring 2014). There is a great number of standards and certifications within the apparel industry available today, with a wide arrange of purposes and contributions. The study shows the importance of CoC as a tool for risk management in the supply chain, which is in line with (Egels-Zandén *et al.* 2015). The follow up practices and compliance of the CoC was not investigated. For SMEs, it could be beneficial to use certification bodies and other actors specialized in the field in order to outsource risk management practices to be more cost efficient.

Pro-activity

From the analysis, one can see that two outdoor companies (Tierra & Houdini) are working pro-actively, developing innovation and lifecycle assessment practices while Sandryds who operates within a different sub-sector, is not. This might be due to the fact that the outdoor industry is more focused on innovative materials and making products with higher quality that will last for a longer time and therefore it makes sense to adopt these practices. It can also be related to the products and the customers that they are selling the products to, with higher demands on quality and sustainability. Regarding learning practices, they were not significant in this study, where only Tierra has continuously trainings in sustainability.

6.2 Dynamic Capabilities apparel SMEs possess in order to implement SSCM practices

The study provides insights on what dynamic capabilities apparel SMEs have in order to implement SSCM practices which can be valuable for implementing CSR in the apparel sector. By doing this, it validates previous knowledge shared by Beske *et al.* (2014) on the relationship between dynamic capabilities and SSCM practices, but here in the context of the apparel sector. Even though this study shows that there could be causal relationships between SSCM practices and dynamic capabilities, it is sometimes hard to know whether it is the practices that enforce the dynamic capabilities or if the dynamic capabilities is needed in order to implement SSCM practices. The study finds that both phenomena exists. For example, the practice of long-term relationship facilitates the dynamic capabilities of partner development.

There are also examples on the other way around where a re-conceptualization capability by including NGO's or third-party actors might enhance risk management practices such as auditing, monitoring and knowledge sharing practices. The findings strengthen Beske's (2012; Beske *et al.* (2014) and Gruchmann, (2018) that states that the relationship between dynamic capabilities and SSCM practices can be seen as a dualistic iterative process. The findings also indicate that a company can perform a practice but choosing different approaches (capabilities) in applying them. Analyzing the results of the study, dynamic capabilities can facilitate implementation of specific SSCM practices.

6.2.1 Knowledge Management

The dynamic capabilities of knowledge management may lead to pro-activity practices such as innovation, learning and stakeholder management, which is in line with the findings of (Beske *et al.* 2014). Accessing and assessing new knowledge about sustainability issues in the supply chain can be beneficial for many companies in the apparel supply chain. For this reason, there might be opportunities of technical integration of ICT systems which can play an important role in the future (Eitiveni *et al.* 2018). Knowledge management capabilities are, to some extent, found in the cases but can be developed further.

6.2.2 Partner development

Partner development capabilities are found to be mainly related to the development of supply chain practices in terms of long-term relationships, collaboration and risk management practices. The studied companies are having well developed partner development capabilities by working closely to their suppliers in order to strengthen the overall sustainability performance of the whole supply chain, which is in line with previous studies (Beske *et al.* 2014).

6.2.3 Supply chain Re-conceptualization

Supply chain re-conceptualization capabilities can be seen as very important for SMEs within the apparel sector. Collaboration with NGO's or external certification bodies can contribute to a number of beneficial practices (Beske & Seuring 2014). They do not only provide risk management practices such as auditing and monitoring, but can also contribute with internal learning processes, expanded stakeholder perspectives and information sharing practices. Within the apparel sector there are many initiatives regarding environmental and social issues in the supply chain so this could be expanded further. Including NGOs and other external actors could be a good way of collaboration for SME as smaller actors in the supply chain. By outsourcing practices to an external party, the company might lose some control by not monitoring and auditing the supplier themselves (Egels-Zandén *et al.* 2015).

6.2.4 Co-evolution

Co- evolution capabilities might enhance proactivity and continuity practices such as innovation and joint development by developing new products. In the apparel supply chain with rapidly changing customer demands of products made of environmentally friendly material (Jakhar 2015), this capability might be of high importance. This might explain why the capability is more developed in the two consumer-oriented companies (Tierra, Houdini) than in the business-to-business oriented company (Sandryds).

6.2.5 Reflexive supply chain control

In order to achieve transparency along the supply chain, reflexive supply chain control capabilities may be achieved by implementing own transparency and monitoring practices (Beske *et al.* 2014). Long term relationships with suppliers can facilitate implementing transparency and auditing practices which also help to develop the dynamic capabilities for supply chain control, as it is often related to high investments in time and money. Another solution derived from the findings is to use external third-party organizations for auditing and monitoring, which can provide reflexive control capabilities. Third-party standards and certifications can help the development of reflexive supply chain control capabilities that the company might not possess internally.

6.3 Reflection on the findings in relation to SME characteristics

According to the findings of this study, the studied SMEs have formal and informal practices for handling sustainability issues in their supply chain. Due to the usage of less formalized practices for SMEs in general (Rahbek Pedersen 2009), it can sometimes be uncertain if the companies have a certain practice or not since it is not written down. This can affect the findings of the study since the findings are mainly dependent on the perception of the interviewee. Nevertheless, the companies might have a strategy for managing their supply chain by using SSCM practices.

In the problem statement, it was suggested that SMEs sometimes lack resources for implementing SSCM practices (Kot 2018). In contrast, this study shows that SMEs possess several SSCM practices and dynamic capabilities that can be important to incorporating all aspects of TBL in the apparel supply chain. Keeping the number of suppliers low means that there are fewer suppliers to monitor and audit which is necessary if you are a smaller company. SMEs use informal practices to a greater extent compared to large companies (Inan & Bititci 2015). This facilitates a faster and more agile management when it comes to develop dynamic capabilities by picking up new market trends and implementing new practices. Since SMEs have shorter decision processes (Inan & Bititci 2015) and since their leadership works, to a great extent, operationally, this might facilitates the development of dynamic capabilities of co-evolution and knowledge management. One factor that might limit the SMEs dynamic capabilities for SSCM practices in this study might be related to the lack of implementation of ICT systems. ICT systems can be important factors for enhancing dynamic capabilities (Beske *et al.* 2014; Kurnia *et al.* 2014; Eitiveni *et al.* 2018). However, since they are associated with high costs, they might be more easily implemented in larger focal companies.

7 Conclusion

The last chapter addresses the aim of the study, to identify SMEs' practices for sustainable supply chain management and analyze their relation to dynamic capabilities, in the apparel sector.
This chapter presents the major findings of the study and ends with limitations and suggestions for future studies.

Concluding this study, it can be argued that SSCM practices and dynamic capabilities can be of great importance for SMEs in the apparel sector. This study provides a better understanding on how SMEs manage their suppliers regarding sustainability and how dynamic capabilities can enhance these practices. Further, the study strengthens previous literature (Beske *et al.* 2014; Gruchmann 2018) as it created a link between SSCM practices and dynamic capabilities. This study further expands the framework by putting an emphasis on SME characteristics.

The study demonstrates that SSCM-related dynamic capabilities can facilitate SSCM practices in an iterative dualistic process. The empirical insights that, SSCM practices such as focusing on long-term relationships with a few numbers of suppliers, collaborating with NGOs and including suppliers in the development process, are some practices that might lead to dynamic capabilities. At the same time, dynamic capabilities such as re-conceptualization capabilities, by including NGO's or third-party actors, might enhance risk management practices such as auditing, monitoring and knowledge sharing practices. Collaboration practices has been underdeveloped in the studied companies which makes room for improvement regarding related dynamic capabilities. Technological development and investments in digital solutions can play an important role in solving these problems in the future, by implementing ICT systems which can facilitate SSCM-related dynamic capabilities (Hagberg *et al.* 2016). While other related studies have focused on the food sector (Beske *et al.* 2014; Gruchmann 2018), this study has focused on SMEs in the apparel sector. The findings provide insights that can be valuable for SMEs operating within the apparel sector or other dynamically changing business environments. In addition, SME characteristics may influence how SMEs are implementing SSCM practices and dynamic capabilities (Inan & Bititci 2015). The study consists of a multiple case study of three Swedish SMEs with outspoken sustainability work in the apparel sector and can provide a deeper theoretical understanding for research in the domains of SSCM, dynamic capabilities and the relation to SMEs in the apparel sector.

7.1 Limitations

Despite the insights provided by this study, qualitative studies always come with some limitations (Lincoln 1995). The conclusions are constrained by characteristics of research design and methodology which have an impact on the interpretation of the findings. Regarding the methodological choices made in the study, there are several aspects to consider. This section will provide a critical discussion of the methodological choices made in the study, what impacts they might have on the study's results and how they could be avoided for future studies. It will also provide a discussion about the trustworthiness of the findings and their application to other contexts in relation to the quality criteria shown previously (Chapter 3.6).

Regarding credibility limitations, the findings are based on interpretations of the information provided from interviews and secondary data. The study is limited to only rely on the perspective of apparel companies and are not looking at other relevant actors up- or downstream the supply chain. Consequently, as SSCM practices are inter-relational between different actors it could be interesting to include other viewpoints of other stakeholders in the study as well.

These interpretations construct a subjective perception of the interviewed persons' reality. In other words, the data is interpreted and coded into constructed categories of SSCM and dynamic capabilities. This information is interpreted by the informants and can be different from how it is perceived from another person's point of view.

Another limitation is how well the conclusions are possible to apply to other contexts. It can be discussed if the sample is representative for companies in the apparel and how much of the conclusions that are related to the unique companies. The study is conducted on three Swedish SMEs that are actively working with sustainability, similarly to other studies of SSCM (Beske & Seuring, 2014). Consequently, these insights might only be applicable for companies with an active work with sustainability. Due to the limited data collection of only having a few interviews and case companies, the conclusions are only limited to be valid for the specific cases and do not provide any ability for statistical generalization. However, according to (Flyvbjerg 2006) a statistical generalization is not admired in a qualitative study and is not claimed in this study. Instead, this study can provide a conceptual generalization which can be applied to other cases in similar contexts which is related to the concept of transferability (Lincoln & Guba 1986). For example, it can provide insights about SMEs in the apparel sector or other market environments with similar dynamic characteristics.

Regarding dependability limitations and the ability to replicate the study, the fact that Tierra might not be fully representative as an SME might be considered. The reason for this is because the company is owned by a bigger business group and therefore have access to additional practices and resources from the parent company. The question might arise if Tierra should be included in the study or not. However, the argument for this study was that Tierra is still operating as an independent company with their own cost structures and strategic management, but if the study would be conducted once more, they might be excluded from the sample.

Regarding confirmability, this study might have been biased by personal expectations and desires during interviews, data analysis and drawing conclusions. The information provided was interpreted and discussed according to the literature where it could be room for misinterpretations.

7.2 Further research

This study focused on SMEs that have a stated active work with sustainability. It would therefore be interesting to compare SMEs that are not claiming to actively work with sustainability. Since this study only focuses on apparel manufacturers that handle the design and mid-production processes, some alternative views might go unnoticed. It would be of interest to study the practices used by actors further up and downstream of the chain as well.

Furthermore, the study identifies a number of SSCM practices and dynamic capabilities related to SMEs within the apparel sector, but since the amount of cases investigated is limited, there could be other practices and dynamic capabilities existing in other companies. The study does not claim to have covered all available SSCM practices and dynamic capabilities, but rather gives examples on how a SME can work with SSCM practices and related dynamic capabilities. One suggestion for further research is to investigate the development of different dynamic capabilities linked to the maturity level of SSCM practices. There are several maturity level frameworks which can be of interest, since the dynamic capabilities are not only related to if there are SSCM practices, but also to what extent they are developed and implemented in the company.

There could also be further studies in how the findings of SSCM practices and dynamic capabilities are related to SME characteristics. This could be investigated by comparing a large company to a SME, as suggested by Inan & Bititci (2015), with similar supply chain and find out the differences and similarities in SSCM practices implemented and related dynamic capabilities. Furthermore, future studies can examine relationships between internal and intra-organizational practices in order to provide insights about choices regarding trade-off situations of outsourcing.

References

Ageron, B., Gunasekaran, A. & Spalanzani, A. (2012). Sustainable supply management: An empirical study. *International Journal of Production Economics*, vol. 140 (1), pp. 168–182. DOI: https://doi.org/10.1016/j.ijpe.2011.04.007

Allen, M. (2017). Narrative Literature Review. *The SAGE Encyclopedia of Communication Research Methods*. 2455 Teller Road, Thousand Oaks California 91320: SAGE Publications, Inc,

Alvesson, M. (2003). Beyond Neopositivists, Romantics, and Localists: A Reflexive Approach to Interviews in Organizational Research. *Academy of Management Review*, vol. 28 (1), pp. 13–33. DOI: https://doi.org/10.5465/amr.2003.8925191

Andersen, M. & Skjoett-Larsen, T. (2009). Corporate social responsibility in global supply chains. *Supply Chain Management*, vol. 14 (2), p. 24

Beske, P. (2012). Dynamic capabilities and sustainable supply chain management. *International Journal of Physical Distribution & Logistics Management*, vol. 42 (4), pp. 372–387. DOI: https://doi.org/10.1108/09600031211231344

Beske, P., Land, A. & Seuring, S. (2014). Sustainable supply chain management practices and dynamic capabilities in the food industry: A critical analysis of the literature. *International Journal of Production Economics*, vol. 152, pp. 131–143. DOI: https://doi.org/10.1016/j.ijpe.2013.12.026

Beske, P. & Seuring, S. (2014). Putting sustainability into supply chain management. *Supply Chain Management: An International Journal*, vol. 19 (3), pp. 322–331. DOI: https://doi.org/10.1108/SCM-12-2013-0432

Bryman, A. & Bell, E. (2015). *Business research methods*. 4. ed. Oxford university press.

Carter, C.R. & Rogers, D.S. (2008). A framework of sustainable supply chain management: moving toward new theory. *International Journal of Physical Distribution & Logistics Management*, vol. 38 (5), pp. 360–387. DOI: https://doi.org/10.1108/09600030810882816

Ciliberti, F., Pontrandolfo, P. & Scozzi, B. (2008). Investigating corporate social responsibility in supply chains: a SME perspective. *Journal of Cleaner Production*, vol. 16 (15), pp. 1579–1588. DOI: https://doi.org/10.1016/j.jclepro.2008.04.016

Correia, E., Carvalho, H., Azevedo, S.G. & Govindan, K. (2017). Maturity Models in Supply Chain Sustainability: A Systematic Literature Review. *Sustainability*, vol. 9 (1), p. 64. DOI: https://doi.org/10.3390/su9010064

Creswell, J.W. (2012). *Educational research: planning, conducting, and evaluating quantitative and qualitative research*. 4th ed. Boston: Pearson.

Creswell, J.W., Hanson, W.E., Clark Plano, V.L. & Morales, A. (2007). Qualitative Research Designs: Selection and Implementation. *The Counseling Psychologist*, vol. 35 (2), pp. 236–264. DOI: https://doi.org/10.1177/0011000006287390

Defee, C. & Fugate, B.S. (2010a). Changing perspective of capabilities in the dynamic supply chain era. *The International Journal of Logistics Management*, vol. 21 (2), pp. 180–206. DOI: https://doi.org/10.1108/09574091011071915

Defee, C.C. & Fugate, B.S. (2010b). Changing perspective of capabilities in the dynamic supply chain era. *International Journal of Logistics Management*, vol. 21 (2), pp. 180–206

Egels-Zandén, N., Hulthén, K. & Wulff, G. (2015). Trade-offs in supply chain transparency: the case of Nudie Jeans Co. *Journal of Cleaner Production*, vol. 107, pp. 95–104. DOI: https://doi.org/10.1016/j.jclepro.2014.04.074

Eisenhardt, K.M. (1989). Building Theories from Case Study Research. *Academy of Management Review*, vol. 14 (4), pp. 532–550. DOI: https://doi.org/10.5465/amr.1989.4308385

Eisenhardt, K.M. & Martin, J.A. (2000). Dynamic capabilities: what are they? *Strategic Management Journal*, vol. 21 (10–11), pp. 1105–1121. DOI: https://doi.org/10.1002/1097-0266(200010/11)21:10/11<1105::AID-SMJ133>3.0.CO;2-E

Eitiveni, I., Kurnia, S. & Buyya, R. (2017). Sustainable Supply Chain Management: Taxonomy, Gaps, and Future Directions. *Sustainable Supply Chain Management*, p. 13

Eitiveni, I., Kurnia, S. & Buyya, R. (2018). IT-Enabled Capabilities for Sustainable Supply Chain Management: An Affordance Theory Perspective. p. 15

Elkington, J. (1998). Partnerships from cannibals with forks: The triple bottom line of 21st-century business. *Environmental Quality Management*, vol. 8 (1), pp. 37–51. DOI: https://doi.org/10.1002/tqem.3310080106

Eurostat (2018). *Statistics on small and medium-sized enterprises - Statistics Explained*. Available at: https://ec.europa.eu/eurostat/statistics-explained/index.php/Statistics_on_small_and_medium-sized_enterprises#Country_by_country_analysis [2019-02-06]

Flyvbjerg, B. (2006). Five Misunderstandings About Case-Study Research. *Qualitative Inquiry*, vol. 12 (2), pp. 219–245. DOI: https://doi.org/10.1177/1077800405284363

Given, L. (2008). *The SAGE Encyclopedia of Qualitative Research Methods*. 2455 Teller Road, Thousand Oaks California 91320 United States: SAGE Publications, Inc. DOI: https://doi.org/10.4135/9781412963909

Golicic, S.L. & Smith, C.D. (2013). A Meta-Analysis of Environmentally Sustainable Supply Chain Management Practices and Firm Performance. *Journal of Supply Chain Management*, vol. 49 (2), pp. 78–95. DOI: https://doi.org/10.1111/jscm.12006

Gruchmann, T. (2018). *Logistics Social Responsibility and Dynamic Capabilities: Conceptualization and Empirical Analysis*. kassel university press GmbH.

Guba, E.G. & Lincoln, Y.S. (1994). Competing paradigms in qualitative research. *Handbook of qualitative research*. Thousand Oaks, CA, US: Sage Publications, Inc, pp. 105–117.

Hagberg, J., Sundstrom, M. & Egels-Zandén, N. (2016). The digitalization of retailing: an exploratory framework. *International Journal of Retail & Distribution Management*, vol. 44 (7), pp. 694–712. DOI: https://doi.org/10.1108/IJRDM-09-2015-0140

Hong, J., Zhang, Y. & Ding, M. (2018). Sustainable supply chain management practices, supply chain dynamic capabilities, and enterprise performance. *Journal of Cleaner Production*, vol. 172, pp. 3508–3519. DOI: https://doi.org/10.1016/j.jclepro.2017.06.093

Hong, P. & Jeong, J. (2006). Supply chain management practices of SMEs: from a business growth perspective. *Journal of Enterprise Information Management*, vol. 19 (3), pp. 292–302. DOI: https://doi.org/10.1108/17410390610658478

Inan, G.G. & Bititci, U.S. (2015). Understanding Organizational Capabilities and Dynamic Capabilities in the Context of Micro Enterprises: A Research Agenda. *Procedia - Social and Behavioral Sciences*, vol. 210, pp. 310–319. DOI: https://doi.org/10.1016/j.sbspro.2015.11.371

Jakhar, S.K. (2015). Performance evaluation and a flow allocation decision model for a sustainable supply chain of an apparel industry. *Journal of Cleaner Production*, vol. 87, pp. 391–413. DOI: https://doi.org/10.1016/j.jclepro.2014.09.089

Johnson, M.P. (2015). Sustainability Management and Small and Medium-Sized Enterprises: Managers' Awareness and Implementation of Innovative Tools. *Corporate Social Responsibility and Environmental Management*, vol. 22 (5), pp. 271–285. DOI: https://doi.org/10.1002/csr.1343

Kot, S. (2018). Sustainable Supply Chain Management in Small and Medium Enterprises. *Sustainability*, vol. 10 (4), p. 1143. DOI: https://doi.org/10.3390/su10041143

Kumar, V., Hallqvist, C. & Ekwall, D. (2017). Developing a Framework for Traceability Implementation in the Textile Supply Chain. *Systems*, vol. 5 (2), p. 33. DOI: https://doi.org/10.3390/systems5020033

Kurnia, S., Rahim, M., Samson, D. & Prakash, S. (2014). SUSTAINABLE SUPPLY CHAIN MANAGEMENT CAPABILITY MATURITY: FRAMEWORK DEVELOPMENT AND INITIAL EVALUATION. *Tel Aviv*, p. 11

Kvale, S. & Brinkmann, S. (2009). *InterViews: Learning the Craft of Qualitative Research Interviewing*. SAGE.

Land, A., Nielsen, H., Seuring, S. & Neutzling, D.M. (2015). Sustainable supply chain management practices and dynamic capabilities in the automotive industry. *Academy of Management Proceedings*, vol. 2015 (1), p. 13660. DOI: https://doi.org/10.5465/ambpp.2015.13660abstract

Lee, S.-Y. & Klassen, R.D. (2008). Drivers and Enablers That Foster Environmental Management Capabilities in Small- and Medium-Sized Suppliers in Supply Chains. *Production and Operations Management*, vol. 17 (6), pp. 573–586. DOI: https://doi.org/10.3401/poms.1080.0063

Lincoln, Y.S. (1995). Emerging Criteria for Quality in Qualitative and Interpretive Research. *Qualitative Inquiry*, vol. 1 (3), pp. 275–289. DOI: https://doi.org/10.1177/107780049500100301

Lincoln, Y.S. & Guba, E.G. (1986). But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. *New Directions for Program Evaluation*, vol. 1986 (30), pp. 73–84. DOI: https://doi.org/10.1002/ev.1427

Lummus, R.R. & Vokurka, R.J. (1999). Defining supply chain management: a historical perspective and practical guidelines. *Industrial Management & Data Systems*, vol. 99 (1), pp. 11–17. DOI: https://doi.org/10.1108/02635579910243851

Ma, Y.J., Lee, H.-H. & Goerlitz, K. (2016). Transparency of Global Apparel Supply Chains: Quantitative Analysis of Corporate Disclosures. *Corporate Social Responsibility and Environmental Management*, vol. 23 (5), pp. 308–318. DOI: https://doi.org/10.1002/csr.1378

Mackenzie, N. & Knipe, S. (2006). Research dilemmas: Paradigms, methods and methodology. p. 11

Mathivathanan, D., Govindan, K. & Haq, A.N. (2017). Exploring the impact of dynamic capabilities on sustainable supply chain firm's performance using Grey-Analytical Hierarchy Process. *Journal of Cleaner Production*, vol. 147, pp. 637–653. DOI: https://doi.org/10.1016/j.jclepro.2017.01.018

Miles, M.B. & Huberman, A.M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook*. SAGE.

Morsing, M. & Perrini, F. (2009). CSR in SMEs: do SMEs matter for the CSR agenda? *Business Ethics: A European Review*, vol. 18 (1), pp. 1–6. DOI: https://doi.org/10.1111/j.1467-8608.2009.01544.x

Nayak, R. & Padhye, R. (2015). 1 - Introduction: The apparel industry. In: Nayak, R. & Padhye, R. (eds.) *Garment Manufacturing Technology*. Woodhead Publishing, pp. 1–17.

Opdenakker, R. (2006). Advantages and Disadvantages of Four Interview Techniques in Qualitative Research. vol. 7, p. 13 (11)

Pagell, M. & Wu, Z. (2009). Building a More Complete Theory of Sustainable Supply Chain Management Using Case Studies of 10 Exemplars. *Journal of Supply Chain Management*, vol. 45 (2), pp. 37–56. DOI: https://doi.org/10.1111/j.1745-493X.2009.03162.x

Paulraj, A. (2011). Understanding the Relationships Between Internal Resources and Capabilities, Sustainable Supply Management and Organizational Sustainability*.

Journal of Supply Chain Management, vol. 47 (1), pp. 19–37. DOI: https://doi.org/10.1111/j.1745-493X.2010.03212.x

Porter, M.E. & Kramer, M.R. (2006). Strategy and society: the link between competitive advantage and corporate social responsibility. *Strategic Direction*, vol. 23 (5). DOI: https://doi.org/10.1108/sd.2007.05623ead.006

Qaiyum, S. & Wang, C.L. (2018). Understanding internal conditions driving ordinary and dynamic capabilities in Indian high-tech firms. *Journal of Business Research*, vol. 90, pp. 206–214. DOI: https://doi.org/10.1016/j.jbusres.2018.05.014

Quayle, M. (2003). A study of supply chain management practice in UK industrial SMEs. *Supply Chain Management: An International Journal*, vol. 8 (1), pp. 79–86. DOI: https://doi.org/10.1108/13598540310463387

Rahbek Pedersen, E. (2009). The many and the few: rounding up the SMEs that manage CSR in the supply chain. *Supply Chain Management: An International Journal*, vol. 14 (2), pp. 109–116. DOI: https://doi.org/10.1108/13598540910941975

Robson, C. (2016). Developing your Ideas. *Real World Research*.

Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin, F.S., Lambin, E., Lenton, T.M., Scheffer, M., Folke, C., Schellnhuber, H.J., Nykvist, B., de Wit, C.A., Hughes, T., van der Leeuw, S., Rodhe, H., Sörlin, S., Snyder, P.K., Costanza, R., Svedin, U., Falkenmark, M., Karlberg, L., Corell, R.W., Fabry, V.J., Hansen, J., Walker, B., Liverman, D., Richardson, K., Crutzen, P. & Foley, J. (2009). Planetary Boundaries: Exploring the Safe Operating Space for Humanity. *Ecology and Society*, vol. 14 (2). Available at: https://www.jstor.org/stable/26268316 [2018-09-06]

Rudnicka, A. (2018). The Role of Relations with Suppliers in the Creation of Sustainable Supply Chain – Practical Examples. *Acta Universitatis Lodziensis. Folia Oeconomica*, vol. 3 (335). DOI: https://doi.org/10.18778/0208-6018.335.06

Sen, A. (2003). The U.S. apparel industry: a supply chain review. p. 50

Seuring, S. & Müller, M. (2008). From a literature review to a conceptual framework for sustainable supply chain management. *Journal of Cleaner Production*, vol. 16 (15), pp. 1699–1710. DOI: https://doi.org/10.1016/j.jclepro.2008.04.020

Shenton, A.K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, vol. 22 (2), pp. 63–75. DOI: https://doi.org/10.3233/EFI-2004-22201

Teece, D.J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, vol. 28 (13), pp. 1319–1350. DOI: https://doi.org/10.1002/smj.640

Teece, D.J. (2017). A capability theory of the firm: an economics and (Strategic) management perspective. *New Zealand Economic Papers*, pp. 1–43. DOI: https://doi.org/10.1080/00779954.2017.1371208

Teece, D.J., Pisano, G. & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, vol. 18 (7), pp. 509–533. DOI: https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z

Tilley, F. (2000). Small firm environmental ethics: how deep do they go? *Business Ethics: A European Review*, vol. 9 (1), pp. 31–41. DOI: https://doi.org/10.1111/1467-8608.00167

Vargas, J.R.C. & Mantilla, C.E.M. (2014). Sustainable supply chain management capabilities: a review from the resource-based view, the dynamic capabilities and stakeholder theories. *Latin American J. of Management for Sustainable Development*, vol. 1 (4), p. 323. DOI: https://doi.org/10.1504/LAJMSD.2014.067388

Walton, S.V., Handfield, R.B. & Melnyk, S.A. (1998). The Green Supply Chain: Integrating Suppliers into Environmental Management Processes. *International Journal of*

Purchasing and Materials Management, vol. 34 (1), pp. 2–11. DOI: https://doi.org/10.1111/j.1745-493X.1998.tb00042.x

Wang, Y.-S. (2016). Dynamic capabilities in fashion apparel industry: emergent conceptual framework. *Baltic Journal of Management*, vol. 11 (3), pp. 286–309. DOI: https://doi.org/10.1108/BJM-02-2015-0051

Yin, R.K. (2009). *Case Study Research Design and Methods*. SAGE Publications, Inc. Available at: http://www.madeira-edu.pt/LinkClick.aspx?fileticket=Fgm4GJWVTRs%3D&tabid=3004 [2019-02-19]

Yin, R.K. (2013). Validity and generalization in future case study evaluations. *Evaluation*, vol. 19 (3), pp. 321–332. DOI: https://doi.org/10.1177/1356389013497081

Zhang, Y. & Wildemuth, B.M. (2009). Qualitative Analysis of Content. p. 12

Zhu, Q., Sarkis, J. & Lai, K. (2012). Green supply chain management innovation diffusion and its relationship to organizational improvement: An ecological modernization perspective. *Journal of Engineering and Technology Management*, vol. 29 (1), pp. 168–185. DOI: https://doi.org/10.1016/j.jengtecman.2011.09.012

Appendix: Interview guide

0. Introduction

0.1 Introduction to the study, its aims, and the researcher

0.2 Assurance of confidentiality and anonymity, GDPR etc.

Background information:
Name:
Job title:
Years in the company:
Number of suppliers:
Employees working with these issues:
Location of suppliers

1. Themes regarding the interview

Focus: Practices for sustainable supply chains

1.1 What

- What is sustainability for you?
- Could you provide a description of your supply chain?
- How many suppliers do you have?
- What critical sustainability aspects do you see in your supply chain?
- What aspects do you focus on?
- How do you see your role in the supply chain?
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1.2 Why

- Why do you work with sustainability issues regarding your supply chain?
- What external factors affect your work with sustainable supply chains?

1.3 How

- How do you work with sustainable supply chains?
- How do you select your suppliers?
- How do you follow up your suppliers?
- What practices (methods/routines) do you use in your daily work with sustainable supply chains? (E.g Code of conducts, risk assessment tools, certifications, audits etc, LCA.)
- How do you work to improve these practices?
  How do you develop capabilities to develop skills/competences to use these practices? (E.g internal training, hiring, outsourcing/consultants)
- Is it anything more you want to add that are of particular interest to you?