

Implementation of Supply Chain Sustainability in the Fashion Industry

Case studies of Small-Medium Sized Enterprises and
Third Party Organizations



Signe Damgaard Nielsen

Supervisor

Olga Chkanikova

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Tel: +46 – 46 222 02 00, Fax: +46 – 46 222 02 10, e-mail: iiiee@iiiee.lu.se.

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Signe Damgaard Nielsen

*Malmö/Lund,
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Abstract

This thesis investigates how small-medium sized enterprises (SMEs) in the fashion industry work with sustainable fashion and the approaches they implement within the supply chain. The research examines further how third party organizations support the SMEs in their way towards a sustainable design and production.

The research presents findings from case studies of seven focal companies and identifies the external factors, which the SMEs in fashion industry face. These external factors include market drivers such as transparency, lack of regulatory drivers and support from third party organizations. The internal factors such as applying sourcing criteria as certified materials and suppliers are identified together with the importance of a trusted and collaborative relationship with suppliers. A gap between SMEs challenges and the support the third party organizations provide is highlighted. Finally, the thesis seeks to provide an overview of the different initiatives done by SMEs in Denmark and Sweden and to understand the critical aspects for a further sustainable development.

Keywords: sustainable supply chain, sustainable fashion, small-medium sized enterprises (SME), third party organizations.

Executive Summary

The fashion and textile industry has a major impact on the environment, on supply chains, on production, on manual labour and essentially on the consumer. The fashion industry is one of the largest global industries and after the oil industry, also the most polluting. Particularly, the textile sector is responsible for significant environmental problems associated with the production process due to large use of toxic chemicals, which have an adverse impact on the natural environment and human health.

Apparel and textiles represent a significant percent of the world's exports and in Denmark the fashion industry is the country's fourth largest export business with increased growth potential, also within sustainability. In fact the market for sustainable fashion is growing 10 percent more than the market for unsustainable fashion globally (Kruse & Storm Rasmussen, 2012).

The SME business sector represents a large part of the world economy and therefore has a substantial role to play in combating societal and environmental problems. Many fashion, apparel and textile companies are SMEs. Research suggests that small companies have been able to reshape their supply chain and identify different practices that large companies cannot pursue (Caniato et al., 2011). SMEs within the fashion industry have applied different sustainable sourcing strategies and implemented successful sustainable clothes production.

SMEs working with sustainable fashion in Denmark and Sweden have been chosen as case studies for this thesis. To help SMEs to realize their potential, the challenges are understood from the perspective of focal organizations, including what type of support is required to assist SMEs in the development and implementation of sustainable supply chains. There is a corporate challenge in establishing a sustainable, yet profitable business and these specific challenges are of interest to explore within the smaller companies and with particular reference to third party organizations that to provide support to the companies.

Aim & Research Questions

The overarching aim of the study is to provide knowledge about sustainability work of SMEs in respective supply chains and elaborate on policy-recommendations regarding what type of support SMEs need in the move towards sustainability.

The research questions posed in this thesis are:

RQ1: How do SMEs in the fashion industry address the issues connected to sustainability within their supply chain?

- What are the major factors that influence implementation of supply chain sustainability?
- How do SMEs approach sustainable sourcing strategies?

RQ2: What are the challenges that SMEs face today while developing and implementing sustainable supply chain strategies?

RQ3: What is the role of third party organizations in supporting SMEs in implementation of supply chain sustainability?

Research Design & Methodology

A case study approach has been selected and seven focal environmentally and socially responsible companies in the apparel industry in Denmark and Sweden were chosen as case studies and interviewed to collect empirical data. Third party organizations within the industry were additionally chosen and interviewed. The research design phase was done in two major steps: first, by conducting a literature review of academic papers to understand the background and identify an analytical framework and second, by collecting empirical data and analysing the data on the basis of chosen analytical framework.

Main Findings & Analysis

External factors play a large role for the ability of SMEs to implement sustainable supply chain strategies. Factors have been identified to be of primary importance by SMEs and they include market drivers (customer demand, transparency and design/quality), lack of regulatory drivers and support from third party organizations. Cross-case comparison of SME's sustainable sourcing strategies is analysed from criteria applied to suppliers, sustainable sourcing approaches, e.g. supplier selection vs. inter-organization management and relationship with suppliers. Third party organizations have a role in supporting SMEs and have the tools and resources to help the companies to implement supply chain sustainability strategies. Third party organizations contribute to SMEs ability to implement sustainable sourcing strategies by providing guidance on CSR issues in the supply chain and offers seminars/workshops/education. The analysis has shown, that while the role of third party organizations in supporting SMEs transformation towards sustainability is of large importance, there is a gap between SMEs challenges and support provided by third party organizations.

Conclusion & Recommendations

One major factor found to be influencing the implementation of supply chain sustainability is finding the right supplier who either has the right certifications or is able to develop in improving sustainable capacity. That factor also relates to having a trusted and close relationship with suppliers. It was recognized that transparency towards the external environment is an important marketing element for the SMEs. Furthermore the SME's relationship with their suppliers is noticeable. For a majority of the case companies the relationship with their supplier is built on trust and collaboration. SMEs can either choose a supplier that is readily available on the market or through inter-organizational management when a supplier is not readily available on the market. The SMEs have chosen to work with existing standards and certifications in the market, which is a main criteria in the sourcing process.

While developing and implementing sustainable supply chain strategies certain challenges exist for the SMEs. The challenges that the SMEs face are highly affected by choices in the company's supply chain. Choices connected to finding the right suppliers are difficult as there are a limited number of suppliers that are certified and have the possibility to collaborate. These challenges are extended by the fact that sustainable and certified materials are limited and judging the information behind takes time and resources. For a company attempting to initiate a sustainable clothing production one of the largest challenges lies within the fact of not knowing where to begin. Paradoxically, there is plenty of information available about materials, chemicals, certifications etc. in many different places but the analysis showed it is difficult for the individual company to know where to search for the right and valid information. At the same time there is a lack of regulatory drivers and financial support to the SMEs, which can hinder successful implementation of supply chain sustainability by SMEs.

Additionally, it can be concluded that third party organizations' role in supporting SMEs is essential. The organizations have the knowledge and resources to help the SMEs in the implementation of supply chain sustainability. Currently, third parties offer guidance, workshops and other valuable assistance. However, the SMEs indicate a gap between the support that is provided and the challenges they face. The SMEs seek assistance in monitoring suppliers, acquiring knowledge from education seminars and a place to search for materials and suppliers. The SMEs need to become aware of the wide range of resources that the third parties are offering and know how to use them in the right way.

Finally, recommendations are put forward to for policy-makers, SMEs and third parties to ensure further improvement within sustainable fashion and supply chain sustainability.

An overall recommendation for the aforementioned parties is to establish a "knowledge platform", initially targeted at SMEs in the fashion and textile industry. This would be a platform for sharing 'best practices' and information about materials, suppliers and certifications to build and strengthen the companies' knowledge and expertise in the area of sustainability. Knowledge sharing in the form of providing more education and seminars for the SMEs can help minimize their time and resources in searching for relevant information, for instance in regards to sustainable qualities of materials, worker conditions, environmental impacts in the production process etc.

It has become evident that if the fashion industry is to implement supply chain sustainability to benefit the environment, production and the consumers, a more concentrated and targeted approach is needed. The fashion companies already on a sustainable pathway are first-movers and tireless in their pursuit for sustainability but if more SMEs are to overcome challenges, the identified internal and external factors must be addressed.

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Abbreviations

BCI	Better Cotton Initiative
BSR	Business of a Better World
CSR	Corporate Social Responsibility
DAFI	Danish Fashion Institute
DIEH	Danish Ethical Trading Initiative
GOTS	Global Organic Textile Standard
NFA	Nordic Fashion Association
NGO	Non-Governmental Organization
NICE	Nordic Initiative Clean & Ethical
OE	Organic Exchange
PFC	Perfluorinated Compound
REACH	Registration, Evaluation, Authorisation and Restriction of Chemical Substances
SAI	Social Accountability Standard
SCM	Supply Chain Management
SFA	Sustainable Fashion Academy
SME	Small and medium-sized enterprises
SVHC	Substances of Very High Concern

1 Introduction

1.1 Background: The World of the Fashion Industry

The world of fashion may be stylish, glamorous and sensational, but its negative impact on the environment is accumulating day by day. From an environmental point of view, the clothes we wear and the textiles they are made from can cause an excessive amount of damage. Consumers' "use-and-throw away" attitude towards products like clothing intensifies the problem. It is an industry with frequent product shift as new fashion styles are launched each season. Fortunately, stakeholders' environmental pressure on the industry is increasing. Consumers, politicians and organizations within the fashion industry are now playing a "watch-dog" role to ensure that the clothing industry focuses its efforts on sustainable development and minimizing harmful environmental and social impacts.

Defining sustainable fashion can be difficult for the average consumer and encompasses numerous aspects. Is sustainable fashion simply organic materials and being ethically produced? Is fabric hardwearing, how often does it need to be washed and is it recyclable? Or does it refer to being manufactured from recycled materials? Defining sustainable fashion is a question, which for many can be answered differently, but one thing is true. Sustainable fashion should become mainstream and ensure a high level of awareness of the contents in the clothes and associated production methods in the company and among consumers and retailers. The industry has a long road ahead and is positioned well to shift towards a more sustainable industry but the responsibility lies not only at the companies in the fashion and apparel industry but also at society as a whole. The sustainable development has to start somewhere and the small-medium sized enterprises (SMEs) have the chance to generate that attention and expand sustainability within their business with all the aspects in mind.

The fashion industry is a large global industry and one of the most polluting and socially challenged industries in the world, after the oil industry (Nordic Fashion Association, 2012). Particularly, the textile sector is responsible for significant environmental problems associated with the production process due to large use of toxic chemicals, which have an adverse impact on the natural environment and human health (Pesticide Action Network, 2012). Conventional production processes require large quantities of chemicals in the production of cotton fibers and according to the Cambridge report (2006) the use of toxic chemicals would be reduced by over 92 percent if the textile industry would switch to organic cotton. In the fashion and textile industry, cotton is an important resource and commodity. Cotton production is a valuable source of income to people in third-world countries with cotton farmers playing a critical role in the cotton supply chain (Fair-trade Canada, 2011).

Another pressing issue is the working conditions in sweat-shops; factories that employ people in unacceptable conditions with long work hours, health and safety risks, low wages and non-respect of workers rights (UNEP, 2011). Among the issues of high environmental concern in the factories are the dyes that are used, anti-wrinkle materials and internal air quality. A sustainable supply chain within the fashion industry is demanding and can be complex for many as it involves mentioned issues as well as control from the company which demands various resources such as time, financing and staff management.

The search for lower production costs has led to a relocation of production sites to developing countries like India, Bangladesh and China. China is the major exporter of textiles in 2010 with a relatively cheap workforce and less strict environmental and labor regulations (World Trade Organization, 2011).

Due to such off shoring of production and extended supply chains, business operations of international clothing brands have become increasingly complex. These global supply chains are causing significant challenges for companies to trace the origins of raw materials and exercise control over environmental and social impacts that arise at various life-cycle stages. At the same time companies are often held responsible for environmental and social problems caused not directly by themselves but also indirectly by their suppliers. This overall responsibility can be damaging for the company in terms of social awareness, reputation and popularity (Miljönytt, 2011;Koplin, 2005).

Apparel and textiles represent a significant percent of the world's exports and in Denmark the fashion industry is the country's fourth largest export business with increased growth potential within sustainability also evident. A trend towards sustainable fashion in Denmark is proven by the fact that the market is growing 10 percent more than the market for unsustainable fashion globally (Berlingske Tidende, 2012). This industry is of great importance to Denmark, which was also indicated at the recent summit on sustainable fashion called 'Copenhagen Summit Fashion'. The 'Danish Fashion Institute' (DAFI) initiated the summit with the launch of the first sector-specific initiative; the new UN Global Compact & NICE (Nordic Initiative, Clean and Ethical) code of conduct (UN, 2012). As the EU Commissioner for Climate Action, Connie Hedegaard expressed at the summit "[...] green fashion now needs to move from the margins into the mainstream - sustainability is the fashion of the future" (2012).

1.2 Research Problem

The SME business sector represents a large part of the world economy and therefore has a substantial role to play in combating societal and environmental problems. More than 99 percent of all European business is SMEs and nine out of ten SMEs are in fact micro enterprises with less than 10 employees (European Commission/Enterprise & Industry, 2012). Many of these micro enterprises are also present in the fashion industry, where sustainability issues are becoming increasingly important.

The sustainability concerns have become a trend among large fashion brands and the public is somewhat aware of sustainability initiatives launched by the big corporations like the Swedish apparel retailer Hennes & Mauritz (H&M), due to their marketing activities and sustainability reporting. However, the fact is that a limited number of actions of SMEs address the sustainability aspects of their products and together with SMEs operations are less known (Peters, 2010). According to Jenkins (2009) more SMEs could adopt corporate social responsibility practices (CSR) if they were educated about it and aware that implementation of CSR and engaging in sustainable practices might enhance their competitive advantage and a survival in the industry (Caniato et al., 2011). Furthermore, it is claimed that companies (of all sizes) need to address sustainability concerns in their supply chains (King & Soule, 2007).

Research suggests that small companies have been able to reshape their supply chain and identify different practices that large companies cannot pursue (Caniato et al., 2011). However, according to Blombäck & Wigren (2009) little research has been conducted on how smaller companies adopt or might further adopt CSR practices normally implemented by large companies. To help SMEs to realize its potential, the challenges should be understood from the perspective of focal organizations, including what type of support is required to assist SMEs in the development and implementation of sustainable supply chains. At the same time, the academic discussion regarding the role of third-parties in enhancing implementation of supply chain sustainability is also relatively limited (Seuring, 2011) There is a corporate challenge in establishing a sustainable, yet profitable business and these specific challenges are of interest to explore within the smaller companies and with particular reference to third party organizations functioning with purpose to provide support to the companies.

1.3 Research Objectives & Questions

The overarching aim of the study is to provide knowledge about sustainability work of SMEs in the fashion industry in respective supply chains and elaborate on policy-recommendations regarding what type of support SMEs need in this process.

To achieve this aim, the following objectives have been set:

- *Provide an exploratory overview of current sustainability approaches within SMEs*
- *Understand the challenges associated with greening supply chains for SMEs, why they exist and how they can be overcome*
- *Understand and analyze the role of third party organizations, what kind of support third party organizations provide to assist in the development of sustainability initiatives and tackling associated challenges*

The research questions that reflect these objectives are:

RQ1: How do SMEs in the fashion industry address the issues connected to sustainability within their supply chain?

- What are the major factors that influence implementation of supply chain sustainability?
- How do SMEs approach sustainable sourcing strategies?

RQ2: What are the challenges that SMEs face today while developing and implementing sustainable supply chain strategies?

RQ3: What is the role of third party organizations in supporting SMEs in implementation of supply chain sustainability?

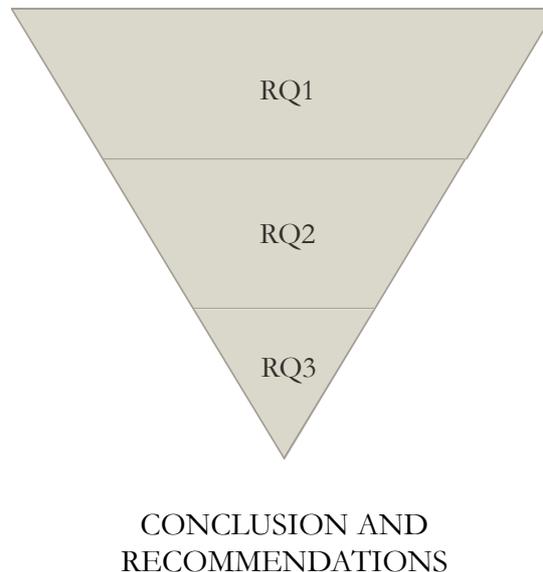


Figure 1-1 Research question funnel

1.4 Research Scope & limitations

The research is industry-specific and focused at seven different case companies, SMEs within the geographical scope of Denmark and Sweden and all working with sustainable fashion and apparel or approaching the development of sustainable fashion strategies. The SMEs in the fashion industry have been chosen due to their transparent and committed approach to sustainability and the associated challenges within the whole supply chain - issues which are very recognized in relation to this industry particularly concerning workers conditions and production of cotton using extensive amount of chemicals.

The selected case companies have demonstrated significant attention and devotion to sustainability issues in their respective fields which in this case focus on children's and adult's clothing or an initial interest to pursue a sustainable production. These companies all have difficulties getting the resources and funds for certification, controlling suppliers, not knowing where to start etc. Besides the seven case companies, third party organizations in the industry have been chosen in order to understand and analyze their specific role in encouraging and enhancing the SMEs' sustainability performance.

The area of fashion is large and so are associated sustainability impacts that arise throughout the garment life cycle. Hence, within the area of this thesis I have chosen to focus at apparel and exclude shoes, outdoor apparel and accessories. Furthermore, the focus is on the design and production phase as implementing sustainability actions in a business demands the company to start at the design level and apply it all the way through the production phase.

Furthermore, since I am interested to gain a SMEs perspective at their sustainability work in supply chains and associated challenges, I exclude the data collection on the effect of the SMEs sustainability initiatives and interviewing suppliers within their supply chain. The issues relating to consumer consumption of apparel will not be analyzed.

A few limitations are recognized within this research. Firstly, the limits exist on the information collected and the risk of misinterpretation and/or bias. Secondly, companies and third party organization were contacted but did not wanted to participate. As a result some information regarding third party organization actions are collected from their website.

The majority of the research was conducted through qualitative interviews and this method includes the risk of some weaknesses in validity. Particular, interpretation of the data can prevent accurate data collection and analysis. Some were provided with the questions beforehand. Focusing only at apparel and not a broader range of fashion limits the larger overview of the industry in Denmark and Sweden.

1.5 Outline/reader's guide

This research is structured into the following chapters:

Chapter 1 outlines the research problem, poses the research questions and provides details on the research scope and limitations.

Chapter 2 provides details on the research design and as well the data collection and chosen methodology.

Chapter 3 describes and analyses the existing literature in the theoretical context of sustainable supply chain management and SMEs approaches to CSR. An analytical framework is presented.

Chapter 4 provides a practical background of the fashion and textile industry by describing different sustainable materials, certifications/standards and regulations.

Chapter 5 describes the case- companies with a basic background description. Third party organizations resources and initiatives are also described.

Chapter 6 outlines the findings from interviews with case companies and third party organizations. The chapter highlights the findings within external and internal factors from the analytical framework.

Chapter 7 provides the analysis of the findings outlined in chapter 5 and 6 and through the lens of the applied analytical framework.

Chapter 8 discusses the area of fashion and its future connection to sustainability.

Chapter 9 summarizes the main finding, provides future recommendations and suggests areas for future research.

2 Methodology

In this chapter the research design is outlined and methods of data collection are explained.

2.1 Research Design

A qualitative approach to research design is adopted. A case-study approach was selected as it represents a suitable method of academic inquiry to understand and explore the driving forces and challenges for sustainability action within a real-life corporate context (Yin, 1994). Seven environmentally and socially responsible companies (two companies with an initial commitment) in the apparel industry in Denmark and Sweden were chosen as case studies and corporate practitioners (owners, head of design, CSR and sourcing managers) within each company have been interviewed to collect empirical data. The type of information collected during semi-structured interviews include description of the company's daily operations, sourcing process and associated challenges, as well as corporate perspectives regarding the role of third party organizations, e.g. support in greening supply chains.

The research designed in two major steps (see Figure 2-1):

- I. Conducting literature review aimed at establishing background and analytical framework for further research.
- II. Collecting empirical data and analyzing on the basis of chosen analytical framework

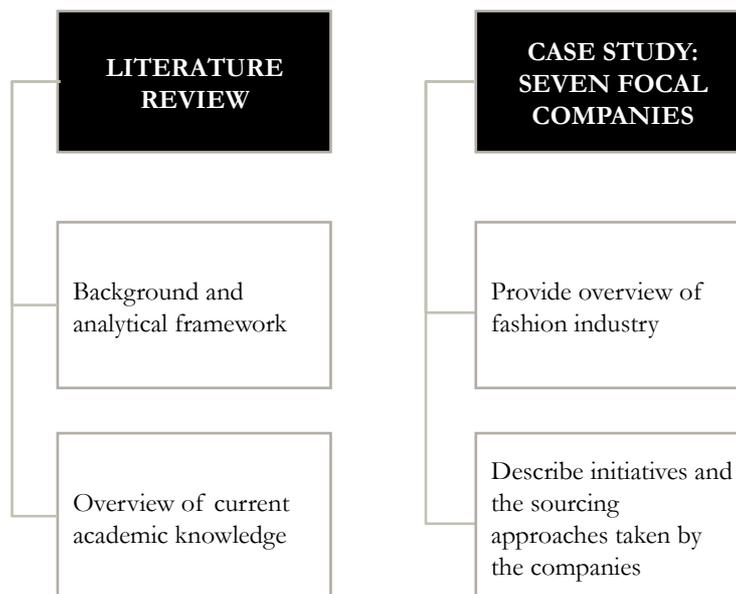


Figure 2-1 Applied research methods

2.2 Data collection

The data collection can be divided into two phases: a) background & theory and b) case studies.

Background & theory

The first phase began with a literature review of academic papers from international peer-reviewed journals, reports and books, which was conducted to collect a deeper understanding of the fashion industry and its practices with sustainable issues. This review of background issues provides an overview of existing knowledge in the field of sustainability in the supply chain and the fashion industry in general. Data were mainly collected through Lund University's online library Summon and Internet sites of central organizations. Information search for academic articles include following key words: 1) corporate social responsibility; 2) sustainable supply chain; 3) supply chain management; 4) sustainable fashion; 5) small-medium sized enterprises. Through this search relevant theoretical and conceptual papers, comprehensive literature reviews, surveys and case-study articles were selected and reviewed in order to guide the analysis.

Case selection

The focus on the fashion and apparel industry is due to the many adverse impacts on humans and environment. Currently, many sustainability initiatives have been initiated both nationally and internationally. These positive changes towards higher level of sustainability have also occurred among SMEs and the chosen case companies have shown a high degree of sustainability actions and others an initial commitment towards a sustainable business.

Seven different fashion and apparel companies were chosen for the case studies due to their interest and commitment to sustainability, relating to ethical and environmental issues. Two of the case companies have been in the fashion industry for over ten years and are now trying to initiate working with sustainable fashion. Those two companies have wished to be anonymous in this thesis. They will be referred to as company A and B. The rest of the case companies will be referred by name as it is essential to openly convey these companies stories, who has made it possible to work with sustainability in the whole supply chain, by describing their process and initiatives.

The focal companies were chosen based on my own familiarity of the single company, recommendations from outside actors and search on different fashion websites. The number of companies are seen as reasonable as they represents a broad range within the Danish fashion industry with one example in Sweden as well. Within this range there is a possibility to provide a larger overview. Common for all of the companies is that they all sell their products through their websites and wholesalers in individual stores worldwide. Company A and B both have concept stores in Copenhagen. The selected companies have demonstrated a clear interest in the research during the initial contact and were willing to take part in the study and assist with interviews and further follow-up questions by email or telephone. The following companies all classified as micro and small according to EU's definition (European Commission, 2005) were selected:

- 1) AIAYU
- 2) Katvig
- 3) Knowledge Cotton Apparel

- 4) Sture&Lisa
- 5) Underprotection
- 6) Company A
- 7) Company B

Additionally, the third party organizations were chosen due to their specific target to assist fashion industry in implementation of sustainable development and the selected companies membership in respective organizations. It should be noted that other organizations related to this industry might exist but has not been included for this research due to limitations.

- I. Danish Fashion Institute / Nordic Fashion Association
- II. Danish Ethical Trading Initiative
- III. Danish Fashion & Textile
- IV. Sustainable Fashion Academy
- V. MISTRA Future Fashion Research Consortium¹

The primary data were collected from semi-structured interviews and in some instances questions were provided beforehand (see Appendix B for list of interview questions). Internal and external factors for the company were investigated in the interviews. Interviews were conducted either by telephone or in form of personal meetings. In few cases the questions were responded through email correspondence and followed up by telephone. Owners of the companies or CSR/sourcing related employees were interviewed. Other actors working with sustainable fashion were also interviewed to provide a more thorough background of the fashion industry. Interviews lasted between 30 minutes to 2 hours. See Appendix A for list of interviews.

The data collection phase and my field research also consisted of participation in three different events:

- "MISTRA Future Fashion Symposium", Copenhagen Business School, May 2nd 2012, participation of leading fashion practitioners and researchers. Arranged by MISTRA Future Fashion Programme.
- Workshop, "Recycling of Textiles", June 21 2012, arranged by the Innovation Network for Environmental Technology at Force Technology². One-day active workshop with participation of designers, retailers and engineers, resulting in five different project ideas with two projects chosen to be further developed. Start-up meeting took place September 5, 2012.
- Pop-up design exhibition "New Nordic Fashion" during Copenhagen Fashion Week, August 7-12 2012 at the Design Museum Denmark showing David Andersen's "Zero Waste" collection and collections from the NICE Design Challenge.

2.3 Intended audience

There is an added value for SMEs, third parties and academics in understanding what the trends are within the SMEs and sustainable fashion. Increased understanding regarding the

¹ 'MISTRA Future Fashion' is a research programme and not an organization but have been included due to its research contribution to the fashion industry.

² The network has been established in order to promote innovation within Danish environmental technology with a particular focus at SMEs. Universities and larger companies are a part of the network.

associated challenges, e.g. what holds SMEs back in a further development of sustainable initiatives is of large interest and relevance for policy-makers and practitioners within the fashion and apparel industry. The expected findings would also be relevant for the aforementioned third party organizations by increased understanding of SMEs challenges toward the realization of sustainable design and production.

3 Literature Analysis

This chapter intends to provide a literature overview of how companies in the fashion industry work with CSR issues that arise along the supply chain. First, sustainability initiatives implemented by the fashion industry are described, with particular reference to SMEs sustainability practices. Afterwards, literature overview on sustainable chain management is conducted with focus on theoretical aspects to delimit an analytical framework for further analysis.

3.1 Sustainable Supply Chain Management: Definitions

In recent years the academic literature on supply chain management (SCM) has increased its focus on sustainability (Kogg, 2009; Caniato, 2011). In a literature review conducted by Seuring & Müller (2008) it is stated that the supply chain covers all activities connected with the flow and transformation of goods from the raw materials to the end user. A sustainable supply chain integrates the three dimensions of sustainability; economical, environmental and social and defined by Carter and Rogers (2008) as *"the strategic, transparent integration and achievement of an organisation's social, environmental, and economic goals in the systemic coordination of key interorganisational business processes for improving the long-term economic performance of the individual company and its supply chains"* (p. 368). The social, environmental and economic factors are also characterized as the three dimensions of performance within the accounting framework called "The Triple Bottom Line"; people, planet and profit (3 P's), introduced by John Elkington in his book *Cannibals with Forks* (1997). The triple bottom line can be an important tool to support sustainability goals with the aim of measuring the performance of the 3 P's within a corporation over a period of time. *People* evolve around everything that the company can take responsibility for within their supply chain whereas *planet* relates to the environmental impacts of the company's production activities. *Profit*, stands for the company's contribution to economic affluence, both indirect and direct economic impact (Cramer, 2006; Elkington, 1997). Consequently, the choices a company makes regarding people, planet and profit depend on the company's vision and strategy (Cramer, 2006).

These choices and sustainable practices lie within the area of CSR, which can be traced back to the 1950s and introduced by Howard Bowen's book *Social Responsibilities of the Businessman*, published in 1953. Today, CSR has many different alike definitions and can be defined as a company's (voluntary) responsibility to create wealth in ways that avoid harm to or increase societal assets and impacts on the environment (Steiner & Steiner, 2009). CSR is about grasping beyond business objectives and benefits (Blombäck & Wigren, 2009).

Practices evolving around sustainable supply chain management include competence building among suppliers. According to Ciliberti et. al., (2008) companies promoting environmentally and socially responsible culture among suppliers can get the supplier to understand the logic of a socially and environmental responsible culture focused at awareness building and training. This can lead to a long-term and close relationship with suppliers. Kogg (2009) further implies that if companies can motivate their suppliers to improve environmental performance of their operations it holds a large potential for further motivation and improvement.

Kogg (2009) additionally defines the intersection between CSR and SCM as *upstream CSR* and as *"the management of environmental and social aspects that are determined, or occur, upstream within the supply chain beyond the focal company's span of direct hierarchical control"*. According to Kogg the study

of upstream³ CSR is a relatively new field of research, in particular within the fashion and textile industry. Below Figure 3-1 shows the basic step in a textile industry supply chain.

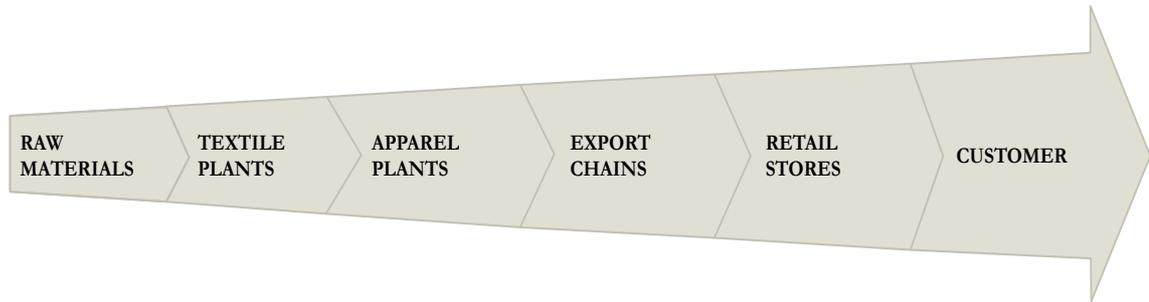


Figure 3-1 Textile industry supply chain

3.2 Sustainability Initiatives implemented by the Fashion Industry

The acceleration of climate change and the awareness of risks related to human induced climate change have influenced commercial sustainability initiatives. The related environmental, social and economic consequences of climate change affect where and how business operates, including the global fashion industry. In dealing with the associated consequences several initiatives within the fashion industry and textile industry have been implemented by businesses, NGO's and governments. The following section outlines numerous strategic environmental initiatives employed by actors in the fashion field:

According to Caniato et al., (2011) a separate innovative group of companies has radically changed their business model and structure of their supply chain as to leveraging on environmental sustainability in new market niches. One example is the Italian nightwear and underwear company called 'Ali Organic Wear'. They do for instance not participate in fashion fairs but take part in organic and health fairs (Ali Organic Wear, 1998).

Larger international brands are positioning themselves in the "green" segment with large changes to their traditional business model and supply chain structure (Caniato et. al., 2011). An example is 'Patagonia', an American outdoor clothing company which states the following at their website; *"At Patagonia we think that business can inspire solutions to the environmental crisis"* (Patagonia, 2012). The company has shown incredible developments such as switching to 100 percent organic cotton and recycled polyester - a switch that came after visiting a cotton farm in California where executives from 'Patagonia' saw a firsthand devastation back in 1992 (Laszlo, 2003). Due to this change, 'Patagonia' had to change many of their regular suppliers to ensure that only 100 percent cotton was used (Sustainable Solution Design Association, 2002). Another outdoor brand is the American company 'Timberland' who has developed the Green Index® rating that lets the customer compare the impact of one pair of 'Timberland' footwear to another in terms of greenhouse gas emissions to the production of the shoe and further how much recycled material and/or organic material that has been used to make the shoe (Timberland, 2012).

The Danish group 'IC Companys' runs 11 different brands in more than 40 countries (IC Companys, 2012a) and one of the brands is 'Jackpot', which is a large brand who has taken the more pragmatic way of communication of CSR with information meetings about 'Jackpot's'

³ Within the supply chain suppliers are referred as upstream and customers as downstream

CSR initiatives and special press events with focus on sustainability (Dahl Jørgensen, 2012). 20 percent of 'Jackpot's' collections are made of 100 percent organic cotton and they also use recycled polyester for their garments (Jackpot, 2012). 'Jackpot' has also launched a "take-back program" with a closing the loop initiative by offering customers to return their used 'Jackpot' garment and receive a 20 percent discount on a new piece of 'Jackpot' garment. The collected items are then passed on to a charity organisation (Strandesen & Kløverpris, 2012; Pers. Comm. Thomas Svenningsen, 2012).

An additional company in the Scandinavian market is the Swedish company 'Nudie Jeans' who had to start from the scratch and change the way they worked together with their suppliers and develop their own organic fabrics. In their Fall-Winter collection 2012 all denims are made with 100 percent organic cotton, a goal that was set in the year 2006 (Nudie Jeans, 2012). 'Nudie Jeans' stands out in fashion industry where the consumer in average owns seven pairs of jeans and three new pairs are sold every single second where the majority are manufactured from conventional cotton (Philip, 2012).

The large Danish company 'Bestseller' owns 10 different clothing brands that is sold world wide and one of them is 'Jack & Jones' who in August 2012 launched a new initiative together with the German company I:COLLECT (specializing in recycling textile- and shoe materials). The initiative deals with the jeans collection "Low Impact Denim" and a "Give Back campaign" where the customer will receive a seven euro discount (DKK 50,00) if they also hand in a piece of old/used clothing in the store. That clothing is then sorted and recycled for different industrial products (Danish Fashion & Textile, 2012a). With an increased transparency, a special hand-tag on the clothes indicates further to the customer how much water and energy is saved in percentage for that single product. The initiative is launched as a test in the Fall 2012 in all Danish and Swedish 'Jack & Jones' stores (Mchangama, 2012).

It is not only private companies that have approached the aspect of sustainability in the industry thus there is a growing number of consortia created by business, government and NGO's with the aim of tackling the environmental and social impacts in the global supply chains of clothing and textiles. Initiatives that support more sustainable clothing and textiles manufacturing in the industry are highlighted in Table 3-1. Described initiatives below have been selected based on their awareness within the fashion industry and their prominence.

NGO	BUSINESS/INDUSTRY ORGANIZATIONS	GOVERNMENTAL
<ul style="list-style-type: none"> • Clean Clothes Campaign • Textile Exchange • MADE-BY • Wear Organic 	<ul style="list-style-type: none"> • The Sustainable Apparel Coalition • The Business Social Compliance Initiative • Better Cotton Initiative • NICE-Nordic Initiative, Clean & Ethical • Fair Wear Foundation 	<ul style="list-style-type: none"> • Sustainable Clothing Action Plan (UK) • Social Business Initiative (EU)

Table 3-1 Sustainable initiatives within the fashion and textile industry

MADE-BY

MADE-BY is a European non-profit organisation, launched in 2004 that strives to make sustainable fashion a common practice together with improving environmental and social conditions in the fashion industry (MADE-BY, 2012). MADE-BY has developed different tools such as scorecards within social standards and environmental benchmarking for fibers. This aims to make a company's activities more transparent and showing a company's improvement in their environmental and social progress yearly. Other tools have been developed by the organization:

- Track&Trace: an online tool set up to make the production of an item of clothing from raw material to end product more transparent for the consumer.
- Blue Button Label: a swing tag, which a company can place on their clothes to indicate that they are working with MADE-BY.

By providing these tools they work with and support their partner brands with strategic guidance. One partner brand is Jackpot (MADE-BY, 2011).

Textile Exchange

Textile Exchange (former Organic Exchange) is an internationally non-profit organisation, established in 2002 and based in USA that works with principles of responsible expansion of textile sustainability across the global textile value chain. The organisation has developed the standards OE Blended Standard, OE 100 Standard and Global Recycle Standard (described further in Chapter 4.) Members of the organisation counts for 'H&M', 'Knowledge Cotton Apparel', 'Nudie Jeans' and numerous other global fashion companies (Textile Exchange, 2012a). The organisation provides advice about materials solutions, published guides about different sustainable issues in the textile industry and arranges large conferences and events about sustainable textiles and apparel (Textile Exchange, 2012a).

The Better Cotton Initiative (BCI)

The initiative operates as a non-for-profit membership association that aims to promote environmental and social improvements in the cotton cultivation globally (BCI, 2009). Since 2005, the BCI has been working with organizations, suppliers, manufacturer and retailers from all over the world in order to facilitate a solution for the mainstream cotton industry. Companies like 'Jackpot', 'Bestseller', 'H&M', 'Ikea' and 'Adidas' are members of the BCI (BCI, 2009).

The Sustainable Clothing Action Plan

Launched in 2007 in the UK by the Department for Environment, Food and Rural Affairs, the action plan for the Sustainable Clothing Roadmap aims to improve the sustainability of clothing through gathering of evidence of environmental, social and economic impacts (defra, 2008). The following five key areas are agreed stakeholder actions (defra, 2008):

1. Improving Environmental Performance across the supply chain (e.g. sustainable design, fibers and fabrics, maximizing reuse, recycling, end-of-life management and clothes cleaning)
2. Consumption trends and behaviour
3. Awareness, media, education and networks
4. Creating market drivers for sustainable clothing
5. Traceability along the supply chain (ethics, trade and environment)

As a part of the action plan several large retailers in the UK have committed to the action plan with several initiatives. The major British retailer 'Marks and Spencer' has pledged to increase their amount of Fair-trade and organic clothing and support fabrics that can be recycled more easily and the grocery and merchandise retailer 'Tesco' has banned cotton from countries known to use child labour (BBC News, 2009).

Specific research literature on initiatives done in the global fashion industry is limited and so is in general the focus at the textile industry. In the following, research on sustainable supply chain management and CSR within SMEs will be reviewed, resulting in a theoretical overview and an analytical framework for further analysis.

3.3 Small-medium sized companies' approaches to CSR

SMEs can vary notably in terms of size, mission and sector and degree of commitment to sustainability, as well as in how sustainability in supply chains is implemented. Blombäck & Wigren (2009) states that the commitment of a company to CSR is related to companies' operational activities. Such include the introduction of measures which respect the environment and can help the company to embrace social issues such as involvement in local community and building up a good relationship with local actors. However, access to information and lack of knowledge of CSR is limited for SMEs such as the awareness about support organizations that offer assistance when starting up CSR initiatives. Furthermore, the SMEs lack of knowledge and capacity to collect and analyze relevant data related to sustainable development (Kechiche & Soparnot, 2012).

Research suggests (Caniata et. al., 2011) that small companies have been able to reshape their supply chain and identify different practices that large companies cannot pursue, primarily for the reason that large companies tend to reshape only one part of their supply chain. Smaller

companies implement radical changes such as adoption of local suppliers, the use of natural drying process for leather and include marketable disintermediation. Such sustainable practices can provide a competitive advantage for SMEs and a survival in the industry (Caniato et al., 2011). The Danish company, 'AIAYU', and the underwear company 'Underprotection' have implemented such practices.

Companies' engagement in CSR can be pursued for a number of reasons such as regulations, market demand and stakeholder pressure but also for the aim of differentiating themselves in the market place (Kogg, 2009). According to Odgaard (2012) a company can take on different levels of corporate social responsibility such a) philanthropically, b) ethically, c) according to regulations and d) financial responsibility.

An example of a small high fashion brand that has approached the area of sustainability is 'David Andersen Denmark' who has created a research project/lower line collection called "Zero Waste" that tries to minimize waste in the design and production phase. According to the designer David Andersen *"sustainability is simply a natural thing for us, to be concerned of the origin, production and maintenance of clothes. It should be a common and decent behavior, and not something new and fashionable"* (Keinicke, 2012). The "Zero Waste" collection presents eight 'David Andersen' styles, which are exhibited at the pop-up exhibition "New Nordic Fashion", August 2012 at the Design Museum Denmark (DAFI, 2012a). The designer also recently (August 2012) designed the first sustainable suit for Denmark's Minister for Climate, Energy and Building Martin Lidegaard made from organic silk and wool and sowed with organic thread. The fabric in itself is residues from larger companies clothes productions and made in Denmark (Skarum, 2012a).

3.4 Sustainability in the Supply Chain: Theoretical Overview

There is an increased interest in sustainable supply chain management practices among researchers and corporate practitioners (Carter & Rogers, 2008; Seuring & Müller, 2008; Gold, Seuring et al., 2010). A number of theories have been engaged to explain the CSR activities in organizations such as stakeholder theory, social contract and legitimacy theory (Moir, 2001). These theories help to analyze the stakeholder environmental pressure and thus explain the corporate motives to address the CSR issues or provide organizational and managerial perspective on the design of sustainability initiatives.

3.4.1 Collaborative Paradigm

To implement sustainable supply chain many contributors have stressed the need for collaboration with suppliers and partnering companies. For instance, Seuring & Müller (2008) have referred to *"a much increased need for cooperation among partnering companies in sustainable supply chain management"* (p. 1706). Sustainable supply chain management must aim at ensuring economic, environmental and social performance. To ensure collaboration it becomes even more crucial as the company is dependent on cooperation with its direct suppliers as well as on how first-tier suppliers cooperate with their own partners (Gold & Seuring et al., 2010). It is a matter of strategic collaboration between involved partners. This collaboration lies within the shift that we see today where the sustainability aspect has shifted from organizational to a supply chain level (Gold & Seuring et al., 2010). The advantage is seen in an inter-firm collaborative relationship, which can help companies create sustainable resources. Within this is the "collaborative paradigm" that is viewed as a vital source of competitive advantage gained through sustainable resources and competences (e.g. sustainable related knowledge through inter-organizational learning) (Gold & Seuring et al., 2010).

At the same time, development of collaborative relationships with supply chain partners require substantial resources from the focal company, e.g. time, money and expertise (Kogg, 2009). Acquiring knowledge about supplier's products and operations can be of importance and the focal company might not possess that acquisition. Some researchers claim that developing and maintaining close partnerships between the company and its suppliers is costly and risky and corporate opportunities to establish collaborate relationships with supply chain partners are limited (Bensaou, 1999; Frohlich & Westbrook, 2001; Fawcett & Magnan, 2002; Williamson, 2008). Among barriers to collaborate with suppliers are investment cost into a possible partnership development, complexity of coordination and communication between the involved parties (Seuring & Müller, 2008).

Additionally, reasons can be mentioned as to why we do not see more companies engage in inter-organizational environmental management. In a conceptual paper Sinding (2000) identifies four different groups of barriers to adoption:

- **Institutional barriers;** Sinding describes them as *"the outcome of isomorphic institutional forces that promote the adoption of intraorganisational environmental practices"* (p.90)
- **Economic barriers;** include entire costs increases, which are linked to the inter-organizational practices
- **Indolence derived from pressures on organisations to be reliable and accountable;** issues that will favour the companies
- **Informational problems;** efficiency is vital when companies need information from several tiers of the product chain with standardised information flows

3.4.2 The Concept of Trust

Collaboration often requires a high level of trust between the focal company and the suppliers. Wilson (1995) points out that trust is a fundamental relationship asset that ensures that one relationship partner will act in the best interest of the other partner. Trust between the company and their supplier is also mentioned as an example of inter-organizational resource by Skjoett-Larsen (1999). Since trust is attributed to specific relationships and develops over time, it cannot be easily replicated by competitors and can therefore be seen as a competitive advantage (Skjoett-Larsen, 1999). Capabilities and resources are difficult to imitate and are often a result of complex social interaction and not visible for people outside the company (Skjoett-Larsen, 1999).

The trust concept and the collaborative paradigm are tied together as trust is an outcome of successful cooperation with the supplier. This dynamic of an inter-organizational relation can also be understood within the network theory as it accounts for the respective interactions between business partners that might lead to a positive long-term cooperation (Skjoett-Larsen, 1999). According to Haakansson & Johanson (1990) this could both be applied through 'formal' (e.g. contracts) and 'informal' relationships (e.g. inter-organizational relationship) in the supply chain.

3.4.3 Approaches to Implementation of Upstream CSR

Recent research on implementation of supply chain sustainability have revealed that companies are engaged in a number of strategies to manage their relationships with suppliers and these strategies are not always limited to collaborative practices. For instance, Kogg (2009) has concluded that focal companies, e.g. brand manufactures and retailers, in the textile industry employ different approaches to manage environmental and social aspects in the upstream supply chain. From that investigation she presents a framework (see Figure 3-2) based on empirical findings.

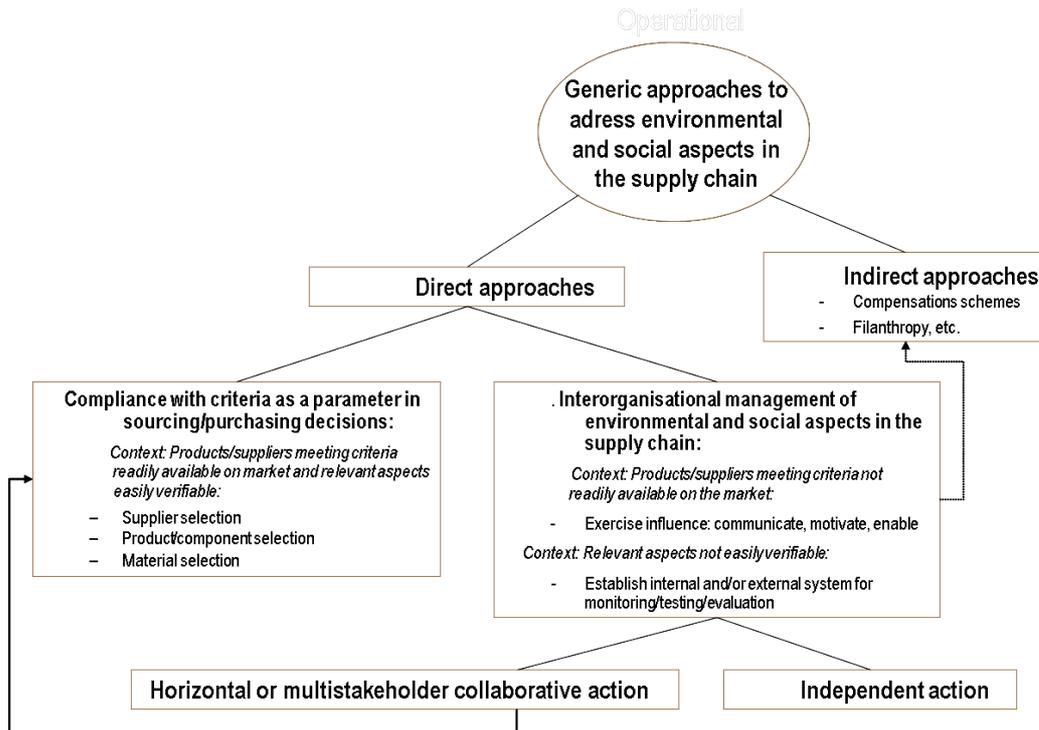


Figure 3-2 Framework to conceptualise different approaches to implementation of upstream CSR (Kogg, 2009)

Kogg (2009) argues that implementation of upstream CSR can be exercised either through choice (if suppliers that meet desired sustainability standards are readily available on the market) or through inter-organizational management (if suppliers are not readily available on the market). Inter-organizational management include exercising influence by communicating, motivating and enabling. Furthermore, inter-organizational management can be implemented independently by the focal company or in collaboration with other business partners (e.g. multi-stakeholder, voluntary industrial initiatives).

Forman & Søgaard Jørgensen (2004) have another specification, when looking at shaping environmental supply chain management practices and the variation of it. They analyse it from investigating case studies in the Danish textile sector. From the case studies, three different environmental supply chain management practices were identified:

- 1) **The wake strategy** (companies follow in the 'wake' of other companies that place the same requirements on their suppliers)
- 2) **The asymmetrical partnership** (long-term relationship with supplier based on control, the customer is dominating the relationship)
- 3) **The symmetrical partnership** (long-term relationships and mutual partnership with a supplier and builds strategies in dialogue)

3.4.4 Challenges to Implementation of Upstream CSR

Implementing sustainable supply chains is a challenging task from the corporate perspective. From the literature review conducted by Seuring & Müller (2008), the following issues were summarized as barriers for implementing sustainable supply chains; 1) higher costs of monitoring, evaluation and reporting, 2) coordination effort and complexity with the supply chain and 3) insufficient or missing communication in the supply chain. Specifically, collaborative efforts of all supply chain partners can help to control costs.

Kogg further describes four generic challenges associated with upstream CSR; a) deciding what to do, b) standard/criteria, development/selection, c) implementation and d) communication/reporting, results/activities. She highlights different issues from the focal company's perspective when deciding what CSR issues to address and how. One of the challenges is criteria definition where companies need to ask themselves - by what criteria should we judge performance? One example is H&M's Code of Conduct and Restricted Substance List, which are developed by H&M itself. Companies can also choose an externally developed standard where the decision needs to be made regarding what standard to use. The company needs to choose between competing schemes available at the market and understanding the difference is significant as well (Kogg, 2009).

Additionally, Kogg's research shows that inter-organisational communication between involved parties in the supply chain is a notable challenge for corporate practitioners, and support and advice in these situations are less available.

3.5 Analytical Framework

The reviewed literature on sustainable supply chain management thus focuses its attention on the buyer-supplier relationship management (sourcing) strategies, which have been stressed by Preuss (2005) as central to delivering sustainability improvements in the supply chain. The presence of sustainable sourcing policies and procedures has also been highlighted by Bowen, Cousins et al. (2001) as corporate internal capabilities that influence implementation of green supply chains. Hence, in analyzing the SMEs strategies in a sustainable fashion industry, it would be of relevance to investigate the SMEs sustainable sourcing approaches, which could be classified as internal factors that influence the implementation of sustainable fashion strategy (Figure 3-3). In particular, analyzing the sourcing strategies of SMEs, the focus is on how the companies define what is sustainable, e.g. sustainability criteria, how they manage their supply chain relationships, and what type of challenges they face in greening the upstream supply chain.

At the same time, the company's sustainability work in respective supply chain could be either hindered or enabled by a number of factors that originate from the company's external institutional environment. These include market and regulatory drivers (Hoffmann, 2000; Sinding, 2000). The market drivers include customers demand and competitors influence. If customers demand sustainable products companies will respond to this as a market opportunity (Hoffmann, 2000). Regulatory drivers relates to legislation and financial support from governmental bodies.

The role of third parties is one of the external factors that are of particular importance in supporting implementation of supply chain sustainability (Seuring, 2011; Kogg, 2009). Third-parties could provide support in form of information and knowledge and advice regarding sustainability impacts in supply chain and how they could be addressed, by defining the sustainability criteria/standards, providing services of auditing and monitoring suppliers, and even providing financial assistance required for developing sustainability capacities among suppliers (Chkanikova & Kogg, 2011). Hence, it is of particular research interest to provide better insights regarding how third-parties could help SMEs to design and implement sustainable strategies in the fashion industry and to examine what the SMEs are requesting.

Within the introduced analytical framework (Figure 3-3) the decision was made to limit external factors to market, regulatory and third party organizations as these factors are perceived by initial research and literature on supply chain sustainability as of major importance in influencing company's propensity to approach sustainability issues within the supply chain (Hoffmann, 2000; Kogg, 2009; Kechiche & Soparnot, 2012).

The outlined analytical framework (Figure 3-3) will be utilized for presentation of empirical findings and case-study analysis. The concepts of trust, collaboration and Kogg's conceptual framework of different corporate approaches to implement upstream CSR (Figure 3-2) would be also engaged to conduct cross-case comparison of SMEs sourcing strategies in section 7.1.2.

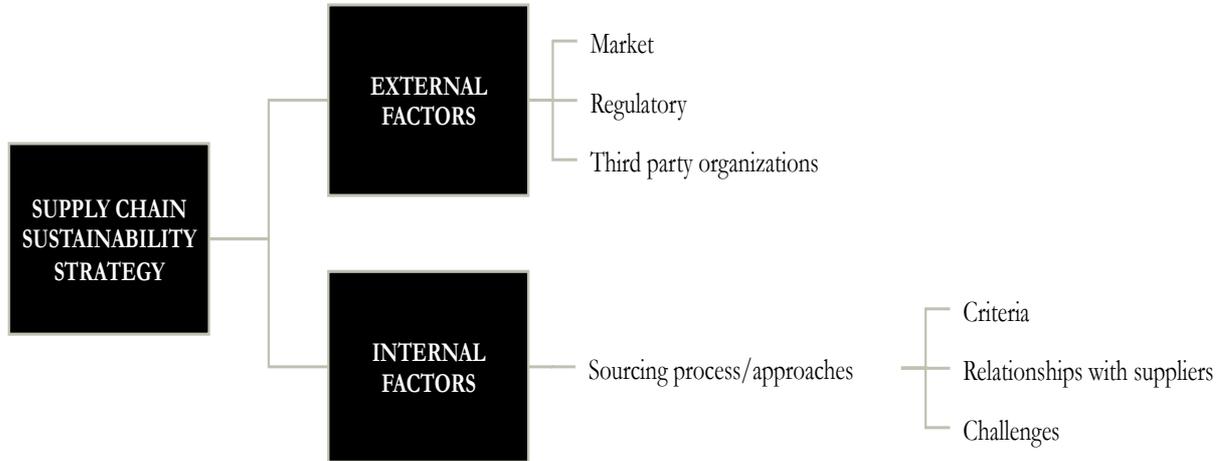


Figure 3-3 Analytical framework. Compiled by Author (Damgaard Nielsen, 2012)

4 Fashion and Textile Industry: Practical background

This chapter is an introduction to the global fashion industry with the description of alternative and sustainable textiles, the different standards and certifications in the textile industry and regulations.

4.1 Cotton and Chemicals: Alternatives

Apparel and textiles products start as fibers, which are natural, man-made or synthetic (Allwood et. al., 2006). Some of the fibers from the fact box will be described more in detail in the following paragraphs.

Cotton, the most widely used fiber of all, is grown with an extensive use of pesticides even though it is a 'natural' product (Lee, 2009). Cotton is a global commodity and supports the livelihoods of millions of farmers. It is one of the major crops cultivated in India with more than 54 percent of the total fiber consumption within the textile sector (Ministry of Textiles, 2012). In many developing countries, farm workers work in cotton fields with limited safety precautions to protect them from hazardous pesticides (Pesticide Action Network, 2011).

Endosulfan is a widely used cotton pesticide, and attacks the central nervous system causing a range of health harms on humans (EPA, 2012). Conventional cotton production also has adverse affects on the environment with release of chemicals in water and as well high water consumption during the cultivation of the fiber crops (Allwood et. al., 2006; WWF Global, 2003). Many clothes manufacturers use conventional cotton, as it is the cheapest for them but not the most sustainable.

In the following sections some sustainable alternatives to conventional cotton will be highlighted and described. The selected ones are also some of the materials which the case companies are using in their apparel production. It is noteworthy that the only material described in the following and is certified with an environmental certification is organic cotton (Pers. Comm. Sunniva Uggerby, 2012).

4.1.1 Organic Cotton

Cotton can be grown organically which is often more durable than conventional cotton as it is not treated with any harsh chemicals which can wear down its fibers. It is produced entirely free of harmful pesticides which means without the risk of adverse affects on humans and the environment (Environmental Justice Foundation, 2007). However the water usage in the cultivation is extensive but in the longer run is it possible that a organic cotton field can become a rain-fed crop in some areas due to decreased water need after the field have been transitioned to organic (Willard, 2009). There has been an increase in organic cotton growth, which clearly expresses a wider sustainable textile strategy by major retailers and manufacturers (Ferrigno & Lizarraga et al., 2009). However government policies have a direct impact in encouraging the companies to pursue on organic cotton fiber production. Organic cotton production saw an increase of 20 percent in 2008/2009 (Ferrigno & Lizarraga et al., 2009). According to the Organic Exchange Farm and Fiber Report (2009) organic cotton was grown in 22 countries worldwide with the top ten producing countries led by India and followed by Turkey, Syria, Tanzania, China, United States, Uganda, Peru, Egypt and Burkina Faso.

FACT BOX

NATURAL FIBERS:

cotton, silk and wool

MAN-MADE:

made from cellulosic, e.g. viscose and lyocell

SYNTHETIC:

oil used to create polymers, e.g. polyester, acrylic and nylon

(EC, 2012)

4.1.2 Bamboo

Cotton used for textile production is common for most people, but other alternatives to a normal cotton t-shirt is perhaps less known among the public. One of them is bamboo, which is classified as a sustainable material (Pers. Comm. Sunniva Uggerby, 2012) as its growth cycle is natural, does not require any replanting after harvesting due to the size of its root network and can be cultivated with no need of using any pesticides or fertilizers with less irrigation (Bamboo Clothing, 2012). Bamboo fiber is 100 percent degradable and it only takes three to four years to go from seed to harvest (Bamboo Clothing, 2012). The bamboo fabric is harder to categorize as there are two ways to process bamboo and make the plant into fabric; mechanically or chemically (Organic Clothing, 2007) The processes can be discussed in terms of sustainability but newer manufacturing facilities have started using technology which makes the chemical process more eco-friendly (Organic Clothing, 2007). Bamboo is also a breathable and a sweat absorbing material (Pers. Comm., Sunniva Uggerby, 2012).

4.1.3 Lycocell

Lycocell is a natural, man-made fiber and a type of lyocell, more known with brand name TENCEL® and owned by Lenzing Fibers of Austria (Lenzing, 2012). Lycocell is made from cellulose in wood pulp, harvested from tree farms (Eartheasy, 2012). The fiber is produced through a 'closed loop' solvent spinning process, which has a minimal impact on the environment and a decreased use of energy and water (Eartheasy, 2012). TENCEL® has gained large acceptance in the fashion industry as this natural fiber is soft, breathable, luxurious and environmentally sustainable (Organic Clothing, 2005). While production is environmentally sustainable there are some concerns in regards to the manufacturing of lycocell as extensive amount of chemicals is used to transform lycocell fiber into garments (Organic Clothing, 2005). A benefit is that lycocell can be recycled and since it is a cellulosic fiber it is also biodegradable (Organic Clothing, 2005).

4.1.4 Recycled polyester

Recycled polyester is made from PET (polyethylene terephthalate), which is normally used as a raw material for packaging materials such as bottles and containers for food products. PET is actually one of the most common consumer plastics used and this material can be used for clothes (Libolon, 2012). This recycled polyester is made from recycled PET bottles and then cut into flakes, melted and shaped into new fibers (Katvig, 2011).

4.2 Certifications and Standards

There are several certifications and standards within the fashion and textile industry. Some are CSR related and others specifically at the clothing itself. The most relevant standards and certifications in regards to the case companies have been chosen and elaborated upon in the following section.

4.2.1 CSR Standards

United Nations Global Compact / NICE Fashion Code of Conduct

UN Global Compact is known worldwide as a strategic policy initiative that is targeted for all business that wants to align their operations with the ten globally accepted principles within the areas of human rights, labor, environment and anti-corruption (UN Global Compact, 2011). Generally, the Global Compact pursue two objectives (UN Global Compact, 2011):

1. Mainstream the ten principles in business activities around the world
2. Catalyze actions in support of broader UN goals, including the Millennium Development Goals

Promoted as a potential innovator who can push towards more sustainable solutions, the fashion industry joined forces with UN Global Compact to launch the first sector-specific initiative in May 2012 during the world's largest summit on sustainability in fashion, the Copenhagen Fashion Summit. It is called the UN Global Compact & NICE Fashion Code of Conduct and provides additional specificity from the fashion industry's perspective with focus areas such as animals, models and transparency with a total of 16 principles (NFA, 2012).

ISO 26000 Guidance Standard on Social Responsibility

ISO 26000:2010 is a standard within social responsibility and provides guidance and not requirements on how business and organizations (of all sizes and activities) can operate in a socially responsible manner. As it is a standard that only guides the business it cannot be certified unlike other well-known ISO standards (ISO 14001, ISO 9001) (ISO, 2010a). This new standard was launched in 2010 to help clarify what social responsibility is and what actions to take from the principles in the standard (ISO, 2010a). The seven core subjects of the standard are (ISO, 2010b):

- 1) Organizational governance
- 2) Human rights
- 3) Labor practices
- 4) The environment
- 5) Fair operating practices
- 6) Consumer issues
- 7) Community involvement and development

While the International Organization for Standardization (ISO) has chosen only to provide guidance on how to work with social responsibility the Danish organization for standards, Danish Standards, has chosen to build further on the standard and develop a certification similar to ISO 14001 and 9001 making it possible to be certified by a third party (Danish Standards, 2010).

SA 8000

SA 8000 is the social accountability standard and established by the Social Accountability International (SAI) that is a non-governmental, multi-stakeholder organization that aim to advance human rights of workers world-wide (SAI, 2012a). The SA 8000 is a tool for implementing international labor standards and the principles of: child labor, force and compulsory labor, health and safety, freedom of association and right to collective bargaining, discrimination, disciplinary practices, working hours and remuneration (SAI, 2012b). The standard is auditable and certificated.

Fair-trade Standards

The Fair-trade standards are designed at tackling poverty and supporting the sustainable development of small producers and agricultural workers in the poorest countries around the world. It applies to both producers and traders (Fairtrade International, 2011).

There are standards applicable to: a) small producer organizations, b) hired labor, c) contract production, d) trading, e) product standard for small producer organization and hired labor (Fairtrade International, 2011). Common principles for all Fair-trade standards are:

- 1) Social development
- 2) Economic development
- 3) Environmental development
- 4) Forced labor and child labor

4.2.2 Environmental certifications

GOTS

The Global Organic Textile Standard is one of the most well-known and leading standards worldwide for textiles made from organic fibers with both ecological and social criteria made. The standard covers the processing, manufacturing, packaging, labelling, trading and distribution of all textiles made from minimum of 70% organic fibers (GOTS, 2010).

The certification is voluntary and accepted in all major markets, which also makes it internationally known among consumers as it also provides a credible assurance to the end consumer that strict criteria's has been verified. The standard does not set criteria for leather products and it is only applied to natural fibers (GOTS, 2010).

EU Eco label

The EU Eco label is another well-known label recognized throughout Europe. It is a voluntary label which applies that products and services have a reduced environmental impact, from the extraction of raw material to the production and finally the use and disposal (European Commission, 2012b).

The EU Eco label on textile products informs the consumer the following (European Commission, 2012c): a) limited use of substances harmful to the environment, b) limited substances harmful to health, c) reduced water and air pollution, d) textile shrink resistance when washing and drying.

Organic Exchange Blended Standard and Organic Exchange 100 Standard

The Organic Exchange (OE) Blended Standard is a third party certification that applies to all products that contain a minimum of 5 % organic cotton and can also be used for blends that contain any fiber, including conventional cotton. Organic Exchange (OE) 100 Standard applies to 100% use of certified organic cotton in yarns, fabrics and finished products (Textile Exchange, 2012b).

Both the OE Blended Standard and the OE 100 are voluntary standards and are designed and developed by the Textile Exchange as with the Global Recycling Standard (Textile Exchange, 2012a).

OE Blended Standard and OE 100 require companies to (Organic Exchange, 2009a; 2009b):

- Use cotton that is purchased from a certified organic farmer
- Have 5% (OE Blended) or 100 % (OE 100) organic cotton content in their products
- Handle the cotton in a manner that maintains its identity until spun into yarn
- Maintain records that confirm all required steps have been taken

R certificate

A new certificate for recycled textile clothing, currently pending, was launched by a fashion NGO in Asia, called Redress. This kind of certification highlights the environmental aspect of clothing after final use. It is a certificate that verifies that retailers have recycled their own factory waste and/or unused clothing waste into their own recycled textile items (Redress, 2011).

The R Certificate guarantees that a clothing item is (Redress, 2011):

- Manufactured using a retailers', brand's or designer's own recycled factory fabric waste and/or recycled unused clothing waste
- Manufactured using minimum 20% recycled fibers
- Manufactured in factories that hold a Global Recycle Standard (GRS) certificate
- Manufactured along a fully traceable supply chain

Even though the R certification mark application is pending, the certification already has the support from fashion industry leaders such as from the worldwide company Esprit who launched their R Certified 'Recycled Collection by Esprit' in May 2012 in Hong Kong (Fibre2Fashion, 2012).

There are several certifications in the market and more than described above. These certifications and standards is a way for companies to secure that strict criteria have been complied with and to indicate to the consumer that the sold garment has certain environmental and ethical assets. The certifications mainly specify what the garment contains (e.g. a certain amount of recycled content) and how it has been processed. Thus certified materials such as organic cotton is limited. Applying these certifications and standards are voluntary for the company and requiring and understand the essential information about them can be resource demanding and time consuming.

4.3 Regulations

In response to the serious health and environmental affects from hazardous chemicals some countries have either banned or restricted the application of certain pesticides used in crop production (Environmental Justice Foundation, 2007). The Rotterdam Convention on the Prior to Informed Consent (PIC) procedure for certain hazardous chemicals and pesticides in international trade is a legally binding agreement which came into force in 2004 (Rotterdam Convention-UNEP, 2010). The treaty aims among others to facilitate information exchange about the release of hazardous chemicals and to ensure that chemicals are labelled correctly with the right information about the given chemical (Rotterdam Convention-UNEP, 2010) The treaty does not promote an end to the sale and use of chemicals that is considered dangerous (Environmental Justice Foundation, 2007; Bamboo Clothing, 2012).

In June 2007 the European Community Regulation on chemical and their safe use entered into force. The regulation is known as REACH and deals with the **R**egistration, **E**valuation, **A**uthorisation and **R**estriction of **C**hemical substances (European Commission, 2012a). The aim of REACH is to (REACHImpact, 2007):

- A. Improve the protection of human health and the environment through an improved identification of chemical substances and their properties
- B. Enhance innovation and competitiveness of the EU chemicals industry (European Commission, 2012a).
- C. Ensure that the risks from the use of SVHC⁴ are controlled and replaced (these substances are subject to authorisation under REACH regulation)

As substances are not intended to be released in textiles the registration obligation is not relevant in itself for the textile industry but if substances contained in a product is higher than 0.1 percent of the total weight then the European Chemicals Agency (ECHA) has to be notified (REACHImpact, 2007).

REACH places a greater responsibility on industry, which includes the textile industry and the impact depends very much on the choice of sourcing and whether the production is based in EU or outside EU (REACHImpact, 2007). For chemicals sourced from outside EU, companies need to register all substances that are imported and used in the production process.

4.3.1 EU Strategy 2011-14 for Corporate Social Responsibility

In October 2011 the European Commission communicated a renewed EU strategy 2011-14 for Corporate Social Responsibility - a strategy with the aim of creating favourable conditions for sustainable growth and responsible business behaviour (European Commission, 2011). For the first time in ten years the Commission also set out a new definition of CSR as "*the responsibility of enterprises for their impacts on society*" (European Commission, p. 6, 2011)

In the strategy it is highlighted that EU development policy recognizes the need to support CSR and by promoting social and environmental standards, companies within the EU can foster better governance and growth in developing countries (European Commission, 2011).

The SMEs are emphasized in this new CSR communication strategy as the Commission itself will take into account the specific characteristics of SMEs, especially their limited resources

⁴ Substances of Very High Concern. There is over 73 substances on the list.

and thereby minimize unnecessary administrative burdens (European Commission, 2011). It is reported that SMEs often communicate social and environmental information informally and on a voluntary basis (European Commission, 2011). Selected agenda actions within the communication strategy are:

- a) Support capacity building for SME intermediary organizations to improve the quality and availability of CSR advice for SMEs
- b) Promote dialogue with enterprises and other stakeholders in enhancing the visibility of CSR
- c) Improve and track levels of trust in businesses

The goal lies in year 2013 with a European award for CSR and the creation of multi-stakeholder CSR platforms in a number of relevant industrial sectors (European Commission, 2011).

The number of EU enterprises that have signed up to the ten principles of the UN Global Compact has risen from 600 in 2006 to 1900 in 2011 (Europa, 2011). However, many companies in the EU have not fully integrated social and environmental issues in their core business strategy and only 15 out of 27 EU Member States have national policy frameworks to promote CSR and one of them is Denmark (European Commission, 2011). The Danish Government came out with an action plan March 2012 for companies' social responsibility (year 2012-2015). In the plan four main actions areas has been set up, inspired by the EU strategy (The Danish Ministry of Business and Growth, 2012):

1. Strengthen the respect for international principles
2. Increase responsible growth through partnerships
3. Increase transparency
4. Promote the frameworks for responsible growth through the public

Currently, the 1100 biggest Danish companies must every year report about their corporate social responsibility work in their annual report and with this new action plan from the Danish government the pressure has increased as well on the SMEs in terms of documenting and reporting on their CSR work. In particular the SMEs can have difficulties with the increasing demands but the Danish government will as a part of the new action plan introduce some information initiatives such as information campaigns, courses in CSR and different tools to supply chain management (The Danish Ministry of Business and Growth, 2012). Within the action plan the government also states to support the first UN initiative for CSR in the fashion industry, the NICE Code of Conduct with the launch in May during Copenhagen Fashion Summit.

Total bans of chemicals is minimal and treaties like the Rotterdam Convention does not promote an end to the sale and use of chemicals that is considered dangerous. This allows companies to continue to produce clothes, which contains chemicals and it is difficult to know for the consumers what affect the chemicals have. Greenpeace is fighting against the larger corporations and their use of chemicals. Greenpeace has currently a list containing 11 hazardous chemicals, which they have asked brands to eliminate (Hojsik, 2012). H&M has acted upon pressure from Greenpeace and has ban all uses of PFCs⁵ as of January 2013

⁵ PFC (perfluorinated compound). A compound which is endocrine disrupting and damaging to the environment.

(Hojsik, 2012) As one of the largest apparel retailers in the world, a ban would be even more significant because when the largest can do it others can too.

5 Case Studies Description

This chapter will provide a brief overview of chosen case companies and third party organizations, which were compiled on the basis of findings, collected from interviews and Internet sources. The overview of case companies includes outlining the corporate views on sustainability and associated initiatives within their supply chain. The overview of third party organizations includes initiatives and resources provided with purpose to support companies in developing sustainable fashion strategies.

5.1 Case companies: Sustainable Initiatives

This section on case companies looks at the corporate views on sustainability and associated initiatives within their supply chain. Selected case companies have elected to remain anonymous. Table 5-1 at the end of the section summarizes the essential information of the described case companies. Elaborated findings are summarized in Table 6-1.

5.1.1 AIAYU

‘AIAYU’ means ‘soul’ in Aymara language, which is spoken by the Aymara people in Bolivia where the company source and produce knitwear from lama wool, with the trade name “CashLlama”. “CashLlama” is sourced from one single place in the world, from the lamas of the Bolivian highlands. The wool is a luxuriously soft textile, which undergoes a process that is organic, and environmentally friendly (CashLlama, 2011). ‘AIAYU’ was the first brand to launch this quality knitwear in 2006 in Denmark. It is produced under the principals of the UN Global Compact (AIAYU, 2011a). The whole production has been built up together with Danida⁶ as a fair-trade project with focus on education, social responsibility and an environmentally sound production.

‘AIAYU’ was established in 2005 and has a head office in Copenhagen. They have increased the number of full time employees from two to five in the last year. The company produces exclusively sustainable apparel and has a ‘HOME’ collection of pillows and blankets, also made from “CashLlama”. ‘AIAYU’'s core business philosophy lies within the concept of being transparent in everything they do. Their design is timeless and applicable to every season. ‘AIAYU’ does not follow any fast-moving trends in the fashion industry wishing their customers being able to use their garment year after year (Pers. Comm. Maria Glæsel, 2012).

In the recent collection the clothes have been produced by hand sewers who put their initials in the garment. By doing so, ‘AIAYU’ preserves the cultural heritage of the Aymara people for whom knitwear production is a traditional activity and allows customers to know where their clothes come from (Pers. Comm. Maria Glæsel, 2012).

‘AIAYU’ has already implemented environmental improvement at their manufacturing facilities in Bolivia such as the installation of a water treatment plan, which allows recovering and reusing up to 70% of the water. The company also aims to achieve an organic and Fair-trade certification of the wool (AIAYU, 2011b). Furthermore, ‘AIAYU’ works on minimizing the amount of dyes used for wool coloring. For this purpose the brighter wool is separated from the darker ones by hand so that less bleaching is required to make a piece of garment in a brighter color (Pers. Comm. Maria Glæsel, 2012). Additionally, ‘AIAYU’ works on developing a closed-loop system by offering to their customers repair services to maintain the quality of sold clothes (Pers. Comm. Maria Glæsel, 2012).

⁶ The Danish International Development Agency (Ministry of Foreign Affairs of Denmark) set up to provide humanitarian aid and development assistance in developing countries.

The company has chosen to work with climate issues and minimize the following environmental impacts caused by their production activities (AIAYU, 2011b):

1. Energy used in the manufacturing process from the raw fibers to the finish goods
2. Transportation distance and efficiency of raw fibers from the countryside in Bolivia to the manufacturer in Bolivia's capital, La Paz; transportation of finished goods to 'AIAYU' in Denmark and finally the transportations of these goods to shops selling 'AIAYU' products.
3. Methane emission from the lama animal farms

5.1.2 Katvig

'Katvig' is a children-clothing company that produces exclusively organic, and sustainable children wear. The company states that they want to set a new standard for what children and nature should be exposed to. They have done that since Vigga Svensson started the company in 2003 and today 20 people are employed in the company, located in Copenhagen (Katvig, 2011).

Vigga Svensson who is the owner and CEO of 'Katvig' has a passion for the sustainability aspects of the business. She has a fundamentally different attitude towards sustainable fashion arguing that consumers need to actively participate in facilitating sustainability changes in the industry by setting the sustainability demands (Pers. Comm. Vigga Svensson, 2012) She believes that sustainable fashion is clothes that meet two demands (Pers. Comm. 2012):

- A. The product must meet current customers needs without destroying the possibility of meeting future customers needs.
- B. Sustainable fashion must offer the same quality of design as conventionally produced fashion.

Her mission is to educate consumers that the clothes they wear are equally important as the food they consume (Thorsen, 2009). With this purpose she has established several initiatives. For instance, the products are branded in a way that makes it very transparent for the customer to see how environmentally friendly the clothes is by using certifications (GOTS and OE Blended Standard) and a Green Barometer which indicates with smileys the percentage of the products which are made from either organic cotton, recycled organic cotton or recycled polyester. The smileys are used as an indicator for the customer to see that they are buying an environmentally friendly textile (Katvig, 2011). The company also reports according to the UN Global Compact.

Vigga Svensson has invented a new 'Katvig' method for recycling organic cotton to help prevent the waste that comes from the process of making cotton fabric. She has also created children wear made from recycled polyester that has been produced from recycled PET bottles. One example is the shell fabric that is used for one of 'Katvig's outdoor-wear jacket where 10-15 bottles have been used (Katvig, 2011). 'Katvig' has also developed environmentally friendly methods of packaging. The bags the clothes are packed in the factory and shipped to the stores are the same ones that customers get when they buy 'Katvig's garment. These plastic bags are biodegradable and will degrade after four years (Katvig, 2011).

Vigga Svensson has initiated a 'Cotton mill' with the idea of recycling all the cotton that is thrown out every year (in Denmark) and make Denmark free of cotton waste. She wants to create a closed cycle for textile fibers in order to minimize the amount of materials, energy and water that is used when manufacturing clothes from scratch. Vigga Svensson (Pers. Comm. 2012) states *"in that way can nature's resources keep up with the high consumption of clothes the consumer*

has today". 'Katvig' is working on the "Cotton mill" initiative together with the Technical University of Denmark, Force Technology and the Innovation Network for Environmental Technology (Pers. Comm. Vigga Svensson, 2012).

To raise consumers' awareness, Vigga Svensson holds frequent events such as the 'Katvig' Sustainability School where she lectures to 'Katvig's' customers about global sustainability issues. Besides that she arranges clothes swapping events where customers can come and swap their old 'Katvig' clothes to another size (if their kids are grown out of it) or model. 'Katvig' asks their customers to return their bought rainwear when it does not fit anymore so it can be recycled into new rainwear (Pers. Comm. Vigga Svensson, 2012).

5.1.3 Knowledge Cotton Apparel

'Knowledge Cotton Apparel' has a long history in the fashion and textile industry. The company was founded in 1969 in Herning, Denmark where the head office is still located. The company has nine employees. The core business philosophy lies within passion for quality, innovation and responsible environmental practice (Knowledge Cotton Apparel, 2011a). The company only sells clothes and accessories for men; all made from either 100% organic cotton or recycled plastic bottles transformed into PET polyester. They use 25 plastic bottles to make one warm winter jacket. The clothes are certified with either the OE 100 Standard or GOTS. Through the use of 100% certified organic cotton, the company has set the goal of saving 150 tons of pesticides, chemicals and fertilizers by the year 2015 (Knowledge Cotton Apparel, 2011b)

The company has developed the Organic Cotton Principles with a message about the environmental issues associated with conventional cotton production through the words; *"Gain Knowledge. Take Action. Earn Respect"*. The company feels it is important to share knowledge and educate the consumer. The company has created an Academy book, which shares environmental facts about organic vs. conventional cotton and highlight corporate orientation towards sustainable production principles (Knowledge Cotton Apparel, 2011a).

The company acknowledges that it requires a lot of resources to work with sustainability and control suppliers.

5.1.4 Sture&Lisa

'Sture&Lisa' is a small Swedish company, located in Malmö which produces solely baby clothing, exclusively produced sustainable. Stina Wickenberg, who started the company in 2008 with her parents, makes all the designs. Those three are the only employees working in the company today. Stine Wickenberg got the idea for the clothes during her education as a designer though she did not receive the any education within the field of sustainable fashion. Her personal interest for fair-trade was increased during a trip to Africa. The clothes are produced in Mauritius from GOTS and fair-trade certified cotton sourced from India (Sture&Lisa, 2009).

5.1.5 Underprotection

'Underprotection' is a Danish brand, located in Copenhagen, which produces exclusively sustainable underwear to women and men and will soon launch a baby collection. There are three persons working in the company each responsible for their working areas as design, sale and marketing and financial issues. Only sustainable materials (bamboo, soy and organic cotton) are used in the production process. The dyeing processes are AZO-free and the use of herbal dyes in the coloring phase is increasing (Underprotection, 2010). The company has two suppliers in India ('Fashion Forte' and 'Kishor exports'. The aim is to 'make a difference' on

the market by providing customers with possibility to combine ethics and aesthetics when buying underwear.

The company has chosen to work with a charity organization in India that helps street children to get an education. 'Underprotection' has also decided that they want to donate a certain percentage from their sale through website to this organization.

'Underprotection' is currently a member of 'Danish Fashion Institute'. The company pays a smaller membership fee as a start-up company. If the company would be asked to pay the regular fee *"we will not be able to afford it as we gain too little from it"* (Pers. Comm. Sunniva Uggerby, 2012). 'Underprotection' used to be a member of 'Danish Fashion & Textile' but had to resign their membership, as it was too expensive for them.

5.1.6 Company A

Company A⁷ has been in the fashion industry since 1999 and has 19 employees. It is situated in Copenhagen with products available in countries worldwide (in more than 25 countries). Company A specializes in producing clothes solely for women. It has recently expressed interest into sustainability issues and so far has little experience in dealing with environmental and social impacts that originates from its supply chain operations. The company has participated in a CSR education programme and took part in the NICE Design Challenge, which was further exhibited at the pop-up exhibition "New Nordic Fashion" (see section 5.3).

None of company's current collections are sustainable but the company is aiming to produce clothes that will last many seasons. Company A has started to educate employees about how to take care of the garments so staff in a store can pass this knowledge to the customers. (Pers. Comm. Sourcing Manager, 2012). The company believes this is a start and states that it is complicated *"as fashion is about changing and by that consuming may be too much. The knowledge about fabrics, caretaking and consuming might also open for new ways of designing"* (Pers. Comm. Sourcing Manager, 2012). The company feels that they will not be able to transfer to a complete sustainable production over just a few seasons as they see it as unrealistic (Skovmand, 2012).

The company does not work with any certificates but has a code of conduct that is inspired by the standards outlined in NICE.

5.1.7 Company B

Company B⁸ is a high fashion brand, situated in Copenhagen and established in 2002 with seven people employed. The company produces clothes for both men and women. The company has not approached a sustainable collection yet but wish to start working with organic or recycled materials (Pers. Comm. Product & Design, 2012). Currently, Company B is trying to find new suppliers, which are already certified according to sustainability standards. The company sees the aspect of approaching sustainability as the only approach now and in the future but finds it difficult to actually know where to start in the whole value chain. It has also participated in a CSR education programme.

⁷ This company is referred to as company A as the respondent in the interview and the company expressed the wish to stay anonymous.

⁸ This company is referred to as company B as the respondent in the interview and the company expressed the wish to stay anonymous.

COMPANY	BIRTH YEAR/ COUNTRY	APPAREL CATEGORY	FIRM DIMEN SION	NR. OF SUPPLI ERS	SUPPLIER COUNTRIES	NR. OF COUNTRIES PRODUCTS ARE SOLD
AIAYU	2005 (DK)	Women	Micro	1	Bolivia	14
KATVIG	2003 (DK)	Children	Small	N/A	N/A	N/A
KNOWLEDGE COTTON APPAREL	1969 (DK)	Men	Micro	8	Mainly Greece & Turkey	9
STURE&LISA	2008 (SE)	Baby	Micro	2	India & Mauritius	20
UNDERPROTEC TION	2010 (DK)	Women/ men	Micro	2	India	6
COMPANY A	1999 (DK)	Women	Small	14	China, Turkey, India, Portugal, Italy, Poland	25
COMPANY B	2002 (DK)	Women/ men	Micro	10	Denmark, Portugal, Turkey, Lithuania, China & India	15-20

Table 5-1 Overview of case companies

5.2 Third party organizations: Initiatives & Resources

This section on third party looks at their initiatives and resources. Selected case companies have elected to remain anonymous. Table 5-2 at the end of the section summarizes the findings.

5.2.1 Danish Fashion Institute & Nordic Fashion Association

'Danish Fashion Institute' (DAFI) is a network organization, created by and for the Danish fashion industry. The goal is to strengthen Danish fashion industry and make it visible in the international fashion scene. The institute was established in 2005 and today accounts for 100 members including designers, fashion companies and other fashion-related. To become a member of the network the company has to pay membership fee, which depends on the corporate yearly turnover. As a member the company receives access to the organizations resources such as special arrangements focused at different areas in the industry, a large network of Danish fashion companies and assistance at fashion fairs. The membership also includes a number of discounts within insurance, transport, accounting and legal assistance (DAFI, 2012b).

'Danish Fashion Institute' is a part of the *Nordic Fashion Association (NFA)*, which was initiated in 2008 by five Nordic fashion organizations: 'Danish Fashion Institute', Helsinki Design Week, Icelandic Fashion Council, Oslo Fashion Week and Swedish Fashion Council. The core purpose of this association is to work with and implement socially responsible and sustainable principles in the fashion industry (NFA, 2011).

The institute has further developed and launched the following initiatives:

CSR education: "Design & Sustainable Performance Essentials"

The organization arranged last year (2011) together with The Danish Chamber of Commerce a CSR education programme called "Design & Sustainable Performance Essentials". 13 Danish fashion companies were chosen to participate in the education that was for free. Companies such as 'AIAYU', 'Baum und Pferdgarten', 'Henrik Vibskov' and 'David Andersen' participated in the program (Fashion Forum, 2011).

"Design & Sustainable Performance Essentials" was developed in close corporation with 'Sustainable Fashion Academy' (see section 5.2.4) in Sweden as a pilot project. It is based on four days of lecturing about the CSR issues (Pers. Comm. Jonas Eder-Hansen, 2012).

Copenhagen Fashion Summit

Under the patronage of the Royal Highness Crown Princess Mary of Denmark, the summit gathered over 1000 key fashion industry players from 27 different countries at the Danish Opera House on May 3rd 2012. The focus of the summit was to discuss ways to involve and engage consumers in sustainable consumption and to identify new opportunities and future solutions for the global fashion industry to tackle environmental challenges (Copenhagen Fashion Summit, 2012). The summit marked the UN Global Compact's first sectorial initiative, NICE Fashion Code of Conduct (as mentioned in chapter 4).

At the summit fashion industry brands participated in a design challenge where designers were asked to create clothes from innovative and sustainable material. The designers who have participated in this challenge (among others 'Marimekko' and 'Baum und Pferdgarten') worked

with textiles made from corn fibers and recycled materials. The finished products were afterwards exhibited at the "New Nordic Fashion" exhibition during Copenhagen Fashion Week, in August 2012 (DAFI, 2012a).

NICE - Nordic Initiative, Clean & Ethical

NICE is a joint commitment of the Nordic Fashion Industry to take a lead on social and environmental issues by sharing knowledge and educating and primarily increase the level of competence among Nordic fashion companies (Pers. Comm. Jonas Eder-Hansen). NICE is a project under Nordic Fashion Association, which the 'Danish Fashion Institute' is a member of. NICE provides the Nordic fashion companies with resources such as recommendations to textiles with a more sustainable profile, information about certifications and labels for textiles.

Other NICE's featured projects are:

- **NICE Code of Conduct** (see also description 4.2.1) is represented by the 'Danish Fashion Institute' with its Nordic partners (UN Global Compact, 2012). The current version of NICE was launched May 3rd 2012 and it now at a hearing in the United Nations until December 2012 (Pers. Comm. Jonas Eder-Hansen, 2012).
- **NICE 10-year plan** is a strategic plan fostering and promoting a sustainable and ethical Nordic Fashion Industry. It is developed together with BSR (Business of a Better World working globally with corporate responsibility) with inputs from NICE members through a survey and existing research on sustainable practices in the apparel industry. The purpose of the plan is to provide a common vision and short and medium term recommendations for NICE members towards a drive for sustainability in their own operations (NFA, 2009). The long-term objectives lies within the following areas: water, carbon dioxide emissions, waste, chemicals, labor & ethics.
- **"BE NICE - Help the world of fashion"** is a global online awareness campaign with the aim of making sustainable fashion mainstream and to get the consumer, the NGO and the politicians aware of possibility of making sustainable fashion a reality (Pers. Comm. Jonas Eder-Hansen, 2012). The campaign is launched in the wake of the Copenhagen Fashion Summit.

5.2.2 Danish Fashion & Textile

'Danish Fashion & Textile' (ref. 'Dansk Mode & Tekstil') is a non-profit organization with around 350 members within the fashion and textile industry in Denmark. The organization works with different guidance tools for its members and inform about latest news within fashion, with particular focus at sustainability (Danish Fashion & Textile, 2009). To become a member companies have to pay a yearly contingent and thereby get access to advisors, certain discounts and an industry network.

The following listed is provided resources (Danish Fashion & Textile, 2012b):

- Guidance in concrete CSR challenges, the developing of a CSR strategy, monitoring and communication of CSR aspects
- CSR events, seminar and conferences
- Work within policy aspects to promote the fashion industry interests
- An online CSR-handbook
- Network groups
- Work with Ecolabelling Denmark on environmental certifications for textiles

- Guide on how to report to UN Global Compact (the report Communication on Progress)

5.2.3 Danish Ethical Trading Initiative

'Danish Ethical Trading Initiative' (DIEH) was initiated in 2008 by 16 members. It consists of representatives from four different member groups: public organizations, business organizations, unions and different companies (DIEH, 2008). The initiative is a non-profit resource center and financially supported by Danida. The initiative has the aim of promoting international trading as to responsible production, procurement and supplier chain management, that respects human- and workers rights and meanwhile contributes to a sustainable development in developing countries (DIEH, 2008). There is a yearly membership fee, depending on the size of the company. Every year the members have to report to DIEH about their work within ethical trading and future planned actions.

The resources include practical guidance, training and arrangements such as (DIEH, 2012):

- The Fair Wear Foundation Wage Ladder
- Ethical Trading in practice
- Workshop on United Nations Business & Human Rights

Currently the initiative represents many different members, including SMEs in the fashion industry (e.g. 'Katvig') but also larger companies such as 'Bestseller' and 'IC Companys'. 'IC Companys' is also a co-founder of the initiative. 'Danish Fashion Institute' and 'Danish Fashion & Textile' are members as well.

5.2.4 Sustainable Fashion Academy

The 'Sustainable Fashion Academy' (SFA) is coordinated by the Foundation for Design & Sustainable Enterprise, a non-profit organization in Sweden. Its vision is to have an apparel industry that creates happier people, stronger communities and a resilient planet by equipping leaders and entrepreneurs within the fashion industry with the tools and knowledge to drive sustainable apparel innovations (SFA, 2012a).

The academy primarily support companies with two different services (SFA, 2012b):

- A. Education & Advisory Service: Tailored education and training, strategy development
- B. Learning & Innovation Forum: Sustainability-focused trend seminars, industry development activities

SFA has performed educations for large brands as 'Acne' and 'H&M' in Sweden and has particularly inspired the 'Danish Fashion Institute' to conduct the CSR education in 2011 in Denmark. The academy is a NICE preferred partner with SFA responsible for education, training and advisory services for companies participating in NICE related activities (SFA, 2012c).

5.2.5 MISTRA Future Fashion Research Consortium

'MISTRA Future Fashion' is program consisting of eight different research projects, each with the aim of generating new knowledge and recommendations, which can be used by the Nordic Fashion Industry in the near future in improving sustainability and the competition. The program is organized to make it easier for related industries, organizations and policy makers to make use of research. It aims to help organizations to increase their capacity to carry out research within sustainable fashion in the future.

The project is funded by MISTRA, The Foundation for Strategic Environmental Research and one of the main partners is the ‘Sustainable Fashion Academy’ (mistra future fashion, 2011). The programme is a four-year initiative with start-up in June 2011 and researchers within a wide range of disciplines are participating covering areas within the eight different research projects ⁹ (mistra future fashion, 2011).

ORGANIZATION	COUNTRY	WHAT	PURPOSE	RESOURCES / INITIATIVES	MEMBERS	MEMBERSHIP FEE
DANISH FASHION INSTITUTE /NORDIC FASHION ASSOCIATION	Denmark/Nordic countries	Network organization	To position and strengthen the Danish fashion and facilitate a network in developing, enhancing and market Danish fashion	NICE: Code of Conduct and 10 year plan, 'Be NICE, help the world of fashion', Copenhagen Fashion Summit, CSR education	Fashion and apparel companies	Yearly member fee between EURO 1,000-2,700
DANISH FASHION & TEXTILE	Denmark	Non-profit organization	To create value for members and help the members to handle the daily challenges	CSR-tool/guide for reporting, CSR handbook, guidance & communication of CSR, seminars	Fashion and textile companies	Yearly member fee EURO 1,600 (excl VAT)
DANISH ETHICAL TRADING INITIATIVE	Denmark	Non-profit knowledge- and resource center (multi-stakeholder initiative)	Create sustainable improvements in the work- and environmental conditions in Danish companies and in their global supply chain	Practical guidance, workshops, seminars, education and networking	Public organizations, companies within different industries, business organizations	Yearly member fee between EURO 700 - 5,600 (excl VAT)
SUSTAINABLE FASHION ACADEMY	Sweden	Non-profit organization	To accelerate the industry innovations needed to ensure a future of the apparel industry with stronger communities and a resilient planet	Educate and advice industry organization, public agencies, NGO's.	Fashion and apparel companies	N/A
MISTRA FUTURE FASHION	Nordic countries	Research consortium	To create a systemic change of the Swedish/ Nordic fashion industry that leads to sustainable development of the industry an	Eight different research projects	N/A	N/A

Table 5-2 Overview of third party organizations

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- Project 1: Changing markets and business models: Towards sustainable innovation in the fashion industry
- Project 2: Clarifying sustainable fashion (sustainable assessment methods)
- Project 3: Interconnected design thinking and processes for sustainable textiles and fashion
- Project 4: Moving towards eco-efficient textile materials and processes
- Project 5: Reuse, recycling and End of life issues
- Project 6: Fashion for the public sectors
- Project 7: Sustainable consumption and consumer behavior
- Project 8: Policy instruments

6 Empirical Findings: Towards a Sustainable Fashion Industry from SMEs perspective

This chapter aims to investigate how case companies develop sustainable fashion strategies with the purpose of applying the analytical framework introduced in Section 3.5. The following essential elements that affect sustainable fashion strategy are considered: external factors such as market drivers, regulatory and third party organizations and internal factors including criteria, relationship with suppliers and the challenges the SMEs face.

6.1 External Factors

External factors relate to the company's institutional environment. These factors explain what drives the companies to develop sustainable fashion strategies. In some instances these factors on the opposite might relate to issues that hinder development of sustainable strategies by SMEs. Three groups of external factors (market, regulatory and third party organizations) have been described by companies as of primarily importance and are presented below (see Table 6-1).

6.1.1 Market Factors

The interviewees have acknowledged certain market drivers as the major driving force towards developing and implementation of sustainable fashion strategy. These include customers demand for sustainable clothes, quality of design and transparency about supply chain operations and associated sustainable impacts. The findings related to these drivers will be described in the following.

Customer demand for sustainable clothes is seen as a driver for the companies. According to most of the interviewed case companies there is an increased demand for sustainable fashion and apparel. Mette Mørup, who works with environmental issues, sale and sourcing in 'Knowledge Cotton Apparel' states "*the market for sustainable fashion is the best in many years, there is a higher awareness among people*" (Pers. Comm. 2012). The companies meet this demand and therefore they see it as highly beneficial for them to already have implemented sustainability within their core business strategy.

For a company like 'AIAYU' this customer demand goes hand-in-hand with *the design* of the garment and its *quality* as "*the company needs to design something that is so good that it will be bought above another piece of garment, which is not sustainable*" (Pers. Comm. Maria Glæsel, 2012). The design and durability of the garment is important for the companies in order to sell their products. Maria Glæsel, partner/CEO of 'AIAYU' believes that "*you can not make a profitable business just by making organic t-shirts, which do not have a design that appeals to the customer*" (Pers. Comm. 2012). The sustainable feature is an add-on to the garment.

The respondents mentioned customer demand for *transparency* as important market driver. Transparency refers to information the company shares with the external environment. This includes information about their operations such as sourcing of materials, production process, their suppliers and associated sustainable impacts. Particular sharing information about the companies suppliers is for some companies a respectful act as to sharing facts about their cultural background, who they are etc. This includes displaying pictures from the manufacturing facilities at the company's individual website.

It was perceived that being transparent is a significant matter and an important driver for many of the case companies. This driver is a vital part of the business that all conceivable knowledge is shared with external partners and customers. In particular, 'Knowledge Cotton

Apparel' sees a high value in what they share of information with their customers about their products and the environmental facts connected to textile production.

6.1.2 Regulatory Drivers

The interviewers have expressed the lack of regulatory drivers. These include lack of regulations per se and the lack of financial support.

Lack of regulations per se is expressed by the case companies with a further wish of an intensified enforcement. The companies do not see any increasing pressure or support from the government and wishes more regulations would be enforced in the area evolving around chemicals and certifications. *"Things are moving too slow and it is frightening to hear frequently about a new substance found causing certain adverse affects"* (Pers. Comm. Sunniva Uggerby, 2012).

Jonas Eder-Hansen, Development Director, 'Danish Fashion Institute' (2012) also wishes to see increased regulations on chemicals and as well as care-label tags on the clothes as a requirement for the manufacturers. He also believes that there should come even more financial support from the Danish government when taking into perspective that the Danish fashion industry is the fourth largest export business in Denmark.

Lack of financial support for certifications on the clothes and as well for the suppliers is present. Mette Mørup highlights the aspect of how expensive it is to get certifications. The company also has to weigh in terms of costs and if it is worth it (Pers. Comm., 2012). She further states; *"you can get financial support for solar cells so why not also financial support for certifications and other standards in the fashion industry?"*

Financial support could also include supports to projects in developing countries where fashion companies see the possibility of working with a supplier in a sustainable production. This is something 'AIAYU' has gained from in their production as they are funded on development assistance from the Ministry of Foreign Affairs in Denmark. The company desires to see more companies in understanding the concept of finding a potential supplier who the company wishes to help and develop in an ethical sound way and then further apply for financial support.

6.1.3 Third party organizations

Case companies have expressed that support and help from third party organizations is needed for successful development and implementation of sustainable fashion strategies. The following forms of support have been mentioned: differentiated education and seminars, monitoring of suppliers and direct and visible dialogue/contact.

Differentiated education and seminars was expressed by most of the respondents as something that should be offered in a larger extent to fashion companies, not only to those who are already working with sustainability in their company but also to those who want to initiate it. This can advance the company but also make a company see new opportunities they did not know existed. For company A, which participated in the CSR education¹⁰, *"it helped us in defining how we could embrace to become sustainable without changes in all areas. We became aware that we actually had a lot of potential of proceeding in the field of consumption and awareness. The education was a good way of getting to know more"* (Pers. Comm. Sourcing Manager, 2012).

¹⁰ "Design & Sustainable Performance Essentials" (initiated by 'Danish Fashion Institute' and executed by 'Sustainable Fashion Academy', 2011)

The participants expressed the performed CSR education as a success. From Jonas Eder-Hansen's, Development Director perspective and from the participants' feedback, some companies acquired a large amount of knowledge from the lecturing, while others did not equally benefit since they were already working with CSR in their value chain (Pers. Comm. Jonas Eder-Hansen, 2012). One of those was 'AIAYU', who wished that there had been a larger distinction and more division between the participants in regards to level of knowledge in the sustainability area. Jonas Eder-Hansen, who not only highlights the demand and need for education but that his should in the future be targeted at different groups in the industry, also supports this. By creating different groups (e.g. designers, sourcing managers, CSR coordinators) it will be possible to work with different challenges and see the opportunities within their own specific working fields (Pers. Comm. Jonas Eder-Hansen, 2012). For instance, 'AIAYU' would like to find another SME in the industry that they could learn from in terms of best practice in the industry. This calls for differentiation of initiatives depending on the level of corporate advancement in dealing with sustainability issues.

Monitoring of suppliers was expressed as a need for some of the case companies, particularly those with several suppliers. Verifying supplier's sustainability performance can be difficult and for 'Katvig' "as a small business it would complicating to control all our suppliers. This a third party organization could help us with" (Pers. Comm. Vigga Svensson, 2012). Monitoring suppliers could help the company knowing that supplier's certifications is up to date (Pers. Comm. Mette Mørup, 2012).

Direct and visible dialogue/contact is another form of support that was expressed by the companies in different ways. 'Underprotection' wishes that they could get help from a communication consultant and help them with communicating their actions to their customers (Pers. Comm. Sunniva Uggerby, 2012). The company wishes for more direct contact with the organization also in terms of information meetings. All case companies expressed their excitement of the recent large focus at sustainability in the fashion industry and particular with the new NICE fashion code. As Maria Glæsel from 'AIAYU' states: "It is important that these organizations are present and established and also puts a pressure on companies. They must educate the industry and the consumer and be there in the very beginning when small companies are trying to start up" (Pers. Comm. 2012).

There is a need in *services/tools* that can help companies to find the suppliers with the right certifications. This would be a tool, that would recommend suppliers in different countries and where to source different sustainable materials. This would save the companies a lot of time and resources (Pers. Comm. Mette Mørup, 2012; Pers. Comm. Sunniva Uggerby, 2012).

6.2 Internal Factors: Sourcing Process/Approaches

6.2.1 Criteria

In the sourcing process, the interviewed SMEs have applied a number of criteria. These criteria are applied for materials and suppliers of these materials. The criterion for materials relates to the quality and if it is certified. The criterion in regards to the manufacturer is whether it is certified as well. The applied certifications and standards are SA 8000, GOTS, Fair-trade and UN Global Compact. The sourcing process for the companies also involves finding the right manufacturer who is able to produce the chosen garment.

Certified material is a large criterion for the case companies when searching for sustainable materials. This relates to finding a supplier who can deliver these materials and in a requested amount. The materials have to have a high quality.

Finding the *supplier with or without certifications* who can produce the design is also a part of the criteria in the sourcing process. ‘Underprotection’ was initially in contact with Fair-trade organization in Denmark asking for help in finding a suitable supplier. Several suppliers who were Fair-trade certified were provided but none of them actually specializing in producing underwear (Pers. Comm. Sunniva Uggerby, 2012). For others such as ‘AIAYU’ the criterion is a supplier/manufacturer to which they can offer development assistance. This is the case with their current one in Bolivia. They are working together with their supplier in achieving SA 8000. The challenge is that many women are knitting from home where the standards are lower than at the factory and generally are difficult to monitor (Pers. Comm. Maria Glæsel, 2012).

The interviewed SMEs who have applied certifications only work with existing standards and certifications, developed by third-parties and do not develop their own.

6.2.2 Relationship with Suppliers

The primary difficulty lies in finding a certified supplier or a supplier who is able to develop and achieve a certification in the long run. This difficulty makes the company develop closer cooperation and trusted relationships with one or two suppliers. It has been perceived that it is very important to have this kind of relationship with their suppliers as it creates familiarity with production procedures, the materials and the design.

A *close cooperation* and a *trusted relationship* are for ‘AIAYU’ important as it contributes to knowing the whole process and what physically happens in the production phase. This means that they visit their supplier in Bolivia twice a year (Pers. Comm. Maria Glæsel, 2012). The company has chosen an ethical approach by working with manufacturers who either meet the standards or are genuinely seriously trying to change the way of running their business. This ethical approach has help ‘AIAYU’ to change the situation of workers in countries where ethical production has not been the case in the local business environment. The company became deeply involved with a manufacturer to improve the ethical standards at the factory. Today, the company's primary manufacturer covers the whole process from raw fibers to yarn spinning to the finished garments. ‘AIAYU’ has chosen to source from only one supplier that manufactures 95% of all ‘AIAYU’ products.

Currently, ‘Underprotection’ has two suppliers whom they aim to visit once to twice per year. With both suppliers they have developed a close and trusted relationship. They have initiated to help their main supplier, Fashion Forte, with knowledge concerning environmental issues and are now in the process of achieving the Fairwear Foundation certification¹¹ and after that hopefully the Fair-trade Standard and GOTS (Pers. Comm. Sunniva Uggerby, 2012). Due to the help and knowledge the supplier, Fashion Forte is receiving from ‘Underprotection’, Fashion Forte has chosen to only work with ‘Underprotection’ and achieves these goals together. This is also seen as a benefit for the supplier (Pers. Comm. Sunniva Uggerby, 2012). Through their supplier in India they have chosen to work with different materials such as bamboo and soy as bamboo is easier to source in India.

For ‘Underprotection’ and ‘Sture&Lisa’ there are only advantages of having one or two suppliers. With this one supplier the companies develop a special form for communication and a way of understanding each other. This means having the same contact person who understands the design, drawing and sizes and knows how to work with the sourced material such as bamboo.

¹¹ Non-profit organization that works with companies and factories to improve labor conditions for garment workers.

In another scale of the supplier relationship lies the consciously choice for 'Knowledge Cotton Apparel' of choosing a supplier in Europe. This is more credible and they have had the experience that the suppliers have their certifications in order, as compared to suppliers in China, where they felt it was not under control (Pers. Comm. Mette Mørup, 2012).

For company A and B there is a current wish of their current suppliers would be interesting in promoting standards and become more transparent in their operations.

6.2.3 Challenges

In the sourcing process lie certain challenges for the SMEs. The following challenges have been mentioned: finding the right supplier (few to choose among) with the right certificates, sourcing sustainable materials and quantity and as a start-up company, knowing where to start.

Finding the right *certified supplier* is a challenge for the case companies, as there is few to choose among, "*it is a challenge to find suppliers who live up to all our demands*" (Pers. Comm. Vigga Svensson, 2012). From the respondents it was perceived that searching for that perfect supplier who lives up to the criteria is a difficult process and takes time. For 'Sture&Lisa' the company received help from the Fair-trade organization in Sweden after first struggling with a supplier in India who were not able to obtain their Fair-trade certification (Pers. Comm. Stina Wickenberg, 2012).

Sourcing *sustainable materials* is a challenge for 'Underprotection' and others. A material that is suitable for underwear and which the manufacturer also knows how to work with has been challenging and demanding. When trying to find new materials, Vigga Svensson also states "*I am very diligent towards finding a new fiber that can replace all the organic cotton we are using - organic cotton is of course a step on the way but far from ideal so we are looking for an alternative*" (Pers. Comm. Vigga Svensson, 2012).

For company A and B it is just a challenge to actually get started and *not knowing where to start*. Both of them have been in the business for a long time and then trying to make things differently is challenging. Company A states that there are too many places where different certifications are described and how to handle them and feel that information should be kept in one place in order to get hold of the right information (Pers. Comm. Sourcing Manager, 2012).

Jonas Eder-Hansen (2012) from 'Danish Fashion Institute' points out that sustainability is so enormous and complex that a company must set a side a large amount of resources to just understand it, which is crucial. He further states that for many SMEs it is confusing and complicated to work with and believes that is it important for the small company to start by working focused at something that is less complicated.

COMPANY	MARKET FACTORS	REGULATORY DRIVERS	THIRD-PARTY ORGANIZATIONS	CRITERIA IN THE SOURCING PROCESS	RELATIONSHIP WITH SUPPLIERS	CHALLENGES	ADOPTED STANDARDS	MATERIALS	MEMBER-SHIP
AIAYU	Customer demand, transparency and design/quality	Increase financial support	Differentiated education and seminars	Supplier with possibility of development assistance	Close cooperation and trusted relationship	The right (certified supplier), materials	SA 8000 (by 2013), UN Global Compact	CashLlama	DAFI
KATVIG	Transparency, customer demand, quality	Lack of regulations and governmental support	Monitoring of suppliers	Certifications and quality (materials)	N/A	Certified supplier, sustainable materials	GOTS, OE Blended Standard, UN Global Compact	Organic cotton, recycled organic cotton, recycled polyester	DIEH, Danish Fashion & Textile
KNOWLEDGE COTTON APPAREL	Transparency	Lack of governmental support	Direct and visible dialogue	Certifications	Collaborative	Quantity	GOTS, OE 100, Textile Exchange	Organic cotton, recycled polyester	Danish Fashion & Textile
STURE&LISA	Transparency	Lack of regulations and financial support	Visible contact and dialogue	Certifications (materials and suppliers)	Close cooperation and trusted relationship	Certified supplier and certified materials	Fair-trade, GOTS	Fairtrade and organic certified cotton	None
UNDERPROTECTION	Transparency	Lack of governmental pressure	Education, services/tools	Certifications (materials and suppliers)	Close cooperation and trusted relationship	Certified suppliers	Fair-trade, GOTS, SA 8000	Organic cotton, bamboo, soy	DAFI
COMPANY A	N/A	N/A	Educations	Good quality	Collaborative with the wish of promoting standards	Not knowing where to start	None	Silk, jersey, cotton, wool	DAFI, Danish Fashion & Textile
COMPANY B	N/A	N/A	Education	Sustainable suppliers	Future wish of a supplier that is transparent	Not knowing where to start	None	N/A	None

Table 6-1 Overview of empirical findings from interviews with case companies

7 Analysis

The case studies and interview findings are analyzed using the analytical framework introduced in section 3.5. This chapter aims to provide cross-case comparison of sustainable fashion approaches and discuss different challenges that SMEs face when facilitating sustainability in the supply chain.

7.1 Comparison of Approaches to sustainable fashion within the context of SMEs

7.1.1 The role of external factors in facilitating sustainable supply chain strategies

External factors play a large role for the ability of SMEs to implement sustainable supply chain strategies. The following factors have been identified as of primarily importance by SMEs and include market drivers (customer demand, transparency and design/quality), lack of regulatory drivers and support from third party organizations.

Customer demand for sustainable products is a market driver that is of primarily importance for the companies as this is the reason why SMEs are motivated to facilitate supply chain sustainability. The majority of the case companies have been able to successfully place their products in a niche 'green' market, where sustainability is perceived as being an extra value for the customer. When 'Katvig' first started back in 2003 the company had an 'explosive' start as it had positioned itself in a market where there was a large demand for sustainable children wear. Since then, the demand for sustainable children wear has increased and more companies are now competing on the market, offering customers organic or fair-trade labelled products.

The interviewed companies have anticipated that the sustainability trend is the future of the fashion industry and that more companies would soon start incorporating sustainability in their supply chain operations. This vision of the future of the fashion industry is driven by two basic considerations. One is the growing consumer awareness and media interest in dangerous substances in everyday products including clothes. Companies that wish to preserve their image and avoid corporate risks associated with negative publicity are therefore motivated to incorporate sustainability aspects in their sourcing strategies. The second consideration is the perceived opportunity of entering 'green' markets that creates a competitive business edge. Some companies are specifically profiling themselves as sustainable compared to other brands. This approach can be viewed as a way of differentiating the company in the market.

Another external factor is customer demand for *transparency*. Transparency refers to information that company shares with external stakeholders. It includes sharing information about suppliers and production processes as well as communicating about future goals and certain challenges the company may have in reaching higher sustainability goals. The case companies view transparency as a strong marketing tool. It allows SMEs to successfully market their clothes by telling the story about the product history, provenance and suppliers traditions. At the same time, increased transparency is also a way for the companies to minimize the risk of negative publicity in the media as they are honestly communicating about their actions. It can force them to reveal certain challenges that the company might have in reaching sustainability goals. For the case companies, transparency is an important part of their communication strategy that is highly indicated when searching corporate websites. For customers the 'good story' might be appealing and make the garment even more attractive and that can increase the demand.

Some of the companies have taken proactive steps by organizing educational events such as “Sustainability schools” and swap parties (ref. ‘Katvig’). This can be viewed as an approach to educate consumers and develop customer’s demand for sustainable clothes by being transparent about the harmful environmental impacts that the fashion industry currently causes. This type of CSR communication can undoubtedly affect consumers towards buying sustainable garments instead of non-sustainable ones, if the information is communicated correctly. Consumers will definitely see more transparency in the corporate communication in the future with introduction of UN's guiding principles for business and human rights¹² (UN, 2011). In these new principles the companies are expected to inform about how they manage the respect of human rights associated with their business operations. This further indicates the increasing demand of external stakeholders for companies to communicate openly about their CSR actions and associated challenges.

While increasing customer demand for sustainable products and transparency represent factors that facilitate SMEs engagement with sustainability, there are a number of factors that hinder implementation of supply chain sustainability. Among these are lack of regulatory framework and financial assistance. The majority of interviewed case companies have acknowledged that there should be a larger focus on both soft (e.g. information provision) and hard (e.g. bans) policy instruments in order to create a larger transformation for the fashion companies. Regulatory drivers facilitate companies to initiate sustainable fashion strategies. Policies are needed to enable industry to minimize the use of chemicals and achieve certifications (e.g. GOTS, SA 8000 and Fairtrade). Financial support to companies is also a vital aspect. This support could be provided in form of subsidies to get expensive certifications and develop suppliers’ sustainability capacity in third-world countries.

Another factor that facilitates SMEs to develop and implement sustainability strategies is support provided by *third party organizations*. These organizations have a large expertise within sustainability aspects applied to the fashion industry and play an important role in enabling SMEs sustainable sourcing strategies. Their pivotal role consist of being able to provide the needed assistance to companies that are both in the initial start-up phase to launch sustainability strategy and to companies that has already experience of working within sustainable fashion. The support provided by third party organizations include seminars on issues involving for instance UN's guiding principles for business and human rights, CSR guidance and workshop on sustainable issues in the supply chain. Unfortunately, the support provided by third party organizations is insufficient in regards to what is sought by the SMEs and there is a gap between the companies’ challenges and the support that a third party organization provides. The role of third party organizations in implementation of sustainable fashion strategies by SMEs will be further analyzed in Section 7.1.3.

The external factors such as consumer demand for sustainable products and transparency, and support of third party organizations have a large influence in motivating and enabling SMEs to develop and implement sustainable sourcing strategies. The third parties contribute to the companies’ ability to maintain their successful determination to sustainable issues in the fashion supply chain. At the same time, lack of regulatory provisions both in form of ‘soft’ and ‘hard’ policy measures and lack of financial assistance from governmental bodies to develop supplier’s sustainability capacity, e.g. support in acquiring sustainability certification, are factors that negatively influence SME’s ability to implement supply chain sustainability strategies.

¹² Published March 24, 2011

7.1.2 Cross-case Comparison of Sourcing Strategies

Approaches to implementation of sustainable sourcing strategies can be exercised differently as confirmed by (Forman & Søgaard Jørgensen, 2004; Kogg, 2009) and the empirical evidence. Based on the literature analysis conducted in section 3.4 and Kogg's framework that conceptualises different approaches to implementation of upstream CSR (Figure 3-2, Section 3.4.3), the cross-case comparison of SME's sustainable sourcing strategies is structured according to the following issues:

- *Criteria applied to suppliers*
- *Sustainable sourcing approaches, e.g. supplier selection vs. inter-organization management*
- *Number of suppliers*
- *Type of relationships with suppliers*

Case companies have applied a number of various *criteria* to select their supply base. These criteria are usually applied both for materials used in production process and for suppliers. Case companies' approaches to sustainable sourcing include searching for a supplier which is certified and can produce the chosen garment but also searching for sustainable materials matching the design and quality (see Figure 6-1). Finding an appropriate supply base is difficult since there is a limited number of suppliers and materials that are certified.

All case companies have chosen to work with existing standards and certifications. The reasons for that are primarily because the companies are too small and lack of resources and expertise to develop their own standards and monitor/verify suppliers' sustainability performance on-site. Using third party certifiers provides an assurance for the SMEs that the conditions of production processes and quality of materials used are in accordance with sustainability requirements and internationally recognized standards of safety, health and labour practices. This reduces the liability risks for the SMEs if incompliance with sustainability requirements in supply chain is revealed. Many larger fashion companies use codes of conduct to ensure manufacturers are maintaining ethical standards. The weak point with private sustainability requirements such as code of conduct is the verification of the manufacturers' actual implementation of the code. The monitoring process can be very costly, not only for the focal company but for the suppliers as well since they can be asked to comply with several codes of conduct by a number of buying companies.

SMEs approaches to sustainable sourcing also differ with regard to how these approaches are exercised by the focal company. Mainly two approaches were distinguished such as *supplier selection*, e.g. choosing a supplier that is readily available on the market, and supplier development through inter-organizational management when a supplier is not readily available on the market. These two approaches are in accordance with Kogg's (2009) findings on how large companies in the fashion industry implement upstream CSR (Figure 3-2).

The companies 'Underprotection' and 'Sture&Lisa' have individually chosen their own suppliers. The chosen suppliers were readily available on the market and met the required sustainability standards. However, 'Underprotection' has also applied another strategy to their second supplier (ref. Fashion Forte) and decided to help the supplier in the process of achieving the required certifications. This collaboration has influenced the supplier's own decision to produce clothes exclusively for 'Underprotection'.

'AIAYU' is also engaged in inter-organizational management approaches with supplier. The supplier with which the company is working nowadays does not have required the

certifications but is currently in the process of achieving SA 8000 with support from 'AIAYU'. Instead of excluding the manufacturer, 'AIAYU' decided to become involved in improving ethical standards in the production process. Supplier development assistance is provided with help from Danida (the Danish Government's development program for developing countries) in the form of financial support. Improvements are made in the physical conditions for workers at the manufacturing company and improved installations such as water-saving toilets and a water treatment plant. The joint effort of 'AIAYU', supplier and governmental organization (in form of financial support) represent an example of successful partnership to improve CSR standards in the upstream supply chain.

Although the case companies have chosen different approaches to sustainable sourcing, e.g. supplier selection vs. supplier development through means of inter-organizational management, the similarity in sourcing approaches of SMEs is the limited *number of suppliers*. The interviewed companies have chosen to have only one or two suppliers. This creates a less complex supply chain but also a risk of being dependent on that single supplier. However, the interviewed SMEs are willing to take such risk as otherwise it is very difficult to find a supplier that is able to produce their garment today. To reduce costs of the sourcing process and reduce complexity of supply chain, some of the interviewed companies have also decided to source raw materials in the same country where the manufacturing facilities are located. For instance, 'Underprotection' produces underwear from bamboo since this type of material is easily available in India. The same approach to source materials locally (close to production facilities) is applied by 'AIAYU'.

Difficulties associated with finding a supplier that is able to produce clothes according to required levels of quality and sustainability has resulted in developing a particular type of *relationships with suppliers* by SMEs. Confirmed by the literature (Forman & Søgaard Jørgensen, 2004) the case companies have developed a "symmetrical partnership" with their suppliers what can be described as mutually dependent and long-term relationships between the supplier and the sourcing company. Some of the case companies (e.g. 'AIAYU', 'Underprotection' and 'Sture&Lisa') have highlighted that such relationships are built on high level of trust and collaboration. As confirmed by literature (Gold & Seuring et al., 2010; Wilson, 1995; Ciliberti et al., 2008) the collaborative paradigm and trust can help build an inter-firm collaborative relationship. This type of relationship is vital for the SMEs' success, as their suppliers are vital knowledge about the design, the materials and the production of the garment.

In developing and implementing their sourcing strategies, SMEs face a number of substantial challenges. As earlier mentioned, one of the challenges lies in finding the right supplier that is certified according to sustainability standards or interested in developing collaborative relationships and acquiring valid information about materials and standards. A sourcing challenge lies in materials selection that is better from a sustainability perspective. This can be time consuming and difficult for the company to assess the right information. Another challenge is that SMEs are deciding individually what standards to apply and what sustainability aspects to address. This is a lack of access to relevant and credible information about sustainability issues that further constraints the SMEs ability to develop sustainable supply chain strategies.

Additionally, commitment to sustainable supply chain strategies is time-consuming for the SMEs and requires substantial resources. As stated by Jonas Eder-Hansen from 'Danish Fashion Institute': *"It is in many ways very confusing and complicated to figure out what, how and where in supply chain to address sustainability issues for the single company"* (Pers. Comm. Jonas Eder-Hansen, 2012). For some companies that are interested in addressing issues of sustainable production,

e.g. company A and B, one of the major challenges is to obtain the relevant information about materials, certifications etc. This type of information can be hard to comprehend and evaluate for SMEs creating a further challenge in prioritizing what sustainability measures should be implemented.

7.1.3 The role of third parties in supporting SMEs in implementation of supply chain sustainability

Third party organizations have tools and resources to help SMEs in the fashion industry to implement supply chain sustainability strategies. Third party organizations contribute to SMEs ability to implement sustainable sourcing strategies by:

1) *Providing guidance and tools on CSR issues in the supply chain.* For instance, 'Danish Fashion & Textile' organization offers specific guidance developed by their sustainability expert on CSR issues in the supply chain and assist SME in developing a CSR strategy. Additionally, 'Danish Ethical Trading Initiative' provides practical guidance on responsible supply chain management while the NICE webpage contains information on textiles with a more sustainable profile and a chemical tool for textiles (the tool covers the chemicals involved in textile production, the effects they causes on humans and environment and possible substitutions).

2) *Offering seminars/workshops/education.* 'Danish Fashion Institute' has offered a CSR education while 'Danish Ethical Trading Initiative' offers different workshops on ethical trading. 'Danish Fashion & Textile' offers different seminars, for instance about labelling rules.

3) *Network arrangements.* All organizations offer different network arrangements where members meet and discuss different challenges. 'Danish Fashion & Textile' has set up a specific network group in order to help companies with CSR issues. In this forum the companies share knowledge about each others' experiences and dilemmas for instance the challenge of using a dye that do not comply with the companies' restrictions.

4) *Up-dating news on sustainability trends in the fashion industry.* Third party organizations provide publications and news about sustainability trends in the fashion industry. These include information about sustainability initiatives and other innovative developments in the fashion industry with respect to sustainability.

While the role of third party organizations in supporting SMEs transformation towards sustainability is of large importance, there is a gap between SMEs challenges and support provided by third party organizations. Lack of support/assistance from the third party organizations has been identified in the following areas:

1) *Education/seminars on CSR in supply chain, certifications, and sustainable materials.* The level of education within the area of sustainability in the fashion industry is insufficient, as least expressed from the SMEs response of wanting more education. This request comes from both companies trying to initiate a sustainable supply chain and companies who have a successful business selling sustainable apparel. The current education is overall targeted at all companies regardless of what level the individual company is working with sustainability. For instance the CSR education 'Danish Fashion Institute' completed (ref. "Design & Sustainable Performance Essentials") there was a high number of applicants but a company like 'Underprotection' was excluded, as there were requirements as to the size of the company. There is also a former generation of designers who have not received any education in sustainability during their education years. This generation needs the basic education on sustainability within fashion, which designers today are taught and familiarised in.

2) *Communication/dialogue of sustainability information between SMEs and third party organizations.* There is a lack of coordination in communicating sustainability information and assistance that the organizations possess. For instance, the respondents were aware of the NICE Fashion Code but few had actually read it in-depth. The organizations provide lots of information but the communication of it is insufficient. This relates to the existing level of information on sustainable materials, certified suppliers, certifications as well as to the newest research on textiles, which are scattered between organizations and different independent websites.

4) *Lack of support in finding a supplier.* The SMEs could need more support and help in finding a supplier that has the right certifications, which the company is requesting. This means also receiving help from other SMEs as to informing about possible suppliers they have worked with or currently are collaborating with.

Lack of support provided by third parties in the aforementioned areas where, at the same time, interviewed SMEs perceive the clear need of support can limit the further development of sustainable fashion. The following section discuss how this gap can be minimized by elaborating on implications for further development of sustainable fashion within SMEs

7.2 Implications for further development of sustainable fashion within SMEs

Based on the aforementioned gap between SMEs challenges and third party organization support (analyzed in Section 7.1.3) and insufficiency of external factors to facilitate SMEs work with supply chain sustainability issues (analyzed in Section 7.1.1), I argue that support/assistance for SMEs in the following areas should be provided:

1) *Differentiated education/seminars.* Education on sustainability issues should be adjusted to different target groups. For instance, SMEs which only start approaching CSR issues in their supply chain would obviously require a different type of information than those companies which have already started implementation of supply chain sustainability. In the initial communication the third party organizations could help the company figuring out what, how and where to apply sustainability in their supply chain. Then the offered education could be applied more differentiated and target the different company groups in relation to size, challenges and level of current sustainability practices. This will increase the overall outcome for the individual company, as their specific issues will be addressed. Offering differentiating education could also be applied to network meetings between fashion companies. Moreover, the level and amount of education could be increased substantially by using experts within supply chain sustainability and providing 'best practice' case studies from other fashion companies' worldwide.

2) *Focused communication/dialogue between SMEs and third party organizations.* The direct communication between the third parties and the SMEs is inadequate, as the SMEs are not aware of the resources that third party organizations are providing while third party organizations are not aware of the specific SMEs challenges. This could be done through direct contact and by means of information meetings about new initiatives, half-year update meetings where companies deliver on their progress and different debate forums. It is vital that the SMEs understand what they can use the third parties for in their daily work and what the gain is to be a member. That is possible by knowing what resources the organizations have to offer. This is particular important for SMEs wanting to start up a sustainable clothes production.

3) *Collective information platform about sustainable materials, certified suppliers and research within the industry.* All required information for SMEs working with sustainable fashion or initiating it

should be able to retrieve relevant information from one specific domain that should be visible and accessible for companies (excluding membership fee). A membership fee can be a barrier for the SMEs to retrieve access to required information due to high financial costs. This platform would be a collective tool to assist the companies both in the short- and long run, through the expertise and resources from third party organizations, research projects and other SMEs in the fashion and textile industry.

4) *Creating incentives for SMEs to produce sustainable products.* Among the noticeable examples is the lack of regulatory framework and incentives for SMEs in the fashion industry. The Danish Government newly introduced an action plan (see Section 4.3.1) that promotes companies' social responsibility with a clear focus at SMEs but without any concrete incentives like subsidies for certifications and tax reductions. It is 'soft' policy measures that are applied by the government. 'Hard' policy instruments as complete bans would force fashion companies to start searching for new ways of producing their products with alternative materials.

5) *Providing financial support to develop supplier's sustainability capacity.* The problem of finding a supplier can be resolved in increasing financial support from governmental bodies to develop supplier's sustainability capacity. This would include helping suppliers achieve third party certifications and improve facilities for workers at manufacturing facilities and thereby expand the amount of suppliers readily available with certifications, which the companies are searching for. The actors involved would be Danida and the Danish Ministry of Business and Growth. Financial support could also be applied to an online platform where companies could search for suppliers and information about them.

External factors play a large role for the ability of SMEs to implement sustainable supply chain strategies and so does the third party organizations. Third parties responsibility is large as to providing education, guidance, the proper communication of initiatives etc. Thus these are the organizations that are capable of offering what the fashion industry needs. Third parties can with their knowledge educate the industry and make more SMEs approach sustainability in the supply chain.

8 Discussion: How sustainable is the fashion industry in reality

The fashion industry is an industry that affects consumers with the latest trends every season and thereby makes other clothes and accessories unfashionable and needless. These fast-moving fashion trends promote over-consumption and are a reason for making clothes obsolete. Considering the over-consumption problem in the world of fashion industry is an important aspect besides providing consumers with clothes that is better from the sustainability perspective. Studies show that 18 percent of people's clothes have never been used and at the same time the largest environmental impact from clothes comes during the use phase (Allwood et al., 2006).

Companies can address the problem of over-consumption in a number of ways such as educating their customers about sustainability issues related to clothes use-phase or actively engaging into initiatives to prevent over-consumption. For instance, 'Patagonia' company has launched "Common Treads Initiative" that promote less clothes waste by implementing "*reduce, repair, reuse and recycle*" measures. The company has also launched responsible marketing effort by encouraging customers not to buy clothes they don't need. The advertisement logos where placed in the clothes stores saying "Don't buy this jacket".

The case companies in this thesis have to a limited extent approached the consumption side of supply chain. Few case companies have organized "swap-parties" events and educated consumers about environmental impacts associated with use-phase of clothes. The challenge of preventing over-consumption is a challenging task as companies' willingness to make more profit by selling more products. Thus companies can encourage consumers to adopt sustainable habits with product-care tags and take the opportunity to change consumers high-impact laundry habits less frequent washing or washing at cooler temperatures. This could be done as a marketing stunt, which Levi Strauss has done with their advertising campaign "Don't wash the stories out of your jeans" or "Dirt is the new clean".

The fashion industry has a future possibility of changing and affecting consumers shopping behavior as well. This possible change has been estimated by a Danish trend forecaster (Sara Ingemann Holm) (Skarum, 2012b). The industry must make a shift in order to become sustainable, a shift that will exclude the two to four different clothes collections companies create every year. The fast moving trends and the constant development of new products are a strong contrast to sustainable fashion. The consumers must change their way of consuming and start to have more basic apparel in better quality in their wardrobe as well. The trend forecaster, Sara Ingemann Holm, states that the consumer must begin to buy more expensive clothes (tailor-made) and in a better quality (Skarum, 2012b). This change will demand a change in consumer behavior and as well in fashion companies' way of conducting business. Thus it will require that the consumer is willing to pay for this more expensive and also sustainable clothes.

The way of conducting business for the larger companies have been underlined from initiatives such Copenhagen Fashion Summit, the launch of NICE Fashion Code and NICE online campaign "BE NICE - Help the world of fashion" (aim of making sustainable fashion mainstream). These initiatives have created an enlarged focus at the whole fashion industry and its effect on humans and the environment. The focus can in the long run create cooperation between organizations and larger clothes manufacturers, such as H&M, in regards to affecting the consumers and their buying behavior of to paying 15 EURO or less for a t-shirt worldwide.

This is a long-term perspective but the fashion industry is known to affect consumers and their behavior by showing new trends. Hence this industry might just have the ability to cause that change in consumer behavior and make sustainability the new black.

9 Conclusions

9.1 Main findings of research

Based on the analysis of collected empirical data, the following answers on the posed research questions were revealed.

RQ1: How do SMEs in the fashion industry address the issues connected to sustainability within their supply chain?

Implementation of Supply Chain Sustainability: Major Factors

The major factor that influence the full implementation of supply chain sustainability was concluded to be finding the right supplier who either has the right certifications or who is able to develop in improving sustainable capacity. Furthermore, other additional factors that facilitate SMEs work with sustainability issues in the supply chain were found to be the following:

Customer demand for transparency about suppliers, materials and production. It is recognized that transparency towards the external environment is an important marketing element for the SMEs. It is an element in their business that reveals their views upon sustainability in the fashion industry and by taking on transparency measures, they communicate more openly to their current and potential customers. Transparency is vital for SMEs as it allows them to be honest about their suppliers and processes and it can force them to reveal certain challenges that the company might have in reaching sustainability goals.

The relationship with suppliers is trusted and collaborative. As confirmed by findings and analysis the SMEs' relationship with their suppliers is noticeable. For a majority of the case companies the relationship is built on trust and collaboration. It means security and trust for the SMEs to know the operations and the manufacturing facilities and it strengthens collaboration for both the SME and the supplier in producing the desired design. This collaboration is perceived as highly beneficial for the supplier as well as they receive the chance to grow and develop further with the SME. A trusted and collaborative relationship is vital for the SMEs' success, as their suppliers are vital knowledge about the design, the materials and the production of the garment. This form of relationship is valuable and takes time and resources to build and maintain for a prosperous business.

Approaches to Sustainable Sourcing Strategies

Mainly two approaches to sustainable sourcing strategies by the SMEs were distinguished in the analysis. The first being supplier selection, e.g. choosing a supplier that is readily available on the market. The second being supplier development through inter-organizational management when a supplier is not readily available on the market. The case companies have all chosen to work with existing standards and certifications in the market.

Criteria such as certified materials and certified suppliers applied in the sourcing process. In the sourcing process for materials the companies mainly source for materials with the right certifications like GOTS. The quality of the sustainable materials is of importance as well. Other criteria that impact a sustainable sourcing strategy are suppliers who are certified with for instance Fair-trade or SA 8000.

While developing and implementing sustainable supply chain strategies certain challenges exist for the SMEs:

RQ2: *What are the challenges that SMEs face today while developing and implementing sustainable supply chain strategies?*

Challenges SMEs faces are connected to finding the right supplier and sustainable materials. The challenges that the SMEs are facing are highly affected by choices in the company's supply chain. Choices connected to finding the right suppliers are difficult as there are a limited number of suppliers that are certified and have the possibility to collaborate. These challenges are extended by the fact that sustainable and certified materials are limited and judging the information behind takes time and resources. For a company attempting to initiate a sustainable clothes production, one of the largest challenges lie within the fact of not knowing where to start. There is the perplexity that information about materials, certifications etc. is scattered in many different places and it is difficult to know where to search for the right and valid information for the individual company.

At the same time, the following factors hinder successful implementation of supply chain sustainability by SMEs:

Lack of regulatory drivers and financial support to the SMEs. The analysis has revealed and case companies have expressed that the support from government is minimal with regards to financial support to certifications. The incentives for establishing a sustainable apparel production are limited for companies. Regulation on the area is minimal both in terms of chemicals and the use of certified and sustainable materials.

The role of third party organizations was further investigated and the following were discovered:

RQ3: *What is the role of third party organizations in supporting SMEs in implementation of supply chain sustainability?*

Third party organizations role in supporting SMEs is essential. The organizations have knowledge and resources to help the SMEs in the implementation of supply chain sustainability. Currently, third parties offer guidance, workshops and other valuable assistance. Although, the SMEs indicate a gap between what type of support is provided and what challenges they have. The SMEs seek assistance in monitoring suppliers, acquiring knowledge from education seminars and a place to search for materials and suppliers. As a company trying to pursue a sustainable business, the third parties should take the responsibility of helping them through the start-up phase. The SMEs should also become aware of the wide range of resources the third parties are offering and knowing how to use them the right way.

A major factor was found as finding the right supplier who is certified but the fact is that there are a limited number of suppliers that live up to the SMEs demands. This creates barriers for the companies, as having the right supplier can be vital for future success. The fashion companies already on a sustainable pathway are first-movers and determined in their pursuit for sustainability but if more SMEs are to overcome challenges, the identified internal and external factors must be addressed with particular focus at third party organizations. Future recommendations are described in the following section.

9.2 Recommendations for further improvements

The recommendations for further improvements within sustainable fashion and supply chain sustainability can be reached within a number of areas. In the following recommendations will be made for policy-makers, SMEs and third parties.

Policy-makers:

- It is recommended that policy-makers create better incentives for the SMEs to start working with sustainable issues in the supply chain. Both 'soft' and 'hard' policy instruments should be enforced such as making chosen standards and certifications mandatory. A 'hard' instrument would be to ban the use of PFCs in the clothes production and demand care-label tags at clothes. Providing financial support to companies wanting to develop their sustainability capacity would help SMEs in achieving certifications for instance and helping to develop possible suppliers. This would be a political decision that has longer-term perspectives in times of economic crises.

SMEs:

- The SMEs are recommended to engage in partnerships with each other and other industries that will enable them to discover new methods of production and use of materials. The knowledge sharing would also include 'best practice' examples. Assisting another company that is determined to develop supply chain sustainability should not be avoided by the more established sustainable SMEs. Evidently more sustainable SMEs in the fashion industry would have a better chance of influencing customers' choice and suppliers' fabrication of sustainable materials and thus, it would benefit the whole sector if more partnerships and share of best practice are strengthened.

Third-parties:

- Organizations working to support fashion and apparel companies should enlarge their focus at specific groups of companies and their individual challenges. This could be done through direct communication in personal meetings, network groups and follow-up meetings every half-year. The third parties are recommended to promote even more sustainable fashion by educating and showing the SMEs where, what and how they can approach sustainable supply chain management and sustainable fashion. The third parties should also strengthen their effort to influence policy-makers and promote that more sustainable materials and textiles become certified and that increased regulation on chemicals is pursued.

An overall recommendation for the abovementioned parties is to establish a "knowledge platform", initially targeted at SMEs in the fashion and textile industry. This would be a platform for sharing 'best practices' and information about materials, suppliers and certifications that essentially would build the companies' knowledge and expertise in the area of sustainability. Knowledge sharing in the form of providing more education and seminars for the SMEs can help minimize their time and resources in searching for relevant information, for instance in regard to sustainable qualities of materials, workers' conditions, environmental impacts in the production process etc. Educating the companies would help

them to reveal and realize new opportunities for sustainability innovation. In table 9-1 the content and involved parties are summarized.

FACTS	AIM	INVOLVED PARTIES	FUNDING	CONTENT
<ul style="list-style-type: none"> • Region: Scandinavia (with possible expansion to all of Europe) • No membership fee • All services provided for free 	<ul style="list-style-type: none"> • To create a platform with accessible information for fashion companies • To learn & exchange knowledge between SMEs • To create partnerships between fashion and textile companies • To increase resource security and sustainability aspects in the fashion & textile industry 	<ul style="list-style-type: none"> • Third party organizations (e.g. Danish Fashion Institute, Nordic Fashion Association, Danish Fashion & Textile) • SMEs in the fashion & textile industry • Design schools in Scandinavia • Research programmes (e.g. MISTRA) 	<ul style="list-style-type: none"> • Governmental bodies • Danish Environmental Protection Agency • Danish Fashion Institute 	<ul style="list-style-type: none"> • Up-to-date research and knowledge on sustainable textiles/natural materials • Database with certified suppliers (world-wide) • Material library (certified and sustainable materials, incl. where to source the materials) • Information on environmental/social certifications & standards • Interactive education on sustainability issues • Best practice (success stories from companies in fashion industry)

Table 9-1 Content of knowledge platform

Currently, there is a large amount of projects established around recycling and reuse of textiles, different research projects and initiatives such as NICE. These initiatives have webpages filled with valuable information. This platform would be a way to gather everything in one place and make it easy to access and comprehensible for SMEs searching for the abovementioned content. It would also contribute to more companies approaching sustainable issues, as this platform would in many ways make it easier.

Particular, the SMEs would have a substantial role in this, as they would also help each other in different issues by sharing stories, experiences and knowledge gathering. That information could easily be shared within a "give & take" concept. Frontier knowledge is vital and a valuable exercise to actually create publicly available knowledge through this database and seeing what pioneer companies have already done. This platform can contribute to saving time and resources, setting the bar higher and open new ways of designing.

A project idea relating to this platform is currently (September 2012) at the sketching board at the Innovation Network for Environmental Technology at Force Technology. This idea has

arisen from the attended workshop June 21, 2012 and has since been chosen to move forward with the idea of creating a platform with similar features like the ones described above with a goal of promoting the recycling of textiles and increase resource security within the fashion and textile industry.

This research can be used to provide practical insight to the industry and the SMEs working with sustainable fashion but it can also be used to put forward recommendations on how to help the companies who wants to initiate a sustainable clothing production and approve their sustainability capacity in the supply chain. This research should however be recognized as an exploratory research and the results are not to be generalized.

9.3 Implications for further research

Based on the findings of the current research, certain areas for future research are suggested:

- *How companies in the fashion industry address the issues of use-phase and consumption.* The issues are about the use-phase and consumption is of great importance to research and investigate how companies can affect consumer behavior. The large environmental impact that arises from the use-phase is significant and perhaps not obvious to many consumers.
- *Research within a larger region.* This research was focused at the region of Denmark and Sweden and further research could be expanded to SMEs in the fashion industry within rest of Europe. This could provide a wider exploratory research of the approaches fashion companies applies.
- *How big fashion corporations can cooperate with SMEs in approaching sustainable supply chain strategies.* A possible research area could be to investigate how larger fashion companies can work together with SMEs in the area of sustainability and explore the possibility of approaching sustainable issues in the supply chain and around consumer behavior and over-consumption.

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Appendix A: List of Interviews

Company/Organization	Name	Position	Date
AIAYU	Maria Glæsel	Partner & CEO	June 27
Katvig	Vigga Svensson	CEO & Head of Design	June 11
Knowledge Cotton Apparel	Mette Mørup	CSR & Sourcing/Sale	June 19
Sture&Lisa	Stina Wickenberg	Owner & Head of Design	July 13
Underprotection	Sunniva Uggerby	Partner & Designer	July 3
Company A	Anonymous	Sourcing & Buying	August 17
Company B	Anonymous	Product & Design	July 25
Danish Fashion Institute / Nordic Fashion Association	Jonas Eder-Hansen	Development Director	June 26
Danish Ethical Trading Initiative	Trine Pondal	Facilitator, Communications & Learning	June 20
Modeinkubatorn	Gesica Gunmalm	Project Manager	May 28
Independent consultant/Guest Teacher at Copenhagen School of Design and Technology	Thomas Aspen	Consultant, teacher, former Managing Director of 'Provider'	June 12

Appendix B: Sample Case Study Interview Questions

GENERAL FACTORS

- How would you define sustainable fashion?
- What are your reasons for pursuing a sustainable business pathway?
- How did it all start and when (sustainable apparel) for your own company?
- How would you describe the trends & demand in the market for sustainable fashion and apparel in Scandinavia?

INTERNAL FACTORS

Sourcing approaches

- How do you source your materials? Describe the sourcing process (from finding the suppliers to making the decision about purchasing (criteria's, requirements, purchasing policies etc.)
- What is the most challenging in the sourcing process?

EXTERNAL FACTORS

Regulatory

- Is there an increasing pressure from government in form of legislation?
- Or is there a lack of governmental support?

Market

- What type of information about your product do you share with your customers (environmental impacts, financial value distribution etc.)?
- How do you market yourself towards customers and competitors?
- How do you perceive the competition within your field? Do you see the potential of a competitive advantage by focusing on sustainability?

The role of third-party organizations

- In what way can third party organization help you with your challenges?
- Are you a member of Danish Ethical Trading Initiative/Danish Fashion & Textile/Danish Fashion Institute; what are the reasons of joining the initiative/not joining the initiative/organizations?
- Have you heard about the NICE Fashion Code? How can this help you further based on what code/standards your current sustainability requirements are based? Have you embedded NICE 10 year plan in your business strategy (with goals and commitments)?

- What kind of support do you feel is needed?
- Are you collaborating with other SMEs or larger brands in developing sustainability strategies?