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SCHOOL OF BUSINESS, ECONOMICS AND LAW

Master Degree Project in Innovation and Industrial Management

Sustainable Value Chain Development in the Apparel Industry

Case studies of how Swedish sportswear companies work with sustainability in their value chains

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SUSTAINABLE VALUE CHAIN DEVELOPMENT IN THE APPAREL INDUSTRY
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ABSTRACT

Background

Sustainability has become a key issue in the apparel industry and sustainable actions are now incorporated into many firms' strategies. Increased sustainability in business activities calls for developments and changes in existing systems throughout entire value chains and garment life cycles. These efforts involve environmental as well as social and economic sustainability. Many sportswear companies have been driving forces of textile development and sustainability trends in fashion.

Purpose

The purpose of this study is to investigate how Swedish sportswear companies work with sustainable development in their value chains. This concerns what changes they have made, and plan to make, throughout their value chains to become more sustainable. Researchers aim to study footprint reducing efforts, and identify challenges in implementing sustainability efforts.

Methodology

This thesis is conducted as a qualitative research study designed as multiple case studies with selected Swedish sportswear companies. The empirical material is collected through semi-structured interviews with representatives at selected case companies.

Results

The analysis of theoretical and empirical findings shows that studied companies work actively with sustainable value chain development, and that these efforts are increasing continuously. Environmental, social and economic sustainability issues are all accounted for, but focus is currently directed to environmental aspects. Implemented changes, as well as challenges in implementing these changes, are described.

Key Words

Sustainability, Value Chains, Sustainable Value Chain Development

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1. INTRODUCTION

This introduction presents background information about sustainability. Focus is directed to sustainability issues in the apparel industry, and sustainable value chain development. The problematization of the research topic is discussed, the purpose of the study is described and the research question is outlined. Lastly, delimitations of the study are presented.

1.1 Background

It has been estimated by The World Wildlife Fund (2017) that the production of one kilogram of cotton lint, which is enough to produce one t-shirt and a pair of jeans, requires 20,000 litres of water. Production processes with intense use of natural resources and chemicals makes the apparel industry and global textile production one of the most polluting and waste-generating industries in the world (DeBrito et al., 2008). Meanwhile, global garment and textile production plays a very important role in the world economy (Martin, 2013). The factory collapse in Bangladesh in 2013 intensified the close examination of the industry, and highlighted the longstanding questions of how gaps between economic viability and social and environmental performance can be bridged (ibid). In recent years, sustainability has ultimately become a key managerial issue, and firms direct increasing attention to sustainability by attempting to balance environmental, social and business needs (Clarke and Clegg, 2000). Sustainable actions are now incorporated into many firms' strategies (Caniato et al., 2012), as they actively engage in decreasing their footprint by taking environmental as well as social and economic aspects into consideration (Elkington, 1997). Retailers see a rising need to produce qualitative and stylish green apparel with an affordable price tag. Increasing the sustainability of business activities in the apparel industry calls for developments and changes in existing systems (Amed, 2017; Arthur, 2017). Apparel has a long and complicated life-cycle that consists of many phases, and a value chain with many dispersed but interrelated activities (Allwood et al. 2006). In attempts to make their value chains more sustainable, Patagonia and H&M are examples of retailers which have developed a system for garment recycling and are moving towards a closed loop system where consumers can bring garments back to be recycled when they are worn out. Advances in PET recycling technology has made it possible to "close the loop" by recycling bottles and containers into new bottles and containers, or make recycled polyester from it. (Kaye, 2017)

To maintain their competitiveness, firms need to understand the latest sustainability trends, consumer insights and industry best practices. Research agrees that apparel companies need to become more sustainable, and moves towards sustainability are accelerating (Hutter et al., 2017). Integration of sustainability into business strategy and practices has a direct impact on own business operations, but also influences upstream and downstream supply chain partners. Sustainable apparel entails production processes carried out in an environmentally and socio-economically sustainable manner, as well as sustainable consumption and use. Because there are interdependencies between supply chain partners and different actors throughout the value chain, sustainable development entails initiatives beyond own organizational boundaries. No company alone can change existing industry paradigms, and sustainability issues facing the apparel industry hence require collective attention and collaboration on a global scale. To increase sustainability, firms need to look beyond materials used and consider the entire value chain and life-cycle of their garments. (Hutter et al., 2017; Kibbey, 2017)" Furthermore, Deloitte University Press (Hutter et al., 2017) and the Sustainable Apparel Coalition (Kibbey, 2017) both argue that moves towards sustainability call for a redefinition of how the whole industry is run, and recognizes collaboration as a prerequisite for impactful changes. This raises the issue of value chain sustainability, and how organizations can reduce their footprint through sustainable value chain development. In recent years, sportswear companies have been driving forces of textile development and new trends in fashion (Bruun and Langkjær, 2016). Sportswear brands make the top of many eco lists and have a lead over many other branches in the apparel industry on various sustainability indexes (Friedman, 2017). Learning about sustainability in sportswear has made researchers of this thesis interested in studying how sportswear companies work with sustainability, and how they can further increase efforts for sustainable development throughout their value chains.

Summary

- The apparel industry has a very high environmental and social impact
- Sustainability issues are increasingly incorporated into firm strategies
- Sustainable development requires sustainable production and consumption
- Different actors in apparel value chains operate interdependently and sustainable development goes beyond firm boundaries
- Many sportswear companies are drivers in sustainability and textile development

1.2 Problem Discussion

Sustainability in global value chains has been identified as a key objective for sustainable development. Michael D'Heur (2015) argues that the creation of more sustainable and inclusive business models requires a common understanding of moves towards sustainable global value chains. Many business leaders view value chains only from an economic point of view, and evaluate where to source materials from by balancing risk and costs with delivery performance and flexibility. Leaders need to understand how sustainability can be used to improve business practices, and recognize sustainability as an opportunity for business rather than a cost factor. Embedding sustainability into strategy, making it part of the core business, can decrease firms' negative environmental and social footprint without scarifying profits, markets and stakeholder interests. Firms need to actively seek a way of balancing interests of all stakeholders, while complying with environmental, social and economic targets. (D'Heur, 2015) Sustainable value chains use collaborative relationships between different actors to facilitate effective information flow and resource allocation as well as enable rational decision-making. For a single firm, creating and sustaining a competitive advantage is dependent on the firm's understanding of how it fits into overall value adding activities. Interpersonal and inter-organizational trust aims at benefiting the value chain as a whole. (Fearne, 2009) According to Fearne (2009), members of sustainable value chains must be responsive to the needs of their customers, and the complex interaction with the natural environment in which they operate. Minimizing the environmental impact could potentially be even more challenging for sportswear companies than other types of apparel retailers. They face a significant trade-off between sustainability and quality, where it is challenging to find sustainable materials that also fulfill all other requirements. Many sportswear companies have incorporated sustainability into their strategies, and claim to work actively with reducing their environmental footprint. However, most apparel retailers describe their work with sustainability from a rather general point of view and few explain how they work with value chain sustainability explicitly.

Based on previously conducted research it can be concluded that a more sustainable apparel industry requires more sustainable value chains (D'Heur, 2015; Ec.europa.eu, 2013; Hutter et al., 2017). This makes it relevant to study sustainable value chain development, and identify what changes organizations need to make to become more sustainable. The possibilities of firms to co-optimize social, environmental and economic developments are largely dependent

on available technologies, development strategies and institutional conditions set by government policies. Some available research argues that current systems are not sufficient for sustainable development, and that simultaneous transitions in technology, structure and culture are required. (Vollenbroek, 2002) However, researchers of this study have identified a gap in previously conducted research concerning more precise insights into what technological, structural and cultural changes (Vollenbroek, 2002) organizations need to make in their efforts to become more sustainable. There is thus a lack of information available about what changes firms have made and plan to make in their sustainability efforts. Moves toward sustainable value chain development ultimately become a suitable focus for this thesis.

Summary

- Sustainability in global value chains is a key objective for sustainable development
- Sustainable development requires changes in technology, structure and culture, as well as collaboration between different actors in the value chain
- Many sportswear companies work actively with sustainability issues, but few describe it from a value chain point of view

1.3 Purpose

The purpose of this study is to investigate how Swedish sportswear companies work with sustainable development in their value chains. Researchers seek to identify what changes they have made, and plan to make, in order to become more sustainable. Changes that firms need to go through to become more sustainable include the whole value chain. Researchers will hence study how involved Swedish sportswear companies are in sustainable development across their value chains, and where they focus their sustainability efforts. The study will target firms that have an explicit focus on sustainability, and investigate what efforts they make to reduce the footprint of their value chains, as well as challenges faced in implementing changes. The time frame of these changes and challenges is five years backwards and forwards. Researchers hope to contribute to an improved understanding of how companies in the apparel industry can work with sustainable value chain development.

1.4 Research Question

How do Swedish sportswear companies work with sustainable development in their value chains?

1.5 Delimitations

Due to the vast size of the apparel industry, and time span of this study, researchers have decided to limit the scope of the study by looking only at companies with sportswear as the main part of their product offerings. Within this scope researchers found it interesting and suitable to study sportswear companies that offer products for an outdoor lifestyle. To further downsize the scope of the research, empirical material will be collected only from companies headquartered in Sweden. These companies are of medium size with global value chains and products sold internationally. This study defines sustainability in accordance with the Triple Bottom Line (Elkington, 1997), including environmental as well as social and economic aspects. Since they are interrelated, researchers believe firms must involve all three aspects in their sustainability efforts. As previously mentioned, studied changes and challenges encompass a time span of five years backwards and forwards in time.

2. THEORETICAL FRAMEWORK

The theoretical framework provides an overview of previously conducted research focusing on sustainability, value chains and sustainable value chain development. This concerns a value chain perspective on sustainability in general, and value chain sustainability in the apparel industry in particular. A theoretical overview aids understanding of relevant topics and enables researchers to answer the research question.

2.1 Sustainability

2.1.1 Sustainability Defined

Sustainability is most commonly defined as "development that meets the needs of the present without compromising the ability of future generations to meet their needs" (Sustainabledevelopment.un.org, 2017). A sustainable organization ultimately "creates profit for its shareholders while protecting the environment and improving the lives of those with whom it interacts" (Savitz, 2012). This entails taking both the environment and society into consideration, and being responsible in social, environmental and economic aspects to be sustainable (Carter and Rogers, 2008; Hart and Milstein, 2003). In this matter, the Triple Bottom Line (Elkington, 1997) of environmental, social and economic dimensions is often discussed.

Triple Bottom Line	
Environmental Sustainability	Reduction of ecological footprint Endeavors to benefit nature as much as possible, or at the least not harm it Green initiatives such as recycling programs, sustainable materials etc. Careful management of water and energy use, waste, toxics etc.
Social Sustainability	Fair treatment of people Enacting fair and beneficial practices toward labour and communities in which business is conducted Reciprocal social structure where the wellbeing of stakeholder interests are interdependent
Economic Sustainability	Positive financial bottom line Considering the real economic impact the organization has on its environment Consumers' willingness to pay more for socially and environmentally sustainable products

Table 1: Explanation of the different dimensions in the Triple Bottom Line (Elkington, 1997).

Corporate sustainability refers to companies' ability to deliver economic value and maintain economic prosperity, while simultaneously pursuing environmental responsibility and social stewardship (Pogutz, 2008). Firms can thereby deliver environmental and social as well as economic benefits, considering all dimensions in the Triple Bottom Line (Hart and Milstein, 2003). Some researchers argue that sustainability should become not only a corporate goal, but part of firms' culture and value systems (Signitzer and Prexl, 2008).

2.1.2 Sustainability in the Apparel Industry

As previously described, the apparel industry has a high environmental impact and is often associated with intensive use of natural resources and poor labour conditions (DeBrito et al., 2008). Production processes entail intensive use of natural resources and chemicals (DeBrito et al., 2008). Based in this, it can be argued that sustainability is a widely recognized issue in the apparel industry. However, it is important to remember that organizations need to balance pressures they are faced with, and accommodate the needs of different stakeholders. This can be linked to the stakeholder theory defined by R. Edward Freeman (1984), which defines the objectives of firms being to attain a balance between the various demands of its stakeholders. Stakeholders are defined as "any group or individual who is affected by or can affect the achievement of an organization's objectives" (ibid). Allwood et al. (2006) further discuss how companies are faced with different kinds of external pressures, and describe these as stakeholder expectations, customer loyalty and ethical pressure. While increasing emphasis is put on environmental impact, and sustainable actions are essential in firm strategies, there are ultimately many other factors that companies need to account for (Caniato et al., 2012).

2.1.3 Sportswear Sustainability

Sportswear used to be produced and purchased primarily for functional purposes. However, during the last century sportswear has found its way into fashionable catwalks and is now used both for its appearance and functions. During recent years, expectations on sustainable sportswear have emerged. In order to attract customers, sportswear companies are now challenged with combining the three factors of fashion, functionality and sustainability, which many times contradict each other. Extensive efforts are directed to developing sportswear that satisfies all customer demands, and sportswear has consequently become a leader for textile development as well as new trends. (Bruun and Langkjær, 2016) Chouinard (2016) argues that the solution in sportswear is to stop producing clothes from non-renewable resources and

instead produce disposable garments. He further argues that a more locally based economy is favourable for sustainability. The sportswear company Patagonia has chosen to close the loop by collecting customers' worn out polyester garments and recycle them into new polyester. (Chouinard, 2016) There are many examples of sportswear companies which claim to work actively with sustainability. However, it is important to review their alleged sustainability efforts critically, and be aware of the fact that they may overstate them for marketing purposes (Erdnüß, 2016).

2.1.4 Attitude-Behaviour Gap

Sustainable development requires not only sustainable production but also sustainable consumption (Niinimäki, 2010; Terlau and Hirsch, 2015), and the environmental footprint of retailers is affected by choices made by consumers. Firms are thus faced with the challenge of raising consumer awareness about sustainability issues, as well as change consumer attitudes and purchase behaviours. If retailers communicate the value of sustainability, they can encourage more sustainable consumption patterns and recycling of worn out garments. Sustainable development focused on production sometimes makes an implicit assumption that increasingly 'green' consumer attitudes entail more sustainable consumption patterns. However, actual purchasing behaviours often deviate from 'green' attitudes (Carrington et al., 2010; Young et al., 2010). Research shows that many consumers are aware of sustainability issues, but that attitudes do not always correlate with consumption behaviour (Joy et al, 2012). There is ultimately an inconsistency between attitudes towards sustainable consumption and actual behaviour, referred to as the attitude-behaviour gap (Niinimäki, 2010; Terlau and Hirsch, 2015). Although apparel companies recognize the importance of sustainability and engage in making their value chains more sustainable, they are still dependent on consumer demand for more sustainable products (Niinimäki, 2010).

Summary

- This study defines sustainability as environmental, social and economic sustainability
- Apparel production processes entail intensive use of natural resources and chemicals
- Many sportswear companies claim they work actively with reducing their footprint
- There are sometimes inconsistencies between consumers' attitudes towards sustainability and actual buying behaviour, referred to as the attitude-behaviour gap

2.2 Value Chains

2.2.1 Value Chains

Value creation is fundamental to the economic logic of companies' existence. Value chains are concerned with how organizations change business inputs into business outputs in a way that generates a higher value than the original costs. The profit margin of a firm is value created and captured deducted by the cost of creating that value. The more value an organization creates and captures, the more likely it is to build competitive advantage and be profitable and successful. (Porter, 1985) A value chain is a set of activities that a firm engages in to create value for its customers. In his book 'Competitive Advantage' (1985), Michael Porter discusses the importance of understanding how a firm creates value in order to develop a competitive strategy. A well managed value chain is a key enabler for a company to create competitive advantage. In order to maintain competitive advantage, the company must question and improve its value chain system continuously. How to organize and perform different value chain activities to reach a competitive advantage is determined by the firm's strategy. (Porter, 1990)

2.2.2 Value Chain Analysis

There are many different frameworks that companies can use when assessing their value chains, and looking for ways of improving value chain activities. The Value Chain Analysis (VCA) is one of these frameworks, described as a diagnostic strategy tool for identifying the ways in which a firm can create the greatest possible value for its customers by finding areas that can be optimized for maximum efficiency and profitability (Taylor, 2005; Porter and Kramer, 2011). By adopting an holistic perspective, addressing external factors such as environmental and social issues, the VCA tool can be used to identify opportunities for a chain to create shared value (Porter and Kramer, 2011). The analysis is a process where the firm identifies its value adding primary and support activities, and seek ways to reduce costs or increase differentiation. The analysis aims at recognizing which activities are most valuable to the firm, which can be improved, and which can be eliminated. The result of the analysis is that customers experience the most benefit from products at the cheapest cost, or unique value that they are willing to pay a higher price to obtain. This can give the firm competitive advantage and improve bottom line results in the long run. (Mindtools, 2017; Jurevicius, 2013; Arline, 2015)

Summary

- The value chain framework addresses how organizations create and capture value by transforming business inputs into outputs
- Well managed value chains are key enablers for firms to create competitive advantage, and to remain successful firms need to continuously improve their value chain system
- There are various frameworks which can be used for identifying ways in which a firm can optimize its value creation by recognizing the value of different activities

2.3 Sustainable Value Chain Development

2.3.1 Sustainability in Apparel Value Chains

As global value chains become more and more complex, firms are faced with challenges related to the traceability of origins of raw materials, as well as controlling environmental and social impacts (Koplin, 2005). Acceptable use of natural resources is becoming more important in the highly competitive and short life cycle industry (Chung and Wee, 2008). Firms can engage in different activities in order to manage and pursue environmentally sustainable goals, as single firms or in entire supply chains (DeBrito et al., 2008). However, within existing business paradigms incentives for collaboration across supply and value chains and business investment are generally insufficient. There is also inadequate consensus in policy frameworks on a global level, and better consensus is essential for better collaboration industry wide. (Hutter et al., 2017) Social, environmental and economic impacts exist in every step of the value chain of garments, from initial production stages to use and final disposal. Apparel value chains can be described to have four factors that are particularly determinant for sustainability. These four factors are raw material extraction, textile production, added chemistry and end-of-life. Raw material extraction is concerned with land and water use for natural textile fibers, and fossil fuels extraction for synthetic fibers. This also concerns the treatment of animals used for wool and leather, and the working conditions for growers of cotton and other natural fibers, are also important aspects of material sustainability. Production primarily entails water and energy use in manufacturing of textiles and garments, and social responsibility for workers. Added chemistry includes dying, finishes and coatings of textiles, which may impact the health of both workers and consumers of the final products. The end-of-life factor concerns possibilities of turning worn out garments into new raw materials, which has a great effect on apparel sustainability. (Hoguet, 2017)

Draper et al. (2007) support arguments that finished garments also bear social, environmental and economic impacts. The retail stage comprises working conditions, supplier treatment, packaging and energy used. The maintenance of garments such as washing, drying and ironing, and how garments are eventually disposed of, all have environmental impacts. Moreover, transportation is a sustainability issue throughout all value chain stages, where different transportation methods have more or less negative environmental impacts. (Draper et al., 2007) In his Primer on Industry Transformation for Impact Economy, Dr. Maximilian Martin argues that achieving a sustainable market transformation of the apparel industry is within reach, but must be connected to improved resource productivity with lower use of water, energy and chemicals, as well as better working conditions and reduced environmental footprints. This is challenging since it requires many social, environmental and economic issues to be addressed. He resumes his discussion around global value chains, and argues how a truly sustainable industry will require much more extensive efforts directed to understanding and calibrating actions and strategies across the overall system. (Martin, 2013) Some conducted research shows that sustainability is essential for organizational and technological development yielding both bottom-line and top-line returns. It can thus be argued that corporate social responsibility can be aligned with business objectives, contradictory to many executives who perceive sustainability as cost and competitive disadvantage (Nidumolu, et al. 2009; Hutter et al., 2017). Becoming more environmentally friendly can in fact reduce costs because firms decrease inputs used. It can further generate enhanced revenues due to better products and new business opportunities. To develop sustainable operations, firms need to analyze each stage in the value chain and identify areas of improvement. Collaboration between suppliers and retailers is critical in the development of eco-friendly raw materials and waste reductions. In many cases, more sustainable manufacturing requires new equipment and processes, which faces firms with the issue of customers' willingness to pay more for eco-friendly products. (Nidumolu, et al. 2009)

2.3.2 Changes for Sustainable Value Chain Development

Sustainable development encompasses environmental, social and economic developments. It entails development of products, processes or services that significantly decrease the negative footprint of industries, and simultaneously creates value for customers and businesses (Vollenbroek, 2002; Hall and Vredenburg, 2003). Vollenbroek (2002) argues that change should result not only in economic strength, but also increased environmental sustainability.

Established approaches to managing change are not always capable of dealing with the additional demands of sustainable development, which calls for adjustments in existing systems. (Hall and Vredenburg, 2003) As previously mentioned, some researchers argue that moves towards increased sustainability require simultaneous changes in technology, structure and culture (Vollenbroek, 2002).

Changes for Increased Sustainability	
Technological Change	Firms' involvement in technological development projects The impact of technological developments on firms' ability to become more sustainable
Structural Change	Changes in the organizational structures to enable increased focus on sustainability Changes in the organizational structures because of increased sustainability focus
Cultural Change	Incorporation of sustainability into the organizational culture The extent to which sustainability permeates decision making and the mindset of organizational members

Table 2: Applied changes for increased sustainability (own table developed from Vollenbroek, 2002).

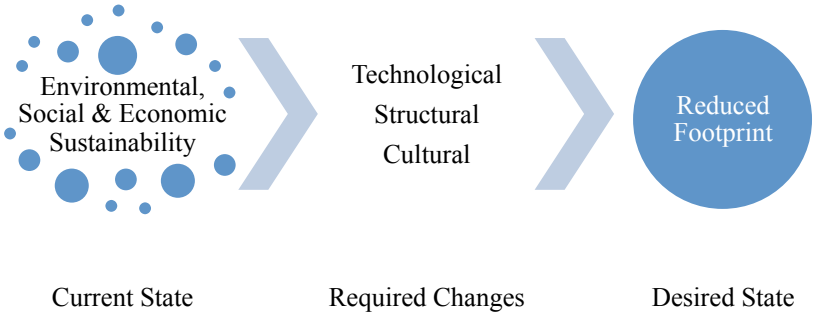

Figure 1: Applied changes for increased sustainability (own figure developed from Elkington, 1997 and Vollenbroek, 2002).

Summary

- Sustainable development refers to developments that aim to decrease the negative environmental and social impact of business activities while simultaneously creating value for stakeholders
- Firms need to implement simultaneous changes in technology, structure and culture to become more sustainable
- Collaboration between different actors is critical for sustainable value chain development

3. METHODOLOGY

This chapter outlines, explains and argues for choices of academic research methods used in the study. It motivates the adequacy of chosen research approach in relation to the research question, and describes the empirical material collection process as well as the procedure for analysis of this material.

3.1 Research Strategy

To answer the research question in a meaningful way, researchers have chosen to conduct a qualitative research study. A qualitative research strategy enables researchers to gain a more holistic understanding of the respondents' thoughts, feelings and knowledge. It further allows for flexibility in the research, and opens up for the possibility of making adjustments based on interviewees' responses. However, in a qualitative research strategy researchers interpret empirical findings, which contribute to a risk of bias. Another drawback of this strategy is the difficulty of generalization. In qualitative researches, a smaller sample than in quantitative research is commonly used, which decreases the possibility of generalizing findings. Moreover, this study takes an inductive approach to the relationship between research and theory. In inductive theory, researchers use a combination of existing literature and collected data to support a theory. Observations and findings are hence contributing factors to the generation of a new theory. The alternative to an inductive approach is the deductive approach, where theory guides research. (Bryman and Bell, 2011)

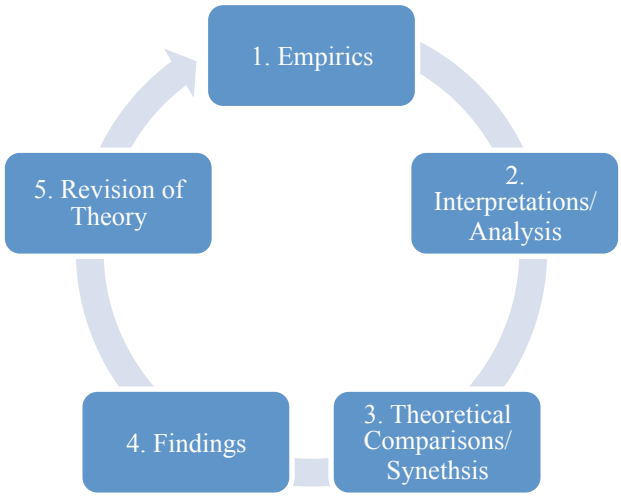

Figure 2: Inductive logic (Bryman and Bell, 2011).

3.2 Research Design

This research is conducted as multiple case studies. Case studies are popular and a frequently used business research design, which can regard a single organization or place, as well as a specific person or happening (Bryman and Bell, 2011). Due to limitations in generalizing the results of a single case study, researchers have decided to conduct a multiple case study interviewing people from different companies. It is typically the case on its own that constitutes the area of interest in a case study. Researchers aim to enlighten unique case characteristics by using an idiographic approach (ibid). Approaches to case study designs are commonly categorized as exploratory, explanatory and descriptive. The exploratory approach aims to increase the overall understanding of a certain subject or area, and is used when researchers have limited access to enough data to define the problem properly. It uses techniques such as open-ended questions in a survey or during interviews, literature studies and focus groups to increase researchers' understanding of the subject. The descriptive approach aims to collect quantitative data from a sample in order to draw conclusions about the characteristics of a population. The third approach, the explanatory approach, is conducted to increase understanding of cause and effect, and can for example be achieved by performing experiments or conducting semi-structured interviews. Studies commonly start with an exploratory approach, which is followed by a descriptive approach and ends with an explanatory approach. (Bryman and Bell, 2011) Access to previously conducted research is nearly enough to construct a complete theoretical framework for this qualitative study. Researchers of this thesis have thus chosen to use an explanatory approach to obtain a comprehensive understanding of the research topic, and successfully answer the research question. However, the formerly mentioned research gap means that a partially exploratory approach will also be used to fill these gaps.

3.3 Research Method

A theoretical framework was constructed as first step of the research process in order to gain basic understanding of the topic, and find out what is already known about the research area. Researchers aimed to identify existing concepts and theories relevant for this study. A disciplined approach to review existing literature enhances the reliability of literature search and review (Bryman and Bell, 2011). The process is regarded as vital when building a solid knowledge base, and avoid "reinventing the wheel" (ibid). Moreover, the literature review provided a basis for motivating what the study adds to pre-existing knowledge, and helped

researchers in constructing questions for intended qualitative interviews. Construction of the theoretical framework also helped researchers find potential controversies or inconsistencies in previous research findings, as well as if there are any unanswered research questions discussed in literature. Theories and concepts were gathered using different search engines and electronic databases. The search engine 'Summon', which is provided by the electronic library of the University of Gothenburg, and Google Scholar served as particularly helpful tools. Key words and criteria were determined and used in searching for relevant findings to ensure satisfactory quality of references.

Qualitative data was collected through semi-structured interviews with selected representatives within studied organizations. Conducting interviews is a frequently used method for qualitative research (Bryman and Bell, 2011). Data collection has been characterized by a standardized research procedure, where the same information was provided to all participants prior to the interview. This gave all respondents the same starting point and opportunities to answer interview questions. Misinterpretations were avoided by providing interviewees with a compilation after the conducted interview, which allowed them to deduct, add and change information if found needed. Interviews were conducted via Skype due to the geographical spread of interviewees. Since face-to-face interviews was not a feasible option in this study, Skype was regarded the best alternative as it favours cooperation and allows for follow-up questions to be asked (Blumberg, et. al., 2011). Both researchers were present during all interviews in order to minimize deviations between interviews, as well as ensure consistency and quality. A semi-structured interview method was assessed to be most suitable for the empirical data collection in this study. There is some uncertainty in outcomes from each interview and a semi-structured approach allows for interviews to move in different directions, and reveal insights that could not have been foreseen (Eriksson and Kovalainen, 2008). Respondents were guided by an outline of questions, but order and wording were adapted to each individual interview (Eriksson and Kovalainen, 2008; Blumberg et. al, 2011; Bryman and Bell, 2011). Reflective questions were asked to ensure answers had been accurately understood.

3.4 Data Collection

Researchers have collected empirical data by conducting semi-structured interviews with five Swedish sportswear companies. These companies are niched towards an outdoor lifestyle and offer a wide range of products for outdoor use, including for example skiing, hiking and climbing. They all have a clear focus on sustainability and communicate this externally. All studied companies are positioned in mid to high price segments, and compete with a differentiation strategy rather than cost leadership.

	8848 Altitude	Didriksons	Haglöfs	Houdini	Peak Performance
Respondent's Name	Åsa Sund	Ulf Bourghardt	Eva Mullins	Mia Grankvist	Åsa Andersson
Respondent's Position	Purchase/ Production Manager	Chief Executive Buying & Design	Sustainability Manager	Head of PR and Communication	CR & Quality Manager
Interview Method	Skype	Skype	Skype	Skype	Skype
Date	March 21, 2017	April 5, 2017	March 21, 2017	March 23, 2017	March 22, 2017
Place	Gothenburg, Sweden	Gothenburg, Sweden	Gothenburg, Sweden	Gothenburg, Sweden	Gothenburg, Sweden
Duration	60 min	60 min	60 min	50 min	55 min

Table 3: List of conducted interviews and interview respondents (own table).

3.5 Data Analysis

As a part of the inductive logic, researchers used a grounded theory approach to analyze qualitative data. In grounded theory, data is collected, re-reviewed and grouped into categories and concepts, which is favourable for interpretation and drawing of conclusions. Empirical material collected in this study constituted a basis for comparing the theoretical framework with results from conducted case studies. Analysis of differences and similarities between theory and practice enhanced the understanding of the relationship between the two. Data analysis is an essential part of building theories from case studies (Eisenhardt, 1989). Identification of relationships in collected data further allowed for categorization of data, and allowed researchers to find gaps between theory and practice. Empirical material was codified, arranged and categorized in alignment with research questions and the purpose of the study. Through a coherent analysis researchers sought to find patterns in collected materials, and attempted to match these patterns.

3.6 Research Quality

Quantitative research uses reliability and validity to ensure quality of the research. In qualitative research, however, different methods can be used. Bryman and Bell (2011) present an alternative method by Guba and Lincoln (1994), where trustworthiness and authenticity need to be fulfilled. Four different factors are taken into consideration when evaluating the trustworthiness of a qualitative research; (i) credibility, (ii) transferability, (iii) dependability and (iv) confirmability.

3.6.1 Credibility

Credibility concerns the accuracy of the interpretation of findings with regards to the reality of what was studied. Researchers can ensure accuracy by letting respondents confirm findings referred to as "respondent valuation". In addition to this, the research has to be carried out in accordance with good practice. Researchers of this study have ensured credibility by sending summaries of the interviews to interviewees for confirmation. Interview findings have then been compared to each other, and to findings in the theoretical framework. Moreover, there was a significant risk of biased answers to interview questions. Firstly, companies have a tendency of wanting to glorify themselves and their sustainability efforts. There was hence a risk that they would not tell researchers the whole truth, and be unwilling to talk about challenges and sustainability actions they could take but have not yet taken. Secondly, because interviews are only held with one person from each case company there is a risk that answers to interview questions given by that individual are not representative for the organizations as a whole. However, due to the fact that studied companies are relatively small in size they tend to have only one person with main responsibility for sustainability issues. Researchers hence came to the conclusion that interviewing the most informed person within each organization would generate the most comprehensive and accurate results. The above mentioned risks of bias have been further mitigated by researchers keeping their objectivity throughout the whole process of the study, and reviewing given answers to questions from a critical point of view.

3.6.2 Transferability

A transferable research is possible to use in other settings than the actual context, and is thus generalizable. Researchers have chosen to conduct semi-structured interviews with multiple case companies to ensure a higher transferability than what is given by a single case study.

Researchers have also chosen to perform interviews with questions that open up for transferability to other branches in the apparel industry.

3.6.3 Dependability

A replicable study has a high degree of dependability. Researchers must document a detailed description of how the research was conducted in order for others to be able to replicate it. To ensure this, detailed documentation of this research process has been kept.

3.6.4 Confirmability

The extent of subjective values from researchers is referred to as confirmability, were less subjectivity leads to higher confirmability. Researchers must have acted in good faith and without influence of personal bias. Researchers of this study are aware of the importance of confirmability and have discussed the risk of personal bias throughout the process of the study. Results have thus been evaluated from an as objective perspective as possible.

4. EMPIRICAL MATERIAL

The empirical material presents findings from conducted interviews. Presented findings help the reader understand the empirical material, and aids researchers in answering the research question. A full list of interview questions asked is provided in Appendix A.

4.1 Summary of Case Companies

	8848 Altitude	Didriksons	Haglöfs	Houdini	Peak Performance
Year Founded	1990	1913	1914	1993	1986
HQ Location	Borås, Sweden	Borås, Sweden	Järfälla, Sweden	Nacka, Sweden	Stockholm, Sweden
Organizational Members (2015)	21	46	142	37	160

Table 4: Compilation of studied case companies and facts about them (own table).

4.2 8848 Altitude

Interview with Åsa Sund, Purchase/Production Manager

4.2.1 About 8848 Altitude

8848 Altitude was founded in 1990 with the task of creating clothing for what became the first successful Swedish expedition to Mount Everest. Since then the company has sold quality sportswear to skiers and other active people across the world, and is currently present in over 20 countries.

4.2.2 Sustainability

8848 Altitude has worked actively with sustainability issues from the beginning. The founders of the company were skiers interested in nature and they wanted to create high quality garments with a long life-time. Sustainability is thus a central part of the company, and incorporated into the firm's strategy. 8848 Altitude wants to create honest products to be proud of both in terms of quality and production process. They have internal routines in place, and hire help from environment and chemical consultants. A new sustainability manager was recently appointed, and she will have an overall responsibility for sustainability across the whole value chain of 8848 Altitude. Sund says a sustainability mentality is incorporated into the organizational culture, and that all employees at the headquarters are engaged. Sund describes 8848 Altitude's sustainability work from a Triple Bottom Line perspective, where all three categories are central to the firm. Chemicals are brought up as a central aspect in environmental sustainability, referring to chemicals in finished products and those used in production processes. 8848 Altitude works actively with reducing the use of hazardous chemicals, and demand certificates and underlying reports from all suppliers to ensure no illegal chemicals are used. The company digs deep into product quality and wants to know all materials used in their products. They disregard some materials although legally compliant because they have a high environmental impact. In developing tools to help suppliers become more sustainable, 8848 Altitude follows the European Union legislation REACH. This facilitates testing of different components, ensuring they do not contain any chemicals prohibited by REACH. Being sustainable on the level that 8848 Altitude is sometimes comes at a cost. However, it is important to note that sustainability does not always entail higher costs and 8848 Altitude strives to make being sustainable natural over time. They aim to

create sustainable products with good value for money. Sund feels like they do what they can in relation to current market conditions and what consumers are willing to pay for increased sustainability, but hopes more consumers will value sustainable products and that the cost of them will decrease. As the situation is today, Sund says it is easier for 8848 Altitude to be sustainable because the brand is positioned in the mid to high price segment of the market, and they can ultimately afford to develop and produce products that meet higher sustainability standards. Sund hopes that in the future, their requirements will be a natural part of how things are done.

4.2.3 Value Chains

8848 Altitude controls all activities in their value chain from the headquarters, and Sund accounts for how they work actively with sustainability throughout. To obtain a good overview of Corporate Social Responsibility (CSR) issues at their suppliers they have longstanding relationships with them. All factories the firm works with are CSR-certified, and they select producers with good working conditions. Working with bluesign® certified suppliers as far as possible ensures safe production processes and means 8848 Altitude can feel confident that both textiles and garments are produced in a good way. Sewing suppliers are not bluesign® certified, but most textile and accessories suppliers are. Having few producers is an advantage since this enables good control over all suppliers and factory visits on a regular basis. 8848 Altitude informs consumers about their sustainability actions, but it is critical for the firm to not give any promises they are not certain they will be able to keep. As part of continuous improvement efforts, the firm considers implementing an overall scoring system for suppliers. This would enable them to rank suppliers based on CSR parameters, and discontinue relationships with suppliers that receive an insufficient scoring. External consultants are used as local human resources, and headquarters visit factories on a regular basis for in-house control.

4.2.4 Sustainable Value Chain Development

8848 Altitude's sustainability efforts have increased significantly over the last 10 years, due to stricter legal requirements as well as higher societal awareness. Child labour used to be the center of attention in sustainability issues, but today this requires less focus because it is very rarely occurring in the regions where 8848 Altitude operates. Great attention is still directed to factory workers and their labour rights and working conditions. They seek suppliers that do

more than what is legally required, and it is Sund's belief that this will result in better end products. Sund says a major challenge they face in their sustainability efforts is the understanding among Asian companies why 8848 Altitude demands such high standards in terms of environmental sustainability. Suppliers understand social sustainability requirements, but some are not equally sympathetic to requirements on environmental sustainability. Moreover, many suppliers do not comprehend why European retailers have higher legal requirements than American ones. Technology innovations are very important for 8848 Altitude since they enable more sustainable textile and garment production through for example new ways of dying textiles with less chemical and water usage. Recycling of polyester is also made possible thanks to new technologies, although Sund points out that the polyester recycling process may encompass new chemicals with environmental footprints. 8848 Altitude further tries to reduce the spill of materials and reuse or recycle leftover fabrics. They work partly independently to find new technological solutions, but also collaborate with innovative textile producers and suppliers in Asia. Sund says 8848 Altitude has had to change its design and development processes to accommodate higher time requirements for product development due to increased complexity and longer production routes. Sund again emphasises the challenge of increasing understanding for the importance of sustainability throughout the value chain. Despite being a small player, 8848 Altitude strives to inform suppliers about hazardous chemicals and encourage them to apply a more sustainable mindset. Moreover, they see it as their responsibility as a brand to inform consumers about sustainability and communicate their efforts to reduce environmental and social footprints. In a long-term perspective Sund hopes that sustainability will be an integral part of consumption patterns, and that sustainable products will not necessarily be sold at a price premium.

4.3 Didriksons

Interview with Ulf Bourghardt, Chief Executive Buying & Design

4.3.1 About Didriksons

Didriksons was founded on the west coast of Sweden in 1913, and has since the foundation been Scandinavia's largest waterproof fashion and functional garments brand. Today Didriksons is owned by the Norwegian investment fund Herkules IV, and is present on 19 markets.

4.3.2 Sustainability

Didriksons' main value throughout its organization is responsibility. They aim to make all people within the organization to take responsibility in every part of their working life, in what they do and how they behave, including taking responsibility for the business, the firm's products, organizational members and the environment. Bourghardt explains that for him responsibility is ultimately about moral. Didriksons aims to be a moral company rather than just a sustainable company, even though sustainability is part of that morality. Didriksons views sustainability from the Triple Bottom Line perspective. Regarding the environment, Didriksons wants to minimize its environmental footprint throughout the value chain and not only for the final product. They work constantly with their most prioritized questions, which are minimizing the use of chemicals, water and energy. They choose the best possible materials in terms of the environment and quality, and rely on internal requirements to ensure sustainable partners. Bourghardt explains that Didriksons has previously not had sufficient tools to measure their environmental footprint, but are now working on the development of suitable tools. To further improve its environmental sustainability, Didriksons tries to evaluate their shortcomings and failures and constructs improvement plans. Moreover, Didriksons offers customers timeless designs and high quality garments. This reduces the need for customers to buy new garments every season. In alignment with this, Didriksons also provides consumers with care instructions for its garments. Bourghardt explains the need of a balance between return on business and sustainability to be economically sustainable. As previously touched upon, while Didriksons aims to be responsible and sustainable the firm also aims to add value to customers as well as increase its profit. According to Bourghardt, Didriksons has found a good balance between these two factors.

4.3.3 Value Chains

Didriksons puts much focus in the first stages of the value chain because these parts are seen as a bottleneck. It is important for Didriksons to have good and long lasting relationships with their production partners and suppliers in Asia, and Didriksons has worked with many of their suppliers for 15 years. To ensure well working relationships, Didriksons has decided to have five employees positioned in Asia. This enables a continuous dialogue between suppliers and Didriksons, and further makes it possible for Didriksons to put pressure on the suppliers in sustainability issues. Bourghardt explains the importance of Didriksons' understanding of local cultures and languages for the ability to demand more environmental and social sustainability. When Didriksons initiates a relationship with a new supplier, the firm takes many factors into consideration. They have a internal guidebook with Didriksons' requirements on suppliers and partners. As an example, the supplier needs to be financially strong because if they are not Bourghardt finds it hard to believe they have the possibility to offer social and environmental sustainability. Bourghardt feels like suppliers in Asia have a good understanding of the requirements of Western companies. Suppliers understand that there are more factors than price included in making business together. However, making suppliers fully aware of sustainability is a continuous work that takes time. Didriksons has decided not to rely on external partners to ensure sustainability in its value chain. Bourghardt discusses that many other sportswear companies use partners such as bluesign® to inspect suppliers abroad, but that Didriksons prefers to do it themselves. He explains the importance for them to have full control over garments and production processes. This makes them able to answer all customers' questions immediately, which is in line with the firm's values. However, Didriksons participates in networks which are working with sustainability issues to further enlighten them.

4.3.4 Sustainable Value Chain Development

The Didriksons brand has been part of many different companies since it was founded in 1913. Profitability used to be the main focus of the company, and sustainability was made part of the agenda in 2005. Since then it has become more and more important for the firm, and is now one of the focus areas. Multiple materials have been abandoned since 2005 when they decided not to use PVC, and in 2008 they abandoned animal based materials. Didriksons has also made the decision to abandon fluorocarbons due to their high level of hazardous chemicals. These actions have been made possible largely thanks to new technology

developments. Innovations have enabled production of new high quality materials and solutions to save water and energy. Didriksons does not develop these new technologies themselves, but makes sure to benefit from them. Didriksons is also part of networks that examine market demand and supply, as well as improve and develop materials and production processes. Bourghardt has been responsible for sustainability at Didriksons since 2009, the first three years as a half time position but later full time. As a result of the increased focus on sustainability, Bourghardt now has three divisions reporting to him. The first division ensures economic stability in sustainability efforts, the second division works with social sustainability throughout the value chain and the third is responsible for environmental issues. These divisions are each responsible for communicating the importance of their work to the rest of the organization. To ensure a good corporate culture Didriksons has devoted resources to employee wellbeing. Focus has been put on creating a team spirit and making employees feel responsible for the organization. Since two years back employees are given two hours per week that they can devote to health improving activities. Bourghardt says that Didriksons currently has two main challenges. The first challenge is how to maintain the organizational culture and prosperous economic results during growth. Newly recruited employees need to be made part of the culture and team spirit, and learn to take the moral responsibility which Didriksons stands for. The second challenge is related to market responsiveness, where a small company like Didriksons might potentially find difficulties being sufficiently up to date when it comes to changes in the external environment.

4.4 Haglöfs

Interview with Eva Mullins, Sustainability Manager

4.4.1 About Haglöfs

Haglöfs was founded in 1914, when it began to provide the Swedish market with high quality backpacks. Over the years, the company has grown its product portfolio and today Haglöfs sells products in three different areas; clothing, hardware and footwear. 103 years after the start of the company high quality products are still the main focus, and since 2008 sustainability is incorporated into the firm's strategy.

4.4.2 Sustainability

Within its sustainability strategy Haglöfs focuses on four pillars. The company aims to produce products made out of sustainable materials with long life-spans, ensure fair working conditions for producers, spare resources and take care of their natural playground, as well as ensure social sustainability for people in the organization and value chain. According to Mullins, sustainability is a natural part of everyday life at Haglöfs. The firm does not have a dedicated sustainability team, but works with sustainability in the whole organization and encourages a sustainable mindset. Increased overall societal awareness of sustainability raises stakeholders' demand for sustainable products and production processes. Since consumers are regarded as Haglöfs' most important stakeholder, their main objective is to create value for its consumers. To ensure sustainable products and production processes Haglöfs only collaborates with certified partners that comply with legal requirements. The annually published sustainability report and informative website provide external stakeholders with information about Haglöfs' sustainability work.

Haglöfs views sustainability from the Triple Bottom Line perspective, and in terms of environmental sustainability Haglöfs reduces its carbon dioxide footprint by paying great attention to energy reduction, waste management, transportations and recycling of left-over fabrics. Minimizing the use of hazardous chemicals in production processes is one way in which they reduce their environmental footprint. Haglöfs works with the bluesign® system and Fair Wear Foundation. In terms of social sustainability Mullins talks about the importance of good conditions for workers as well as animals. It is important for Haglöfs to supply safe

and sustainable production from a workers' perspective, and to have gender equality. Consumer behaviour is seen as a challenge for economic sustainability. Consumers express a demand for products to be environmentally and socially sustainable, but are not to the same extent willing to pay a higher price for it. This makes pricing a challenging task for Haglöfs. Mullins reasons that sustainable products are reliant on consumers' willingness to buy them, and that a sustainable product that nobody is willing to pay for at the end of the day is not very sustainable.

4.4.3 Value Chains

Mullins says it is of high importance for Haglöfs to work with sustainability across the whole value chain. To ensure a sustainable value chain Haglöfs conducts product development and logistics in-house. The firm is involved and engaged in the products' whole value chain and advocates traceability and transparency in the whole production process. Secure integrity in the supply chain is becoming increasingly important. To maximize control over the value chain Haglöfs visits their suppliers' factories annually, and perform a thorough audit every three years. Mullins explains the importance of certified suppliers to ensure compliance in terms of environmental and social sustainability. However, she acknowledges the reality that no organization that does not have their own factories can guarantee and certify 100% that sustainability standards are fulfilled at all times, irrespective of efforts put into it.

4.4.4 Sustainable Value Chain Development

Mullins experiences that the significance of sustainability has increased rapidly in recent years, and that society advocates a more sustainable world making consumers increase their demand for sustainable products. Companies must hence meet new customer requirement, as well as follow ambitious regulations. According to Mullins, constantly developing consumer demands is one of the reasons why Haglöfs is more socially and environmentally sustainable today than they were five years ago. Innovations in technology have provided sportswear companies with more sustainable material alternatives produced with less chemicals, consequently resulting in a more sustainable final product offered to consumers. Technological innovations are currently the centre of attention in the apparel industry, and according to Mullins this will probably contribute to continuously improving production processes. Competition and demands have made it crucial for Haglöfs to be sustainable in order to compete successfully in the sportswear market. Consumers and customers demand

sustainable products to a much larger extent today than they did only a few years ago. Media influences the focus of sustainability in society, and apparel companies need to be responsive to this. In addition, non-governmental organizations (NGOs) such as partner companies as well as lobby organizations help and push companies to become more sustainable. Structural changes done by Haglöfs to become more sustainable include increased contact with and assessment of suppliers, materials and products as well as more collaborations with NGOs and peer companies. This is mainly driven by an increased overall interest for sustainability in society and by stakeholders. Mullins says it is important for Haglöfs to have a sustainable mindset in the organization and to continuously develop and improve this approach.

Haglöfs has faced, and still faces, a number of challenges in their sustainability work. One of these is the gap between consumers' demand for sustainable products and actual willingness to pay a higher price for sustainable products. Another one is competition from apparel companies which, according to Mullins, offer garments to unreasonably low prices without taking sustainability nor quality into account. She argues that Haglöfs offers customers high quality products that are time consuming to produce, consist of complex materials and are sustainable. This results in a higher price for consumers, and the firm ultimately faces a trade-off between sustainability and quality versus cost. Competing interests within the organization, and between various stakeholders, makes this a challenging trade-off for the firm to act on. In alignment with its high quality products, Haglöfs provides care instructions for garments to help consumers treat them well and make them last longer. Moreover, the production processes of Haglöfs' products are complex and involve many partner companies. Dependencies between actors increase lead-times when altering processes to make them more sustainable, and this makes it difficult for Haglöfs to improve as rapidly as they would like to. Moreover, Mullins describes how positioning a company as sustainable involves some significant risks in ensuring the supply chain is truly sustainable. Due to their relatively small size Haglöfs has a lower negotiation power than many larger companies. Mullins argues that the consumption of goods will in itself never be 100% sustainable, and that working with sustainability is thus a never-ending story.

4.5 Houdini

Interview with Mia Grankvist, Head of PR and Communication

4.5.1 About Houdini

Houdini was founded in 1993 and offers a complete range of qualitative functional clothing for active people. Houdini has worked actively with sustainability from the start and it is seen as a prerequisite for good business. This is ensured through careful selection of suppliers and materials, and active assessments of production processes.

4.5.2 Sustainability

Houdini feels like acting in a sustainable way is the only reasonable option for them as a company. Houdini has a vision of zero negative impact on the environment and aims to make the world a better place, meaning they want to be a regenerative force and not just less bad. Grankvist describes that she likes the fact that she does not have to compromise her own values and principles when she goes to work because the values of Houdini are aligned with her own. Everyone working at Houdini have a passion for nature and sustainability. The company does not have one single person responsible for sustainability, but it is rather an important and natural part of everything they do. For Houdini being sustainable does not imply having to compromise on design or functionality aspects. Long-term objectives is a way of counteracting excessive consumption, and Houdini wants to create garments that last for a long time, both in terms of quality and design. Houdini works with Core Comfort in all its products, which means all garments should be perceived as comfortable by all senses while simultaneously being good from an environmental perspective allowing for a clear conscious while wearing them. Grankvist discusses how firms with sustainability less integrated into the organization may experience some internal conflicts of interest and explains that this is not a challenge for Houdini. Thanks to its dedication to sustainability also from an ownership perspective, Houdini is able to let for example the development of new sustainable materials take time. For Grankvist this comes down to making smart choices and not viewing sustainability as a sacrifice but rather something that creates a lot of value for all stakeholders.

Grankvist further explains how the firm applies a holistic view and wants to minimize its footprint in all different aspects. They promote biodiversity and actively reduce CO_2

emissions and the use of water and chemicals in production processes. Environmental sustainability issues are where Houdini puts its main focus, and what they primarily communicate externally. Social sustainability is something they also work with on a daily basis, but Grankvist feels like this is so obvious they sometimes forget to communicate it to the same extent. Grankvist discusses how it is a dilemma for Houdini that their products have a higher price than many competitors, but she does not consider them to be expensive. For Houdini a major challenge is how to raise consumer awareness of sustainability, and make them willing to pay more for the value of good quality and design with a clear conscious. She argues that companies can never expect consumers to be fully aware of sustainability issues. She means that it is the companies' responsibility to work with these questions since they have the knowledge, but also sees it as the companies' responsibility to inform their customers by offering them sustainable products, and encouraging them to buy these products. In an effort to offer more sustainable ways of consumption, Houdini offers rental of shell layer ski clothing and second hand sale in their own stores. In alignment with product quality and durability they offer to repair damaged garments in their own stores, a service which also makes Houdini's clothes a bit more affordable. Moreover, Houdini has recycling boxes for collection of worn out polyester garments in their own stores as well as retailers.

4.5.3 Value Chain

Houdini works with only a very limited number of suppliers and has close and long-term relationships with these. They have a very careful process for choosing new suppliers, and requirements on for example bluesign® certification and recyclable materials. Again, they can allow the supplier selection process to take time thanks to sustainability being very important also to the company's owners. Since Houdini has very strict requirements for what they expect from their suppliers, close relationships with them is key to successful collaboration. Due to the fact that Houdini works with timeless designs and make few aesthetic adjustments between different collections they have few incentives to change its suppliers as long as the collaboration is successful. With production facilities in Europe, Baltic and Poland primarily, Houdini is assured by legal requirements and unions that social sustainability is not an issue. The company is open to the possibility of moving its production to other locations in the future. Grankvist describes that this could lead to reduced production costs, and also benefit people in less developed countries by providing working opportunities. However, Houdini would still place the same high demands on the environment, working conditions and quality

as they currently do with European producers and suppliers, and Grankvist believes they are currently not large enough to make impactful enough changes.

4.5.4 Sustainable Value Chain Development

As previously mentioned, Houdini has always worked actively with sustainability, but they are able to increase their efforts as they grow. Grankvist explains that you need a certain size to be able to make your voice heard, and that Houdini is now established as a respected influencer among its established producers and suppliers. This enables them to put more pressure on suppliers, and also raise societal environmental sustainability awareness. In terms of technological development there are many more sustainable possibilities today than five years ago. Examples of this are recycled and recyclable materials, where Grankvist expects developments to continuously create new opportunities. Houdini engages in technological developments and collaborates with other actors such as The Swedish School of Textiles University of Borås and Mistra. Today, the main parts of Houdini's products are made from recycled or renewable fibers, and most are also recyclable or biodegradable. Grankvist thinks political systems and new knowledge will continuously improve sustainability efforts by creating new opportunities. For her it is very important that people are not acting protectionist and apply for patents on developments that help reduce the environmental footprint. In terms of organizational structure, Houdini works actively with finding new ways of putting pressure on its suppliers, refining what questions to ask them and how to persuade them to work increasingly with sustainability. Grankvist says Houdini is in a good position thanks to their CEO and board of directors being very clear in communicating the direction in which the company is heading. Houdini has not made any significant cultural changes as all employees share a passion for nature and sustainability issues. Grankvist feels like this rather amplifies as the organization grows. Conclusively, she stresses the importance of everyone taking responsibility for sustainability issues and contribute to raising awareness.

4.6 Peak Performance

Interview with Åsa Andersson, CR and Quality Manager

4.6.1 About Peak Performance

Peak Performance was founded in Åre, Sweden, in 1986 by skiing enthusiasts and ski clothing is the core business of the company. With the love for nature and outdoor life, finding good designs and technical solutions for their garments has always been a key success factor. Danish IC Group A/S owns peak Performance since 2000, but the brand headquarters is still located in Stockholm, Sweden.

4.6.2 Sustainability

Sustainability is very important for Peak Performance, and being an outdoor company with ski clothing as their core business nature is ultimately close to their heart. Andersson describes that they face a lot of pressure to become more sustainable due to increasing demands from consumers, as well as many other actors in the industry working very actively with sustainability. Products of high quality and long life times have been Peak Performance's most important key performance indicator (KPI) since the start in 1986. However, sustainability has been given increasing strategic attention in recent years. Environmental and social sustainability has been part of the firm's strategy for four years, and part of the business plan for two years. The company is a member of the Sustainable Apparel Coalition (SAC) and conducted their first Higg Index evaluation in 2013. In addition to SAC, Peak Performance collaborates with other branches which engage in sustainability issues. Peak Performance's corporate responsibility vision is focused on preserving the environment for future generations. The majority of the firm's sustainability efforts are in the production side, where they work actively with sustainable material selection, chemicals reduction and process optimization for energy reduction. Most employees at Peak Performance are nature enthusiasts who are personally very engaged in sustainability issues. However, Andersson sees improvement opportunities in terms of involvement in the organization where a main challenge is that it takes very long time to construct frameworks and implement guidelines.

Peak Performance operates according to the same sustainability framework as its owner IC Group A/S. The owner is primarily responsible for all social sustainability issues across the

value chain, while Peak Performance works more actively with environmental sustainability. Andersson feels like they have an organized approach to this, and they update and improve themselves continuously. The firm follows UN guiding principles in environmental sustainability and their care for the planet is centered around the brand, products, materials in the products and suppliers. Andersson recognizes that Peak Performance as an apparel company has a very high environmental impact, and also talks about sustainability pressures from various stakeholders. Being a premium brand Andersson describes it as rather inevitable for them to attend carefully to sustainability issues. Peak Performance has attempted to implement sustainability as a positive part of the business rather than something difficult. Environmental change has a direct impact on the firm's core business, and being reliant on selling ski clothing they have a very large incentive to help preserve the environment. Andersson says it is very difficult for them to calculate the profitability of sustainability efforts, and how she as a CR and Quality Manager can persuade for example the finance department and board of directors that this is the right route for the firm to take. Andersson explains that they always try to be smart and negotiate prices with suppliers so that more sustainable products do not necessarily need to come at a higher cost, and ultimately not end up with a higher price tag for the consumer.

4.6.3 Value Chains

Since Peak Performance's owner takes the main responsibility for social sustainability, Andersson's role as CR and Quality Manager is focused on decreasing the firm's negative impact on the environment in every step of the value chain. To achieve this, Peak Performance has developed a framework for their corporate responsibility efforts in their strategy, and work actively to communicate this throughout the whole organization. The company assesses its suppliers regularly and has close relationships with them. Peak Performance uses production factories in Europe and Asia. External partners perform audits on these production factories continuously and Peak Performance then follows up on all audits to ensure compliance with requirements.

4.6.4 Sustainable Value Chain Development

By measuring and evaluating the performance of themselves, products and suppliers Peak Performance can provide incentives for increased sustainability focus. Being able to show how the brand is becoming more sustainable makes it more viable for them to put more pressure also on suppliers. They measure water and energy use, chemicals use and waste, among other things, and formulate goals for how to minimize their environmental footprint throughout the value chain. When asked about challenges Andersson brings up the interest in and understanding of sustainability at the consumers' end, where she perceives that the general public does not yet show enough commitment to sustainability. Pressures to become more sustainable rather come from business-to-business partners such as key account retailers. She also brings up the challenges of implementing a committed sustainability mindset within the internal organization, and make sustainable design and development choices permeate all operations. Moreover, Andersson experiences that their textile suppliers have good control over their environmental footprint but that the situation is different at sewing suppliers. Sewing suppliers do generally not recognize their environmental impact, and Peak Performance hence struggles in encouraging them to become more sustainable.

Andersson says that Peak Performance is not actively involved in R&D, but very open to find new solutions for textile materials, dying techniques, chemicals, water use and recycling of materials. Since sustainability was integrated into the firm's strategy, there have been some changes in the organizational structure and responsibility areas at headquarters. It is part of Andersson's responsibility to get the rest of the organization on board with the sustainability mindset, and she sees how it is becoming increasingly important across. She strives to implement the corporate responsibility strategy further in the organization, and they are currently working on the firm's first sustainability report. External communication to retailers and consumers, and finding the right tone of voice, is described as very important factors going forward. To increase the durability of its garments Peak Performance offers repair services in its stores, and to make sample garments useful these are donated to charities. Andersson conclusively talks about Peak Performance's high ambitions and mentality of always wanting to do things better and making a difference, with winning spirit as one of the firm's values. Andersson means that if you have clearly defined goals it is easier to work towards reaching them, and Peak Performance is accelerating their sustainability efforts continuously.

4.7 Changes for Sustainable Value Chain Development

As described in the theoretical framework, some research argues that increased sustainability requires simultaneous changes in technology, structure and culture (Vollenbroek, 2002). Collected empirical material shows that studied case companies work actively with sustainability. The below presented table illustrates what changes have been brought up and highlighted by interviewees during conducted interviews.

	8848 Altitude	Didriksons	Haglöfs	Houdini	Peak Performance
Technological Change	Textile materials Water and energy use Chemicals Dying technique Recycling of materials	Textile materials Water and energy usage Chemicals	Textile materials Water and energy use Chemicals	Recycled/renewable and recyclable/biodegradable materials Active involvement in technological developments	Textile materials Water and energy use Chemicals Dying techniques Recycling of materials
Structural Change	Appointment of sustainability manager Joint responsibility for sustainability	Appointment of sustainability manager and teams	Collaborations with NGOs and peer companies Joint responsibility for sustainability	New ways of putting pressure on suppliers Joint responsibility for sustainability	Appointment of CR manager Increasing attention at HQ
Cultural Change	Sustainability part of corporate culture	Increasingly sustainable mindset	Nature and sustainability part of corporate culture	Nature and sustainability main part of corporate culture	Increasingly sustainable mindset Continuous improvement mentality

Table 5: Compilation of technological, structural and cultural changes in studied companies (own table).

	8848 Altitude	Didriksons	Haglöfs	Houdini	Peak Performance
Repair Services	-	-	-	✓	✓
Garment Recycling	-	-	-	✓	-
Care Instructions	-	✓	✓	✓	✓

Table 6: Garment sustainability services offered by studied companies (own table) (✓ = brought up, - = not brought up).

5. ANALYSIS

The following chapter provides an analysis of collected empirical material in relation to the presented theoretical framework. It aims to review similarities and disparities between theory and empiricism, thereby enabling researchers to answer the research question and fulfill the purpose of this study.

5.1 Sustainability

Empirical findings confirm theoretical arguments that sustainability is a central issue in the apparel industry (DeBrito et al., 2008; Clarke and Clegg, 2000), and show that studied Swedish sportswear companies direct a lot of attention to sustainability. All case companies in this thesis seem to work actively with reducing their footprint, and it is clearly important for them to appear sustainable. In alignment with theoretical findings, studied companies view sustainability from the Triple Bottom Line perspective, which includes environmental, social and economic aspects (Elkington, 1997). Although all three aspects are described to be of great importance, environmental sustainability is where case companies primarily focus their efforts and what is externally communicated. This can be seen as contradictory to theoretical findings, which argue that all dimensions of the Triple Bottom Line (Elkington, 1997) should be prioritized. When discussing sustainability in sportswear it also becomes relevant to consider quality and functionality aspects of product offerings. Interviewed companies all view garment durability as a central part of their sustainability efforts. Researchers of this study agree with the durability argument since consumption per se can never be completely sustainable. Garments with long durability and lifespans consequently play an important role in decreasing the overall footprint of the apparel industry.

Moreover, some of the studied companies reason that they are both able and expected to be more sustainable due to the fact that they are positioned in mid to high price segments. Interviewees point out that they strive for good value for money in their products, and argue that potentially higher prices is a direct result of quality and sustainability in garments. However, companies agree that sustainability should not necessarily entail higher costs and hope the price situation will improve in the future. Researchers of this study perceive that there is a genuine interest from studied companies to take responsibility for their footprint. It is important to remember that they face significant pressure from external forces and that

sustainability efforts are now a question of how and how much rather than if. While all studied companies feel pressure from external stakeholders, there are deviations between different cases regarding which stakeholders put most pressure on sustainability. Some interviewees experience primary pressures from consumers, while others say it rather comes from shareholders, governments, NGOs and media. Empirical findings reveal that tougher regulations further mean that brands and their suppliers have stricter legal requirements to satisfy in terms of both environmental and social sustainability. Regulatory aspects of sustainability have not been explicitly included in the constructed theoretical framework, and these findings are thus not confirmed by theoretical findings. On one hand, there are reasons to question companies' motives for acting in a sustainable manner, and whether they are self-driven or pressured externally. On the other hand, incentives for sustainability efforts can be argued as insignificant as long as organizations actually make them.

Looking at how sustainability is incorporated into studied companies, findings confirm that sustainable actions are now part of many firms' strategies and that they engage actively in decreasing their footprint (Caniato et al., 2012). Although being included in all firm's strategies, the level of sustainability focus and for how long it has been part of the strategy, differs between different cases. In some of the studied companies sustainability is allegedly a central part of the strategy, and has been so since the company was founded. In other cases sustainability aspects were added to the strategy more recently, and does not permeate the organization to the same extent. Due to the high importance of sustainability in today's society, it becomes more or less inevitable for firms to make it part of their strategies. This focus also impacts operational aspects of the internal organization, where a sustainable mindset needs to be part of all processes and every decision made. All studied companies work with this implementation, but researchers of this study are given the impression that there is some diversity in how far they have come. There are still some internal conflicts of interest between different objectives. In organizations where the responsibility for sustainability is an assigned role, this person might potentially perceive some resistance in his or her promotion of sustainability issues. This is brought up during some interviews, where it is described by the interviewee how he or she sometimes needs to argue for more attention to sustainability issues in decision making processes.

	Theoretical Findings	Empirical Findings
Sustainability central issue in the apparel industry	✓	✓
Triple Bottom Line	✓	✓
Focus on environmental sustainability	-	✓
Pressure from external stakeholders	✓	✓
Pressure from regulatory requirements	-	✓
Sustainability part of strategy	✓	✓

Table 7: Sustainability in the apparel industry (own table) (✓ = brought up, - = not brought up).

5.1.1 Environmental Sustainability

Environmental Sustainability	Reduction of ecological footprint Endeavours to benefit nature as much as possible, or at the least not harm it Green initiatives such as recycling programs, sustainable materials etc. Careful management of water and energy use, waste, toxics etc.

Table 8: Explanation of the environmental dimension in the Triple Bottom Line (Elkington, 1997).

Theoretical findings discuss the large environmental impact of the global apparel industry, with intensive use of natural resources and chemicals (DeBrito et al., 2008). Empirical findings are aligned with this discussion, but also give the impression that studied case companies have come relatively far in their environmental sustainability efforts compared to other actors in the apparel industry. It appears like the sportswear companies studied in this thesis have a high general awareness of their environmental footprint and are prone to reduce it. A significant reason for this might be the fact that studied companies are niched towards outdoors, and that the products they offer are designed for use in nature. The wellbeing of the planet is directly determinant for these companies' future prosperity, and it ultimately makes sense for them to care for and protect nature. When asked about what aspects of environmental impacts studied companies work most actively with reducing, chemicals, water and energy use are the most frequently mentioned.

According to theory textile production traditionally entails use of many different chemicals, many of which are hazardous for the environment (DeBrito et al., 2008). Interviewees confirm this, and describe how they actively try to reduce the use of hazardous chemicals in their value chains. Most of the case companies prioritize chemicals in their environmental sustainability efforts. They do not only comply with legal requirements, but go beyond these

and eliminate legal hazardous chemicals. Both theoretical and empirical research thus make it evident that this is a significant issue in the apparel industry. Moreover, it is evident that case companies prioritize water and energy savings throughout their value chains, which is also a main sustainability issue according to theoretical findings (The World Wildlife Fund, 2017; Hoguet, 2017; Martin, 2013). Interviewees describe how they incentivize reduction of water and energy use at textile suppliers, sewing suppliers and headquarters as well as consumers. Going further in their environmental sustainability efforts, a couple of case companies offer repairs of damaged garments in their own stores as an effort to extend garment durability. Consumer advice on how to take care of garments is a more commonly offered service to increase garment durability. Theory exemplifies how some international fashion and sportswear companies offer in store recycling of worn out garments (Kaye, 2017). This is found in one out of the five studied companies. As will be discussed later in this analysis, the use of recycled materials in textile production is increasing continuously. As can be seen in the below table, empirical findings are well aligned with theoretical findings in terms of environmental sustainability and no inconsistencies have been identified.

	Theoretical Findings	Empirical Findings
Decreased environmental footprint	✓	✓
Reduced use of water and energy	✓	✓
Reduced use of chemicals	✓	✓

Table 9: Environmental sustainability efforts (own table) (✓ = brought up, - = not brought up).

5.1.2 Social Sustainability

Social Sustainability	Fair treatment of people Enacting fair and beneficial practices toward labour and communities in which business is conducted Reciprocal social structure where the wellbeing of stakeholder interests are interdependent

Table 10: Explanation of the social dimension in the Triple Bottom Line (Elkington, 1997).

Theory discusses how the apparel industry is faced with many different kinds of pressure (Allwood et al., 2006), and that social sustainability has historically sometimes been compromised in favour of other performance measures (Martin, 2013). Empirical findings indicate that social sustainability issues are most prominent in early stages of the value chain, and concern textile and sewing factories primarily. However, reported tragic accidents have

lead to tighter legal requirements and improved industry praxis in terms of factory working conditions (Martin, 2013). Studied case companies, most of which say they aim to provide better labour rights and working conditions than what is legally required, confirm this. Social sustainability also entails working conditions at headquarters, and studied companies aim to be an employer of choice and have an inclusive corporate culture. Theoretical and empirical findings ultimately agree that social sustainability in the apparel industry has improved. However, theoretical findings do not support empirical findings of reduced focus on social sustainability in favour of increased focus on environmental sustainability.

	Theoretical Findings	Empirical Findings
Reduced focus on social sustainability	-	✓
Improved labour rights and working conditions	✓	✓

Table 11: Social sustainability efforts (own table) (✓ = brought up, - = not brought up).

5.1.3 Economic Sustainability

Economic Sustainability	Positive financial bottom line Considering the real economic impact the organization has on its environment Consumers' willingness to pay more for socially and environmentally sustainable products

Table 12: Explanation of the economic dimension in the Triple Bottom Line (Elkington, 1997).

Taking economic sustainability into account, studied companies agree that sustainability efforts that go beyond what is legally required often come at a cost. Working with reducing environmental and social footprints entails a trade-off between cost and sustainability. Although theoretical findings account for the significance of all Triple Bottom Line perspectives (Elkington, 1997), the trade-off brought up by case companies is not explicitly discussed. Case companies give researchers the perception of thinking it is worth the extra cost, but there appears to be some deviations in how much they think it is worth. It is important to remember that studied companies are profit making with the main objective of creating value for its shareholders. In some of the studied companies owners of the firm are willing to sacrifice short-term returns in favour of long-term value creation, and this consequently promotes sustainability efforts. In other cases, shareholders are more focused on short-term wins, which makes the pursuing of sustainability objectives and the trade-offs this entails more complicated. Theoretical and empirical findings both discuss the fact that

stakeholders have diversified objectives and organizations attempt to account for all of them (Freeman, 1984; D'Heur, 2015). It hence becomes a challenging task for companies to streamline the time perspective of different actors and make them see the long-term value of sustainability, thereby increasing the willingness for potential short-term financial losses.

Moreover, studied companies recognize the current trade-off between costs and sustainability but expect technological developments to make sustainability less expensive in the future. Theoretical findings reveal expectations about new opportunities and production improvements from technological developments, but do not discuss cost reductions in particular. Theoretical and empirical findings agree that corporate social responsibility can be aligned with business objectives (Nidumolu, et al. 2009; Hutter et al., 2017). Some interviewees talk about what literature describes as the attitude-behaviour gap, which points out the significance of consumers' actual buying behaviours and not only positive attitudes towards sustainability (Niinimäki, 2010; Terlau and Hirsch, 2015). Others do not experience it and feel pressure for their consumers to become more sustainable. Companies that experience an attitude-behaviour gap explain that sustainability improvements need to be matched with demand. If consumers are not willing to pay for more sustainable products, these will not be sold and thus not be very sustainable after all.

	Theoretical Findings	Empirical Findings
Trade-off between costs and sustainability	-	✓
Diversified stakeholder objectives	✓	✓
Reduced costs of sustainability	-	✓
Alignment of CSR and business objectives	✓	✓
Attitude-behaviour gap	✓	✓

Table 13: Economic sustainability efforts (own table) (✓ = brought up, - = not brought up).

5.2 Value Chains

As discussed in theoretical findings, increased sustainability in the apparel industry requires sustainability efforts throughout the value chain (Hutter et al., 2017; Kibbey, 2017; Martin, 2013). Empirical findings show that this is recognized by studied companies, as they claim to work actively with reducing their footprint across value chain activities. Based on the

theoretical definition of value chains (Porter, 1985), researchers have interpreted the value chains of studied companies to comprise the following primary activities.

Figure 3: Value chain activities of studied companies (own figure).

When discussing value chain sustainability, all studied companies describe textile and sewing suppliers as their primary focus areas. Researchers of this study reason that studied companies control raw materials through their textile suppliers rather than directly at the source, and that they ultimately still work actively with sustainability in raw material selection. The environmental footprint of transportation is brought up in theoretical findings (Draper et al., 2007), but rather surprisingly not mentioned as a major sustainability issue in empirical findings. Researchers of this study reason that this might be due to the fact that reduced environmental impact from transportation would require large changes in the structure of value chain, with suppliers located closer to customers. It is thus believed that case companies do not see reduced transportation as a feasible way of becoming more environmentally sustainable.

Looking at various ways of analyzing value chains, none of the studied companies work explicitly with the VCA framework which is brought up in theoretical findings (Porter and Kramer, 2011). Instead many of them have developed their own frameworks which are used for seeking ways to optimize value creation by finding areas of improvement and planning for these improvements. There are many different frameworks that can be used to achieve the same purpose as the VCA tool. It is beneficial for companies to work with a framework since it can provide clarity and structure to improvement efforts. However, a generic framework might not encompass industry specific aspects that must be taken into consideration, and it can thus be more rewarding for companies to work with more personalized frameworks. This could be a primary reason for why several of the studied companies have developed their own frameworks used for sustainable development. These frameworks are related to environmental and social sustainability, and can for example be applied on the selection and evaluation of suppliers. Theoretical findings emphasize the importance of collaboration for value chain sustainability, but does not discuss key determinant for successful collaboration between different actors (Fearne, 2009). Empirical findings confirm the importance of

collaboration between different value chain actors, and also reveal some experienced success factors. Many of the studied companies describe how negotiation power and high demands on sustainability are reliant on close and long-term relationships with suppliers. All companies say they are careful in their selection of new suppliers, and have clearly defined requirements that must be fulfilled. They also make continuous internal and/or external follow-ups on existing suppliers to ensure compliance with requirements. Additionally, some of the studied companies rely on certifications in their supplier selection and evaluation processes.

	Theoretical Findings	Empirical Findings
Sustainability efforts throughout the value chain	✓	✓
Environmental footprint of transportation	✓	-
Frameworks for value chain analysis	✓	✓
Collaboration between different actors	✓	✓
Determinants for successful collaboration	-	✓

Table 14: Value chain sustainability (own table) (✓ = brought up, - = not brought up).

5.3 Sustainable Value Chain Development

Although having worked actively with sustainability for a long period of time, the emphasis on footprint reducing efforts in value chains has increased significantly during recent years. This is evident in empirical findings, and confirmed by theory which argues that focus on sustainability in society and the apparel industry increases continuously (Martin, 2013; Clarke and Clegg, 2000; Chung and Wee, 2008). As previously mentioned empirical findings also reveal that, in addition to higher societal awareness, stricter legal requirements force apparel companies to become more sustainable. Case companies agree that sustainability is a never-ending story which requires constant improvements. These facts make it interesting to look deeper into required changes for sustainable value chain development. This includes changes implemented during the last five years and intended changes during the coming five years, as well as challenges faced in the implementation of these changes. Change has been reviewed through the lens of technological, structural and cultural change, as described in the theoretical framework (Vollenbroek, 2002). Theoretical findings do not reveal what explicit technological, structural and cultural changes are required for sustainable value chain development. The theoretical framework also fails to include challenges experienced in

implementing these changes. The analysis of described changes, and their implementation, will consequently be based primarily on empirical findings.

5.3.1 Technological Change

Technological Change	The impact of technological developments on firms' ability to become more sustainable Firms' involvement in technological development projects

Table 15: Applied technological changes for increased sustainability (own table developed from Vollenbroek, 2002).

All studied companies agree that technological developments have created and will continuously create new opportunities for value chain sustainability. These developments can further favour the previously discussed alignment of corporate social responsibility and business objectives (Nidumolu, et al. 2009; Hutter et al., 2017). Case companies are themselves generally not actively involved in technological development projects, but members of various networks which support developments in the apparel industry. Interviewed companies say new techniques for dyeing and coating of textiles can lead to reductions of chemicals, water and energy use. Moreover, non-hazardous chemicals are being constantly developed. Technological progress also enables the development of new textiles, which provides more sustainable alternatives to existing raw materials used. While technological developments are discussed in theoretical findings (Vollenbroek, 2002), these do not confirm the explicit impacts on textile production sustainability found in empirical findings. Refined recycling techniques further make it possible for companies to use recycled materials in their garments to a larger extent. Studied companies see large improvement opportunities in the area of renewable, recyclable and biodegradable materials. These empirical findings are confirmed by previous research, which discusses advancements in textile recycling (Kaye, 2017).

5.3.2 Structural Change

Structural Change	Changes in the organizational structures to enable increased focus on sustainability Changes in the organizational structures because of increased focus on sustainability

Table 16: Applied structural changes for increased sustainability (own table developed from Vollenbroek, 2002).

There are differences between studied companies in how significant structural changes that have been made because of increased sustainability focus. Two out of the five studied

companies have appointed a sustainability manager, and one company has a CR manager. These appointments have causally resulted in structural changes in the organization. The other two companies do not have an assigned role responsible for sustainability, but it is rather integrated into the whole organizational structure. It is interesting to reason around what impact this structural decision has on sustainability efforts. No best way of structuring sustainability efforts has been found in either theoretical or empirical findings. Moreover, researchers of this study have not been able to identify any correlation between the organizational structure and how sustainable case companies appear to be, or for how long sustainability has been part of their strategic agenda.

5.3.3 Cultural Change

Cultural Change	Incorporation of sustainability into the organizational culture The extent to which sustainability permeates decision making and the mindset of organizational members

Table 17: Applied cultural changes for increased sustainability (own table developed from Vollenbroek, 2002).

The integration of sustainability into operations influences and is influenced by the organizational culture. Like with operational issues, it is challenging for firms to get all organizational members on board with the sustainability mentality and mindset. Case companies describe that a key success factor in implementing sustainability into the organizational culture is to make people see and understand the value of it. This can be linked to theoretical findings, where some researchers argue that conveying the reason for change is one of the primary challenges in change management. Successful implementation of change requires transforming it from something that is perceived as an inconvenience to something that creates value for all stakeholders. Lack of understanding for why change is needed can potentially lead to conflicts of interest and resistance from the rest of the organization. Making all organizational members understand the importance of sustainability, and clearly communicating what needs to change, are described as key determinants for building a sustainable culture. Sustainability is incorporated into the culture of all studied companies, but there are differences between cases in how deeply integrated it is.

5.3.4 Challenges

All studied companies want to become more sustainable and prioritize these efforts, but acknowledge that it is very challenging. Making suppliers understand the importance of sustainability is a challenge brought up by multiple interviewees. It is revealed during interviews that countries in the European Union have strict legal requirements on environmental and social sustainability, but that legal requirements are not as strict everywhere in the world. Suppliers may hence question why European apparel companies put higher pressure on sustainability issues than for example their American counterparties. It is ultimately challenging for European companies to communicate and implement sustainable practices at their suppliers. Close and long-term relationships with suppliers is described as a way of mitigating this challenge. However, interview respondents recognize that 100% sustainability cannot be guaranteed in production processes that are not controlled in-house. The apparel industry has complex production process that involves many different actors and change consequently takes a lot of time. This makes it interesting to reason around how time requirements of change correspond with organizational size.

Becoming more sustainable entails many trade-offs for companies to consider, and they need to prioritize what factors are most important to them. Described trade-offs are mainly related to sustainability, cost and quality. For the focal company, meeting the demands of different stakeholders is one of the primary challenges for increased sustainability. Interviewees discuss experienced conflicts of interest between different stakeholder groups, and difficulties in balancing contradictory interests (D'Heur, 2015; Freeman, 1984). From an employee perspective, the main challenge for companies is to implement a sustainable mindset and make it a natural part of the organizational culture. Essentially, the success of companies is dependent on meeting consumer demands and preferences. Companies are ultimately faced with the difficult challenges of communicating the value of sustainable products, and convince consumers to purchase them. This task is highly related to what literature describes as the attitude-behaviour gap (Niinimäki, 2010; Terlau and Hirsch, 2015), and companies which experience it need to take actions to reduce it.

Summary of Challenges	
Value chain complexity	Diverse stakeholder demands
Supplier understanding	Building a sustainable culture
Triple Bottom Line	Attitude-behaviour gap
Trade-offs (sustainability, quality, costs)	Continuous learning
Internal conflicts of interest	

Table 18: Summary of challenges in sustainable value chain development (own table).

6. CONCLUSION

This conclusion presents key findings derived from conducted research based on the analysis of empirical findings in relation the theoretical framework, and the research question and purpose of this study. Moreover, suggestions for future research directions within the field of this study are outlined.

6.1 Answering the Research Question

> *How do Swedish sportswear companies work with sustainable development in their value chains?*

Based on theoretical and empirical findings researchers of this study can conclude that sustainability is a central issue in the apparel industry. The emphasis put on footprint reducing efforts has increased significantly during recent years, and continuously does so. Theoretical findings argue for the importance of all aspects in the Triple Bottom Line, while empirical findings reveal that case companies currently focus primarily on environmental sustainability. Increased sustainability requires efforts throughout value chains and it is described by case companies that they direct their main efforts towards early value chain stages. To answer the question of how Swedish sportswear companies work with sustainable value chain development researchers of this study have chosen to look deeper into changes and challenges related to sustainability.

It is concluded from empirical findings that case companies work actively with changes for increased sustainability. Theory categorizes changes as technological, structural and cultural but no information has been found about what these changes entail in practice. Empirical findings thus contribute to insights into how these changes are operationalized. Studied companies show great confidence in technological innovations, and the new opportunities these can bring. Developments create more sustainable alternatives in terms of reduced environmental footprint, better social conditions and increased economic viability. Advancements in production and recycling technologies enable improved textiles and reductions in chemicals, water and energy use. Increased focus on sustainability further impacts the organizational structure and culture. Structural changes are seen in the majority of

studied companies as they have appointed people responsible for sustainability issues. However, there are disparities in how companies are structured in their sustainability efforts and no best practice can be concluded. The integration of a sustainable mindset further impacts the organizational structure. This can be linked to the organizational culture, where all companies aim to make sustainability a natural part of everything they do.

Primary Changes	
Technological Change	Improved production and recycling technologies Reduced chemicals, water and energy use
Structural Change	Appointment of sustainability manager or joint responsibility for sustainability
Cultural Change	Implementation of a sustainable mindset

Table 19: Primary changes brought up by case companies (own table).

Studied companies clearly describe that sustainable value chain development entails many challenges, and that it requires commitment by actors in both the focal firm and the rest of the value chain. The previously mentioned complexity in balancing diverse stakeholder interests is brought up as a major challenge. There are disparities in which stakeholders are perceived to put the most pressure on sustainability, the most frequently mentioned being society, government and customers. The attitude-behaviour gap experienced by some case companies makes it difficult to prioritize sustainability efforts across the value chain. Supplier understanding for the need of increased sustainability is also brought up as a primary challenge in sustainable value chain development. Case companies describe how they sometimes struggle with communicating and implementing sufficiently sustainable practices at their suppliers. Close and long-term relationships are seen as the most effective way of overcoming this challenge. Since studied companies are profit making it becomes challenging for them to balance trade-offs between sustainability, quality and costs. Empirical findings make it evident that studied companies want to be perceived as environmentally and socially sustainable. However, reviewing case companies from a critical standpoint researchers are given the perception that profitability targets are still very important for them. It can hence be argued that their most critical challenge is to improve environmental and social sustainability without having to compromise financial results.

Primary Challenges	
Diverse stakeholder demands	Required trade-offs (sustainability, quality and costs)
Attitude-behaviour gap	Triple Bottom Line sustainability
Supplier understanding	

Table 20: Primary challenges brought up by case companies (own table).

6.2 Suggestions for Future Research

There is a research gap in how companies work with sustainable development throughout their value chains. In an effort to fill this gap it would be relevant to look further into the changes described by Vollenbroek (2002), and enhance the understanding of how these changes can be operationalized. This could potentially create a framework for how companies can work with sustainable value chain development. Researchers of this thesis believe valuable information can be provided from studying other actors in apparel value chains, and obtain their views on sustainability. This would result in a more overall perspective and nuanced perception of sustainable development across value chains in sportswear apparel. It would also be compelling to study additional branches in the apparel industry. This could provide a better perception of sustainability in the industry as a whole, and enable comparisons and knowledge exchange between different branches. Finally, findings from the apparel industry could be favourably applied to sustainable value chain development in other industries.

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APPENDIX A

This appendix lists the questions asked to interviewees during the empirical material collection of this study.

Sustainability

How do you briefly describe the way in which you work with sustainability?
How would you describe the importance of sustainability in your organization?
Would you say sustainability a central part of your organization?
How is sustainability incorporated into your:

- Strategy
- Operations
- Organizational culture

What are your main incentives for sustainability?
Do you view sustainability from a Triple Bottom Line perspective?
How do you work with:

- Environmental sustainability
- Social sustainability
- Economic sustainability

Value Chains

Do you work with sustainability across the whole value chain?
In what way?
Where do you focus your efforts?
Are you familiar with the Value Chain Analysis framework?

Sustainable Value Chain Development

Have you always worked actively with sustainability?
How have your sustainability efforts changed over time?
What primary challenges do you face in sustainable value chain development?
In what way are you more sustainable today than you were five years ago?
What changes have you had to make in order to get to where you are today?

- Technological
- Structural
- Cultural
- Other

What have been the main challenges in implementing these changes?

- Technological
- Structural
- Cultural
- Other

APPENDIX B

This appendix briefly explains the various organizations, certifications and indices that were brought up by interviewees in the empirical material section of this study.

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bluesign®

The bluesign® system is a solution for sustainable textile production which unites the entire textile supply chain, aiming to reduce its impact on people and the environment. Founded in Switzerland in 2000, bluesign® combines expertise in key segments of textile production and attempts to cultivate an interdisciplinary network where sustainability efforts are implemented and maintained throughout the textile production industry. In doing this, bluesign® has developed a CSR certification based on input-stream management, and brands can join the bluesign® network. The system focuses on five key areas of the production process: resource productivity, consumer safety, water emissions, air emissions, and occupational health and safety. Textile manufacturers that become partners in the bluesign® system regularly report their progress and are subject to on-site audits. (Bluesign, 2017)

Fair Wear Foundation

The Fair Wear Foundation (FWF) is an independent non-profit organization that aims to improve working conditions in garment factories. FWF works with brands, factories, trade unions, NGOs and sometimes governments and is active in 11 production countries in Asia, Europe and Africa. The foundation strengthens industry relations through social dialogue and sharing of expertise, and keeps track of improvements made by the companies it works with. This involves verification that members of FWF implement its Code of Labour Practices in their supply chains. (Fair Wear Foundation, 2017)

The Higg Index

Administered by the Sustainable Apparel Coalition (SAC), the Higg Index is an indication based tool used to measure and evaluate CSR in materials, products, facilities and processes. The Higg Index comprises several online tools designed for members from various segments of the apparel industry. Members provide data on their business' impact areas which SAC uses to generate standardized performance scores, allowing businesses to benchmark their results against others. This serves as an incentive for companies to increase their sustainability efforts and strive for continuous CSR improvements. (Apparel Coalition, 2017 - The Higg Index)

Mistra

Mistra is a Swedish foundation for strategic environmental research which supports research that is of strategic importance for the environment and sustainable development. In an effort to pinpoint solutions to key environmental problems, Mistra has priority areas in which it funds research programmes. Investments intend to foster sustainable development and boost the competitiveness of Swedish organizations. (Mistra, 2017)

REACH

REACH is a European Union regulation adopted with the purpose of protecting human health and the environment from risks posed by chemicals. This further enhances the competitiveness of the EU chemicals industry, and promotes methods for assessing and eliminating hazardous chemicals. REACH establishes procedures for the collection and assessment of hazardous substances. This applies to all chemical substances as its impact reaches most companies in the EU. To comply with regulations, companies are required to identify, manage and communicate risks of substances manufactured and marketed in the EU. (European Chemicals Agency, 2017)

Sustainable Apparel Coalition

The Sustainable Apparel Coalition (SAC) is and alliance in the apparel, footwear and home textile industry that strives for more sustainable production. The previously described Higg Index is the main focus and building block of SAC. By measuring sustainability performance through the Higg Index, SAC works towards reduction of damaging practices and greater environmental and social transparency in the industry. The coalition enables addressing of urgent systematic challenges that companies cannot change independently. Members of SAC commit to cooperation to meet shared sustainability goals and are rewarded with open access to the network of individuals and organizations that drive the shift towards more sustainable apparel production. (Apparel Coalition, 2017 - The Coalition)

The Swedish School of Textiles, University of Borås

The Swedish School of Textiles was founded in 1866 and is part of the University of Borås. The school currently has around 900 students from across the world and offers degree programmes, which encompass the entire field of textiles. Conducted research projects are of high international standard, and focuses on sustainability issues aiming to contribute to a better world. The school collaborates with an international research network and looks at for example consumer behaviour, global markets, recycling of clothing and new ways of textile use. (Hb, 2017)

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APPENDIX C

This appendix lists all tables and figures used in the thesis.

Tables

Figures