Sustainability: Fashion or Future?

The Business Case for Sustainable Supply Chain Management in the Apparel Industry

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Executive Summary

Sustainability: Fashion or Future? Although apparel firms seem to have seriously intended to adopt responsible supply chain practices, still, they have not managed to realize a sustainable apparel supply chain. A complicating matter here is that the apparel industry consists of a highly interconnected network of large retailers and brands, and numerous suppliers operating at a global level. The result is a complex and fragmented supply chain, which in interaction with global and industry trends, firms' characteristics and an increasing demand from stakeholders to address socio-economic and environmental issues, has both triggered and hindered firms to implement sustainable practices in their supply chain. This makes it questionable, whether it is feasible for a sustainable apparel supply chain to exist at all:

Is there a Business Case for Sustainable Supply Chain Management in the Apparel Industry?

This study aims to identify the factors that influence the business case for sustainable supply chain management (also referred to in this document as 'SSCM') and analyse how these affect the business case for a sustainable apparel supply chain.

Three sub-questions form the basic structure of this report.
1. What is sustainable supply chain management?
A review of sustainability, strategy and supply chain management literature shows that many studies have investigated the business case, or underlying rationale, for Corporate Social Responsibility (CSR). Findings on the link between CSR and financial performance are inconsistent, which indicates that a broader perspective on the business case is required, where the effect of CSR on performance depends on the convergence between firms' economic goals and societal objectives. This suggests that strategies for sustainability are influenced by mediating variables and contextual factors (Carroll & Shabana, 2010). These should be taken into account when making the transition to a sustainable industry, which can be achieved if the business case is complemented with business models for sustainability (Van Tilburg et al., 2012). The supply chain function can facilitate the transition towards more sustainable business models, however, there is no common definition of what constitutes sustainable supply chain management. Research calls for industry-specific and longitudinal studies to further conceptualize SSCM (Seuring & Müller, 2008). Therefore, this study analyses SSCM in the context of the apparel industry.

2. What factors influence the business case for sustainable supply chain management in the apparel industry?
Firstly, global, industry and local trends influence the business case for SSCM. Secondly, firms' approach to sustainability in terms of stakeholders and issues intervenes with the business case for SSCM. Thirdly, propositions were formulated on the effect of firm characteristics, consisting of firm features, strategy and business models, on the implementation of SSCM practices. The relation between these three factors form the basic conceptual model of this study.

3. How do firm characteristics, sustainability approach and context influence the business case for a sustainable apparel supply chain?
The influence of firm characteristics, sustainability approach and context is analysed by a retrospective, longitudinal, comparative multiple-case study. Expected relations were analysed by hypotheses on the influence of firm characteristics and by transition trajectories for the influence of sustainability on SSCM. Findings were analysed in the context of global/industry/local trends for the three periods from 2000 to 2012, which resulted in three new conceptual models.

These support the business case for sustainable supply chain management in the apparel industry, where in a context of globalization, financial crisis and trade liberalization, SSCM underwent a transition of internal alignment. Over the years, apparel firms have increasingly adopted sustainability into their policies and are now further integrating sustainability into their business models. A tendency towards more active SSCM, in combination with more strategies and business models for sustainability, will certainly trigger a first transformation in the apparel supply chain, towards one characterized by more stakeholder collaboration, transparency and sustainability. Rather than following the trend of sustainability, the apparel industry chooses to prepare for a sustainable future.

Preface

Fashion has always played an important role in shaping my reality.

FANTASY

As a little girl I loved to dress up as a fairy in the bright pink dress my mum had made for me. I would go out and play with friends in a world of fantasy so big it crossed all borders of human imagination. As I grew older, this world started to shrink and was replaced by a world of reality.

INSPIRATION

In this real world, I entered high school and became fascinated by the secret world of ready-to-wear and haute couture. Inspired by fashion magazines, I would travel to many cities to find that one piece of clothing that was supposed to be most fashionable of all. Anytime there a new season started, I would be the first to check out the new collections in store, to be the first to buy new items of clothing no one had seen yet.

CREATIVITY

Sooner or later though, another reality entered my world. I could no longer find the fashionable clothes I wanted for an affordable price. So I decided to make my own clothes instead. Like writing a thesis, this was a long and tedious process that required a creative mindset. It would start with finding the right fabric at the market, then drawing patterns, and cutting and sewing the pieces of fabric together. Especially in this last phase I would often encounter problems, so I requested a little help here and there.

SUSTAINABILITY

Then, when I entered a new phase in my life and enrolled in university, fashion got again a different meaning. As my interest for sustainability grew, my perception of the world changed. I felt increasingly responsible for the world, especially during my master of Global Business and Stakeholder Management at the Erasmus University in Rotterdam. Rather than following the latest trends in fashion, I became intrigued by the business behind fashion and especially its effect on society and the environment.

That is why I decided to choose to write my thesis on sustainability in the fashion industry. It symbolizes both the result of almost 20 years of education and the beginning of a new phase in my life. A number of people have helped me in the process of brainstorming, writing and analysing or form a source of inspiration for me. That is why I would like to thank my mum, for her steady and unconditional support at times when I was lost in the amount of articles and data. My dad, for his critical insights and always calming attitude. My sister, who always inspires me to manage my time and enjoy life at the same time. Also, I would like to thank my friends Anne, Juliette, Liselotte, Laura, Indira, Joske, Paula and Paulina for distracting me from writing my thesis. Naturally, I would have never learned as much as I did, if it was not for my fellow students and stimulating professors. Especially Li An, who teached the course Companies in Ecologies, has been a great source of inspiration to me and again changed my perception of the world.

Lastly, I would like to thank my coach Rob for his knowledgable feedback, flexibility and unexpected jokes, and also my co-reader Erik, for his constructive and detailed feedback. With this thesis, I hope to contribute to a sustainable future, rather than to just make sustainability fashionable. Now, it is up to you to decide whether I have succeeded, so sit back, relax and enjoy the show!

Colette Grosscurt*,*
Rotterdam, September 2012

1. Sustainability: Fashion or Future?

Will sustainability be the new dresscode? In the past decades the globe has increasingly internationalized. A growing number of enterprises operates in different countries and global value chains are no longer an exception. Production is outsourced to developing countries with low wages and price considerations as prime motivation. However, working conditions are often poor in these countries, which makes multinational enterprises (MNEs) a perfect target for public scrutiny. In the 1990s, they received negative publicity for their role in upholding these conditions. In response, many firms started to draw up codes of conduct in which they adopted amongst others the ILO (International Labour Organization) core standards. Through a continuous process of monitoring, auditing and reporting, some firms have succeeded to improve working conditions in their supplier factories abroad. Still, however, there are also many obstacles related to the implementation of codes of conduct, such as factory management, local labor laws and MNEs' wish for low prices.

The apparel industry is an exemplary industry with a global supply chain in which working conditions have improved. Traditionally, the industry has been one of the oldest and most globally dispersed industries. It is one of the first to develop when nations first enter the export market and industrialization phase of development. The apparel supply chain can be characterized as buyer-driven. Brand marketers, retailers and manufacturers coordinate regional production networks in developing countries and are in the powerful position to impose their product specifications on suppliers. These then undertake either pure assemblagey, produce full packages or subcontract orders to second- and third-tier suppliers. Taken together, this adds to the complexity of the supply chain and makes firms dependent on relational assets and social capital for the quality of products. Additionally, the apparel industry is labor intensive and highly volatile, so that just-in-time delivery and lean management are a must. Often, however, these features also contribute to poor working conditions, because they force suppliers to trade-off short lead times and working overtime. Lastly, since 2005 the quota system that existed under the Multi-Fibre Agreement (MFA) is being phased-out. Where previously smaller developing countries were protected by the MFA, nowadays competition has shifted their export capacity to China. Also, lead firms increasingly consolidate and work with large suppliers to gain price- and quality advantages (Gereffi, 2010). Both these industry characteristics and developments, such as trade liberalization, have severe consequences for the structure of and working conditions in the global apparel supply chain.

Together with the adoption of codes of conduct arose the concept of the multi-stakeholder initiative (MSI). In these fora, parties from the non-governmental, corporate and public sphere join forces to overcome the governance gaps that exist in developing countries concerning labor conditions. In the apparel industry, the Ethical Trading Initiative (ETI) from the UK and the Fair Labor Association (FLA) in the USA are examples of platforms that encourage social and environmental standards, monitor codes of conduct, and audit and certify suppliers through ongoing dialogue. In many instances the implementation of codes of conduct has positively changed developing countries. Often it results in a raise in wages and thereby living standards. Also, it reduces the number of accidents on the work floor, improves overtime payments and builds suppliers' capacities.

These are positive developments, however non-governmental organizations (NGOs) continue to report headlines such as: "Young Dalit women still exploited in Indian garment factories." (SOMO, 2012). In this case, European and US fashion retailers and brands have, despite several attempts to improve the working conditions at garment production facilities in Tamil Nadu, not succeeded to structurally improve the situation. As described in a report by the two NGOs Stichting Onderzoek naar Multinationale Ondernemingen (SOMO) and the National India Workgroup (LIW), thousands of women and girls are still working in conditions similar to bonded labour. This is a complex and culturally embedded issue, which calls for an industry- and supply chain-wide approach to ensure the right to collective bargaining (SOMO, 2012).

Clearly, some standards have proven difficult to implement at suppliers in developing countries. As fashion retailer C&A states with regards to the violation of maximum overtime hours by Chinese migrants: "In China, however, we have to recognise that the objective of limiting working hours is difficult to enforce, because it is precisely the employees in need of protection who do not accept this limitation; on the contrary, in some cases they demand to work the longest possible hours in order to earn additional wages. In such instances it is difficult to obtain understanding for our requirement and in particular work is needed to persuade those affected of the protective effect of the measure, which is also to their benefit." (C&A, 2012, p.79). This illustrates the opposing interests of the different stakeholder groups that are affected by more sustainable business practices. Another example where this plays a role is the ILO standard on the right to freedom of association. In China this right is not allowed by law, which means that suppliers that are audited on this standard receive lower rankings than suppliers in other countries and thus they lose their competitive position. Also, often suppliers' management appoints employees to be representatives, which is not in accordance with the standard concerning employee involvement. Additionally, audits vary in their degree of transparency, where some auditors interview people on the work floor while their managers know, so they can not speak about issues confidentially. Lastly, child labor is often difficult to detect, because of the numerous subcontracted homeworkers (Opijnen & Oldenziel, 2011).

All in all, firms have attempted to improve working conditions and to a certain extent succeeded to make supply chains more sustainable. In doing so, they seem to support the business case, or underlying rationale for Corporate Social Responsibility (CSR). Generally, the business case for CSR is presented from a narrow perspective where it has a direct effect on firm financial performance and leads to cost and risk reduction, and reputation and legitimacy benefits. The broad view of the business case on the other hand, is more beneficial and looks at both the direct and indirect relation between CSR and firm performance. It allows firms to leverage opportunities for competitive advantage and create win-win relations with stakeholders, next to the benefits gained from the narrow view. The broad view boosts the acceptance of the business case for CSR, in that it recognizes that the relation between CSR and firm financial performance as complex and dependent on mediating variables and situational factors (Carroll & Shabana, 2010). Thus, it is not surprising that often apparel firms' strategies for sustainability do not seem to take off and many issues continue to exist, because they are complex to address. So it is questionable if there is a future for sustainability in the apparel supply chain at all.

1.1. Research aim

Although it seems that firms have seriously intended to adopt responsible supply chain practices, still, they have not managed to realize a sustainable apparel supply chain. A complicating matter in this story is that the apparel industry consists of a highly interconnected network of large retailers and brands, and numerous suppliers operating at a global level. Such a complex and fragmented supply chain, in interaction with global and industry trends, firms' characteristics and an increasing demand from stakeholders to address socio-economic and environmental issues, has both triggered and hindered firms to implement sustainable practices in their supply chain. This makes it questionable, whether it is feasible for a sustainable apparel supply chain to exist at all:

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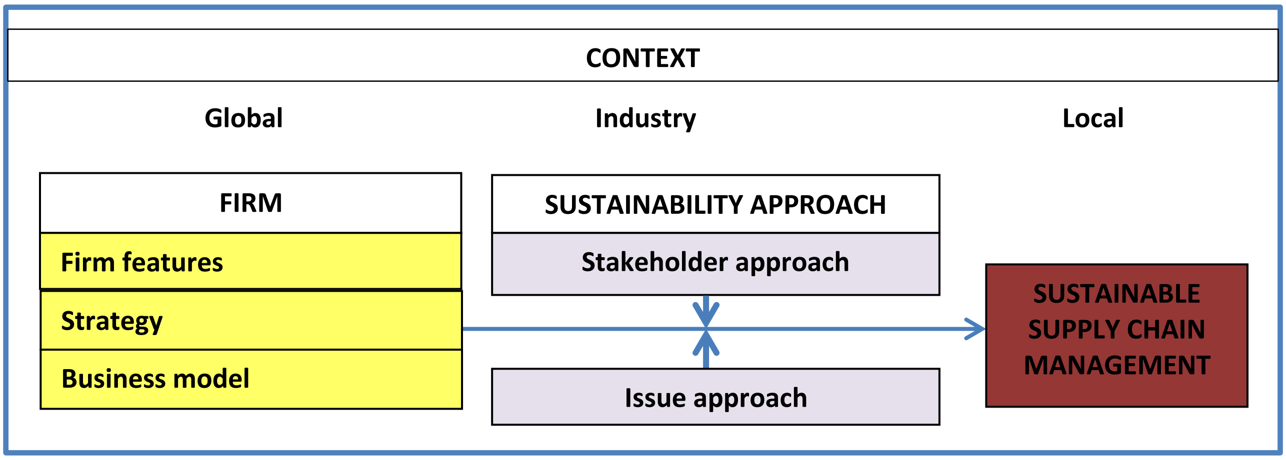
1.2. Report outline

Three sub-questions help to answer the main question and form the basic structure of this report.
1. What is sustainable supply chain management?
Chapter 2 will start with a revision of the sustainability, supply chain management and strategy literature to come to a better understanding of the concept of sustainable supply chain management in general. After that, a systematic literature review zooms in the many concepts that are related to sustainable supply chain management. From this flows an overview of the underpinning theories, drivers and barriers and tools for implementing SSCM. Limitations in current research on SSCM include the need for more industry-specific and longitudinal studies on SSCM. Therefore, this study analyses SSCM in the context of the apparel industry.

2. What factors influence the business case for sustainable supply chain management in the apparel industry?
This sub-question guides the setup of chapter 3, which starts with a detailed analysis of the apparel industry. After that, follows an analysis of the shaping forces that have led to the current status quo of sustainability in the apparel supply chain. Firstly, the influence of global trends on the industry is investigated, next to changes in the global apparel market and supply chain. Secondly, a media analysis identifies the sustainability issues that are still present in the apparel supply chain and how they influence firms' SSCM. Thirdly, an academic literature review of SSCM in the apparel industry results in eight theoretical propositions concerning the influence of firm characteristics on the degree to which firms adopt SSCM practices. Together, these three factors form the basis for this study.

3. How do firm characteristics, sustainability approach and context influence the business case for a sustainable apparel supply chain?
Chapter 4 describes the longitudinal, retrospective, comparative multiple-case study methodology this study uses to unravel the business case for sustainable supply chain management in the apparel industry. After the research design is explained, the concepts of interest are described and presented in a model. As the simplified version of this conceptual model in Figure 1.1 shows, this study will analyse how firm features affect sustainable supply chain management. It will do so, for the period from 2000 to 2012 and use a combination of levels of analysis. Firstly, by using documents from apparel firms and surveys filled out by sustainability or supply chain staff, the evolution of SSCM will be analysed at micro-level. These findings will be tested against the independent firm variables as formulated in the eight propositions in the previous chapter. Then, it will be analysed how firms' approach to sustainability intervenes in this relation, by assessing the degree to which firms take an active approach to stakeholders and issues. This reveals the relation between sustainability and sustainable supply chain management at industry level, which represents meso-level analysis. Lastly, findings will be analysed at macro-level, by looking at the influence of the context of global, industry and local trends on SSCM.

Figure 1.1 Conceptual model (simplified)



Chapter 5 presents the findings on the relations between the concepts for the time period of 2000 to 2012. These are then analysed in terms of their future sustainability potential to ultimately reveal whether there is a business case for SSCM in the apparel industry. Lastly, chapter 0 closes off with the theoretical and managerial implications of findings, and opportunities for future research.

1.3. Relevance

This research is relevant for a number of stakeholders. Firstly, academia will benefit from the findings on the factors that affect the business case for CSR and the role of business models in realizing a sustainable industry. Also, this research contributes to a better understanding of the concept of SSCM in general and for the apparel industry in specific, as it covers the social and economic dimensions of SSCM, the relation with supply chain governance and its effect on sustainable competitive advantage. Secondly, this research can be valuable to businesses, as they are increasingly scrutinized on more responsible supply chains. Insight in the factors that influence the business case for SSCM, can help firms to define more effective strategies and business models. Possibly, this will help them to address the many sustainability issues that are still present in the global apparel supply chain. In addition, an understanding of how current business models would operate in the world of 2025 guides managers in the decision on what changes are needed for their business to survive in the long term. Lastly, NGOs can use the information in this research to gain more insight into the role of business models in solving sustainability issues (e.g. increasing minimum wages). This will help them in giving better advice to companies, who ultimately need to decide whether they will merely stay in fashion or adopt the new dresscode of sustainability.

2. Literature Review

This chapter aims to give an answer to sub-question 1 and discover what is meant with sustainable supply chain management. It starts with an overview of the general sustainability (section 2.1) and supply chain management literature (section 2.2). After that, a more detailed review of the literature on sustainable supply chain management follows (section 2.3), which zooms in on the definition, theoretical framework, drivers and barriers, and practical implementation of the concept. Lastly, the state of affairs and challenges in research are discussed (section 2.4).

2.1. Sustainability

2.1.1. Definition and concept

Sustainability has been explored from a variety of academic perspectives. One of the mainstream concepts used for sustainability in a business context is corporate social responsibility (CSR). This has been well researched by Carroll (1991) who describes that it constitutes of economic, legal, ethical and philanthropic responsibilities. Debates about the definition of CSR continue however, because it is difficult to lay down such an interactive and dynamic concept. Nowadays it is divided into relevant themes such as business ethics, stakeholder theory and the triple bottom line. Where the latter entails the balancing act of companies to reach economic prosperity, environmental quality and social justice (Elkington, 1998). There are examples where companies that operate at the intersection of these three interfaces achieve higher sustainable returns. At the same time, there are findings that do not support this proposition. This is mainly because of a lack of validity and a mixture of methods used to investigate the relationship (Perrini, Russo, Tencati, & Vurro, 2012).

The past two decades saw a surge of various stakeholders, like customers, shareholders, non-governmental organizations (NGOs), public authorities, trade unions and international organizations, who hold multinational enterprises (MNEs) responsible for the effect of their activities on society and the environment (Andersen & Skjoett-Larsen, 2009). For example, customers boycott products that were produced under environmentally harmful conditions. Also, institutions such as the OECD, UN, EU and ISO increase regulation for responsible business. These regulations go beyond a company's direct operations and extend into for example the supply chain and the overall effect of business on society and the environment (Maloni & Brown, 2006). Related to this is the discussion on the extent to which businesses can be held responsible for certain actions. It is especially difficult, when looking at the supply chain of MNEs to determine where their sphere of influence stops (Amaeshi, Osuji, & Nnodim, 2008). Consequently, firms increasingly formulate strategies for sustainability.

2.1.2. Strategy for sustainability

Traditionally, firms adopt one of the three generic corporate-level strategies defined by Porter (1985):

1. *Cost-leadership:* low cost, basic goods, economies of scale, exploit resources.
2. *Differentiation:* best performer, targeting a need, uniquely positioned, premium price.
3. *Focus:* exploit a niche market, tailored products or services, either through cost-leadership or differentiation.

Firms achieve competitive advantage by offering lower prices or being more unique than competitors. According to Porter, firms should either opt for a cost leadership or a differentiation strategy, which they can then combine with a focus strategy.

Nowadays, firms increasingly adopt differentiation strategies for sustainability, sometimes in combination with a focus on a specific product, market or customer segment. The truth is, sustainability has entered the agenda of CEOs at least since Price Waterhouse Cooper's CEO survey in 2003 and continues to grow in importance nowadays (PwC, 2011). Numerous CEOs have designed a sustainability strategy and support the business case for CSR, or the underlying rationale to adopt sustainable practices. Over the years, many justifications for CSR have been formulated. There is no single argument of how CSR improves firm performance (Carroll & Shabana, 2010). A business case for CSR is composed of all arguments and is presented in literature in four types (Kurucz, Colbert & Wheeler, 2008):

1. **The classical business case:** sustainability is undertaken based on a pure profit motive (inactive).
2. **The defensive business case:** sustainability is used to prevent financial losses (reactive).
3. **The strategic / moral business case:** sustainability is integrated in the long term strategy of the firm for competitive advantage (active).

4. **The societal business case:** sustainability as a tool for synergistic value creation, changing mind sets and innovation (proactive).

Generally, the business case for CSR is presented in terms of its direct effect on firm financial performance. Type 1 and 2 represent this narrow view, where sustainability leads to cost and risk reduction, and reputation and legitimacy benefits. The broad view of the business case on the other hand, is more beneficial and looks at both the direct and indirect relation between CSR and firm performance. As represented by type 3 and 4, this allows firms to leverage opportunities for competitive advantage and create win-win relations with stakeholders, next to the benefits gained from the narrow view. The broad view boosts the acceptance of the business case for CSR, in that it recognizes that the relation between CSR and firm financial performance as complex and dependent on mediating variables and situational factors. Moreover, it explains the inconsistent findings of studies on financial performance and sustainability (Carroll & Shabana, 2010).

The complex relation between CSR and firm performance has also been identified by other authors. They classify firms into the degree to which they take an active CSR approach, which depends on their moral attitude and responsiveness to stakeholders and issues (Van Tulder & Van der Zwart, 2006; Maignan, Hillebrand & McAlister, 2002). Table 2.1 shows the dominant transition trajectories firms undergo when they move from one business case to the next. As can be seen, this depends both on the interaction of internal and external dynamics as well as firms' moral attitude. A typical transition trajectory starts with the first phase of *activation*, in which firms move from the first business case, where they take an inactive approach focused on efficiency and compliance, to the second business case, where risk management prevails and firms take an opportunistic, short-term and outside-oriented approach. In the second phase of transition, *internal alignment*, firms move towards the third business case, in which they have the internal drive to do good and ensure health, safety and environmental standards by integrating CSR in their strategies. The last phase of transition is *external co-alignment* and constitutes the shift to the fourth business case, where through a proactive stance, the firm focuses on creating societal value. Here CSR is fully integrated into the business model and firms take a long-term approach to issues.

Table 2.1 Dominant transition trajectories of CSR approaches

Responsiveness		Moral attitude	
		Liability	**Responsibility**
	Internal	Inactive	Active
	External	Reactive	Proactive

Source: Van Tulder, 2009

Often firms have good intentions, but the actual implementation of sustainability strategies is lacking. There seems to be a discrepancy between the wish to become, and the reality of being sustainable. This lack of a business case for CSR, may stem from the fact that the environment in which firms operate does not recognize the benefits from the broader business case (Williamson et al., 2006). Hence, firms should be aware that their strategies for sustainability are influenced by mediating variables and contextual factors. The above transitions are influenced by numerous interacting and uncertain factors, which makes change often a process of learning-by-doing or doing-by-learning (Loorbach, 2007). Thus, it can well be that during this process, CSR does not always benefit firm performance.

Therefore, Carroll & Shabana (2010) propose to take a contingency perspective when studying the relationship between CSR and firm performance. This will provide insight into which CSR activities address both firms' financial goals and societal needs. Also, it can reveal the critical points at which the system changes and sustainability actually becomes an integral part of the business world. These so-called 'tipping points' are likely to come about if strategies for CSR are complemented with business models for sustainability. Where business models constitute the value proposition of the firm and provide managers with practical decision tools and activities through which they can actually implement their strategy (Van Tilburg et al., 2012). Only then will firms pursue CSR activities supported by stakeholders and can there be a business case for CSR.

2.1.3. A business model for sustainability

In order to understand *how* firms can achieve value creation through sustainability, this section will look into the concept of the business model. Especially, because this influences the operationalization of functional areas such as supply chain management, which in turn affects the transition to a more sustainable supply chain at industry level.

Business model definition and concept

The business model concept first appeared in the 1990s with the surge of the internet. Despite the recent increase in popularity, authors have so far been unable to agree upon a common definition or accepted theories that support it. In an attempt to come to a better understanding, Zott, Amit & Massa (2011) conducted a literature review in the e-business, strategy and innovation management disciplines.

They found that e-business literature mainly defines generic business models and presents several business model typologies, using elements such as: value (e.g. value stream, customer value, value proposition), finance (e.g. revenue streams, cost structures), and relationships with partners (e.g., delivery channels, network relationships, logistical streams, infrastructure) (Zott, Amit, & Massa, 2011). Strategy literature, on the other hand, emphasises the business model as a tool for firms to redefine value creation, for example in the context of the digital economy they can result in economic value creation, whilst, in relation to deep poverty and societal wealth improvements, new business models can create social value (Thompson & MacMillan, 2010). To achieve that, business models typically span firm-boundaries and involve partners in a networked setting (Amit & Zott, 2001). In addition, business models can also be a source of competitive advantage: "a successful business model presents a better way than the existing alternatives … it may completely replace the old way of doing things and become the standard for the next generation of entrepreneurs to beat" (Magretta, 2002, p. 4). As shown by empirical studies, business models can function as independent variables that lead to higher firm performance, while being moderated by the environment (Zott & Amit, 2007).

It is important to note the conceptual difference between strategy and business models. Where the latter actually complement a firm's product strategy (Zott & Amit, 2008). Meaning, "a business model is like a blueprint for a strategy to be implemented through organizational structures, processes, and systems" (Osterwalder, Peigneur et al., 2009, p. 14). Another distinction is that strategy is often associated with competition and capturing value, whilst business models emphasize cooperation, partnership and joint value creation (Magretta, 2002). Overall, strategy literature has conceptualized business models mainly in terms of activities or activity systems. Lastly, innovation management literature perceives business models as a way to realize the commercial potential of a specific technological innovation (Chesbrough & Rosenbloom, 2002) or as a subject of innovation (Mitchell & Coles, 2003). This is the case for open innovation, where firms can gain new ideas for business models by crossing their boundaries to leverage both internal and external ideas (Chesbrough, 2003). Increasingly, business model innovation is seen as crucial for firm performance as will be explained below (Zott, Amit, & Massa, 2011)

Summarizing their findings, Zott et al. (2011) defined four common themes amongst the different streams of literature. Firstly, the business model is a new unit of analysis that spans or bridges traditional units of analysis like the firm and network. Also, studies take a holistic perspective of how business is conducted, rather than a mere functional approach through product market strategy, marketing, or operations. Thirdly, there is a focus on the *how* of doing business, as opposed to the what, when or where. Lastly, research has shifted to value creation for all business model participants, from an exclusive focus on value capture. This translated in the definition of a business model as: "a system of interconnected and independent activities that determine the way the company 'does business' with its customers, partners and vendors. In other words, a business model is a bundle of specific activities – an activity system – conducted to satisfy the perceived need of the market, along with the specification of which parties conduct which activities, and how these activities are linked to each other." (Amit & Zott, 2012, p. 42).

A useful conceptualization of this definition is presented by Osterwalder, Pigneur et al. (2009) in their book 'Business Model Generation'. According to them, a business model is composed of nine building blocks: 1. Customer segments, 2. Value propositions, 3. Channels, 4. Customer relationships, 5. Revenue Streams, 6. Key resources, 7. Key activities, 8. Key partnerships and 9. Cost structure. They visualize this with the Business Model Canvas, which is nowadays the most often used framework by businesses to analyse their business model, see Appendix

Appendix 1. Together with the above definition, these elements are a comprehensive summary of the business model components presented in academia so far and form fruitful input for business model innovation during a firm's journey towards sustainability.

Business model innovation and sustainability

In a global survey, the Economist Intelligence Unit (EIU) found that the majority of 4000 participating senior managers (54%) preferred new business models over new products or services as a source for future competitive advantage. "The overall message is clear: how companies do business will often be as, or more important than what they do" (EIU, 2005, p. 9). Why is this the case? Firstly, business model innovation is an underutilized source of future value. Secondly, it leads to a sustainable competitive advantage, since competitors find it more difficult to imitate an entire novel activity system than a single product or process. Thirdly, business model innovation can be such a powerful tool for competitive advantage, that managers need to be attuned to competitors' moves (Amit & Zott, 2012).

Several studies have looked into the role of business model innovation for corporate transformation. They find that if a firm wishes to change its business model, it can adjust the 'who', 'what', 'when', 'why', 'where', 'how', or 'how much' involved in providing products and services to customers (Mitchell & Coles, 2003). Similarly, Johnson et al. (2008) propose that business model innovation involves a change in the firm's value proposition, target customers, product and service offering, resources (such as people, technology or equipment), revenue model, cost structure, processes, rules and norms. Although these broad definitions of business model innovation are useful, because they allow to investigate feedback loops, others suggest that for the purpose of clarity and simplicity, it may be better to focus on the activity system as the level of analysis, and on the activity as the unit of analysis for business model innovation (Amit & Zott, 2012).

In general, business model innovation can be achieved by adding novel activities, linking activities or changing one or more parties that perform any of the activities. There are three design elements of a business model that firms can adjust accordingly: 1. *Content* (what activities are performed), 2. *Structure* (how are activities linked and in what sequence), and 3. *Governance* (who performs which activity). These elements can be highly interdependent. In addition, there are four value drivers for business models that can improve the potential for value creation:

1. *Novelty*: introduce new elements related to activities, actors and/or linkages.
2. *Lock-in*: increase switching costs to retain activities and actors.
3. *Complementarities*: value adding activities by interdependent business model activities and actors.
4. *Efficiency*: cost savings through interconnections between activities in the business model.

Together, these drivers can create significant synergies (Amit & Zott, 2001). Next to that, there is an important interdependency between business models and revenue streams, which are defined as "the specific ways a business model enables revenue generation for the business and its partners" (ibid.). Thus, it is important for firms to select the right revenue model that will complement their business model.

It is questionable if the above activity approach will be effective in the future scenario of sustainability. As found by Nidumolu, Prahalad & Rangaswami firms that wish to become environmentally sustainable will have "to find novel ways of delivering and capturing value, which will change the basis of competition." (2009, p. 60). They identified several opportunities such as new delivery technologies which will change the value chain, combining digital and physical infrastructures, or changing products into services. Thus, new business models require a new approach by the firm, but for it to thrive, a shift in the whole industry is necessary. As posited by Johnson et al., there is "no point in instituting a new business model unless it is not only new to the company, but in some way game-changing to the industry or market." (2008, p. 58). This is supported by the study of Johnson & Suskewicz (2009), who found that large infrastructural change, like the transition from fossil fuel economy to clean tech economy, involves a shift from individual technology development to the creation of new systems. In that context, the business model is a framework that guides thinking about that change.

In conclusion, firms are increasingly defining strategies for sustainability. They display strategic intent and support for the business case of sustainability. However, for them to achieve strategic realization, they need a business model for sustainability. Through business model innovation at system level, firms may be able to change the status quo of sustainability in their industry and thereby achieve long-term competitive advantage.

2.2. Supply Chain Management

Supply chain management plays an important role in the transition towards more sustainable business models. Nowadays, most any company acknowledges the strategic importance of supply chain management. Due to increased (global) competition, many companies outsource non-core activities to developing countries, product lifecycles become shorter and just-in-time delivery is key in staying ahead of competition (Andersen & Skjoett-Larsen, 2009). No longer do companies merely purchase products as inputs for lowest price and cost efficiency purposes. They have moved towards supply chain management, which involves “the systematic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole.” (Mentzer, et al., 2002, p. 18) (Kraljic, 1983). This definition emphasizes cross-functional cooperation among all actors in the chain for their long-term existence. Such an approach requires a more mature purchasing function that cares about customer value. Thereby, supply chain management becomes a strategic component of the organization (Van Weele, 2010).

Supply chain configuration is part of the business model design process. Several authors have tried to define it in terms of the number, role and location of the actors who perform a certain part of the process. That is, supply chains take on different shapes based on the number of tiers, the number of actors per tier and geographical dispersion. These dimensions are also known as the degree of horizontal diversification, so the number of branches a firm is active in and the degree of vertical integration, so the part of the supply chain that a firm controls in-house. Where firms can integrate backward, i.e. into the industry that delivers inputs, or forward, i.e. into the industry that distributes its products. Lastly, the degree of internationalization, so the number of global or local suppliers (Harland, Lamming, & Cousins, 1999). Together, these elements determine the degree of power and control a firm has over the supply chain. Where a low degree of diversification, high degree of vertical integration and low degree of internationalization provide high supply control.

In the 1990s, there was strong growth in the number of mostly buyer-driven ‘global commodity chains’. In such chains, so-called lead firms - often large, powerful retailers located in developed countries -, have a broad supply base to produce and distribute products at a global level. They directly coordinate the manufacturing process across borders without owning the firms that create their end product. Thus they are rightly named ‘manufacturers without factories’ (Gereffi, 1999) or ‘hollow firms’ (Van Tulder & Van der Zwart, 2006). They gain power due to their position in the market and control over key resources. As a consequence, they are able to dictate what is produced where and can influence other parties’ interests. Moreover, they create entry barriers for newcomers and exit barriers for existing actors in the supply chain (Van Tulder, 2010). Thus, supply control can also take place in chains with a high degree of diversification, low degree of vertical integration and high degree of internationalization.

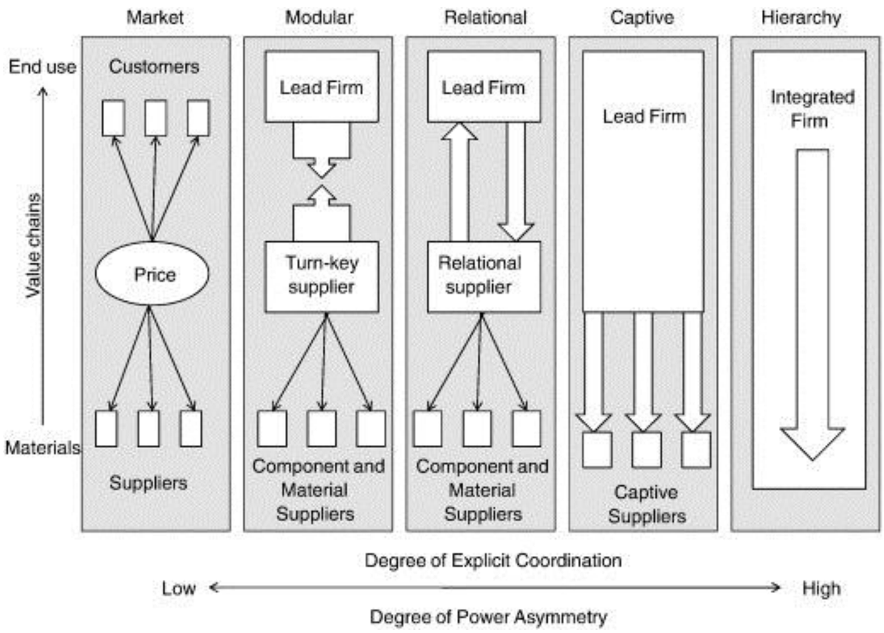
The flip side of this is however, that the evolution of ever more global supply chains and competition comes with a larger responsibility for multinationals (Emmelhainz & Adams, 1999). A common question in that respect is whether the more powerful in an economic relationship, e.g. a multinational buyer, should take responsibility for the less powerful, e.g. a supplier (Reed, 1999). On the one hand, this would mean that buyers should take responsibility for suppliers, so by exerting power over a supplier from a moral duty perspective they can require responsible business practices. From a consequensialist perspective however, multinationals may exert power for profit maximization and require low costs at the expense of responsible business practices (Amaeshi, Osuji, & Nnodim, 2008). The risk here is however, that too high requirements can lead to lower quality, less investments, lack of innovation, unemployment and industry decline (Crane & Matten, 2004). Therefore, Amaeshi et al. (2008) plead, it is theoretically not appropriate to hold an individual company responsible for the acts of another company. So, the powerful companies in a relationship should only exert influence over their direct suppliers, because they have a direct consequence for the other company. Then, they assume, through ripple effects the whole supply chain will gradually adopt more responsible business practices as well.

Despite theoretical objections, the business model of global commodity chains described above, seems rather successful successful in practice. Still, one of the main challenges is the difficulty to govern activities effectively, which differs per differs per chain configuration and industry (Gereffi, 1994). When studying global industries and more specifically the specifically the apparel industry Gereffi et al. (Gereffi, Humphrey, & Sturgeon, 2005) discovered three industry features

features determine which type of Global Value Chain (GVC) governance companies use, namely: (1) the complexity of transactions, (2) the ability to codify transactions, and (3) the capabilities in the supply-base. As depicted in

there are five governance types, based on high or low scores on each of the three industry features, which translates into a *market type*, where the switching cost between suppliers is low; a *modular type*, where suppliers make modular products or full packages to a customer's specifications; a *relational type* with complex interactions between buyer and seller based on mutual dependence, asset specificity and tacit knowledge; a *captive type* where suppliers have low competence, so that lead firms create transactional dependence and lock-in situations, making it difficult for suppliers to switch; lastly, a *hierarchy type* is one in which a firm engages in vertical integration by bringing production in-house.

Figure 2.1 Five Global Value Chain governance types



Source: adopted from Gereffi et al.,2005

The framework shows the nature and content of linkages between the lead firm and actors in the supply chain. GVC governance allows firms a certain degree of coordination over a variety of suppliers and in combination with the power asymmetry that arises, enables firms to realize effective cost reductions and handle asset specificity in chain management. What is lacking in this framework however, is a consideration of the role of each individual actor that is embedded in the supply chain. Moreover, supply chains are dynamic, so they differ per industry, period and place. So, when implementing new practices such as sustainability, it is important to know the specific composition of the supply chain in order to choose the best governance approach. Now that supply chains become more interconnected networks of actors, leading to higher levels of uncertainty and complexity, this is even more relevant.

Therefore, Frederick & Cassill (2009) proposed that the vertical governance as stipulated by GVC can be simultaneously studied with the horizontal governance structure of industrial clusters. Industry clusters are geographic concentrations of interconnected companies and institutions in a related field that both compete and cooperate (Porter, 1998). They create a competitive advantage through co-location and support from institutional actors. Such research will provide insight into how the lead firm and institutional actors contribute to local development. Vurro et al. (2009) took another approach and investigated which network governance models fit which supply chains when implementing sustainability. They find that supply chain density, so the interconnectedness of actors along the value chain and centrality of the focal firm influence companies' collaboration to implement sustainability. However, future research they suggest should also include other factors such as uncertainty, asset specificity, interdependence and institutional context.

Concluding, when defining a business model for sustainability, it is important to strategically configure the supply chain in terms of horizontal diversification, vertical integration and internationalization. While taking into account interaction between governance structures, industry dynamics and individual actors.

2.3. Sustainable Supply Chain Management

In order to better understand the aim of this research, it is necessary to analyse the concept of sustainable supply chain management (SSCM). Also, it is useful to know how firms implement sustainability into the supply chain and the current academic discussions with regards to SSCM. Therefore, a systematic academic literature search was conducted amongst the ten top academic journals specialized in the fields of international business (*Academy of Management Review, Academy of Management Journal, Journal of International Business Studies, Strategic Management Journal*), corporate social responsibility (*Journal of Business Ethics, Business & Society*) and supply chain management (*Journal of Supply Chain Management, Journal of Purchasing and Supply Management, Journal of Operations Management, Journal of Business Logistics*). The 10 most cited and/or most relevant articles were found by using the keywords: sustainable supply chain management, purchasing social responsibility, responsible purchasing, socially responsible buying, sustainable procurement, CSR in the supply chain. Additional articles were consulted, wherever these were referred to in the top 10 articles and significantly contributed to defining the concept of SSCM (section 2.3.1), the theoretical basis (section 2.3.2), related barriers and drivers (section 2.3.3) and practical implementation of SSCM (section 2.3.4).

2.3.1. SSCM defined

In the same period that supply chain management became more prevalent, several academic disciplines started to look into the role of sustainability in that same field. The result is a multitude of conceptualizations that are all somewhat related as shown in Table 2.2. Where some developed the concept from a purchasing perspective and named it socially responsible purchasing or buying (SRB), which entails the practice of procuring goods while considering their impact on society (Maignan, Hillebrand, & McAlister, 2002). Others approached the concept from the field of operations and logistics, for example in the form of closed-loop supply chains, where the elimination of waste is key in the process of becoming more sustainable. Or reverse logistics, which entails “the process of planning, implementing, and controlling the efficient, cost-effective flow of raw materials, in-process inventory, finished goods and related information from the point of consumption to the point of origin for the purpose of recapturing value or proper disposal” (Rogers & Tibben-Lembke, 1999). What became clear from this diversity of definitions, was the need for a definition of sustainable supply chain management (SSCM) integrating both supply chain and sustainability literature on the topic.

A first attempt is made by Carter & Rogers (2008, p. 368) who reviewed both sustainability and supply chain literature to construct a coherent definition of sustainable supply chain management as: “the strategic, transparent integration and achievement of an organization’s social, environmental, and economic goals in the systematic coordination of key inter-organizational business processes for improving the long-term economic performance of the individual company and its supply chains.” Thereby addressing the triple bottom line and supporting factors such as risk management, transparency, strategy, and culture. These elements are also reflected in the definition given by Seuring & Müller (2008, p. 1700) who identify SSCM as: “the management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e. economic, environment and social, into account which are derived from customer and stakeholder requirements.”

Both definitions are step forward from the logistics perspective that has dominated SSCM research so far. They take a more integrated view of SSCM by combining it with the triple bottom line perspective. So, rather than merely focusing on the environmental dimension the definitions also include economic and social dimensions. Taking a closer look, reveals that the definitions also differ from each other. Where Carter & Rogers (2008) mainly see long term economic performance as a driver for SSCM, Seuring & Müller (2008) add external pressure from stakeholders as crucial in driving firms to adopt SSCM. Moreover, the definitions differ in their ultimate goal, where the latter perceives SSCM as a way to achieve the larger objective of sustainable development, rather than merely a way to achieve long-term economic performance of business. This difference is also observable among the definitions given by firms in Table 2.2, where IKEA for example defines sustainable supply chains as a way to achieve sustainable competitiveness, whilst Walmart sees it as a way to contribute to the sustainable development of suppliers.

Table 2.2 Definitions of Sustainable Supply Chain Management in academia and business

Definition	Author, year		Definition	Firm, year	Source
"We define sustainable supply chain management as the management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e., economic, environmental and social, into account which are derived from customer and stakeholder requirements."	Seuring & Muller, 2008, p.1700		"Our vision of sustainability remains the same as it always has: to bring people, planet and profits into balance. For Nike, this is not about trading one off against the other. It's about recognizing that sustainability is a route to future profitability, and that a sustainable economy or business model must lead to equitable supply chains: if we attend to the needs of the environment or profits, but not supply chains, we will not have succeeded."	Nike, 2012	CR Report 2011
"We define SSCM as the strategic, transparent integration and achievement of an organization's social, environmental, and economic goals in the systemic coordination of key interorganizational business processes for improving the long-term economic performance of the individual company and its supply chains."	Carter & Rogers, 2008, p. 368		"IKEA is a production-oriented company... We cooperate with suppliers to spread best practices in various areas to increase their ability to take on more social and environmental responsibility. For a supplier, investments in working conditions and the environment often lead to more orders, better productivity and improved profitability, thereby improving competitiveness."	IKEA, 2011	The IKEA Group approach to sustainability
"Purchasing activities that meet the needs of the ethical and discretionary responsibilities expected by society'	Carter & Jennings, 2004, p. 151		"As the world's largest retailer, we strive to positively impact global supply chain practices by consistently raising our own standards and partnering with other retailers, brands, suppliers, NGOs and government leaders to find innovative and sustainable ways to improve working conditions. Through this collaboration we work to help build ladders to a better life in the countries we source from."	Walmart, 2012	Global Responsibility 2012 www.walmartstores.com
"the process of planning, implementing, and controlling the efficient, cost-effective flow of raw materials, in-process inventory, finished goods and related information from the point of consumption to the point of origin for the purpose of recapturing value or proper disposal."	Rogers & Tibben-Lembke, 1999, p.2		"The Footprint Chronicles® examines Patagonia's life and habits as a company. The goal is to use transparency about our supply chain to help us reduce our adverse social and environmental impacts – and on an industrial scale. We've been in business long enough to know that when we can reduce or eliminate a harm, other businesses will be eager to follow suit."	Patagonia, 2012	www.patagonia.com
"Green supply refers to the way in which innovations in supply chain management and industrial purchasing may be considered in the context of the environment."	Green et al., 1996, p. 188				

Still, not all elements crucial to SSCM seem covered by the two definitions. For example, SSCM does not necessarily stem from external stakeholder pressures only, since the owner of a company can also consciously choose to adopt SSCM, because this is in line with his or her personal values for sustainability. Also, some firms adopt SSCM out of necessity, because their raw materials are depleting and they need to reconceptualize their supply chain to secure long-term existence (Pagell & Wu, 2009).

Summarizing, despite improvements in defining the concept of SSCM, more theory-building can support the development into a more mature formulation of sustainable supply chain management. Therefore, the following section will elaborate on a range of theories that have been consulted to come to a rationale for SSCM.

2.3.2. A theoretical basis for SSCM: Organizational theories

As already mentioned, supply chain management has become a strategic function within the global business environment. The following will provide some of the theoretical underpinnings for the strategic value of sustainable supply chain management. After consulting strategic, supply chain and sustainability literature it becomes clear that in general four organizational theories can explain the integration of more sustainable behaviour in the supply chain. Insights can be used in this research as underlying factors or contingencies that have contributed or hampered a shift to a sustainable apparel supply chain.

Transaction Cost Economics

Firstly, transaction cost economics (TCE) posits that firms attempt to acquire scarce and valuable resources at low cost, in a stable manner (Williamson, 1975). Transaction costs cannot be explained by market dynamics. They can be direct costs, for example search costs when firms want to contract new suppliers, or coordination costs to manage relationships with suppliers. Or they can be indirect costs such as expenses stemming from inadequate governance systems e.g. when organizations behave unethically this results in extra regulation or reporting (Williamson, 1993). In that sense, TCE can explain the shift to more responsible governance structures in supply chain management.

Additionally, TCE can be argued to influence the implementation of sustainability in the supply chain in the short-term. For example, firms can have policing and enforcement costs through supplier certification and audits, so as to ensure suppliers do not act opportunistically and adhere to their sustainability standards. Or firms can have search and information costs, for example when they need to assess the environmental features of a product, which may not be transparent e.g. organic cotton. When such products acquire recognition in the market, through more consumer demand, reporting and certification costs will decrease, as they are spread amongst more players in the supply chain. As sustainable products become mainstream, also search and information costs will reduce. So that sustainable sourcing has now become the new equilibrium, since all firms adopt sustainable practices, in response to changing regulation and stakeholder demands. If the respective products are commodities it is expected that buyer-supplier relations will transition from more collaborative, back to leveraged ones as information assymetries fade away and suppliers become undifferentiated again (Pagell et al., 2010). Data shows, however, that TCE can only explain part of sustainable sourcing, as firms also engage in collaborative relations with suppliers of commodity goods over long periods of time. Not targeting information assymetries, but rather gaining long-term structural benefits, which can be explained by the following theory.

Resource-Based Theory: Resource-Based View and Dynamic Capabilities

The second theory is resource-based and also provides some of the reasons for more sustainable SCM. One of the theories is the resource-based view (RBV), which explains business behaviour from the perspective of the external environment, in which resources are heterogeneous across firms and that heterogeneity is long lived. Hence, firms can obtain sustainable competitive advantage by selecting those resources that can improve their efficiency and effectiveness (Barney, 1991). The supply chain can be seen as such a resource, because competitors find it difficult to imitate due to the lack of transparency in terms of business transactions between all the different actors. Adding sustainability to that context, makes it even more difficult to imitate and thus more valuable. Since buyer and supplier engage in inter-organizational learning about environmental and social activities, or may have made asset-specific investments for SSCM (Carter & Carter, 1998).

Also Hunt & Davis (2008), who looked at the relation between resource-based theory and supply chain management, found that this can take on the form of a unique set of purchasing strategies. Such as a close relationship between a buyer and supplier, which translates into high levels of trust and a deeper understanding of what is expected in terms of sustainability performance (Pagell et al., 2010). In turn, this positively impacts supplier performance, reduces operating costs (Carter, 2005), reduces the carbon footprint and improves the quality of life of the people in the supplier's community (Pagell et al., 2010). Complementary to RBV is the dynamic capabilities theory, which proposes that changes in the external environment and stakeholder demands trigger firms to build unique and dynamic capabilities. These are "a firm's capacity to integrate, build and reconfigure internal and external resources using organizational processes to respond to changes in the competitive environment and to design new value creating strategies" (Teece et al. 1997, Eisenhardt & Martin, 2000). Such capabilities are path dependent, socially complex and tacit, therefore they are unique to the organizations involved. An example of such a capability is the deployment of regional supply chain experts trained in social and environmental issues and with knowledge of local culture, who can identify supplier violations and quickly develop strategies for suppliers to reach compliance again. These experts allow a firm to react more adequately to changes in regulation and thereby reduce reputational damage and grievances (Reuter et al., 2010). Again, this theory can only explain part of the reasons why firms engage in SSCM, since some practices such as supplier development may be only undertaken for short-term reasons. Thus, Pagell et al (2010) suggest there is a hybrid theory, combining the practices for long- and short-term purposes.

Stakeholder theory

The third theoretical framework of stakeholder theory can serve as a hybrid. As Freeman (1984, p.46) asserts, "A stakeholder in an organization is (by definition) any group or individual who can affect or is affected by the achievement of the organization's objectives". Important in this regard is the stakeholder's power and legitimacy to claim for example sustainability standards. Stakeholders can stimulate firms to integrate sustainability in their supply chains (Russo & Perrini, 2010). For example, more regulation on transparency will push firms in the direction of more SSCM, otherwise they will be fined or risk reputational damage. Or NGOs can request companies to responsibly treat the waste they produce in their supply chain. Consequently, firms engage in collaborative relations for short-term purposes of catching up with new regulations, which can lead to relation-specific knowledge that in the long-term can enhance the firm's competitive advantage. In that context, supply chain managers combine the short-term cost reductions of traditional supply chain management with the long-term beneficial opportunities of SSCM (Pagell et al., 2010).

Population Ecology

Lastly, continuing on the dynamism of the environment, population ecology emphasizes the limit to environmental resources and consequently the number of populations such environments can bear. In that context, firms are expected to control limited resources for purposes of survival (Hannan & Freeman, 1977). This means that firms need to transform their supply chain structures in the face of environmental and social changes, such as raw material scarcity and demands for improvements in human rights. In response, firms are expected to increasingly engage in practices related to closed-loop supply chains or supplier diversity. Those firms able to adapt will have a stronger competitive position in the market in the long-term (Carter & Rogers, 2008).

All in all, these four theories contribute to the theoretical underpinnings and definition of SSCM. The combined landscape of strategic, supply chain and sustainability literature further establishes the concept in academia. Considering the variety of sometimes contradicting explanations and hypotheses these theories develop, the field seems ready for empirical testing, so as to develop into a formal theory of strategic sustainable supply chain management (Campbell, 1974). The next sections will shed light on the research conducted so far and relevant findings that contribute to the development of SSCM.

2.3.3. An empirical basis for SSCM: Drivers and barriers

Several authors have investigated the drivers and barriers of SSCM, in order to understand the underlying motivations and obstacles for firms to make the transition towards more sustainable supply chains. Using existing definitions and associated theories they identified the main drivers and barriers as shown in Table 2.3. Many of the drivers can be perceived as barriers and vice versa. For example, regulations to implement social standards in the supply chain can be received by firms as a welcome incentive to change their approach to supplier selection to ensure more long-term supplier performance. On the other hand, regulation can also be seen as a limitation in the supplier selection process, because it comes with additional costs to check whether a supplier adheres to the social standards (Mefford, 2011). Next to that, drivers and barriers can originate both internally or externally to the supply chain. Interestingly, research has found that external factors have a larger influence on the firm than internal factors (Walker et al., 2008). The following will describe in more detail how firms have been prompted or hindered to adopt sustainable supply chain management practices.

Internal drivers and barriers

As was described in section 2.3.2, SSCM is used as a tool for competitive advantage by CEOs, who formulate sustainability strategies and are motivated by one of the types of business case that support it. Firstly, companies face fewer costs and improve efficiency through lean and zero waste SSCM practices, which automatically translates into higher profit margins. Secondly, SSCM can be used to prevent financial losses, in that firms select suppliers on criteria such as riskiness and closely monitor them, so that SSCM functions as a risk management tool. A third driver for SSCM is the long-term survival of the firm and the intrinsic morality to do good. Fourth, as proposed by Porter & Kramer (2006), firms could select those social issues that form an opportunity for them to create shared value. When taking a strategic CSR approach, companies can transform their value chain social impacts into activities that benefit both society and business. From this, it seems SSCM is financially attractive, however, literature has so far presented opposing findings as to whether SSCM is ultimately beneficial.

On the one hand, it can be argued that SSCM leads to more effective production processes and a more productive workforce, since workers have more voice in the process, can execute multiple tasks, are more satisfied and work in a safer and healthier environment (Mefford, 2011). Moreover, information sharing between supplier and buyer improves planning and coordination concerning input and output. So that bottlenecks and overtime become less prevalent, thereby reducing operating costs (Locke & Romis, 2007). Also, relational exchanges and an increased responsibility for suppliers will stimulate product and process innovation and value creation. So that firms gain a competitive edge when for example suppliers are proactive in green supply chain practices (Handfield et al., 2002).

On the other hand, SSCM can also be seen as a financial barrier, because it leads to increased direct costs in terms of the supplier selection process, monitoring compliance with the code of conduct through costly audits, training suppliers, aligning information sharing and possible shared investments in equipment or management system changes (Mefford, 2011). Thus, companies are forced to trade-off short-term investments against long-term effects, like improved reputation, which are often difficult to quantify (Carroll & Shabana, 2010).

Nevertheless, firms are motivated to adopt SSCM, because it makes them less prone to reputation losses. On the one hand, this is because firms have introduced codes of conduct or environmental management systems which help them to manage supplier risk (Koplin, Seuring, & Mesterharm, 2007). Additionally, they face fewer customer boycotts, because it is less likely that their suppliers will be reported to engage in social or environmental harmful practices or that they experience stock outs (Seuring & Müller, 2008). Also, organizations that engage in SSCM will be perceived as more attractive by suppliers, customers, employees and shareholders, due to their interest for sustainable business behaviour (Carter & Rogers, 2008). On the other hand, like any sustainability claim made by a firm, those adopting SSCM are under closer scrutiny by stakeholders and therefore carefully need to manage their reputations.

This relates to a third driver, namely the role of organizational factors. Park & Lennon (2006) discovered that vendor monitoring and perceived top management support influence sourcing professionals' decisions for socially responsible buying (SRB). Where the former specifically helps them to consider human rights / employment factors, to which the latter adds attention for environmental factors in a buying decision. Additionally, Carter & Jennings (2004) found that top management leadership, a people-oriented organizational culture and the indirect effect of individual values on employee initiatives contribute to implementing purchasing social responsibility (PSR). However, no support was found for the effect on buying decisions from a buying policy, punishment system, special SRB department or specialist, and perceived ethics and social responsibility of peers. A reason for this is that at the time, SRB was a relatively new concept, so that few respondents knew what it consisted of and systems were maybe not yet successfully implemented. Moreover, the study was limited to 1000 US firms active in the apparel sector and was exploratory, so that the scale used in the survey may explain some of the insignificant results (Park & Lennon, 2006). Another study found that a lack of legitimacy for sustainable initiatives within the firm also hampers green supply chain management (Walker et al., 2008). All in all, studies differ on which organizational factors affect the adoption of SSCM, due to differences in conceptualization (PSR vs. SRB) scales, industries investigated and sample sizes.

Further zooming in on the internal barriers to adopt SSCM, three factors are frequently cited in the literature. Firstly, SSCM comes with higher costs, related to monitoring, evaluating, reporting and sanctions, as already briefly described above. This was also found by Walker et al. (2008), who discovered that internally, high supply chain transformation costs create a barrier to adopting green supply chain practices. A second factor that hampers firms is the increasing coordination effort and complexity that comes with SSCM, in that it requires intense supplier cooperation, in terms of training, information-sharing, and shared production or distribution processes. Moreover, now that supply chains are becoming more network-based, the complexity to govern all actors and activities in terms of sustainability grows. Management systems are put in place to ensure minimum environmental and social standard compliance, which in turn again leads to increased coordination. Thirdly, insufficient or lacking communication in the supply chain can act as a hurdle, since SSCM requires company-overlapping communication and training of purchasing and supplier staff (Seuring & Müller, 2008).

External drivers and barriers

Moving on to factors external to the supply chain, it is notable that especially changes in legislation have been identified as a major driver for companies to engage in SSCM (Seuring & Müller, 2008). Many countries are drafting stricter environmental rules and regulations and the risk of being fined when in violation with these laws forces firms to act more responsibly (Walker et al., 2008). Additionally, international legislation can also be a driver of change, for example the OECD Guidelines for Multinational Corporations, UN Guiding Principles for Business and Human Rights, ILO standards and ISO 26000, which stipulate that multinational organizations are responsible for upholding human rights wherever they operate.

However, Park-Poaps & Rees (2010) investigated the impact of stakeholder forces on supply chain management orientation and found no significant results for the influence of regulation on both a firm's intra-organizational commitment to fair labour conditions in the supply chain, and the inter-organizational management of labour issues in the supply chain. Possibly, because regulation as a driving force does not result in proactive standard setting, rather it encourages a compliance attitude to minimal standards. Moreover, stakeholder influence is limited due to the current lack of control, coverage, and uniformity of regulations for ethical labour management. Similarly, Carter & Jennings (2004) found no evidence for the effect of government regulation on PSR. On the other hand, a replication of their study did find support for regulation in promoting SSCM, which can be explained by the different, more government-driven business culture in Asia which was the context of that study (Salam, 2009). Taking regulation to the extreme, however, has been found to become a barrier to firms that wish to adopt more environmental supply chain practices (Walker et al., 2008).

Despite these findings, regulations from government and international organizations like the UN are also part of the a second external driver, namely pressure from stakeholder groups. This can also take the form of general public opinion or customer demands for good corporate citizenship. Often they are indirectly fed by publications and actions from NGOs, who bring to the light major societal issues for which companies are held accountable (Seuring & Müller, 2008). In response, firms underwrite the defensive business case and take measures to prevent financial losses from reputational damage (Van Tulder & Van der Zwart, 2006). Also, it can stem from competitors who increasingly adopt SSCM in their operations, so that through the bandwagon effect firms are stimulated to also adopt sustainability practices (Buysse & Verbeke, 2003).

A third driver is a firm's dependence on critical resources. Especially in the case of high resource dependence, SSCM can help firms to exercise more control over the access and delivery of inputs crucial for the production process. For example by engaging in supplier partnerships or joint ventures (Carter & Rogers, 2008). Fourthly, firms can be motivated by the opportunities stemming from societal needs. As these converge with their economic goals, they support the societal business case, in which they engage in win-win relations with stakeholders. On the other hand, as found by Walker et al. (2008), too little supplier commitment to sustainability can act as an external barrier, by making it difficult for firms to effectively manage sustainability in their supply chains.

Table 2.3 The drivers and barriers of SSCM

Drivers of SSCM*	**Barriers of SSCM**
Internal	***Internal***
Profit (type 1 classical business case)	Higher costs
Prevent financial losses / risk management (type 2 defensive business case)	Coordination effort or complexity
Competitive advantages / moral principles (type 3 strategic/moral business case)	Lack of legitimacy for sustainability initiatives
Innovation / value creation (type 4 societal business case)	
Organizational factors	Insufficient/lack of communication
Reputation loss	
External	***External***
External pressure from stakeholders (type 2 defensive business case)	Too little commitment of suppliers
Changes in regulation	Too little regulation
Bandwagon effect	
Resource dependence	
Societal needs (type 4 societal business case)	

Source(s): based on Park & Lennon, 2006; Porter & Kramer, 2006; Carter & Rogers, 2008; Seuring & Müller, 2008; Walker et al. 2008; Carroll & Shabana, 2010; Mefford, 2011
Note: *The sentences in brackets refer to the types of business case for sustainability described in section 2.1.2.

When researching drivers and barriers it is important to note that there is a large difference between SMEs and multinational corporations. For example, the effect of supply chain pressure was found to be significant for SMEs, in that including social and environmental requirements as preconditions to supply increases their motivation to engage in CSR (Baden, Harwood & Woodward, 2008). Also, for SMEs there are more specific barriers than those mentioned before, such as, a lack of financial and human resources, which make it difficult to implement CSR practices whilst fulfilling consumer's commercial demands. Moreover, for SMEs the adoption of CSR depends to a large extent on the owner's values and commitment, while this is less the case for MNEs where many other factors play a role (Perry, 2009). This is also why Pedersen (2009) found that SMEs require different tools and frameworks to implement CSR in their supply chains. Especially, since so far only 25% of SMEs have CSR activities in their supply chains, the majority of which were large SMEs.

What is noteworthy about the studies that investigated drivers and barriers, is that their methodologies are often case-based. With a focus on success stories or best practices, they tend to ignore that using such methods make their findings context-dependent and not valid in the long run. So far, only some studies have developed surveys, however, these often assess the perception and desired behaviour of respondents, rather than what is actually implemented. Hence, until now there has been a strong theoretical and conceptual approach to assess the drivers and barriers of SSCM. This can be partly explained by the phase in which the academic field finds itself, thus, more empirical research is needed for purposes of generalization.

In conclusion, studies differ in their findings concerning the drivers and barriers for SSCM. In general, competitive advantage, external pressure from stakeholders, reputation loss and organizational factors are found to be significant triggers for adopting SSCM. Whilst firms perceive higher costs, communication problems in the supply chain, and coordination effort or complexity as important obstacles to implementing sustainability in their supply chains. Several studies mention the need to investigate the effect of SSCM on the bottom line of suppliers. Moreover, more empirical research will contribute to the generalization of findings, especially when looking at different industries, across countries and across functions within the supply chain, and taking a longitudinal approach. Ultimately, this will provide insight into how firms can be motivated to adopt SSCM and how it can best be implemented, which will be touched upon in the current research.

2.3.4. SSCM implemented

Academia has also taken a closer look at the actual realization of sustainability strategies through supply chain management strategies and the operationalization of sustainable supply chain management tools and practices. This section will present general findings of SSCM strategies and a more detailed analysis of SSCM tools and practices.

General strategies for SSCM

In their literature review of SSCM, Seuring & Müller (2008) found that generally, firms adopt two types of strategies to respond to external pressure for more sustainable supply chains. Firstly, they can choose to green the supply process, by using supplier management to avoid risks and improve overall supply chain performance, for example through environmental initiatives such as recycling or evaluating suppliers based on social and environmental criteria. The second strategy is a product-based green supply, so supply chain management for sustainable products. For example by conducting a life-cycle assessment in cooperation with suppliers, to ensure product quality and performance, but also to gain insight in the operational process and possible environmental or social issues related to raw materials. The type of strategy firms choose depends on factors such as the degree of external pressure, supply chain composition and the industry in which they are active. Where the first strategy is more accessible and short-term focused, whilst the latter seems more complex and long-term. That is, it requires companies to consciously integrate sustainability into the core of their business model and often results in partnerships, because sustainable products require investments in the supply chain from several parties. The two strategies can both oppose and support each other, where the launch of an environmentally and socially sound product, such as organic cotton, can trigger the need to monitor supplier performance on those same dimensions. Whilst firms that start with supplier development for risk mitigation, can identify products in support of the triple bottom line as well (Seuring & Müller, 2008).

Mefford (2011) has also investigated how SSCM can contribute to the profitability of the firm through its effect on three business functions. Firstly, the production function will improve in terms of efficiency and quality, due to a move toward more lean and quality management practices, employee skills development and motivation are stimulated. As a consequence, SSCM reduces risk and will also contribute to the firm's financial function through a drop in the number of lawsuits filed against the company and more predictable cash flows stemming from better insights in production flows. This in turn, will support the firm's marketing function, so that through increased brand equity the firm becomes a favourable choice for customers. Thereby positively affecting stock market valuations and the number of sales. Eventually, this benefits both shareholders' returns on investment in the firm, but also other stakeholders such as employees, customers, the environment and community. This study, however, is based on theoretical reasoning, so the foregoing is merely a hypothetical scenario which needs empirical testing for validity purposes.

Another review by Pagell & Wu (2009), lists best practices that play a role in successful SSCM. Their sample consisted of 10 sustainable companies, regarded as excelling in sustainability expertise with respect to product design, internal operations, sourcing, service design, distribution and supply chain design. The factor commitment, was found to contribute to successful SSCM, so that noneconomic goals are internalized by the organization and considered important for growth. With measurement and reward systems linking employee performance to sustainable goals. Moreover, it was also found that the traditional approach towards commodity suppliers, so using your leverage over them as a buying firm (Kraljic, 1983) was not common practice at the companies under study. Rather, they decommoditized their business and that of their suppliers, again showing commitment. They treated commodity suppliers as strategic suppliers by buying inputs at above-market prices, offering long-term contracts and tools for supplier development. Taking a more social approach, with concern for supply base continuity, material traceability and price transparency, they show care for long-term relations with suppliers and employees. Part of the practices found by Pagell & Wu are also present in the case of IKEA as described in Box 1. The generalizability of their findings is limited, however, because they are based on a small sample. Moreover, it is questionable whether the SSCM practices found will also extend to second-movers or the whole industry. That is, if the whole industry adopts sustainability, exemplars may no longer be willing to pay above-market prices for commodity supplies.

Box 1 Case IKEA: sustainable supply chain management?

IKEA: Sustainable supply chain management?

IKEA has several years of experience with implementing CSR practices in its global supply chain. It started from a reactive position, by developing a supplier code of conduct (IWAY) to address external stakeholders' concerns about the origin of their furniture. Although in previous years, the retailer engaged in short-term purchases of articles from many small suppliers based on tight contracts, the last few years saw a shift toward more long-term contracts with fewer suppliers. This also changed the way in which IKEA treats its suppliers, where it used to only demand from suppliers to deliver the quality, service, price and environmental and social responsibility as specified by IKEA, the firm now also engages in capacity development with suppliers to improve efficiency and realize cost savings. After analyzing the implementation of IKEA's code of conduct IWAY, it was found that for CSR to be practiced throughout the supply chain, it should be embedded in the overall organization. Factors that contribute to realizing this include: knowledge enhancing mechanisms (training of employees and suppliers), knowledge controlling mechanisms (incorporation of CSR measures in e.g. KPIs), firm-specific assets (e.g. size, reputation) and corporate history (proactive culture).

Source: Andersen & Skjoett-Larsen, 2009

Tools and practices for SSCM

In order to implement the strategy for SSCM, firms need a business model composed of new tools and practices. The following will give a detailed overview of the tools firms have adopted so far and the considerations and obstacles they faced. Typically firms adopt the practices according to the order in which they are discussed below. To a certain degree this corresponds with the dominant transition trajectories for CSR, where firms start with an inactive/reactive attitude, by adopting internal codes of conduct, labels and participating in MSIs. After which they move to a more active and proactive stance by engaging in supplier collaboration, transparency practices and lifecycle assessments. Important to note here is that this order is not fixed and that depending on the context, some practices can be typified differently.

Code of conduct

The first response by firms to issues in their supply chains has been rather defensive. That is, they did not feel responsible for the unethical actions of suppliers. Or in case they did, they would boycott suppliers and stop placing orders. Once it became clear that such practice is unsustainable, the 1990s witnessed a surge in the number of voluntary codes of conduct that were introduced. At the time, multinationals started to progressively source from suppliers in the developing world, where legal frameworks are often less complete or lack enforcement. Therefore, firms have taken up a more active role; no longer do they merely adhere to national regulations, they have created institutions by introducing codes of conduct that go beyond regulatory standards. These documents oblige suppliers to obey to the multinational's standards of operating and ensure more sustainable practices (Van Tulder et al., 2009).

Numerous studies have explored to what extent the introduction and monitoring of codes of conduct effectively changes suppliers' ethical behaviour. Most codes of conduct score low in compliance likelihood, because they are vaguely defined and difficult to monitor, for example due to supplier deception in developing countries (Van Tulder et al., 2009; Egels-Zandén, 2007). Another problem related to monitoring effectiveness, is the fact that some suppliers produce for several international buyers, which each have a separate code of conduct. So that suppliers face multiple audits for similar standards, which is rather unpractical and makes it impossible for them to obey to all standards that are imposed. Thus, the quality of codes of conduct can improve through broader standards and the involvement of external stakeholders (Van Tulder et al., 2009). Especially, because the majority of these codes of conduct are based on Western perspectives that are not always welcome in developing countries. For example, some of them include a shortening of the work week, which is undesirable by people in certain countries who want the additional earnings in order to support themselves and their families (Lund-Thomsen, 2008).

Labels

Another measure that has been taken to increase transparency concerning sustainable practices in the supply chain is labelling. Labels such as Utz, Fairtrade and FSC show customers whether products are made ethically. Also, retailers have introduced private labels and A-brands developed independent labels to show customers that their products are responsible. The current debate on labels centers on the lack of transparency this large number of labels creates for customers. It is difficult to understand their exact meaning and to distinguish quality labels (Van Tulder, 2010). From the supplier perspective, labels are a way to differentiate themselves from their competition, since they can show buyers they adhere to the standards of the label. However, it leads to audit fatigue, because for every label they need to be assessed against specific standards. Moreover, labels can be a tool for focal companies to force suppliers in a certain position. That is, buyers pay higher compensations to those suppliers that adhere to the requirements of the label, however, they want the same profit margins and customers are unwilling to pay for the extra costs. So the power distribution in the supply chain has not changed, causing a lock-in for suppliers. Additionally, suppliers often make asset-specific investments for the label and therefore face high switching costs in case they want to change to another buyer. Overall, there is a need for less organization-specific labels and more industry-wide labels, since this would enable customers to make an informed decision when they buy products (ibid.).

Multi-Stakeholder Initiatives (MSIs)

In need of higher quality codes of conduct and more standardized audits, multi-stakeholder initiatives emerged. In these forums, parties from the non-governmental, corporate and public sphere join forces to overcome the governance gaps that exist in developing countries concerning labour conditions. In the apparel and textiles industry, for example, the Ethical Trading Initiative (ETI) from the UK and the Fair Labor Association in the USA are some of the platforms that encourage social and environmental standards, monitor codes of conduct, and audit and certify suppliers through ongoing dialogue. In many instances the implementation of codes of conduct has positively changed the situation in developing countries, by raising wages and thereby living standards, reducing the number of accidents on the work floor, improving overtime payments and building capacities within suppliers. Moreover, if a supplier serves several large MNEs it will now only be assessed once against CSR criteria. Although this leads to less specific codes, it does increase compliance (Van Tulder et al., 2009).

However, there are also elements that have proven difficult to implement in developing countries. For example the ILO standard on the right to freedom of association, which in China is not allowed by law. So that Chinese suppliers audited on this standard receive lower rankings and thus lose their competitive position when compared to suppliers in other countries. Also, regarding employee involvement, often a supplier's management appoints employees to be representatives, which is not in accordance with the standard (Krueger, 2007). Additionally, audits vary in their degree of transparency, where some auditors interview people on the work floor while their managers know. Lastly, child labour is often difficult to detect, because of the numerous subcontracted home-workers (Opijnen & Oldenziel, 2011).

Whilst MSIs are quite a successful form for corporations to improve social and environmental issues, literature indicates that they sometimes lack effectiveness in terms of their contribution to sustainable development. Some studies show that MSIs exclude relevant parties from the developing world when designing codes of conduct and monitoring systems (Utting, 2002; Ahlstrom & Egels-Zanden, 2008) and are not transparent in their methods and findings (O'Rourke, 2006). Also, it was shown that MSIs should pay more attention to the terms of trade between retailers and suppliers; price & quality vs. sustainable working conditions (Hughes, 2001). Additionally, codes of conduct were found more effective when complemented with factors at plant, corporate and national level e.g. workers unions, management structure and national laws (Locke & Romis, 2007). All in all, MSIs have improved working conditions and made supply chains more sustainable, however some areas still need improvement. Thus, there is a need to better understand how MSIs can more effectively promote socially responsible practices.

Supplier collaboration and development

Despite government's improved legislation concerning labour conditions, factories often lack (human resource) management capacity to implement these changes in countries such as China and Vietnam. Although improvements have been made over the years, codes of conduct and audits are not considered to create lasting changes in labour conditions. This is why, next to taking part in MSIs, corporations increasingly engage in supplier cooperation and development. That is, companies move from a policing to a more collaborative role, in which trust and capacity building at suppliers are key. This means that audits are more focused on the effectiveness of management systems in order to prevent, rather than only remedy non-compliance with the code of conduct. Supplier collaboration helps in that process, because it allows companies to reduce deception.

Also multi-stakeholder initiatives such as ETI encourage long-term relationships between firms and suppliers. According to them, this allows firms to enter into a dialogue with for example their supplier's employees, who are then given the opportunity to speak up to management in case of issues on the work floor (ETI, 2012). On the other hand, firms are warned that too high levels of trust can work against them, because loyal employee relationships can be exploited to e.g. circumvent audits on labour conditions (Jap & Anderson, 2005). In the end, it is necessary for brands to invest in flexibility and speed without compromising quality and labour conditions, especially since companies will not be able to gain competitive advantage by sourcing from low-cost countries anymore in the near future. In general, firms engage in supplier development for the traditional purpose of improving supplier performance. However, there are also firms that engage in supplier development to help their suppliers become better suppliers for other organizations. This selfless act has no direct benefits for the focal company, rather it helps to ensure supplier continuity and reduce supplier risk (Pagell & Wu, 2009).

Supply chain transparency

Gaining insight in the flows of money throughout the whole supply chain is still one of the main challenges for firms. Transparency allows them to know the activities and actors that are part of their supply chain and indicates possible cases of abuse that need to be dealt with. Thereby, they can ensure that suppliers receive sufficient compensation to live, develop future business and invest in assets that improve the overall supply chain (Pagell & Wu, 2009). However, it is difficult to gain insight in all the parties involved in the complete supply chain, especially when there are large numbers of subcontractors and quick changes in order requirements. As mentioned before, auditing factories does not mean child labour no longer occurs in the process of making a specific product. Furthermore, factories subcontract to children, women and homeworkers, who fabricate products in basements or at other secret locations downtown that are difficult to trace. Adding to that the inadequacy of most audit methodologies, the lack of assessment before or after the audit, weak quality control of external auditors, and the number of audits suppliers face, it becomes clear that audits are used to 'police' suppliers; they help to diagnose, however, they do not cure, prevent or improve suppliers' situations (ETI, 2012).

Although companies are going through a maturity phase, by increasing the number of factory audits, reporting on them and defining action plans in case suppliers are not compliant, there is still considerable room to improve chain visibility and traceability. Some brands, are a step further than the rest, Nike for example provides an online factory list. Previously, this was regarded as harmful for the competitive position of a brand, because every organization could approach your preferred supplier with possibly more attractive orders, so that suppliers might shift their efforts to your competitors. Nowadays, an increasing number of brands publishes factory lists, as many firms order from the same supplier anyways, thereby encouraging industry-wide collaboration (Doorey, 2011).

C2C/lifecycle assessment

Following up on supply chain transparency, another SSCM practice entails the lifecycle assessment of a product or cradle to cradle approach. This is in line with the sustainable product-based strategy of Seuring & Müller

(2008), where focal firms ask suppliers to provide them with information on the life-cycle of a product and use that information to reduce the carbon footprint of the product covering all production phases. Or to design a closed-loop supply chain, where waste is reused and recycled in a way that it can be input for new products. To reach this way of producing, the focal firm needs to collaborate with suppliers beyond the first tier and integrate all stages of its supply chain, so from raw materials to final customers. As such, it requires a transformation in the traditional approach to supply chain management.

The above practices are all good attempts to further supply chain transparency, however, some issues remain difficult to deal with. Firstly, one of the questions companies still have is, how far back in the supply chain they should trace the source of their products. Until what n-tier supplier should they gather information about the conditions under which products are made and possible by-products? (Awaysheh & Klassen, 2010) Secondly, there are issues regarding the supply chain capacity to transform to more sustainable products (M&S, 2012). Thirdly, it is questionable to what extent customers care to know the origin of the products they purchase. Although the past years saw strong growth in the number of customers that buy ethical products, it is debatable in how far they consciously choose not to buy unethical products (de Brito et al., 2008).

2.3.5. SSCM: what will the future bring?

In their literature review of SSCM Seuring & Müller (2008) point out several areas that require more attention in academia. Firstly, they find that until now, research has mainly focused on the environmental contribution of SSCM. So sustainable development is seen as a simple way to improve the environment. Rather they suggest to also look at it from the social and economic dimension. Thus, sustainable development should be seen from the three-dimensional perspective and the interplay between the three parts of the triple bottom line. Related to that is also the discussion about the effect of stakeholder initiatives for SSCM on a country’s sustainable development.

Secondly, literature tends to narrow down to just one actor in the whole supply chain, mostly the focal company. Whilst an integrated perspective of all stages in the supply chain will provide better insights into how sustainable supply chains can be successfully managed. This is also argued by Pagell & Wu (2009), who indicate that there is a need to reconceptualise the supply chain and consider who is in the supply chain e.g. NGOs, regulators, competitors. Although research so far has found limited supply chain integration, it is thought to facilitate the process of SSCM. Moreover, it could lead to improved risk management or value creation, which is also why the Ethical Trading Initiative’s new approach to ethical trade is more integrative. They do not only want tackle a single issue, but look at corporate decisions and all other acts together. In that way, they can better understand the underlying issues of a problem, rather than the symptoms of for example poor working conditions. “In a given supply chain these are likely to include a mix of lack of transparency in the supply chain, weak government capacity to implement laws, inappropriate retailer purchasing practices and prevailing cultural attitudes.” (ETI, 2011, p.2) So, only when organizations have a good overview of the composition of their supply chain, will they be able to formulate strategies on how to manage (with) specific suppliers. This should be considered in addition to the traditional supply chain management principles of type of supplier and product. Once these are known, a firm can decide whether collaboration is the best approach in terms of performance (Kogg & Mont, 2011).

The question remains however, how companies can use supply chain integration to achieve sustainable performance (Seuring & Müller, 2008). Gereffi’s GVC model, Porter’s industrial clusters and Vurro et al.’s network models can play a role in the formulation of an effective governance structure for sustainable supply chain management. Thus, more research is needed to investigate how these models translate into more collaborative governance forms that can lead to more successful SSCM. Especially, in the context of SSCM’s contribution to a sustainable competitive advantage.

Since that also depends on the industry, another opportunity for research would be to focus on SSCM in a specific industry. As most studies so far have used multi-industry samples to investigate the adoption of CSR in the supply chain. Although this provides insight into overall trends, for managers and researchers it is even more useful to understand the CSR issues unique to a specific industry. This would allow them to formulate more effective strategies and operations for SSCM (Maloni & Brown, 2006). Moreover, it would help to further refine which theories are relevant to individual industries. This relates to a last observation Seuring & Müller (2008) make, namely the lack of a theoretical background used in studies about SSCM. Both in supply chain management and the wider strategic management literature, they find that there is a lack of theory building. So, they suggest authors to link their findings to previous theories.

Other discussions in the field of SSCM are for example the effectiveness of monitoring, but also SSCM seen from a customer perspective; do they actually care for CSR in the supply chain? Ultimately, it is questionable whether SSCM will ever become mainstream and what consequences this will have for suppliers, the strategic position of an organization and the level of SSCM. As Pagell & Wu (2009) point out, if all firms become sustainable, to what extent are best practice SSCM firms willing and able to pay premium prices to commodity suppliers?

2.4. Conclusion

In conclusion, firms are increasingly held responsible for the way they do business, including their supply chain. They undertake CSR activities as they believe it is a profitable way to differentiate themselves. Several studies have investigated the link between CSR and financial performance, or the narrow business case for CSR, but their findings are inconsistent. Amongst others due to a mixture of methods, this makes it impossible to draw conclusions on the relation between CSR and firm performance. Therefore, (Carroll & Shabana, 2010) propose to investigate the business case for CSR from a broader perspective. In doing so, studies can assess the direct and indirect effect of CSR on firm performance, where firms' economic goals are integrated with the social objectives of society.

Despite the fact that firms increasingly adopt strategies for sustainability, however, they have not yet succeeded to effectively implement them. There is a gap between their strategic intention and realization, they need a way to translate their strategy into successful business models (Van Tilburg et al., 2012). Studies on business models have not yet come to a common definition and/or accepted theories. The business model is a new unit of analysis, takes a holistic view of the firm, focuses on the *how* of business and on value creation for all stakeholders. So far few studies have researched the business model for sustainability. Thus, more studies are needed to assist firms to untangle the business model for sustainability, further define the concept of the business model and analyse the interaction between individual business models for sustainability and sustainability at industry level (Zott, Amit, & Massa, 2011).

Supply chain management is one of the functional areas that can facilitate the implementation of sustainability. Several studies have identified what governance structures are effective to implement sustainability and for example found that firms with more vertically integrated governance structures can better implement sustainable practices. However, literature calls for a deeper understanding of the configuration of the supply chain and the interaction between industry dynamics and governance models for sustainability (Frederick & Cassil, 2009).

Although studies on sustainable supply chain management have looked at these matters, there is still no commonly accepted definition of SSCM, which makes it difficult to compare findings. Most studies so far have only focused on the environmental dimension of sustainability, whilst SSCM encompasses the economic and social dimensions of sustainability as well. Several organizational theories can explain part of the rationale for SSCM and much research has identified the drivers and barriers for firms to adopt SSCM. Numerous practices and tools have been researched, however, mostly from the perspective of one actor in the supply chain. Overall, there is a need for a more sophisticated conceptualization of SSCM (Seuring & Müller, 2008).

All in all, the sustainability, strategy, supply chain management and SSCM literature faces conceptual, theoretical and empirical challenges. Firstly, in terms of conceptualization, more studies need to investigate the business case and business model for sustainability. Next to that, research is needed on the effective governance models for sustainability that includes industry dynamics and on the relation between vertical integration and the implementation of sustainability. Moreover, a common definition of SSCM, will ensure that studies use similar methods and thus allow to compare findings. Secondly, by integrating findings with well-known theories from strategy and supply chain management research, more studies can also contribute to theory-building on the underlying rationale for SSCM. Additionally, this allows to further generalize findings on the effect of SSCM on the bottom line. Thirdly, at this point, most studies on the topic of SSCM are still conceptual or case study-based, so there is a need for more empirical and longitudinal research (Carter & Rogers, 2008). This can help to identify common stages in SSCM evolution and implementation and reveal whether SSCM relates to long-term high performance. More industry-specific studies can untangle specific theories that support the concept of SSCM. Also, it is proposed that studies take a holistic approach, by both including all or more actors from the supply chain instead of only the focal company, and by covering all dimensions of the triple bottom line (Seuring, 2008). Lastly, more cross-country and -functional studies that integrate theories into their findings, will provide insight into the effect SSCM has on firms' competitive advantage and feed managers with information that will help them design business models for SSCM.

3. The Apparel Industry

From the previous chapter it has become clear that the academic world pays attention to the topic of sustainable supply chain management, however there is still room for further theory development. Considering the relatively successful implementation of SSCM in the food industry, and the footwear industry being an exemplar for numerous SSCM studies, it is surprising that the apparel industry has not been investigated as much. Despite serious attempts to make the apparel supply chain more sustainable, so far the realization of those initiatives has not fully taken off. This, while the potential for improvement is significant (Laudal, 2010). This chapter answers to the call for more industry-specific research and aims to address sub-question 2. concerning the influences on the business case for sustainability in the apparel supply chain. The first section 3.1 elaborates on apparel production, after which an overview of the global trends affecting the industry is given in section 3.2. From this follows a review of the changes in the apparel industry in terms of market forces, dominant strategies and business models, and the global value chain in section 3.3. Section 3.4 concludes with a literature review specifically on SSCM in the apparel industry, a media analysis on the sustainability issues in the apparel supply chain and propositions on the relation between business models and SSCM.

3.1. Apparel production

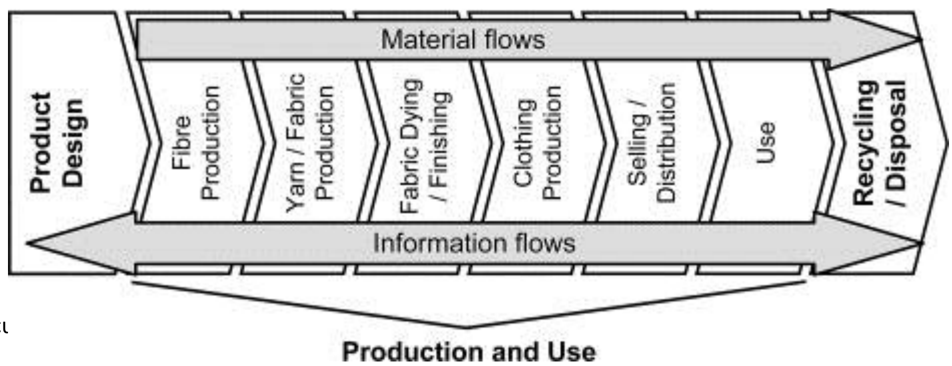
The apparel industry is part of the larger apparel and textiles industry, which deals with the production of raw materials, like cotton, into fabrics and the transformation of those fabrics into clothes. A variety of organizations is found to engage in the sale of mens-, womens-, and childrenswear. In 2011, the global apparel industry produced a total revenue of $1.175,4 billion. Womenswear is the largest segment and accounts for 51,5% of the industry's value. In 2016, the industry is expected to have a value of $1.348,1 billion, which represents an increase of 2,8% since 2011 (Marketline, 2012). The top 10 suppliers in the EU of clothing come from countries such as China, Turkey and India (EC, 2010).

The apparel sector can be characterised as resource intensive; growing cotton, making textile and dyeing fabrics, requires large amounts of water, energy and labour. Where it is almost impossible to fully replace the manual labour needed to put together garments with machines. A number of actors is involved in making a garment, together they form the supply chain. Every season, a collection enters this complex network of suppliers, before it is sold in shops or through agents.

Apparel production is highly fragmented, that is, a typical apparel supply chain knows eight stages, see

. It starts when designers create collections at the head office or design centre of a focal company. They send their sketches to pattern makers, who in turn send the patterns to either their own factories for production or to agents who arrange the whole sourcing process for them. To make the garments, companies either source (organic) cotton which is a natural crop grown by farmers. Or they source polyester, which is a man-made material consisting of crude oil. After that, both the cotton and polyester are transformed into yarn by spinning the fibres. These are then knitted or woven into fabrics. Thereafter, they will be coloured, improved in terms of quality or changed in their feel and look.

Figure 3.1 The Apparel Supply Chain



Source: adopted from Goldbach et al., 2003

After receiving the sketches from the head offices, factories make a first sample of the garment. This is checked by the focal company on quality and safety. Once approved, the sample is taken up for production, which entails the sewing of fabrics and combining them with additional materials like zippers or buttons. Once finished, the garments are transported to distribution centres by ship or airplane and from there distributed to different sales locations across the globe. Customers can buy the clothes in shops or online and wear, wash and dry-clean them. Although some clothes are reused in the second hand market or sold to third world countries, still many end up in land fill (Dicken, 2011).

Overall, the apparel supply chain can be characterised as dynamic and complex. The resource intensive nature and global fragmentation of activities make it difficult to coordinate. Moreover, at each stage of the supply chain different stakeholders are involved that are affected by different global, industry and market trends. Consequently, the apparel supply chain knows numerous different sustainability issues.

3.2. Global trends affecting the apparel industry

Traditionally, the apparel and textiles industry has been the eldest and most global industry. It is often one of the first industries to develop in nations that just enter the export market and industrialization phase of development, due to its low entry barriers in terms of technology and labour. Like all business sectors, the apparel sector has been subject to globalization and accompanying trends. This section will highlight the trends that have significantly impacted the global apparel industry, by adopting the SEPTE-model for external environment analysis. Additionally, present and future trends will be identified, using the study Fashion Futures that was conducted by NGO Forum for the Future and Levi Strauss & Co (2010). They detected three certain and six uncertain factors that will shape the world of 2025 as explained below.

3.2.1. Past, current and future trends

The SEPTE model for external environmental analysis has been used in many strategy and marketing books. It is an abbreviation of the social, economic, political, technological and ecological trends that firms are affected by.

Social

The first trend is the change in demographics. Where strong population growth is witnessed, and the global population is expected to grow to 8.1 billion people in 2025, especially in the developing countries (UN, 2008). This could lead to competition for diminishing resources in a crowded world. In addition, the population gets older, so that 20% of the population in EU, USA, Russia and China will be over 60 years old, which will affect disposable incomes. Moreover, it will affect the global apparel working force and consumer base. A related trend is that there is less difference between the clothes worn by people of different ages. Another trend is the increasing number of smaller families, so that more money is spend per child on for example on garments. Also, globalization continues, so that countries will host an increasing number of nationalities. Workforce diversity increases and marketing and sales strategies target an increasingly global consumer base. Moreover, the continuing influx of global immigrants will come with preferences for new styles and cultures. This is linked to the last trend of ethical consumerism, where it has been shown that consumer awareness of ethical and fair trade products is increasing, however, demand is not yet mainstream. Thus, it is questionable whether consumers will care for more than cost in 2025 and choose clothes that are also socially and environmentally fair.

Economic

Firstly, developing countries are strong low-cost competitors in the global market, because of relatively cheap labour. However, in many of these countries wages are rising, making it more expensive to produce abroad (Fang et al., 2010). Secondly, the financial crisis has recently caused a slow performance in the apparel sector, thereby increasing rivalry. Especially in the middle class segment the financial crisis has had its negative effects, whilst for the haute couture and luxury segment sales have actually gone up (Gereffi & Frederick, 2010). The near future will be highly influenced by the emerging markets. That is, by 2025 China is expected to be the largest economy (PwC, 2008), also in other BRIC countries the rise of the middle class will impact the global business environment. The shift in economic and socio-cultural power will affect demand and styles that are produced. A study showed that South Africa, the UAE, Singapore, India, Russia, and Brazil are newly emerging markets for fashion (Grail research, 2009). This is mainly due to the rise of the nouveau riche in these markets, who have increasingly high disposable income. On the cost side, firms face rising costs of resources, where energy demand will be 40% higher in 2030 (IEA, 2009), thus new sustainable energy forms are needed. Also high oil prices will immediately increase costs for polyester, which is a byproduct of oil, pesticides and transport. Lastly, changes in disposable income and expenditure leads to the question whether consumers will demand fair fashion or will fashion become too expensive?

Political

A first political trend that has affected the apparel industry is the MFA phase-out. That is, from 1974 until 2004 world trade in garment and textile was regulated by the Multi Fibre Agreement (MFA). Under this agreement, developed countries set quotas on the amount of exports from developing countries, so that the advanced economies could compete against low-wage countries (Dicken, 2011). In 2005 trade regulations have become liberalized, so that the quota system that existed under the Multi-Fibre Agreement (MFA) would slowly be phased-out (Dicken, 2011). A second trend is trade liberalization, for example through the formation of Europe. Moreover, under the international trade regulations set by the WTO, countries increasingly open up their borders for international trade. Lastly, legislation plays a role, in that global, regional and national legislation in addition to legislation on climate change and resource shortages shape the apparel industry. How it will affect the industry in the future depends on global trade agreements and the extent to which governments want to coordinate legislation on trade, economics, environment, poverty and other global issues. Experts expect an increased standardisation of labelling and environmental/social regulation in the near future, thereby lowering the cost for firms to monitor and audit suppliers. Also, the past has shown that land use and subsidies affect cotton prices. If in future, cotton farmers would not receive subsidies anymore, land could be used for energy and food, so that cotton supply would decrease and prices would rise.

Technological

Several technological innovations have contributed to the streamlining of the fashion supply chain, replacing labour with automation. For example, flexible machines that recognize pieces of material, pick them up and align them on the machine, whilst also making adjustments to sewing. Other technologies address the problem of transferring semi-finished clothes from one workshop to the next, while retaining shape, thereby smoothening sequential operations. Also improvements have been made to the unit production system, where individual pieces are delivered to the operator on the conveyor belt to reduce time on unbundling pieces. Electronic-point-of-sale is a real-time link between sales, reordering and production, ensuring more efficient ordering procedures. A second trend is the internet, which through social media and online networks plays an important role in the further development of online sales, marketing and supply chain transparency. Lastly, most technologies that will play a role in the future of the apparel industry already exist, but their use is yet to be mainstreamed. Examples include 'build your own outfit' applications and energy generating clothes. Also, there will be improvements in energy efficiency in the supply chain, for example in the process of dyeing and finishing garments.

Ecological

Although opinions still differ on its prevalence, a hotly debated topic that will certainly affect the apparel industry is climate change. Due to the timelag between emissions and their impact on the climate, current action will not change way the climate will change in the coming 15 years. On the other hand, it is possible to influence climate change after 2025, however, it is questionable whether and how the global community will respond. At present, there is an overall trend amongst countries to address the environmentally adverse impact human beings and organizations have. A second major trend is increasing resource scarcity. Both a booming population and climate change will make resources such as energy, water and food scarce. In 2025 it is expected that 1.8 billion people will live in a water-scarce country or region (UN, 2007). This will affect the production of cotton, because this requires large amounts of water. Moreover, pesticides will be more expensive and land will be competed over for food production. Efficiency and legislation will limit water use and waste treatment.

3.2.2. Future scenarios in the apparel industry

It is not possible to predict the future, however, it is possible to illustrate expectations concerning the future and how it will be possible to thrive in those circumstances. In order to understand the system that the apparel industry is part of and the global trends that affect it Forum for the Future used the current and expected trends, as set out in the previous section and defined four scenarios of the world in 2025 and the role of the apparel industry in that world. Findings were drawn from internal expertise as well as external knowledge, through in-depth interviews and peer reviews from fashion experts in academia, trade unions, NGOs, design, manufacture and retail. The scenarios cover the whole industry and numerous issues, such as climate change, shortage of cotton, the effect of shifting supply chains on fashion workers, technological impacts on production and sales, water shortages, higher energy prices, and reuse and remanufacturing (Forum for the Future, 2010).

The four scenarios are built on two dimensions that will shape the future of the apparel industry. Firstly, the degree of connectedness in the world, ranging from connected, where globalization has expanded, to fragmented, where globalization has reversed and regionalism arises. Secondly, the pace of change in society and fashion, which can be either fast or slow in terms of consumption, financial capital flows, media and communications and cultures. Along these dimensions, Forum for the Future formulated the following scenarios (see

Appendix 3 for a more detailed overview of the scenarios):

1. Slow is beautiful

This is a world of political collaboration and global trade where slow and sustainable is fashionable. Moral values play an important role and people adopt low-carbon lifestyles and mindsets. Carbon regulation and increased tracking and labelling make people conscious about the impact of the apparel supply chain. They are willing to pay more for less clothes of higher quality and sustainably produced. Firms are challenged with decarbonisation and changing people's habitual consumption pattern of fast fashion. Living wages are standardized in factories, however, there is still a 'grey economy' where cheap garments are made under poor working conditions.

2. Community couture

The world is characterized by growing populations and resource scarcity, so that self-sufficient communities have emerged. Due to high costs for raw materials and supply chain disruptions, sales of new clothes has dropped significantly. People now rely on local networks and second-hand clothes. Although creative solutions have emerged, consumers still want new clothes. These are only affordable by the rich or on the black market.

3. Techno-chic

A world with high-tech systems that deliver for the speed-obsessed global shopper. Made possible due to an early shift to low-carbon economy and technological investment. Few trade barriers exist and smart consumers enjoy shopping in this high-tech, fast-paced environment. Clothes are designed for degradation, disassembly, remanufacturing or reuse. There is an infrastructure for recycling and man-made fabrics provide customized, high-tech and affordable solutions to everyone. Processes have been automated, so that unemployment abounds in countries that were dependent on the apparel industry.

4. Patchwork planet

A world of fast consumption in global cultural blocs. Conflict, uneven economic recovery from crisis and resource scarcity have fragmented the world, causing suspicion between cultures. Fashion changes quickly, according to the styles set by the economic and cultural power Asia. Regionalization of supply chains caters demand for fast-paced, national garments. Social and environmental issues abound and it is questionable how long this will be able to continue.

Together, these scenarios form a strategic tool for firms to determine how their current business models are fit for the world of 2025. Discussion can lead to insights that require a change in current strategies or business models to ensure sustainable competitive advantage in the future.

3.3. Changes in the apparel industry

The foregoing trends had, have and will have an impact on the composition of the apparel industry in terms of market, strategies, business models and supply chain.

3.3.1. Changes in the global apparel market

In order to assess the competitiveness of the apparel market, Porter's Five Forces model for competitive advantage (2008) was used. These forces differ per industry and the strongest force or forces determine profitability. Below follows an analysis of the forces with respect to the apparel market, where buyers are end-users and suppliers are manufacturers and wholesalers.

Threat of new entrants

Relatively high: entering the apparel market does not require large capital investments. Meaning that many firms can set up a retail store for apparel. Moreover, the market is forecast to grow in the near future, making it more attractive for individuals to start a business. Although larger, established players may have more bargaining power with suppliers due to economies of scale, customers face low switching costs, so they can easily purchase from new players (Datamonitor, 2012).

Bargaining power of suppliers

Moderate: Key suppliers within the industry are clothing manufacturers and wholesalers, who deliver to retailers. They can also choose to sell private labels themselves, which increases their power, because they can achieve higher returns and lower costs per unit by optimizing capacity. On the other hand, economic circumstances have adversely affected prices for raw cotton, dyes and chemicals, thereby reducing supplier power. Manufactures and wholesalers are often SMEs that operate in a fragmented manner at a global level in developing countries (Neef, 2004). Switching costs for retailers are respectively low, although they may risk a higher number of errors in a more global supply chain. The lack of diversity among suppliers also reduces their power and makes them dependent on retailers (Datamonitor, 2012).

Bargaining power of buyers

Moderate: Retailers and fashion brands sell clothes to individual consumers, thus there is a large market, which weakens buyer power. Demand can be divided into three categories: basic garments, fashion-basic garments and fashion garments. The level and distribution of personal income is a major determinant of demand for each of these categories. Since the basic need for clothing is quickly satisfied, basic economic theory implies that beyond that, demand for clothing will increase less rapidly than the growth of income. So that, especially the affluent markets determine the composition of demand (Dicken, 2011). In order to gain some influence over demand, clothing firms adopted strategies to stimulate demand via fashion change. That is, they differentiate through designer labels and thereby move consumer demand from basic and low-margin, to fashion and high-margin garments. Subsequently, they create demand for fashion that is highly volatile and relatively unpredictable, since it is largely based on personal consumer preferences for specific styles rather than basic garments. By segmenting the market, buyer power is limited, on the other hand, buyers face low switching costs, so that brand loyalty is important, especially for high-end designer labels as compared to retailers. Demand changes rapidly, making brand equity even more important to retain customers, especially since there are low entry barriers and few requirements for capital (Dicken, 2011). Retailers, who are positioned at the end of the supply chain, are forced to offer what consumers want, so that buyer power is again enhanced (Datamonitor, 2012).

Threat of substitute products or services

Weak: Several substitutes are available, like bespoke tailoring, factory shops and second hand clothes, however, these do not have a substantial impact on the industry (Marketline, 2012). Also consumers can directly purchase from manufacturers through online channels. Although an increasing number of consumers purchase clothes online, still retail clothing is considered highly important, so the overall threat of substitutes is weak (Datamonitor, 2012).

Rivalry among existing competitors

Moderate: The apparel market is highly fragmented, with a few large and many smaller players. Although increases in capacity will be costly, these smaller firms can take on more flexible staff to open up new outlets. Some retailers are highly diversified, however, most retain a focus on apparel, which adds to rivalry. Forecasts are positive, so rivalry is expected to increase with newcomers entering the market (Datamonitor, 2012).

Based on the Five forces model, overall, the apparel industry is considered moderately competitive.

3.3.2. Changes in dominant strategies and business models

Traditionally, garments were produced in factories and sold in shops bearing their names. Since the 1990s, however, there has been a global shift in power from manufacturers to retailers and marketers. Especially retailers account for an increasingly large share in global apparel sales. By increasing the offer of their private-label or store-brand lines, retailers intensified competition with brand manufacturers, whom they previously sourced garments from. In search of higher value clothes, they started importing and engaged in vertical integration, by operating overseas buying offices. In response, brand marketers increasingly focused their core business on design and branding, by providing overseas suppliers with knowledge that helped them to upgrade their position in the supply chain, reassigning support functions to contractors, shifting purchase and redistribution activities to contractors, using fewer but more capable manufacturers, adopting more stringent vendor certification systems and shifting sourcing from the western hemisphere to Asia. A similar strategy was found amongst brand manufacturers who adjusted to the new business environment by selling product lines to offshore contractors and moving production activities abroad (Gereffi & Frederick, 2010).

Then came the MFA phase-out in 2005, which, together with trade liberalisation in Europe increased foreign competition and introduced Schumpeter's so called 'creative destruction' (1942, in Gullstrand; Dickerson, 1991). In that, domestic companies "destroyed" their old organizational structure and adopted new, creative strategies. Changing the internal organization stimulated the development of new products, markets, transportation and production processes. On the one hand, the number of Western manufacturers decreased, because price pressures caused them to outsource labour-intensive production to countries with low labour costs (Dicken, 2011). On the other hand, companies adjusted their operations in high-wage countries (Doeringer & Crean, 2006). For example, in France, domestic manufacturing was retained through competitive clusters on technical textiles, so that traditional areas such as Cholet and Roanne survived (Courault & Doeringer, 2008). Other countries focused on technological change and stimulated just-in-time processes, quick response and computer techniques for designing, cutting or finishing clothes. In general, it resulted in the dominance of the purchasing policies of major multiple retailing chains in production (Gereffi, 1999).

Throughout time and affected by the financial crisis, firms adopted again different strategies. Firstly, lead firms increasingly consolidate by working with large suppliers to gain price and quality advantages. This triggered previously East Asian international manufacturers to become an intermediary and start managing global production networks for buyers. An exemplary firm is Li & Fung, a Hong Kong based firm acting as the primary purchasing agent for large retailers like Walmart and brands like Tommy Hilfiger. Instead of owning factories, Li & Fung manages 80 sourcing offices located across the globe, thereby providing buyers with customized sourcing solutions. Secondly, buyers started to set up their own local sourcing offices in producing countries, so as to ensure direct sourcing (Gereffi & Frederick, 2010).

Each of the abovementioned developments affected the value propositions of firms. They resulted in the four dominant business models currently found in the apparel industry: mass merchant retailers, specialty apparel retailers, brand marketers and brand manufacturers, see

Appendix 4 for a detailed overview of the nine building blocks comprising these business models.

Mass Merchant Retailer

This business model targets the mass market by producing basic goods for low prices, while leveraging on economies of scale (Dicken, 2011). With a cost leadership strategy and high degree of horizontal diversification, mass merchants manage to specialize by product or price and thereby gain market share in the global apparel market (Gereffi, 2003). Their offer consists of private label, licensed or exclusive brands only sold through their channel and other brands. Especially private labels have proven profitable, as shown by the case of JC Penney, a US retailer who upgraded its apparel homebrands and thereby strategically positioned in the middle price segment that no other brand was targeting yet (Gereffi, 1999). An inhouse design team and outsourced production to low-cost countries through direct sourcing, enabled the elimination of middlemen and increased profit margins. Thus, retailers are expected to increase the number and variety of private labels in the near future (Euromonitor, 2009).

Specialty Apparel Retailer

This type of retailer offers proprietary label basic fashion garments to the mass market. Through a differentiation strategy they target the higher end of the fashion basic market, examples are The Gap, Banana Republic and Liz Claiborne. Whilst others focus on affluent young consumers, by pricing garments in the low to middle class and offering medium quality, firms include H&M and Zara (Dicken, 2011). Their value proposition focuses on the newness of garments, they are highly fashion sensitive, meaning that they place small orders, hold low stock and require quick replenishment if items are selling well. The degree of vertical integration differs per firm, where some own few whilst others own the majority of manufacturing facilities. As the typology already indicates, horizontal diversification is low, because these retailers specialize in apparel production.

In general, retailers are perceived as very powerful, in terms of purchasing power and leverage over manufacturers (Gereffi & Frederick, 2010). Moreover, in the last few years, they have gained in importance, because brand loyalty to retailers has increased (Dicken, 2011).

Brand Marketers

These firms own a brand name with which they target luxury, high-end fashion markets composed of people with a high income. Core competencies include marketing and design, which is their source of differentiation and allows them to reach niche markets. They offer quality fashion or basic fashion apparel for premium prices. Sometimes they customize garmetns and engage with mass merchant retailers to sell exclusive product lines. There is a tendency to horizontally diversify into other branches such as footwear, accessories, bags, hotels and restaurants, however, they do so to a lesser degree than mass merchant retailers. The degree of vertical integration differs. Although the majority of firms is known to be factoryless and organizes entire systems of garments production with overseas contractors (Dicken, 2011), some also maintain a certain percentage of manufacturing inhouse, so as to ensure brand consistency (Euromonitor, 2012).

Brand Manufacturers

This type of brand targets the basic fashion market, by a mixture of cost leadership and differentiation, which translates in medium price, quality garments offered at a fast pace (Gereffi, 1999). Like marketers, they own a brand name, however, in addition, they own manufacturing facilities or coordinate intermediate supplies to their production network. Next to that, they arrange the brand’s sales and marketing through multiple retail channels, so they are relatively integrated. Over the years, several major apparel manufacturers have decided to desintegrate. For example, Levi’s invested in building a global brand, by acquiring related consumer product lines and selling their offshore manufacturing facilities to contractors. On the other hand, their brand expansion simultaneaously led them to re-integrate, by opening concept stores and engaging in franchise agreements for overseas stores (Gereffi, 1999). Considering their skills in garment making, horizontal diversification is low.

An overall trend that will affect both types of brands in the near future is brand owner specialization. Meaning that brands increasingly open own stores, moreover, brand owners with exisiting retail operations will also increase focus on their own stores over the needs of external customers.

Next to these lead firms there are of course numerous small and medium enterprises and tailor-made shops. Additionally, it is important to note that the types that were described are of a generic nature. In reality, there will be exceptions to and mixes of the different types of business models. However, for clarity purposes this typology is deemed most appropriate for this research.

3.3.3. Changes in the global apparel supply chain

All in all, the global fashion supply chain has grown more complex and currently consists of many subcontractors and operations in different countries. Throughout the years, the supply chain has developed in terms of governance, types of suppliers and sourcing strategies.

Generally, the apparel supply chain is impacted by lead firms who are specialized in the design, branding and marketing of apparel and are in the powerful position to impose their product specifications on suppliers. These in turn undertake pure assembly in the form of Cut, Make and Trim activities (CMT). Typically, manufacturing is outsourced to a large group of global suppliers, who operate under fierce competition for contracts or investments by one of these large foreign retailers. Thus, suppliers have little leverage in the supply chain and receive only small margins. They are part of a captive global apparel value chain that is characterized as buyer-driven with large power asymmetries between suppliers and buyers (Gereffi, 1999).

As previously pointed out the apparel industry is labour intensive and highly volatile, due to fluctuating seasonal demand. So suppliers must deliver just-in-time and have lean management. These features often contribute to poor working conditions, since they force suppliers to trade off short lead times and working overtime. Where most suppliers end up working overtime, without paying workers accordingly. Another consequence is that suppliers, subcontract second- and third-tier suppliers, including home workers. This adds to the complexity of the supply chain and makes firms dependent on relational assets and social capital for the quality of products (Gereffi & Frederick, 2010; Dicken, 2011).

The MFA phase-out is having severe consequences on the supply side of the chain. That is, where previously smaller developing countries were protected by the quota system, competition has now shifted their export capacity to China, the country with the lowest wages. On the other hand, it also allowed lead firms to contribute to the economic development of countries, by helping suppliers to upgrade to more advanced production methods (Gereffi, 1999). Consequently, network relationships became more complex, due to the increased breadth and specialization of apparel products and improved production capabilities in a large number of countries. On the demand side, this meant that due to retailers' strengths in marketing and design, they replaced brand manufacturers with suppliers of private label garments (Gereffi & Frederick, 2010).

That led the supply chain governance setting to shift from one that was captive, with CMT suppliers that depended on buyers, toward one that was modular, where buyers, next to manufacturing, give suppliers responsibility for packaging, logistics coordination and shipping (Gereffi & Frederick, 2010). These are so-called package/OEM (original equipment manufacturer) and full package / ODM (original design manufacturer) suppliers. An example of this type of supplier is Esquel Group, a vertically integrated manufacturer of cotton shirts, owning farms in China that produce fibres for its production sites in China, Malaysia, Vietnam, Mauritius and Sri Lanka. Its clients include brands like Tommy Hilfiger, Abercrombie & Fitch and Nike, but also retailers such as M&S and Nordstrom (Esquel, 2012).

In response to both the ending of the MFA phase-out and the recent financial crisis, lead firms are again adopting new sourcing strategies from a risk management attitude. Firstly, firms want to maintain a more diversified portfolio of suppliers across several regions, specifically to reduce reliance on China. Secondly, firms no longer want to be the main buyer of one supplier, due to the risks associated with owning too much of a supplier's output. Thirdly and related to that is the wish to enter into more long term strategic partnerships with suppliers. Lastly, lead firms engage in supply chain rationalization, in order to reduce the number of suppliers they source from and select those suppliers that are most capable or strategically located near regional markets (Gereffi & Frederick, 2010; Dicken, 2011). Consequently, many firms adopt a dual sourcing approach, whereby fast fashion products are sourced from flexible, quick and often nearby suppliers, whilst basic products are sourced from low-cost countries (Gereffi & Frederick, 2010). Thereby they move toward relational governance, whereby full-package suppliers are becoming intermediaries, so they no longer manufacture, but are in charge of a global network of suppliers (Li & Fung). Next to that, agents expand their capabilities into design, product development and quality control, so that they develop into OBM (original brand manufacturer) business models, through which they can sell branded products in their home countries.

These developments have resulted in a variety of suppliers with different core competencies, positions in the supply chain, are part of different global value chain governance structures and geographical locations (see Appendix 6).

Cut Make Trim suppliers (CMT)

These suppliers produce imported inputs according to buyers' specifications. They are regarded as marginal suppliers and often operate small workshops while using immigrant or illegal labour. Some only work as short-term subcontractors producing lower-quality garments (Dicken, 2011). As a result, they are part of a captive governance structure, in which they lack capital, expertise, direct access to buyers and local inputs. They are located in countries such as Cambodia, Sub-Saharan Africa, Caribbean and Vietnam (Gereffi & Frederick, 2010).

Package contractor (OEM)

Next to production, package contractors source inputs and coordinate inbound logistics. Although they are preferred or niche suppliers, they still largely depend on buyers and are therefore part of a captive governance structure. In case the ability to codify transactions increases, the governance structure can become one that is modular. Overall, these suppliers lack skills in design, management and technology, however, they gain knowledge about the up- and downstream actors of their supply chain. Typical countries are Bangladesh, Indonesia, Sri Lanka and Mexico (Gereffi & Frederick, 2010).

Full package provider (ODM)

Moving up the ladder, ODM suppliers also engage in pre-production activities such as design and R&D. They are regarded strategic suppliers, so often buyers collaborate with them in the process, thereby engaging in a relational governance structure. In other cases, however, buyers can decide to attach their brand to a product designed by the supplier, which makes the governance structure captive or modular. Despite the development of innovative skills, full package providers do not have the skills in marketing to access foreign markets. Countries in which they are present include, Turkey, EU, India and China (Gereffi & Frederick, 2010).

Service Providers (OBM)

The last phase of upgrading involves post-production activities like marketing and sales. This results in large-scale integrated firms, especially in East Asia, that act as coordinators and produce for a number of leading retailers in the fashion sector (Dicken, 2011). In this case, relational governance structures arise, through collaboration with buyers. Moreover, some suppliers develop further into lead firms themselves and distribute garments through their own channels. Typical locations where this has happened are Hong Kong, South Korea, Taiwan, Singapore and Malaysia (Gereffi & Frederick, 2010).

3.4. SSCM in the apparel industry

Now that the context and dynamics of the apparel industry have been described, a review of the academic literature will provide more detailed insights of this specific industry on sustainable supply chain management and more particularly supply chain governance, since this is an essential part of the business model.

3.4.1. Literature review of SSCM in the apparel industry

A similar approach was taken as the one used for reviewing the academic literature on sustainable supply chain management (SSCM). Articles were selected by a search in the Scopus Database within the timeframe 1997-2012. Citation indexes from the Journal Citation Reports database were used to identify 10 top academic journals, specialized in the fields of international business (*Academy Management Review, Academy of Management Journal, Journal of International Business Studies, Strategic Management Journal*), corporate social responsibility (*Journal of Business Ethics, Business & Society*) and supply chain management (*Journal of Supply Chain Management, Journal of Purchasing and Supply Management, Journal of Operations Management, Journal of Business Logistics*). Considering the focus of this review, journals relevant to the apparel industry were selected using the respective number of articles published on the combination of keywords in

Table 3.1 and the number of citations. This resulted in four additional journals: *Journal of Fashion Marketing and Management, Journal of the Textile Institute, Clothing and Textiles Research Journal, International Journal of Clothing Science and Technology.*

Table 3.1 provides an overview of the number of articles found for each combination of keywords on SSCM and the apparel industry in all fields in the selection of journals for the specified years.

SSCM and supply chain governance in the apparel industry have not been the subject of much academic research so far. With only 26 articles published that contain the combination of the keywords 'SSCM' and 'apparel industry' and 32 studies done on 'supply chain governance' and 'apparel industry'. Moreover, the majority of these articles only contain references to other articles that have researched the apparel industry. When searching on article title, abstract and keywords, using the same journals and time period no articles are detected. Thus, there seems to be room for more research on the topic in this particular industry.

Table 3.1 Keyword search SSCM in the apparel and textiles industry

Keyword	Keyword	No. of articles
Sustainability	Apparel	20
Corporate social responsibility	Apparel	60
CSR	Apparel	33
Green supply chain	Apparel	15
Sustainable supply chain management	**Apparel**	**26**
Purchasing social responsibility	Apparel	19
Responsible purchasing	Apparel	14
Socially responsible buying	Apparel	14
Sustainable procurement	Apparel	8
CSR in the supply chain	Apparel	29
Supply chain governance	**Apparel**	**32**
Sustainability	Fashion	19
Corporate social responsibility	Fashion	32
CSR	Fashion	15
Green supply chain	Fashion	2
Sustainable supply chain management	**Fashion**	**2**
Purchasing social responsibility	Fashion	0
Responsible purchasing	Fashion	0
Socially responsible buying	Fashion	1
Sustainable procurement	Fashion	0
CSR in the supply chain	Fashion	1
Supply chain governance	**Fashion**	**0**

In total 184 academic articles were found. They are mainly exploratory and cover a large variety of topics, ranging from green supply chain management, to codes of conduct, the conceptualization of CSR, governance structures, compliance mechanisms and ethical sourcing. Most research on sustainability within the apparel industry has focused on the social dimension. Issues with respect to child labour, working conditions and safety in the context of code of conduct implementation have been investigated in numerous articles (Doorey, 2011; Emmelhainz & Adams, 1999; Lund-Thomsen & Nadvi, 2011). Environmental aspects that are relevant to the industry have so far been somewhat neglected. Contradictory to the trend in SSCM literature, where according to Seuring & Müller (2008) most attention is paid to the environmental dimension of sustainability.

Most of the studies use theoretical or case study methodologies. There are also a number of studies that have analysed the implementation of codes of conduct or the introduction of organic cotton supply chains by large retailers like OTTO and H&M (Goldblach & Seuring, 2009; Illge & Preuss, 2012), and brands such as Nike and Reebok (Doorey, 2011; Yu, 2008). Some have conducted surveys, often to trace country- or firm size-related trends in SSCM. Samples are composed of US, European and Asian firms, engaged in retail, manufacturing, buying or supplying. There seems to be a slight bias in sampling towards U.S.-based sports brands, since the footwear industry has been confronted with stakeholder demands for fair labour since 1990 already, so there is much information available and it is possible to analyse the effectiveness of firm's responses (Doorey, 2011). Units of analysis range from the individual firm level, buyer-supplier relationships, networks to the apparel sector as a whole.

From the mix of articles, a sample of 14 was selected based on their relevance to the topics sustainable supply chain management and supply chain governance. Again, the sample showed a large mix of topics, methods and levels of analysis. They range from philosophical debates on what is ethical behaviour for MNEs, dealing with questions such as: should MNEs engage in sweatshops? Are they responsible for their extended supply chain? (Amaeshi et al., 2008) To the evolution of codes of conduct in the footwear industry (Doorey, 2011; Lim & Philips, 2008; Yu, 2008), which was one of the first industries to be criticized by stakeholders and taking on a CSR strategy. Other studies are more practically oriented and investigate how companies can undertake more responsible buying practices (Jiang, 2009a; Park & Dickson, 2008). Lastly, research has analysed global value chain governance and the role of industrial clusters (Frederick & Cassill, 2009), networks (Lau et al., 2010) and supplier-buyer relationships within that overarching concept (Emberson & Storey, 2006; Lund-Thomsen & Nadvi, 2010; Park & Dickson, 2008). Surprisingly, in this highly dispersed sample of articles it was possible to detect several common topics. This section will highlight some of the academic discussions related to buyer-supplier relations, the role of economic feasibility and context-specific SSCM.

Buyer-supplier relations based on trust and commitment

From a transaction cost economics perspective, efficient transactions will be market-based if there are no conditions of individual bounded rationality, opportunism and asset specificity (Williamson, 1985). In reality, however, these conditions often exist simultaneously, therefore, actors need to build in safeguards for effective governance. This can take the form of trust and commitment, popular subjects in buyer-supplier relationships research. These factors stimulate cooperation, prevent opportunism and allow for long-term high risk investments (Dwyer et al., 1987).

This was shown by Lau et al. (2010), who studied strategic network antecedents in the Hong Kong apparel industry. They found that commitment is the most important antecedent for successful strategic networks, since it leads to higher flexibility and larger orders if suppliers perform well. Next to that, trust, continuity of relationship, reputation, transaction cost, communication, competence and cooperation were found relevant factors. Notably, power was not found to be an important antecedent, which was explained by the fact that firms avoid overdependence on only one supplier and costs for switching suppliers are low. Next to that, ability to handle conflicts was not considered important for strategic networks, because firms engaged in long-term relationships with frequent communication, which would prevent conflicts in time. It should be noted, however, that the sampling in this study was not random, so more quantitative research is needed to support the external validity of the findings. Additionally, although part of the study attempted to show that Western antecedents are similar to Asian, it is still possible that these factors differ per geographic or cultural setting. On the other hand, Park & Dickson (2008) show that the opposite holds. In their study on fair labour management partnerships of US apparel companies they also found that communication was most common, whilst conflict resolution was least engaged in. There is however a small difference in the level of analysis between both studies, where the former looks into strategic networks in general, whilst the latter investigates partnerships only, moreover, the specific context of fair labour, may cause some differences.

Another study looked into the reasons for four Swedish apparel brands to continue sourcing from China, whilst labour costs were rising. It supported the effectiveness of trustful relationships in the apparel industry. As one company explained, their strong relationship with suppliers has given them good prices. Even though they place small orders and have little bargaining power, they are loyal by placing stable orders and having an open dialogue with suppliers. In that way, they are able to influence labour conditions at suppliers. A similar story was told by another company who stated that it has always been their goal to establish long-term relationships with suppliers. Overall the four apparel brands have much trust in China's manufacturing, because of its long tradition in apparel manufacturing, skills and quality. To a certain extent these findings are biased, because they are fully based on the perception of Swedish brands. Considering the high living standard and tendency towards CSR in Sweden, this may explain why these firms are insensitive to rising labour costs and prefer continuing relationships with suppliers (Fang et al. 2010).

Researching Chinese apparel supplier's compliance with social supply chain programs, Jiang (2009a) also showed that moving from a relationship characterized by threat to one that is more collaborative will improve compliance. He also emphasized the fact that suppliers and buyers share responsibility to facilitate the implementation of social responsibility. Meaning that buyers should engage in activities such as rewarding honesty, setting realistic lead times, understanding the pressures on suppliers and providing support to address these pressures with gradual improvements over time.

Economic feasibility

As already mentioned before, implementing CSR in the supply chain always comes at a cost. Nowadays, many lead firms impose CSR standards through codes of conduct on their suppliers in developing countries. This makes sense from a risk management perspective, as it allows them to control what happens in their supply chain. However, these same lead firms do not always take into account how their requirements change the economic conditions in these countries (Lund-Thomsen & Nadvi, 2010).

This can be illustrated with the article by Powell & Zwolinksi (2012), who argue that many of the anti-sweatshop arguments provided so far are flawed from a moral and economical point of view. They show that there is no valid economic mechanism which allows for higher wages and changes in sweatshop conditions without leading to unemployment. Such measures always cost money and with other conditions unchanged, it would lead to less employment, due to a shift in the labour demand curve. Also, they argue, legal reforms for higher wages are not beneficial, because for the same reason as before they will lead to unemployment. Instead, they support the entrepreneurial process, in which business owners themselves will voluntarily offer higher wages, which can improve labour conditions through knowledge transfer. This in turn will lead to more productivity, more sweatshops and more competition for labour. Then wages will increase, so that a country can develop itself beyond sweatshops.

A case study of Nike in terms of the role of CSR in shaping GVC governance structures illustrates this process. It was found that CSR can promote the transformation of lead firms to engage in more collaborative instead of arm's-length relationships and ultimately more CSR implementation, also by suppliers. However, suppliers will only be willing to implement CSR measures if they are economically feasible. Therefore, Nike gave suppliers a special status, shared information, guaranteed orders and larger responsibility. These elements made suppliers more willing to collaborate, because they had securer economic conditions and in that way commitment of Nike. Since Nike considered CSR as highly important, suppliers, despite conflicting labour standards, wanted to ensure their contracts and were therefore willing to invest in CSR so as to maintain their relationships with Nike. Ultimately, CSR became a moral value, so that without buyer incentives suppliers undertook initiatives for CSR themselves; it became embedded in the organization (Lim & Philips, 2008). Additionally, Nike went even a step further by publishing its factory list online for everyone to see. In that way, it also provoked industry collaboration for better conditions in sweatshops, based on information sharing (Doorey, 2011).

Interestingly, Powell & Zwolinksi (2012) also posit that in certain instances sweatshops are allowed to violate labour laws. This is the case if there is a law that stipulates safety standards, but sweatshop workers prefer larger pay checks over smaller pay checks and safety standards. Then such a law harms sweatshop workers, because the safety conditions are paid from the same fund that could have otherwise gone to the workers' pay check (Powell & Zwolinksi, 2012).

Another study also showed that lead firms are limited in the extent to which they can impose norms and values for CSR in local clusters. That is, it may only be a minority of suppliers in the cluster that is engaged in a captive relationship with the lead firm and that will consequently adopt the CSR practices. Whilst they may receive the largest portion of production, they in turn are likely to be part of relational value chains with medium-size subcontractors. In that case, they will not impose the norms as set by lead firms on their relations, because in these relations norms are based on trust and mutual dependence (Lim & Philips, 2008). Another scenario is a supplier's relationship with small subcontractors on the basis of arm's length transactions. Again, in this context it is unlikely that suppliers will request specific CSR practices (Jiang, 2009b).

Again another study showed that the presence of multinational buyers in local industrial clusters in South-East Asia was beneficial for the implementation of CSR practices. This was the case, because multinationals had CSR high on the agenda, due to increasing urges by stakeholders and for the sake of their corporate image to address labour issues at manufacturing factories (Park & Rees, 2008). At the same time the local institutions could support the implementation of CSR by for example effective monitoring (Lund-Thomsen & Nadvi, 2010). However, the sample of this study focused on the footwear industry, so it is questionable whether similar patterns can be found in the apparel industry. Moreover, it may be too simple to suggest that the presence of multinationals in a certain industrial cluster will lead to the adoption of CSR practices. Especially since the size of the local industry cluster and firms, the characteristics of the labour pool and historical or cultural trends in the cluster could also explain some differences in effective local institutional governance. Still, further research is needed to understand whether there is a difference in compliance between horizontal and vertical governance. Moreover, the ambiguous interaction between CSR and governance deserves more attention, as for now it is unclear whether it is CSR that shapes GVC governance structures and industry collaboration or vice versa.

Context specificity of CSR, codes of conduct and regulations

Several articles call for a more context-specific or locally embedded investigation of sustainable supply chain management or governance. This is for example the case with supplier-buyer relationships research, which although extending, remains prescriptive and survey based. Emberson & Storey (2006) answered to the need to further explore the role of trust and commitment in relationship building in a specific context, by studying the specific context of an apparel retailer and supplier. They found that although the retailer shared information with suppliers, leading to better production management and on-shelf availability, the parties had difficulty maintaining this program, because every two years the buyers of the retailer would switch due to career development. Every time a new person had to be convinced of the benefits of sharing information with suppliers, moreover, other corporate policies giving more responsibility for overseas procurement to a special team and changing production and delivery systems due to price pressures, made it impossible to keep up the relational collaboration that was established beforehand. Although similar results were found in companies active in other industries, still it is necessary to further investigate how buyer-supplier relationships operate in practice.

Another area that calls for more context-specificity is the interaction between the opposing interests of GVC and local industry clusters in determining which norms and values will prevail in industry-wide CSR initiatives. So far, it is unclear which type of governance will be emphasized, because clusters are both influenced top-down via GVC by the lead firm and bottom-up through institutional actors. Thus, it is not possible to determine what will be the economic, social and environmental outcomes. It is necessary to study the interaction between vertical and horizontal governance in the specific global and local context to understand the outcomes they can produce in terms of upgrading, development, environmental governance and access of small producers to the global market (Neilson & Pritchard, 2009).

Lastly, there have been calls for local clusters to organize multi stakeholder initiatives to promote CSR in developing countries (Lund-Thomsen & Nadvi, 2010). As some studies showed, MSIs set up in the local context can facilitate access to high value markets, localize standards, develop independent CSR monitoring, and create local buy-in of CSR and space for voicing concerns (Dolan & Opondo, 2005). This emphasizes the importance of context-specific engagement of actors for sustainable supply chain management.

3.4.2. Drivers and barriers for SSCM in the apparel industry

As described in section 2.3.3 both internal and external drivers and barriers influence firms' adoption of SSCM practices. Based on this literature review, however, it seems that no study has specifically looked at the drivers and barriers for adopting SSCM in the apparel industry. There are however some studies that have identified general drivers and barriers for implementing CSR in the apparel industry (de Brito et al., 2008). These are added to the review that follows.

Table 3.2 Drivers and barriers for SSCM in the apparel industry

Drivers of SSCM*	**Barriers of SSCM**
Internal	***Internal***
Profit (business case 1)	Higher costs
Prevent financial losses / risk management (business case 2)	Coordination effort or complexity
Competitive advantages / moral principles (business case 3)	Lack of legitimacy for sustainability initiatives
Innovation / value creation (business case 4)	Insufficient/lack of communication

Organizational factors	Organizational factors
Reputation loss	Labour-intensive production and traditional technology
A buyers' market	A buyers' market
	Short deadline and low predictability in ordering procedures
	Low transparency
External	***External***
External pressure from stakeholders (type 2 defensive business case)	Too little commitment of suppliers
Changes in regulation	Too little regulation
Bandwagon effect	Large differences in general cost levels between buyer region and supplier region
Resource dependence	
Societal needs (type 4 societal business case)	

Source(s): based on Park & Lennon, 2006; Porter & Kramer, 2006; Carter & Rogers, 2008; Seuring & Müller, 2008; Walker et al. 2008; Carroll & Shabana, 2010; Mefford, 2011
Note: *The sentences in brackets refer to the types of business case for sustainability described in section 2.1.2.

Internal drivers and barriers in the apparel industry

Most of the drivers and barriers identified in section 2.3.3 apply to the apparel industry as well. Internally, most apparel firms are motivated to implement SSCM practices for risk management purposes. They impose codes of conduct and other standards on suppliers abroad so as to control what happens in the supply chain (Lund-Thomsen & Nadvi, 2010). Additionally, some apparel firms view SSCM from a moral point of view and find it their duty to prevent harmful substances such as pesticides from affecting the environment (de Brito et al., 2008). With regards to organizational facors, one study amongst apparel firms found that top management plays a mediating role in their adoption of fair labour management practices (Park & Rees, 2008). Another organizational factor concerns the frequent changes in customer relationship management e.g. due to career paths within a firm, which make it difficult to implement a longlasting policy for CSR in terms of information sharing for example (Emberson & Storey, 2006).

The three internal barriers identified before play a role in the apparel industry as well. Especially the complexity of the supply chain is a barrier, as illustrated by the case of OTTO, it is for example difficult for apparel firms to coordinate an organic cotton supply chain, due to the numerous different actors and relations between actors in the chain. Firms that want to set up such a supply chain are recommended to collaborate with suppliers (Goldbach & Seuring, 2010). As already mentioned before, legitimacy is enhanced and internal support broadened if top management is commited to sustainable practices in the supply chain (Park & Rees, 2008).

There are also additional drivers and barriers to the ones previously identified. Firstly, the large bargaining power of buyers in the supply chain makes it easier to stimulate socially responsible behaviour amongst suppliers, for example by imposing standards (Lepoutre & Heene, 2006). On the other hand, this can also form a barrier, especialy, because buyers face low switching costs when changing suppliers. Thus, they can easily shift to those suppliers with the lowest costs or shortest lead times. Consequently, competition amongst suppliers is fierce, which often leads to poor working conditions and overexploiting resources (Laudal, 2010). Secondly, the labour-intensive production and traditional technology, make it less likely that firms will invest in capital for new production methods. Moreover, the workforce is highly unskilled and thus easily substitutable, leading to unsustainable human resource practices. A third barrier is low transparency, in that there are numerous small and medium enterprises active in the apparel supply chain. Due to such limited insight, it is likely that not all companies in the supply chain will uphold social and environmental standards. Moreover, they cannot be checked by independent organizations on compliance, especially since few firms have disclosed their manufacturing factories. Lastly, communication barriers inhibit the implementation of sustainable practices in the supply chain. Especially since many firms have outsourced production to developing countries where few employees or managers speak English, making it difficult to gather information (Laudal, 2010).

External drivers and barriers in the apparel industry

From an external point of view, pressure from stakeholders, such as sweatshop and child labour accusations by NGOs, are common in the industry. Additionally, ethical and green consumerism is shown to increase the adoption of social standards in the supply chain (Wong & Taylor, 2006). Moreover, changes in regulation in terms of social and environmental international standards, also requires lead firms to behave responsibly and become more transparent in their activities. The trend amongst competitors to engage in sustainability and the high resource dependence on cotton as a raw material and water in the manufacturing process are strong drivers. Two other external events, namely the MFA phase-out and the financial crisis, have also led to more sustainable sourcing strategies. Firms show a more risk averse attitude, leading to practices for supply base rationalization, less dependence on one supplier and less dependence on Chinese suppliers (Gereffi & Frederick, 2010).

Lack of supplier commitment is also a common barrier in the apparel supply chain, particularly due to the type of supplier relationships they have with subcontractors. The other two external drivers deal with a similar issue, in that firms benefit from the differences in costs and regulation between their region and the supplier region. However, this is often accompanied by a lack of environmental and social standards and enforcement of those standards by local governments. Moreover, suppliers may benefit as well in the form of additional income. Thus, even if a firm adopts international standards against child labour and other harmful working conditions, the implementation of such SSCM practices is hindered (Laudal, 2010).

3.4.3. SSCM implemented in the Apparel Industry

In general, apparel firms adopt similar tools and practices for SSCM as identified in section 2.3.4. Codes of conduct, labels, multistakeholder initiatives, supplier collaboration and development, supply chain transparency and lifecycle analysis. Some are more specific to the apparel industry or have gained wider acceptance than others. For example the Better Cotton Initiative and Oeko-Tex label, or multistakeholder initiatives such as the the Fair Labor Association, Ethical Trading Initiative and Fair Wear Foundation. Another multistakeholder group is BSCI (Business Social Compliance Initiative) which, although not targeted at the apparel sector solely, knows a high number of apparel firm members. Also, some practices are more commonly adopted than others, for example not many firms have adopted tools to improve supply chain transparency or lifecycle analysis. Apparel firms have targeted social rather than environmental SSCM practices over the past years. Only recently apparel firms seem committed to a change to organic cotton and take a sustainable product rather than process strategy.

3.4.4. Sustainability issues in the apparel supply chain

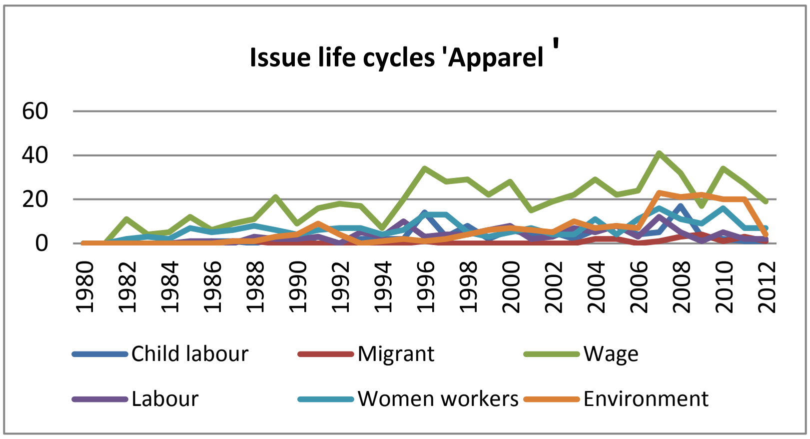
As a consequence of the characteristics and developments of the global apparel supply chain, numerous social, environmental and economic issues have arisen. Not only has the public paid more attention to issues in the apparel supply chain, also academia is discovering the complexity that comes with solving these issues. Surprisingly, even though issues such as working conditions have improved over the years and firms have adopted more sustainable supply chain practices, they are still present in most every apparel supply chain. Therefore, the following media analysis will attempt to better understand how this paradoxical reality can exist. Firstly by detecting the issues specific to the apparel industry and their development over time. Secondly, by describing the issues in more detail, including the degree to which the industry has taken responsibility for them.

Media analysis sustainability issues in the apparel supply chain

A media analysis was conducted to discover which specific issues exist in the apparel industry and how they have developed over time in terms of framing and intensity. The search was done in the LexisNexis database in three English newspapers: *The International Herald Tribune*, *Financial Times* and *The Guardian,* for the period 1980-2012. A general search included the keywords: apparel, fashion, supply chain, social, environment, socio-economic, corporate social responsibility, sustainable development, ethics and human rights. Based on the number and relevance of articles, the search was specified by combining the respective keywords: 'child labour', 'migrant', 'wage', 'labour', 'women workers', and 'environment', with the keyword 'apparel'. This resulted in a total of six socio-economic and environmental issues. Each is included in the overview of issue life cycles in

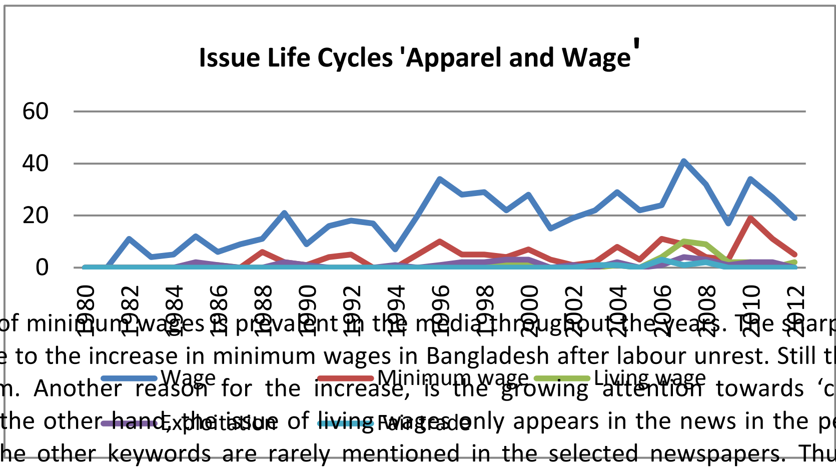
, showing the number of total hits per keyword in the three newspapers over the specified time period.

Figure 3.2 Issue life cycles keyword combination ‘apparel’ and ‘child labour’, ‘migrant’, ‘wage’, ‘labour’, ‘women workers’, ‘environment’



The figure shows that the number of articles published on the keyword ‘wage’ is much higher than that of the other issues. It should be taken into account however, that the articles detected by this keyword also cover general problems related to wage increases. Further investigation into actual wage issues was done by searching within the articles for the number of hits on relevant keywords like ‘living wage’, ‘minimum wage’, ‘exploitation’ and ‘fair trade’. Figure 3.3 contains the issue life cycles of these related concepts and shows a significant decrease in the number of hits for relevant articles as compared to the number found in Figure 3.2.

Figure 3.3 Issue life cycles keyword combination ‘apparel and wage’ and ‘minimum wage’, ‘living wage’, ‘exploitation’ and ‘fair trade’



Especially the issue of minimum wages is prevalent in the media throughout the years. The sharp spike in 2010 is mainly caused due to the increase in minimum wages in Bangladesh after labour unrest. Still the wage is not enough to live from. Another reason for the increase, is the growing attention towards ‘cheaper’ China (Kazmin, 2010). On the other hand, the issue of living wages only appears in the news in the period between 2006-2008, whilst the other keywords are rarely mentioned in the selected newspapers. Thus, the articles covered by the main keyword ‘wage’ mainly refer to general pay for work in the apparel industry and the financial development of the sector, rather than issues.

Going back to the other general issues, it is remarkable that the environment receives increasing attention over the past few years. Analysis of the articles shows that they mainly concern trends like eco-fashion and recycling (Fox, 2009), but also an eco-labelling initiative from large brands and retailers (Marsh, 2011). A last observation, is that the issues of child labour, labour and women workers follow similar cycles throughout the years. They spiked around 1995-1998 and 2005-2007, which can be explained by the fact that they are highly related concepts. Only in the beginning period does the issue of women workers receive significantly more hits. However, when looking at the respective articles, they do not relate to societal issues. Some mention job losses in local markets (Our Labour Staff, 1983), but most merely deal with fashion styles for working women and are irrelevant for purposes of this research. Concerning child labour an interesting trend is that, in the early years news focused on campaigns against large apparel retailers and brands, alleging them of using child labour for the production of clothes (Milne, 1999). While more recent news highlights company initiatives to trace child labour and collaborate in the surge to eliminate it from the supply chain (Birchall, 2007).

In general, there seems to be a slight increase in media attention for socio-economic and environmental issues in the apparel industry over time. Naturally, the findings of this media analysis are limited by the three English sources that were consulted. Moreover, despite a pre-screening still relatively many articles were irrelevant for the current research. Therefore, now the issues will be further elaborated upon, using other sources of information as well.

Issues in the apparel supply chain

After detecting issues through media analysis, a more detailed description will be provided. Firstly, by consulting academic articles that have investigated them. In addition, to gain insight into the degree to which the industry has taken responsibility for certain issues, online sources of three of the four largest apparel retail players in terms of revenues in the European market were consulted, namely C&A, H&M, and Marks and Spencer Group plc. (Datamonitor, 2012). In addition, information from the brands Patagonia and Levi Strauss & Co was used, because they are considered sustainability frontrunners in the apparel industry. In that, at an early stage they were involved with and integrated sustainability into the core of their strategy. Besides, they are often referred to in sources for sustainable business practices (Pasquinelli, 2012). For a critical note concerning SSCM in the apparel industry, key apparel-related NGOs were selected, based on positive references in academic research and from companies, governments and international organizations that collaborated with them. They include the Fair Labor Association, Fair Wear Foundation, Ethical Trading Initiative and Clean Clothes Campaign.

3.4.4.1. Socio-economic issues

Bonded labour

One of the issues present in the apparel industry is bonded labour. Recently, especially the Sumangali system in India has received attention from different kinds of stakeholders. Under this scheme, young Dalit girls are exploited to work in Indian factories for a lump sum which they are promised to receive after three years to pay their dowry. Often the girls work under bad conditions, are not allowed to leave premises without permission and receive a sum that is less than what was promised to them before they entered the contract (Coninck et al., 2011). In May 2011, numerous fashion brands were accused of importing clothes from Indian apparel factories engaged in Sumangali practice. C&A and Diesel for example place orders at Eastman Exports, which is one of the factories found to support the Sumangali system. None of the companies says to have found evidence that employees received below minimum wages. In response to findings of NGO SOMO, C&A explained that the Sumangali system mainly occurred in those parts of the supply chain, so the weaving and spinning mills, that were not audited by its independent auditor SOCAM. The company further explained that international stakeholder cooperation is needed to address the situation. An example in this context is the Tirupur Stakeholders Forum, which attempts to structurally abandon the practice, through stakeholder dialogue between relevant parties (C&A, 2012). Although working conditions have recently improved in the factories, there are still problems to be solved (SOMO, 2012).

Child labour

NGOs and multi-stakeholder initiatives (MSIs) have long focused efforts on the elimination of child labour in the apparel industry. Significant improvements have been made, for example the number of social audits was increased and educational facilities were built. Still, however, instances of child labour are found, for example the recent case in Uzbekistan. Where in summertime the Uzbek government dismisses all children and teachers from school, forcing them to work in the fields to harvest cotton without compensation. NGOs called for a ban on the import of Uzbek cotton and together with companies such as C&A and Levi's entered into a dialogue with the government. Consequently, the Uzbek government signed the ILO standards, thereby showing good intention to improve the situation. However, the Uzbek government has still a long journey ahead to implement these standards (ETI, 2012).

Migrant / Women / Home workers

Another issue relates to the employment of migrant workers, who often work in unsafe and unhealthy circumstances, are abused and receive low pay for long hours. Recently, NGOs highlighted the hardships migrant workers face. Due to their temporary legal status, they depend on their relationship with an employer and are vulnerable to premature ending of their contract. Also, they do not have easy access to legal protection and are often heavily indebted due to the processes of acquiring work/papers. Moreover, migrant workers do not have direct contracts with the factories for which they work, but are recruited by agents in their home country. So, they sign contracts at home with clauses containing better conditions than those found in the destination country, which is a form of pure exploitation. Additionally, companies pay deductions (levies to the government for employing migrant workers) and obstruct the right to freely associate (due to legal prohibitions or short contracts) (CCC, 2009).

To address the problem, NGOs plead for organizing migrant groups. For example in independent worker unions, where they can be educated and raise awareness about their rights. So far, brands seem to have taken limited action, because they are discussing who is responsible for migrant workers; the brand, supplier or the recruitment agency? Although some organizations specifically mention migrant workers in their code of conduct and have remediation strategies, they call for MSIs so as to clearly formulate the responsibilities of all stakeholders involved in the issue (CCC, 2012).

Similarly, women workers face unfair treatment and are often denied the right to basic labour conditions. About 80% of the labour pool for clothes manufacturing consists of women and in developing countries these are often young women who work in sweatshop conditions. They either work in small workshops or at home, because of their role in the household or to take care of their children. Payments are piece-rate based, so there is no certainty for a stable income. In addition, women are often discriminated in terms of wage or working hours. As discovered by a study of the World Bank, female wages have declined in developing countries like Sri Lanka and Cambodia after the MFA phase-out, thereby widening the gap between male-female wages (Savchenko & Acevedo, 2012). On the other hand, often there are no better options than to work in a factory, since the alternative is unemployment (Dicken, 2011). Firms have formulated programs to specifically educate women on their labour rights.

Wages

Related to this is another prevalent theme that has been brought to the attention of corporations, namely wage issues. These can relate to wages below the minimum level, minimum wages below the living wages in a country, or insufficient compensation for overtime work. These cases have been quoted in countries such as Bangladesh and Cambodia, where it is also the case that the minimum wage level set by the government is insufficient to make a living (Kazmin, 2010). Another factor complicating this issue, is the difficulty to determine what price buyers should pay so that workers can earn a living wage (FWF, 2012). Therefore, one of the tools designed by the FLA is a wage ladder which benchmarks wage levels in a factory relative to the standards in the country/region. In that way, factories and buying firms can gain insight into proper levels of compensation (FLA, 2012).

Freedom of association

If workers are given a voice and allowed to organize themselves to stand up for their rights against suppliers, many of the aforementioned issues could be tackled. However, many countries have either not taken up the right to freedom of association in their legislative frameworks or are reluctant to enforce it. An interesting case is China, where the law stipulates that workers are allowed to organize themselves, however, only with the national labour union. So that normally unionization results in a company-elected union, where employees need to consider three conflicting interests of the business, regional economic wealth and employees (Yu, 2008).

Health & Safety (Sandblasting)

Also, the apparel and textile industry knows issues concerning workers' health and safety. These include unsafe environments where workers have insufficient protective gear to operate equipment, but also unhealthy dyeing practices exposing employees to dangerous chemicals. One of the most recent NGO campaigns sheds light on the practice of sandblasting, which gives jeans their worn look. It entails 'the erosive/abrasive process applied to denim by air compressors blowing out sand under pressure in order to bleach and to batter the denim.' (CCC, 2012). In this process workers are exposed to silica dust, which causes silicosis in the lungs of workers who inhale the dust and cause illness.

Together, Levi Strauss and H&M initiated a worldwide sandblasting ban. Since despite strong health & safety standards from their side, suppliers are not always able to comply with them and workers' health is at risk. Starting in September 2010, they have engaged in an industry movement, working together with NGOs and advocacy groups. So far, a number of brands have signed the ban, amongst which high-end fashion labels like

Versace. Some firms however, like Dolce & Gabbana, refuse to sign the ban and enter into discussions about sandblasting (CCC, 2012). To ensure compliance with the ban, the organizations have set up a team of assessors which checks suppliers, and hired quality experts working at a number of suppliers. The ultimate goal is to end sandblasting at an industry-wide level (Levi Strauss & Co., 2012).

3.4.4.2. Environmental issues

Chemicals

Lastly, the global apparel supply chain has adverse effects on the environment. Cotton is often harvested while using harmful pesticides and some of the materials used to dye clothes contain chemical components (CCC, 2012). Programs such as the Better Cotton Initiative are first attempts to tackle these environmentally harmful processes. Moreover, several apparel companies have set up the Joint Roadmap Towards Zero Discharge of Hazardous Chemicals, with the purpose to eliminate the discharge of toxic chemicals in their supply chains from 2020 onwards (SustainAbility, 2012).

Water

Large amounts of water are used at several phases of a garment's product life cycle. Firstly, in the cotton harvesting phase, where especially farmers located in water-scarce regions are increasingly adopting more water-saving harvesting techniques such as drip irrigation. Secondly, during the manufacturing process when yarn is spun and clothes are dyed. Thirdly, in the consumer phase, where clothes are washed very often, with washing machines wasting much water.

Climate change (cotton / energy)

Cotton farming comes with polluting practices such as chemical fertilizers and large amounts of water. Therefore, many firms are introducing organic farming into their supply chains. Concerning energy, many suppliers still waste energy in their production processes, so that firms have set up projects in which they make an inventory of the supplier's energy consumption and detect possible energy-saving measures.

3.4.5. Business model and SSCM in the apparel industry

Overall there seems to be a discrepancy between certain types of business models, e.g. for low prices, quick replenishment and uncertain orders, and the demand for proper working conditions at suppliers (Hearson, 2009). Since the apparel industry knows several types of business models though, each may be motivated by different drivers and hindered by different barriers in the implementation of SSCM practices. Only some studies specifically deal with apparel business models and their impact on the adoption of specific types of SSCM practices. Therefore, the following will attempt to extrapolate their findings and the results of studies on the adoption of SSCM by more generic business models into propositions related to the nine building blocks for business models. These will form the basis for research into the interaction between business models and SCM approach in the apparel industry. They are formulated in terms of the degree to which a firm takes an active approach, since firms continuously change.

3.4.5.1. Firm characteristics

Size

Firm size can affect the degree to which firms adopt SSCM practices. Park & Dickson (2008) found that larger firms sourcing from more foreign countries have stronger partnership relations with suppliers. Probably due to the fact that they are more prone to accusations by the media than smaller firms and for the sake of protecting their brand. In this way, they show leadership and can possibly lift the norms in the industry. Still, when controlling for size and foreign sourcing, however, the results show that strategic emphasis influences firms' fair labour management. These findings lead to the following proposition:

Proposition 1: Larger firms take a more active approach to SCM than smaller firms.

Ownership structure

Another element that can possibly influence a firm's strategy is ownership structure (Mascarenhas, 1989). Research generally distinguishes between three types of ownership: publicly traded, privately held and government owned. Although some studies found that the type of ownership structure may not play an important role in a firm's development of capabilities and resources (Roberts, 1975), others argue that it can mediate organizations' strategies (Darnall & Edwards, 2006). Publicly traded firms issue shares, through which they increase capital, by sharing risk amongst many shareholders. In privately owned firms, such as family firms, financial resources are shared amongst a smaller group of individuals. Often family firms have been found to outperform other firms due to the long-term tenure of CEOs and their care for future generations. This makes them more apt than other types of firms to invest in longterm relations with external stakeholders such as suppliers (Le Breton-Miller & Miller, 2006). Thus it seems that:

> *Proposition 2: Firms that are family owned take a more active approach to SCM than firms that are publicly owned.*

3.4.5.2. Strategy

Ever since apparel firms were accused of having poor labour practices in their supply chain, they started implementing policies for responsible business. Park & Dickson (2008) found that depending on its strategic emphasis a firm would engage in partnerships for fair labour management with suppliers. They detected six different strategies amongst apparel firms, namely supply control, image differentiation, focus, quality differentiation, product development, and low price. Their survey amongst 209 sourcing managers in the US apparel and footwear industry showed that firms with a strategic emphasis on supply control, image differentiation, and product development engage more in partnerships, whilst a low-price strategic emphasis is less likely to lead to partnership relations. Interestingly, quality and focus strategies were not significant predictors for partnerships in fair labour management. Possibly, because firms can for example also achieve quality by engaging in longterm relations with suppliers. Regarding focus, the authors explain that these firms commonly know their customer base well, so that if they are not concerned with fair labour practices, then the firm could see partnerships as a costly, unnecessary investment. Categorizing the six different strategies into Porter's generic types of strategies, it is proposed that:

> *Proposition 3: Firms with a differentiation or niche strategy take a more active approach to SCM than firms with a cost leadership strategy.*

3.4.5.3. Business model

Dominant business models

For brands the most important driver seems to be external stakeholder pressure that threatens the corporate image. That is, the brand is their strategic asset and composed of people's perceptions (Fombrun, 1996). So, information about social responsibility can enhance the image (Fombrun and Shanley, 1990), however, negative communication, such as alleged sweatshop activities, can severly damage clothing firm's reputation. Consumers have left brands for this reason (Wong & Taylor, 2006), however, brands in their turn have also responded to these calls (Sethi, 2003). Resultantly, it is expected that:

> *Proposition 4: Brands take a more active approach to SCM than retailers.*

Looking into the behaviour of retailers in a collaborative supply network, it was found that of the two types of retailers, specialty apparel retailers place 'soft pressure' on their supply network partners and especially on their first-tier suppliers to implement sustainability in their production systems. Whilst mass merchants were not found to exert pressure on their supply network (MacCarthy & Jayarathne, 2012). This is in line with Humphrey & Schmitz's (2001) finding that some retailers only refer to process standards to be attained by suppliers, like mass merchants, whilst others specify how these are to be attained and support the adoption of specific production and monitoring practices, as done by specialty apparel retailers. Another observation is that mass merchants are more likely to use arm's length approaches, resulting in environmental monitoring, whilst specialty apparel retailers engage more in jointly developing solutions with suppliers, so environmental collaboration. This may be due to the fact that the latter type works with first-tier manufacturers that are wholly owned, jointly owned or operated under longterm collaborative agreements, which facilites cooperation. So that:

> *Proposition 4.1: Specialty apparel retailers take a more active approach to SCM than mass merchants.*

What is more, brand marketers seem more vulnerable to external stakeholder accusations than brand manufacturers, since the former have a business model based on outsourcing, which the public more easily perceives as a way to circumvent social and environmental standards, than the business model of brand manufacturers who own most of the production facilities. On the other hand, due to their business model, brand marketers are motivated to establish long-term relationships with suppliers to ensure continuity, commitment and good prices also for smaller and quick orders (Fang et al. 2010). Such relationships are fruitful for the implementation of sustainable practices in the supply chain. Based on this, it can be inferred that:

Proposition 4.2: Brand marketers take a more active approach to SCM than brand manufacturers.

In general, the financial crisis showed that the majority of people find the premium price that comes with sustainable goods too high. Mainly consumers with higher disposable incomes are willing to pay for CSR, making it foremost profitable for the luxury brand to invest in SSCM practices (Euromonitor, 2012). Moreover, only the luxury and aspirational luxury customer segments showed growth during the crisis, since they are price insensitive. Thus, there is a pricing effect on sustainability, where:

Proposition 4.3: Luxury brands take a more active approach to SCM than mainstream brands.

Degree of internationalization

As mentioned before, larger firms sourcing from more foreign countries have stronger partnership relations with suppliers (Park & Dickson, 2008). So, next to generic business models, the degree to which a firm has a large foreign supply base is also expected to influence its sustainable supply chain management.

Proposition 5: Firms with a larger foreign supply base take a more active approach to SCM than firms with a small foreign supply base.

Supply chain composition

The apparel supply chain knows several different types of players. Suppliers are affected by different factors than buyers, which determine their ability and willingness to adopt sustainable practices. Regarding internal barriers, firstly, the supplier workforce may prefer to work overtime rather than under better social and/or environmental conditions (Powell & Zwolinksi, 2012). This relates to the economic situation in certain developing countries, where employment opportunities are scarce and earning a living is difficult. Secondly, there is the difference in cultural norms between buyer and supplier. Where some cultures e.g. Sri Lanka regard responsibility as a moral value stemming from Buddhism, others do not recognize the role of business in society (Perry, 2012). Thirdly, in the national or industrial context, suppliers are part of an integrated network of contractors with whom they do business in a relational way. In these relations different norms prevail, which forms a barrier for suppliers to request their contractors to implement social and environmental standards as set by buyers (Lim & Philips, 2008). Fourthly, they also typically engage in arm's length business relations with subcontractors e.g. fabric suppliers from abroad, which makes it even less likely that they will require social and environmental standards from subcontractors (Jiang, 2009b). A last barrier is that often, fully integrated suppliers lack the knowledge and technological capabilities to make production processes more sustainable (Goldbach & Seuring, 2010). Thus, the key activities or competencies of a firm determine its adoption of sustainable practices, where:

Proposition 6: Firms with a more downstream position in the value chain (closer to end-user) will take a more active approach to SCM than firms further upstream in the value chain (supplier/manufacturer).

Brito et al. (2008) found that less integrated and less stable networks, as often managed by mass merchants, are mostly based on short-term contracts and less likely to make mutual investments for sustainability. Moreover, there is a trend amongst retailers towards greater product specialization, brand-name products and market segmentation, which means that they will increase the frequency of orders, engage in less forward buying and require more replenishment, in addition to greater requirements for product variation (Abernathy et al., 1999; Baden, 2002). Together with their captive governance structures, large bargaining power over suppliers and low-cost strategies, this makes it less likely that they will adopt responsible practices towards suppliers (Gereffi, 1999), suggesting that:

Proposition 7: Firms with a high degree of vertical integration take a more active approach to SCM than firms with a lower degree of vertical integration.

Proposition 8: Firms with a low degree of horizontal diversification take a more active approach to SCM than firms with a higher degree of horizontal diversification.

Overall, the apparel industry seems mainly affected by external pressures for sustainable supply chain management. Next to that, there are indications that business model components can form a hurdle when firms wish to implement SSCM practices in addition to firm and supply chain characteristics. So far, however, no studies have systematically researched the interaction of these elements.

3.5. Conclusion

The apparel industry was chosen to address the gap in research concerning sustainable supply chain management in a specific industry. Despite efforts to improve the apparel supply chain, the industry has not yet succeeded to transform into a sustainable supply chain. A possible explanation for this can be found in the characteristics of the industry and the global developments that have affected it. Together these factors have triggered a shift in the market, strategies and business models, and supply chain of the apparel industry. Consequently impacting firm's effectiveness to address sustainability issues in the supply chain.

The apparel industry can be characterized as complex and dynamic. Firstly, apparel production is highly fragmented and globally dispersed. With numerous small enterprises in the developing world manufacturing clothes for large retailers from the developed world. This hinders effective coordination of the supply chain. Secondly, there is low transparency. Due to the global operations of both buyers and suppliers and the subcontracting of orders to smaller players, thereby making it difficult to detect all players relevant to a specific supply chain. Thirdly, consumer demand in the middle segment has become highly volatile and unpredictable. Partly due to consumer's shifting preferences, but also due to the fashion change strategies adopted by retailers whereby collections change at least 8 times per year. Together, these characteristics make it difficult to gain complete insight in the workings of the apparel industry and its supply chain.

Several global trends have impacted the apparel industry. Firstly, the MFA phase-out has affected the global composition of the industry. Where increased competition has shifted manufacturing from small developing countries towards those countries with the lowest wages, especially China. Also, now that retailers are no longer dependent on quotas, they prefer to work with a smaller supply base of large suppliers. Secondly, the financial crisis has adversely affected the sales of clothes, causing firms to adopt a risk management approach to supply management. This includes, reducing reliance on China and overdependence on one supplier, together with supply base rationalization and a search for more regional suppliers. In addition, global trends, such as demographic change, climate change and rising costs for key resources will certainly influence the industry in the near future. Whilst for other factors it is more difficult to estimate how they will affect the apparel industry, like the response of society to resource scarcity, the role of legislsation, disposable income, emerging economies, technological development and ethical consumerism.

As a consequence of both these characteristics and trends in the industry, the market has grown into one that is moderately competitive. Also, dominant strategies and business models have changed to more outsourcing, private labels by retailers and a stronger focus on own brand stores. Moreover, there has been a shift from manufacturers to retailers and brands, where especially retailers have gained influence in the past few years. As a result, the governance structure of the supply chain has moved from captive to modular to relational. Historically, the typical governance structure was one in which suppliers were held captive by large retailers. Retailers placed orders and suppliers performed cut, make and trim activities based on short-term contracts. Over the years, suppliers upgraded and gained skills and knowledge allowing them to perform other activities next to manufacturing. They moved to a modular type of governance structure, which made them responsible for full-packages based on customer specification. Recently, firms start to shift towards more relational governance structures where they enter into long-term strategic partnerships with suppliers, mainly due to the abovementioned developments and for CSR purposes.

Overall, there are few articles on SSCM within the apparel industry and there is a general bias towards studies on US footwear firms. Some studies have shown that it is important for buyers to implement CSR in a way that is economically feasible for suppliers. SSCM affects players at different positions in the supply chain in different ways and more research is needed to untangle the ambiguous interaction between CSR and vertical and horizontal governance structures. Surely, buyers enhance compliance through trust and commitment, however more research is required to identify whether this is also the case for suppliers operating specifically in the apparel sector and in different regions. Also, context-specficity plays an important role as it is found that the effective implementation of SSCM depends on the relationships between all players in the supply chain. Thus, there is room for research on the interaction between local industry clusters and global supply chain governance and their effect on compliance. This comes with research challenges concerning the conceptualization of SSCM, through studies on the interaction between vertical and horizontal governance and the effectiveness of SSCM. In addition to studies on the interaction between drivers / barriers (business case), business models and strategies for SSCM in the apparel industry. Next to that, research faces empirical challenges in terms of more context-specific studies that include suppliers and cover business models for SSCM.

Over the past years, apparel firms were mainly criticized for socio-economic issues, mainly related to wages. More recently, the apparel industry increasingly addresses environmental issues. Firms interact with various stakeholders when tackling issues in the supply chain and differ in their approaches to sustainability.

Research has identified a variety of apparel industry-specific internal and external drivers and barriers. Next to that, some studies have specifically examined how SSCM is implemented in the apparel industry. Despite tools for SSCM and changes in their SSCM approach, however, the effective implementation of sustainable practices in the apparel supply chain is still lacking. Thus, there seems too be an inconsistency between SSCM implementation and firms' business models and strategies. So far, no systematic studies have been done to look into this interaction. Therefore, propositions were formulated, which will be further investigated in this research.

4. Methodology

Chapter 2 revealed that sustainable supply chain management is a complex concept. Despite good intentions, firms find it difficult to implement responsible sourcing practices. Similarly, academia calls for more industry-specific studies to better understand *how* sustainability can be implemented in the supply chain. Zooming in on the apparel industry, chapter 3 showed that firms increasingly adopt more sustainable supply chain practices. However, stakeholders continue to demand improvements in the conditions of the apparel supply chain, where still many sustainability issues abound. In combination with the global developments in the supply chain and the role of firm characteristics, this makes it questionable whether a sustainable apparel supply chain can exist, in other words:

Is there a business case for sustainable supply chain management in the apparel industry?

This study aims at investigating the relation between firm characteristics, sustainability demands and answers in the form of sustainable supply chain management practices and global trends. This involves a number of conceptual, but in particular methodological choices which will be explained and elaborated in this chapter. Section 4.1 presents the research design, followed by an overview of the most important concepts, their measurement and a conceptual model in section 4.3. After that, sections **Fout! Verwijzingsbron niet gevonden.** presents the sample and section 4.4 elaborates on the data collection process. The final section 4.5 concludes with an explanation of the data analysis.

4.1. Research design

In line with the suggestions for research on the concept of sustainable supply chain management in section 2.4, this research uses a longitudinal, retrospective, comparative, multiple case study method. The choice for a case study design, was partly based on the request in sustainable supply chain management and business models literature, for more empirical studies for the purpose of theory-building (Carter & Rogers, 2008). Using empirical findings from a variety of sources in a case study context and integrating them in existing theory, can significantly contribute to further develop the respective concepts (Eisenhardt, 1989; Yin, 2003). Also, this is an explorative research into the 'how' of sustainable supply chain management, or the development of a contemporary phenomenon in the real-life context of global developments, industry dynamics, firm strategies and stakeholder demands. Such dynamism makes it impossible to control the implementation of sustainable supply chain management and test which factors influence it, as in an experimental setting (Eisenhardt & Graebner, 2007; Yin, 2003).

Longitudinal studies allow for multiple observations within a single setting over a longer time period (Yin, 2003; Eisenhardt 1989). By analyzing the development of SSCM over a longer period, it is possible to detect the relation with other factors in the context of a dynamic environment. This provides insight into common phases in the evolution and implementation of SSCM, which contributes to theory development (Carter & Rogers, 2008). At the same time, incidental effects will be averaged out, which enhances the internal validity of the study. Although studies have identified that with the onset of globalization in the 1990s many firms have changed their approach to sustainability, online information of that time period is scarce. For the apparel industry, the MFA phase-out in 2005 marks an important shift in the global supply chain. Generally, developments can be detected in period of at least ten years, therefore, this research will investigate the period from 2000 to 2012. Thus, a retrospective design was chosen, in order to detect what factors have led to the current status of sustainability in the apparel supply chain and how they relate to SSCM. The three time periods: 2000-2004, 2004-2008 and 2008-2012 were selected as a basis for the different contexts in which SSCM developed and for reporting purposes. Concepts are measured for each period, so as to detect transition trajectories, which will provide insight into which factors and contingencies play a role in the business case for a sustainable apparel supply chain.

Next to within-case comparisons over time, this study analyses multiple cases to compare different firms on the development of their supply chain management and approach to sustainability. Such direct replication of findings adds to the external validity of the study, in that findings are more generalizable than those detected in one case (Yin, 2003). The use of multiple cases was also suggested by Seuring (2008) as improvement for SSCM and supply chain management research. Companies are increasingly held responsible for larger parts of their supply chains, so that collecting data of all or multiple stages in a supply chain, instead of only the focal firm, will for example, provide better insight into the relation between business relations and risk management or sustainability issues. The level of analysis is the international supply chain, since the aim is to gain insight in the development of supply chain management in the apparel industry. Within that chain, the unit of analysis is the firm. This is set in a global context, so that this study adopts a combination of micro-, meso- and macro-level analysis.

The quality of a case study design is commonly tested by the four logical tests on construct validity, internal validity, external validity and reliability (Yin, 2003). These terms are mentioned throughout this chapter and

Table 4.1 summarizes which methods are used to ensure the quality of this study's research design.

Table 4.1 Tests and methods for quality case study design

Test	Method
Construct validity	> Data triangulation: company reports, media, NGO reports, academic articles,websites, survey. > Chain of evidence: quotes and scores are reported in tables with their sources, summary tables and references.
Internal validity	> Pattern-matching: theoretical propositions tested with probabilistic hypotheses. > Time-series analysis: three measure points 2000 - 2005 - 2010.
External validity	> Multiple case study design.
Reliability	> Case study database.

Source: based on Yin, 2003

4.2. Conceptual Model

Several concepts are important to determine the business case for sustainable supply chain management. Firstly, firm characteristics are expected to influence the effective implementation of sustainability in the supply chain. Next to this internally-oriented concept, sustainability, in terms of stakeholder relations and the approach to issues in the supply chain, influences the degree to which firms adopt strategies and practices for SSCM. In addition, global, industry and local trends have changed the composition and structure of the global apparel supply chain throughout the years, which also affects the effective implementation of SSCM. Each concept consists of variables and indicators, an overview of which can be found in Table 4.2.

Table 4.2 Specification of concepts and variables

Concept/variable	Operationalization
Context	
Global / industry / local trends	* Social, economic, political, technological, ecological trends. * Changes in production, market, strategy, business models and supply chain composition. In 2000, 2005 and 2010.
Firm	
Firm features	
Size	Net sales in 2000, 2005 and 2011, market share in % in 2011.
Ownership structure	Public, Private.
Strategy	Low cost leadership, differentiation and niche *(Porter, 1985).*
Business model	
Generic business models	4 types of lead firms: see Appendix 4 *(Gereffi & Frederick, 2010; Osterwalder & Peigneur et al., 2009)* 4 types of suppliers: see Appendix 6 *(Gereffi & Frederick, 2010).*
Degree of internationalization	Number of foreign suppliers / total number of regional vs. global suppliers.

Position in the supply chain	Distance to end-consumer (1-4).
Degree of vertical integration	DVI = Added Value/Net Sales, where Added Value = (Net sales – Cost of Sales) + Depreciation and amortization + Personnel Costs *(Van Tulder, 2009).*
Degree of horizontal diversification	The number of industries a firm is active in.
Sustainability approach	Transition trajectory SSCM / sustainability: 1. activation, 2. internal alignment, 3. external alignment *(van Tulder, 2009).*
Stakeholders	* Primary: Employees, Suppliers, Customers, Investors, Competitors. * Secondary: Governments, NGOs, Community.
Issues	* Socio-economic: Bonded labour, Child labour, Migrant /women / home workers, Wages, Freedom of association, Health & safety (sandblasting). * Environmental: Chemicals, Water, Climate change (cotton/energy). See **Fout! Verwijzingsbron niet gevonden.** for a specification per approach and see **Fout! Verwijzingsbron niet gevonden.** for the selection of issues.
SSCM	Awareness, risk exposure, risk management measures, monitoring, capacity building & incentives, ESG integration in strategy, opportunities, measuring supplier performance, transparency and communication, collaboration with stakeholders. Total score on SSCM: 0-25% - inactive; 25-50% - reactive, 50-75% - active, 75-100% proactive. See Appendix 7. Transition trajectory SSCM / sustainability: 1. activation, 2. internal alignment, 3. external alignment *(van Tulder, 2009).*

Sustainable Supply Chain Management (SSCM)

Sustainable supply chain management is the dependent variable in this study. As suggested by previous research, studies of SSCM should cover all sustainability dimensions, rather than only the environmental one. Not only, because firms are increasingly assessed on their triple bottom line performance, but also because it allows to further analyse the correlation between performance and SSCM (Seuring & Müller, 2008). This study measures the SSCM concept on the economic, social and environmental dimension through a set of ten variables: a.) awareness, b.) risk exposure, c.) risk management measures, d.) monitoring, e.) capacity building & incentives, f.) ESG integration in strategy, g.) opportunities, h.) measuring supplier performance, i.) transparency and communication, and j.) collaboration with stakeholders. In turn, these variables are composed of 49 indicators, the selection of which was mainly based on the survey of SAM Group, a socially responsible investment research firm, in addition to academic articles (Pagell & Wu, 2009; Ciliberti et al., 2008) and online rankings like the Dow Jones Sustainability Index, FTSE4Good and VBDO Benchmark voor Duurzaam Ketenbeheer. Although the indicators are used to assess the relationship of buyers and tier-1 suppliers, this study also uses them to assess both suppliers' own sustainability activities, and the relationship between suppliers and their tier-1 suppliers.

Since sustainable supply chain management is a dynamic concept, firms are assessed on their approach to SSCM for the three different time periods. In order to assess the degree to which a firm has an active approach, each indicator is given a score based on: the amount and quality of available information, the timing of the adoption of certain practices compared to industry peers and the underlying business case (i.e. the measure was taken for efficiency / risk management / competitive advantage / societal reasons). Scores can take any value between 0 and 1, which represents the respective firm's SSCM approach as inactive: 0-0,25; reactive: 0,25-0,5; active: 0,5-0,75 or proactive: 0,75-1. This score feeds into a weighting system, which was based on the scoring methodology of SAM Group, since it is a widely adopted assessment (SAM Group, 2012). To determine their weights, each indicator was categorized as either general or industry-specific and related to the economic, social or environmental dimension. Where industry-specific indicators on the social dimension receive higher weights, since these are considered most relevant for the apparel industry, than for example general indicators on the economic dimension, which were categorized at the lower end of the weighting scale.

The weighted scores for the indicators are then grouped into one of the variables. In turn, these also weights, based on the extent to which they contribute to sustainable supply chain management in industry, see

Appendix 7 for an overview of the weights for each indicator and variable. Ultimately, this results in a total score between 0 and 1, per firm per year, which represents their approach to sustainable supply chain management. Using a more quantitative method can give insight in the degree to which firms fall into a certain category of approaches, facilitates cross-case comparison on specific variables, enhances consistency and helps to reduce the researcher's bias in making assessments. A test run was conducted to ensure that the weighting system would result in total scores that were representative of the information gathered on the case.

Firm

Section 3.4.5 proposes how firm-specific variables influence the degree to which firms adopt sustainable supply chain management practices. These independent variables are captured in the concept Firm and grouped into three elements:

1. Firm features, so the basic firm-related variables: a.) size (net sales/market share) and b.) ownership structure (private/public).

2. Strategy, classified according to the three generic strategies of Porter (1985) (cost leadership, differentiation and niche).

3. Business model, or the way in which the firm creates value: a.) generic business model type of lead firm or supplier (brand vs. retailer, specialty apparel vs. mass merchant, brand marketers vs. manufacturers and luxury vs. mainstream brands), b.) degree of internationalization (number of sourcing countries) c.) supply chain position (distance to end-consumer), d.) degree of vertical integration and e.) degree of horizontal diversification.

The elements contain a mix of continuous and categorical variables, the measurement of which is explained in the following section 4.3, since the variables were used in the sample selection. Ultimately, by analyzing the relation between the Firm and SSCM concept it is possible to answer the sub-question *How do firms' characteristics influence their approach to supply chain management?*

Sustainability approach

The way in which firms handle sustainability is also expected to influence the degree to which they adopt sustainable sourcing practices. Although stakeholder demands and issues are also a consequence of sustainable supply chain management, this is In this study, the Sustainability approach concept is an intervening variable that consists of two elements:

1. Stakeholder approach

Stakeholders relevant to the apparel supply chain were identified by using the model of Mitchell et al. (1997). This model predicts stakeholder activity based on whether stakeholders have more than one of the following three characteristics with respect to firms: *power,* the ability to get others (firms) to do what they otherwise would never do, *legitimacy,* the stakeholder's right to exercise its powers and *urgency*, of a stakeholder claim in a certain issue. This resulted in the variables a.) primary stakeholders: employees, suppliers, customers, investors and competitors, and b.) secondary stakeholders: governments, NGOs and community. For sample firms with a private ownership structure the approach to stakeholder group 'investors' is deemed irrelevant. For suppliers in the sample that do not interact with end-consumers, the stakeholder approach to 'customers' was replaced by the firm's approach to clients or buyers.

2. Issue approach

Apparel supply chain issues were identified with the media-analysis in section 3.4.4. This resulted in the two variables a.) Socio-economic issues: bonded labour, child labour, migrant /women / home workers, wages, freedom of association, health & safety (sandblasting), and b.) Environmental issues: chemicals, water, climate change (cotton/energy).

In order to assess how firms have approached both stakeholders and issues over the past decade, the framework of sustainability approaches of Van Tulder (2009) is used, see Table 4.3. Based on the indicators in this framework, firms receive a score on a scale from 0 to 4, which corresponds to the following approaches: inactive: 0-1; reactive: 1-2; active: 2-3 and proactive: 3-4. Firms' stakeholder and issue approach are calculated by averaging the scores given to the eight stakeholder groups and nine issues. Next to these generic approaches, firms are also assessed on their approach to specific instances of stakeholder demands or issues that occurred in the ten year period. This was assessed by criteria adopted from SAM Group (2012), namely: severity of the case, the response of the firm in terms of timing, degree of activeness, transparency, effectiveness, and whether measures were taken to prevent future recurrences. Scores were adjusted, whenever firms' generic approaches to a large extent did not correspond with their occasional approaches. The final result is an average stakeholder and issue approach per firm per year.

Table 4.3 Generic stakeholder and issue approaches

	Inactive	**Reactive**	**Active**	**Proactive**
Generic stakeholder approach	No organized interaction with stakeholders about issues.	Stakeholder debate.	Societal dialogue and (informal) stakeholder contract.	Stakeholder dialogue.
Primary stakeholders				
Employees	Hierarchical; Employees as cost / production factor - low wages - no unions (or loyal unions	Responsive; Employees as potential risk factor (ethics / whistle-blowing); Competitive HRM practices - competitive wages - union-bashing	Responsible; Employees as possible followers of philosophy - union information - good wages	Developmental; Employees as greatest asset (continuous improvement; learning) - 'fair' wages - union involvement (also as monitor of codes for instance)
Suppliers	Chains on the basis of prices only; Strong competition for customers; Active use of power position in chain; No systematic attention for e.g. labour conditions	Chains on the basis of prices and quality; Suppliers are responsible for e.g. labour conditions	Chains on the basis of fair prices and high quality; Suppliers are selected on the basis of their approach towards e.g. labour conditions	Chains on the basis of joint responsibilities; Quality and prices are set together; Definition of fair wages and labour conditions are based on consultation and strategic dialogues
Customers	Customer as cost minimiser; Consumer; communication; Only what is legally required	Customer as buyer (including higher quality if needed); Consumer accountability; Only what is required towards shareholders	Customer as 'CSR interested buyer'; Consumer appeal; Identification and development of own goals;	Customer as co-producer; Consumer engagement; development of goals; Stakeholder orientation
Investors	Search for 'tacit' shareholders; Stock exchange as 'necessary evil'	Search for risk-taking shareholders; Stock exchange as provider of rapid capital	Active search for ethical, but silent investors	Search for involved shareholder
Competitors	Do-it-alone	Pragmatic / defensive alliances	Leader-follower alliances	Offensive alliances
Secondary stakeholders				
Government	Self-regulation; Keep away from government	Self/semi-private regulation favoured; Request 'level playing field'	Source of inspiration; Semi-public regulation; More than law requires	Joint formulation of legislation/regulation; Other than law requires.
NGOs	Firm not targeted by NGO	Donations to NGOs; Response to NGOs statements/reports.	Few clashes with NGOs; NGOs are not involved in setting standards.	Partnerships with NGOs; Roundtables; Engagement of NGOs in standard setting.
Community	Philanthropy; Volunteering and sponsoring as seperate activity	Social philanthropy ; Volunteering & sponsoring in response to societal unrest	Corporate Philanthropy; Active volunteering and sponsoring as integral activity of the HRM policy.	Strategic philanthropy; Solving societal problems.
Issues	Public relations; Control; No strategy for issue advertising	Public affairs; Issues management; Compliance; Issue advertising in crisis.	Corporate communication; Commitment; Explanation of core values of the firm towards issues.	Strategic issues management; Cooperation; Invitation to joint problem solving in issue campaign.

Source: based on Van Tulder, 2009

The Sustainability approach concept is measured by averaging the average scores for stakeholder and issue approach. This indicates the degree to which the firm has taken an active approach to sustainability in general.

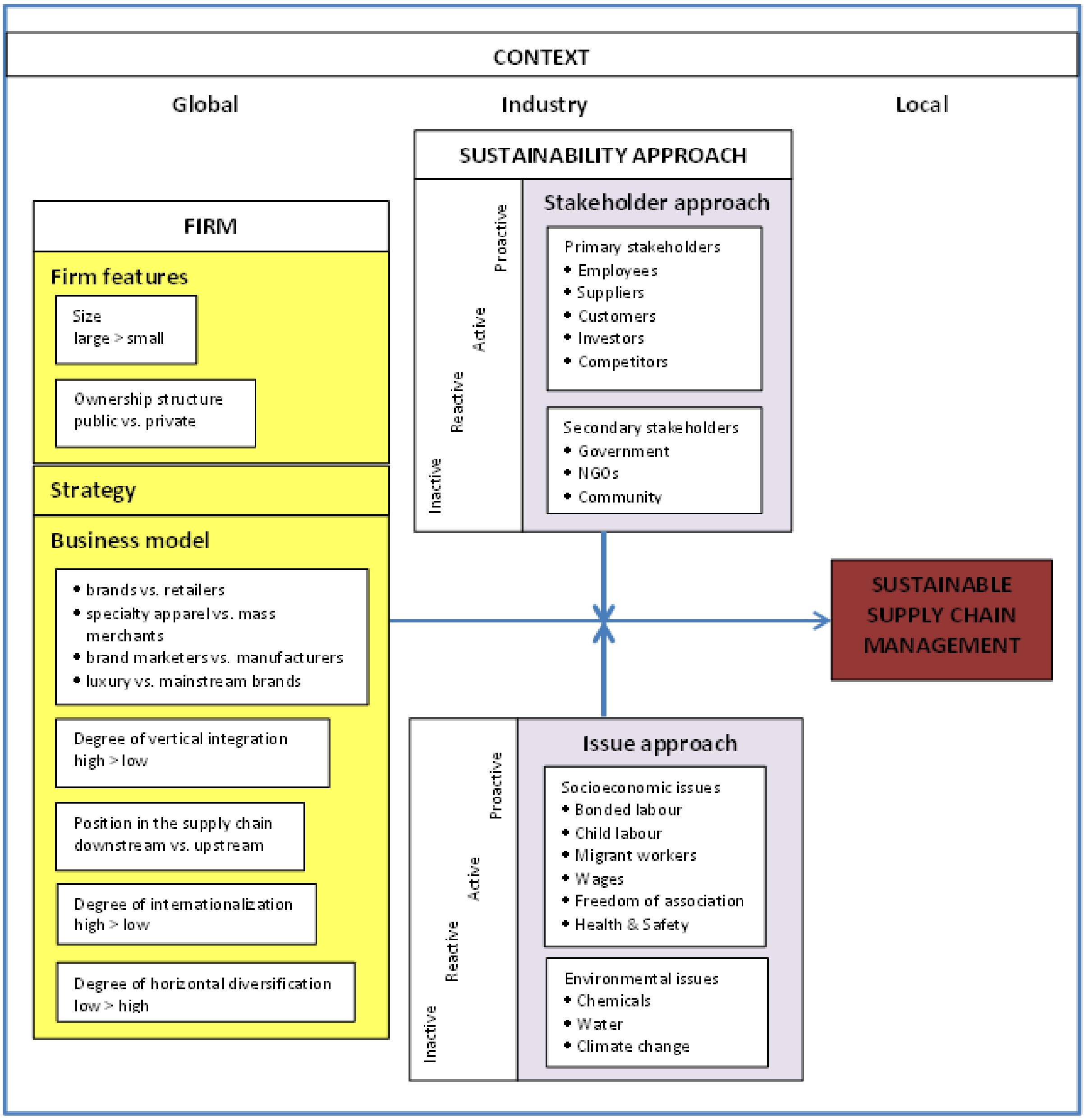
Additionally, the timeline in Appendix 11 shows the MSI and joint issue campaigns firms have joined. The number of projects and time at which firms joined are also used as an indication of the degree to which firms have an active approach to stakeholders and issues. Ultimately, the scores will give an answer to the sub-question *How do firms' sustainability approaches influence their approach to supply chain management?*

Context

All of the above concepts are influenced by the external environment. In response to the call for more context-specific research (Neilson & Pritchard, 2009), this study looks at the development of sustainable supply chain management in three different time periods. The context is described in terms of a.) global trends (section 3.2), b.) industry trends (section 3.3) in terms of changes in the market, dominant strategies and business models and the supply chain, and c.) national trends. Looking at these elements, will provide insight into the interaction between specific governance structures, business relations and supply chain configurations with firms' individual SSCM approaches and the status of sustainability in the global apparel supply chain. In other words, this answers the sub-question *How do contextual factors influence firms' approach to supply chain management?*

Figure 4.1 shows the conceptual model of this study after sustainable supply chain management in the apparel industry. The arrows represent the expected relationships between the concepts. Whether and to what extent these relationships hold is tested for each of the three time periods. Possibly, other (pre)conditions, interactions, contingencies and situational factors that support or hamper the business case for a sustainable apparel supply chain are detected.

Figure 4.1 Conceptual model of SSCM in the apparel industry



4.3. Sample

The number of firms selected for good case study research can vary. Eisenhardt (1989) suggests that one can maximally process seven cases, whilst others propose that data collection should continue until saturation (Yin, 1994). Since this study is interested in the global apparel supply chain and the influence of eight firm variables, a total of ten cases was selected, see

Table 4.4 for an overview. To ensure representativeness of the sample, case selection was based on several criteria. Firstly, this is a longitudinal, retrospective study covering the period from 2000-2012, so sample firms have at least been operational since the start of that period. Secondly, the selected firms originate from different countries and world regions. Three firms are founded in Europe, two in the US and five in the Asia-Pacific of which another three are situated in developing countries. This is representative of the global apparel industry, where both Europe and the US represent 30% of the market and the Asia-Pacific 40% (Datamonitor, 2011). Thirdly, since the level of analysis of this study is the international value chain, the sample contains a mixture of six lead firms and four suppliers that operate in the apparel industry. Fourthly, in order to test the propositions, firms were selected to ensure a relatively balanced range on each of the independent variables of the Firm concept.

Table 4.4 Case study sample of apparel firms variables: firm features and strategy

Firm	Foundation year	Country	Size 2000	Size 2005	Size 2010	Ownership	Strategy
Arvind	1931	India	$328	$289	$482	Public	Differentiation
C&A	1841	Netherlands	$4.300[1]	$6.300	$8.300 (0,7%)[2]	Private	Cost leadership
Fast Retailing	1963	Tokyo	$2.147	$3.447	$10.691 (0,7%)	Private	Cost leadership
H&M	1947	Sweden	$5.171	$8.824	$15.854 (1,3%)	Public	Cost leadership
Huafu	1993	China	$0[1]	$78	$250	Public	Differentiation
Levi's	1853	US	$4.645	$4.125	$4.674 (0,5%)[3]	Private	Differentiation
Li & Fung	1937	Hong Kong	$2.512	$4.848	$12.911 (0,2%)	Public	Cost leadership
LVMH	1987	France	$3.939	$5.921	$10.719 (0,1%)[4]	Public	Niche
Viyellatex	1996	Bangladesh	$25[1]	$100[1]	$206	Private	Differentiation
Walmart	1962	US	$36.353	$46.864	$31.070 (3,4%)[5]	Public	Cost leadership

Source: firms' annual reports and websites

1. Firm features

a.) *Size/market share*: firms were selected on the basis of their net sales for 2000, 2005 and 2011, since this study aims to investigate whether changes in size influence SSCM. Since the sample firms come from different countries, they also report financial data in seven different types of currencies. For purposes of comparison, net sales were converted into millions of US dollars by using respective exchange rates. In case firms are part of a holding company or have retail operations in numerous product groups, total net sales is adjusted for the contribution of garment sales only. Also, for the years 2000 and 2005, several firms do not report net sales, because their ownership structure does not require them to publicly disclose financial information or because the firm was just established. In order to be able to draw conclusions concerning the propositions, their net sales were therefore estimated, by using general descriptions of the firm's performance or other financial figures such as profit margins. Based on this information, the net sales that the firms did publish were extrapolated backwards. The percentage of market share in 2011 was also used to select sample firms.

Table 4.4 shows that the apparel market is highly fragmented, for example H&M is the 2nd largest apparel firm with a market share of only 1,3%. For most of the suppliers in the sample no market share figures in the global apparel market were published and some were only available for a firm's holding company or in different markets like the retailer or beauty and personal care market. Therefore, in line with other research (Park & Dickson, Engaging in buyer-seller partnership for fair labor management: The role of a buyer firm's strategic emphasis, 2008), net sales was finally used as the most informative indicator of size.

b.) *Ownership structure*: as mentioned before, ownership structure can influence firms' approach to sustainability. Firms were selected on the basis of whether they are privately- or publicly-owned. Most of the firms in the sample were privately-owned before entering the capital market, whilst others, like Levi's, were bought out to become family-owned again.

2. Strategy

Apparel firms can be characterized to adopt one of the generic strategies formulated by Porter. Selection took into account a variety of cost leaders, differentiators and niche players.

Table 4.5 Case study sample of apparel firms variable: business model

Firm	Type	Internationalization	Supply chain position	DVI00	DVI05	DVI10	HD00	HD05	HD10
Arvind	Supplier (ODM)	2	3	0,91	0,87	0,67	3	3	4
C&A	Mass merchant retailer	40	2	0,5[6]	0,5	0,5	1	2	3

1 Estimates of net sales: 2000: C&A $4.300; Huafu $0; Viyellatex $25. 2005: Viyellatex $100.
2 Net sales for 2010 (Cofra Holding AG Group).
3 Net sales of softgoods (beauty & personal care market).
4 Net sales Fashion and Leather business segment.
5 Net sales x percentage of apparel merchandise (retailer market).
6 Estimated degree of vertical integration

Fast Retailing	Specialty apparel retailer	5	2	0,59	0,53	0,64	0	0	0
H&M	Specialty apparel retailer	30	2	0,55	0,63	0,66	0	0	0
Huafu	Supplier (CMT)	3	4	0,8[6]	0,8	0,8	0	0	0
Levi's	Branded marketer	42	1	0,5	0,54	0,58	0	0	0
Li & Fung	Supplier (OBM)	40	3	0,14	0,14	0,22	2	2	3
LVMH	Branded manufacturer	6	1	0,79	0,78	0,78	5	5	6
Viyellatex	Supplier (OEM)	5	4	0,9[6]	0,9	0,9	4	4	6
Walmart	Mass merchant retailer	80	2	0,14	0,14	0,22	3	3	3

Source: firms' annual reports and websites

3. Business model

a.) *Business model type*: lead firms were selected so that the sample contained at least one of each of generic business model types: mass merchant retailers, specialty apparel retailers, brand marketers manufacturers, see

Appendix 4. Similarly, suppliers were selected based on the business model types: cut make trim supplier (CMT), package provider (OEM), full package provider (ODM) and service provider (OBM), see Appendix 6.
b.) *Degree of internationalization*: to test this variable, the sample was selected on the basis of variety in the extent of foreign sourcing. This variable was determined by the number of countries in which suppliers are located and their spread across world regions. Generally, lead firms have a higher degree of internationalization than suppliers, since they operate a more global supply chain, have a broader portfolio of products and a larger number of products they source. Although the number of international suppliers was also considered as indicator for this variable, this figure would be less representative of the degree of internationalization, since a firm might source from a large number of suppliers, but all of them may be located in China. Therefore, the number of countries was taken selected as indicator for firms' degree of internationalization. Due to a lack of information, this variable was only recorded for 2010. For some firms the number of sourcing countries is estimated based on figures from previous periods or reference to suppliers in articles, reports or websites.
c.) *Supply chain position*: in line with suggestions from previous research, the sample was composed of firms active at several stages of the supply chain. Based on their distance to end-consumers, firms were given a score on a scale from 1 to 4. Where 1 represents lead firms that are positioned close to end-consumers, as reflected by their personal assistance and personalized customer approach. Whilst position 4 represents suppliers that operate far from end-consumers and have no direct interaction with them.
d.) *Degree of vertical integration (DVI)*: this variable was calculated for each of the three periods by using the mathematical formula by Van Tulder (2009): DVI = Added Value/Net Sales, where Added Value = (Net sales – Cost of Sales) + Depreciation and amortization + Personnel Costs. Three firms did not provide sufficient financial data to calculate their degree of vertical integration for every period. In order to test the hypotheses, DVI scores for these firms were estimated based on their number of in-house suppliers and the amount of tangible assets they owned.
e.) *Degree of horizontal diversification (HD):* this variable looks at the number of business segments in which firms are active. It is recorded for the three time periods. As expected, specialty apparel retailers have a low degree of horizontal diversification, because they only operate in apparel market.

4.4. Data collection

Data triangulation is used to ensure the construct validity of the case study design. By consulting multiple sources for information, a converging line of inquiry developed and evidence for the same concept is based on several sources (Yin, 2003). Firstly, data is collected from documentation in online company sources such as annual and/or CSR reports, websites and press releases. Although these are stable and exact sources that can be reviewed any time and contain detailed facts, they are also subject to reporting bias, so that information reflects the firm's viewpoint only. Therefore, additional documents from different stakeholder groups are used, namely, NGO reports, websites and case studies (BSR, SOMO, Clean Clothes Campaign, Ethical Trading Initiative, Fair Labor Association, Fairwear Foundation, Flo-CERT, local NGOs), multistakeholder reports and websites (Better Cotton Initiative, Sustainable Apparel Coalition), academic articles, newspaper clippings and apparel-related websites.

Secondly, to gather information about firms' Sustainability approach, a media-analysis is conducted for each case, covering the period from 2000-2012 in three English newspapers (*The International Herald Tribune*, *The Guardian* and *The Independent).* If the search in these newspapers resulted in few relevant articles, the media-analysis was conducted in more regional newspapers. Moreover, if available in English or Dutch, two of the qualitatively best and most widely read regional newspapers were added to the analysis. The search used the different groups of stakeholders and issues as keywords, in combination with the firm's name. Some stakeholders or issues were searched for by using several different keywords, e.g. bonded labour / forced labour. Similarly, firms that belong to a holding firm, or that have subsidiaries active in the apparel industry were included in the keyword of the firm's name. This resulted in a number of relevant articles with external opinions on firms' sustainability approaches and firms' sustainability strategy realizations.

A third source of information are sustainability or supply chain managers, or other people knowledgeable about the sample firm's supply chain. In total, ten persons were approached by email with a semi-structured survey to obtain additional information to that available online, to verify findings of the respective firm's approach to sustainability and supply chain practices, and to give their opinion on how future-proof their firm's business model and supply chain management approach are. The response rate was 10% and thus relatively low. One person provided information and this is considered highly representative, because the respective respondent is Head of Sustainability, writes the firm’s CSR report and is thus highly knowledgeable on the topic of sustainability in the supply chain.

Appendix 8 contains a detailed overview of all the sources that were used for the case studies.

For reliability purposes, this study maintained a chain of evidence, by organizing documents, quotes, tables and e-mails in a case study database. Quotes were copied into a table for each of the independent variables of Firm and Sustainability approach and for each of the indicators of SSCM. A reference to their source and respective scores are also recorded. After that, the quotes found for SSCM and Sustainability approach were summarized into smaller tables, so that variables could be more easily compared within cases. Lastly, the scores for SSCM and Sustainability approach were added and averaged in summary tables to allow for cross-case comparison per period. In this way, raw data is available for independent observers or future inspections, so that if case study findings are questioned it is possible to trace back the sources of evidence (Yin, 2003).

4.5. Data analysis

To answer the main research question, firstly, firms are anayzed on how they have changed their approach to sustainable supply chain management over the years. After that, each of the arrows in the conceptual model in **Fout! Verwijzingsbron niet gevonden.** is evaluated for the three contexts between 2000 and 2012. Findings from these analyses are then used as input to evaluate whether there is a business case for a sustainable apparel supply chain.

4.5.1. Sustainable Supply Chain Management transition

Each firm receives a score on the approach to Sustainable Supply Chain Management, which can range from inactive to proactive. By comparing scores over time within-case changes in SSCM approach are detected. In turn, these are analysed by the typical CSR transition trajectories from Table 2.1. If transitions are found, it is useful to look at which SSCM variables could have caused the change in approach, by looking at how they developed over time. In addition, SSCM scores are cross-case compared to gain a first impression whether some firms in the sample have consistently higher scores than others. Then, an industry average score is calculated, which forms a benchmark to compare the individual firm scores against. This shows the extent to which a firm takes the lead or rather is a laggard in terms of SSCM for each of the three time periods. If the lower-performing firms show systematically large differences on specific variables compared with the higher-performing firms, improvements in these variables can significantly contribute to the business case for sustainable supply chain management.

4.5.2. Link between Firm and SSCM approach

To further analyse the difference in SSCM approaches between firms, the effect of changes in the concept of Firm is analysed. This is done through pattern-matching, which compares empirical with expected patterns. If the two coincide this adds to the internal validity of the study (Yin, 2003). The propositions of section 3.4.5 are tested by hypotheses, which are then matched with the empirical data gathered for the two concepts. The propositions take the form of probabilistic relations, where a change in the value of the independent variable (firm features, strategy and business model) is expected to result in a predictable change in the value of the dependent variable (SSCM). So it is hypothesized, that the SSCM approach of firms with comparatively high (low) values on the independent Firm variables is higher (lower), than of firms with comparatively low (high) values on these variables. An exception to this formulation are discrete Firm variables, which are tested for the specific category that is expected to lead to a more active SSCM approach. Hypotheses are tested with a comparative case study, where it is expected that the rank order of cases according to their SSCM approach is like the rank order of cases according to the values given to the independent variables. If the rank order is the same, then the hypothesis is confirmed (Dul & Hak, 2008).

If the rank order is different, it is assessed whether the two rank orders show a similar tendency or have no relation at all. Since case study samples are too small for statistical methods, a comparable method to test this is to divide the first rank order (the independent variable) in groups (quartiles) and compute the average rank number of the cases of these groups to assess whether they are perfect (Dul & Hak, 2008). Cases are then sorted into groups based on variable characteristics, after which these groups are checked for a perfect rank order.

All independent variables, except for the degree of internationalization, are measured over time, by matching them with the different periodic values for SSCM. Moreover, it is possible to analyse how SSCM approach changes with respect to periodic changes in the Firm variables: size, degree of internationalization, degree of vertical integration and degree of horizontal diversification. Continuous Firm variables were placed into four groups based on their scores, these include: size, degree of internationalization, degree of vertical integration and horizontal diversification. Where group 1 consists of the two cases with the lowest values, group 2 contains the following three cases, group 3 consists of the next three cases and group 4 comprises the last two cases with the highest value. For the discrete Firm variables, cases were grouped according to the number of values possible on their measurement scales: ownership (2), strategy (3), generic business model (4) and supply chain position (4), see also Table 4.2.

After that, the group averages are compared to detect whether indeed group 1 has the least active approach to SSCM and the other groups an increasingly more active approach. If this is the case, rank orders are considered perfect for the different time periods and the hypothesis will be accepted. The acceptance or rejection of a proposition shows whether SSCM approach systematically relates to the independent Firm variables.

Ultimately this gives an answer to the sub-question *How do firms' characteristics influence their approach to sustainable supply chain management?*

4.5.3. Link between Sustainability approach and SSCM approach

The third step in data analysis gives an answer to the sub-question: *How do firms' sustainability approaches influence their approach to sustainable supply chain management?* Each firm receives scores for the approach to different stakeholders and issues. By comparing these scores over the years, it is possible to detect the degree to which firms' approaches show a systematic trend throughout time and whether sustainability is maturing in the apparel industry. Also, it is informative to analyse whether firms' sustainability and SSCM approach follow the same transition trajectory in the period from 2000 to 2012. For example, a firm's SSCM approach can change in a similar fashion as its sustainability approach, which indicates a strong relation between the two concepts. Or, the trajectory can show an abrupt change in a firm's approach to SSCM, which is not in line with expected changes in firms' sustainability approach. Such observations can reveal the nature of the relation between sustainability and SSCM. Cross-case comparison further unravels whether specific industry transitions occurred in terms of responsiveness and moral attitude, and how these relate to a change in the overall status of sustainability in the apparel supply chain. If the majority of firms in the sample show a similar transition to more active SSCM, then this is a clear indication for the business case of sustainability in the apparel supply chain.

4.5.4. The Business Case for SSCM: Link between Context, Firm, Sustainability and SSCM

The last phase in data analysis starts with addressing the sub-question: *How do contextual factors influence firms' approach to sustainable supply chain management?* Firstly, it is assessed how global trends affect firms in terms of their characteristics, sustainability and sustainable supply chain management approach, and the relations between these concepts. This reveals relations, commonalities, dependencies and interactions amongst the concepts and their context. Similarly, the concepts are analysed on the effect of industry and national trends in the three different periods. Thereby, it is possible to gain insight into whether some concepts and their relations play a larger role in a specific period compared to another period. This shows the factors and relations that have led to the current status of sustainability in the apparel supply chain. Combining these results with the findings on the links between Firm, Sustainability approach and Sustainable supply chain management, it will become clear whether the apparel industry is ready for a sustainable supply chain.

Going one step further, it is possible to determine how future-proof the apparel industry is. The four global scenarios for 2025 from Forum for the Future (

Appendix 3) function as a starting point. Then it is analyzed how current types of business models and SSCM approaches fit into those scenarios and whether firms should change their business models to achieve a sustainable apparel supply chain. If possible, business model innovations will be formulated, that are required for firms to be successful in the different types of futures. The framework by Amit & Zott (2012) is used for this, as it proposes to look at opportunities in the content, structure and governance of a business model. The same authors also identified four drivers for value creation, namely novelty, lock-in, complementarities and efficiency, which can serve as a basis when defining new business models. All in all, this is a contextual assessment of the future of the apparel supply chain and provides recommendations for the business case for sustainable supply chain management for apparel firms.

5. Results

This chapter presents an overview of the data that was used to test the conceptual model. The analysis of sustainable supply chain management in the apparel industry is presented in Section 5.1. After that, section 5.2 follows, with an analysis of the relation between firm characteristics and SSCM. In section 5.3 the link between sustainability approach and SSCM is analysed. Subsequently, section 5.4 looks at the relation between context, firm, sustainability and sustainable supply chain management, and presents a new version of the conceptual model. Finally, section 5.4 analyses whether there is a business case for sustainable supply chain management in the apparel industry. All analyses and results are built on the data of the individual case studies, these details can be found in **Fout! Verwijzingsbron niet gevonden.**.

5.1. Sustainable Supply Chain Management approach

Each case was scored on the SSCM indicators, after which they were taken together to calculate scores for each of the ten variables that comprise the SSCM concept. Finally, these variable scores resulted in a total score on SSCM approach per firm per time period as reported in Table 5.1. Approaches are classified as inactive (0-0,25), reactive (0,25-0,5), active (0,5-0,75) and proactive (0,75-1). Where the latter two approaches represent more sustainable supply chain management than the former two.

For three of the firms in the sample only little data was available during the time period of 2000 to 2008. These are indicated with 'NA' and not included in the average SSCM scores of the first two periods. This was decided, because if the firms would be included in the calculation, this would result in a score that is unrepresentative of the industry's SSCM approach. Since it could well be, that the firms already actively engaged in SSCM practices in the period between 2000 and 2008, however, they did not yet have the management systems to report on them. On the other hand, non-reporting can be regarded as having an inactive approach. To test the effect of including the firms on the average scores, a second scenario was calculated including the respective firms' scores as '0'.[7] Comparing these scores with the ones recorded in Table 5.1, it is shown that although non-disclosure reduces total and average scores, the classification into the four generic management approaches remains the same.

From the table it can be read that over the years, firms have enhanced their approaches to SSCM. The transition from a reactive to a nowadays active approach, indicates a more responsible management style that is characterized by internal alignment. The average score of all cases over the past decade (0,472), shows that overall, the apparel industry has taken a reactive approach to sustainable supply chain management. Looking at the exact figures, it can be inferred that firms have changed especially in the last period, where the average score jumps from 0,43 in 2005 to 0,65 in 2010.

Table 5.1 Total and average SSCM approach per case per period*

Firm	SSCM2000	SSCM2005	SSCM2010	SSCMav.	Approach
Arvind	NA	NA	0,374	0,374	Reactive
C&A	0,358	0,407	0,761	0,509	Active
Fast Retailing	0,026	0,313	0,677	0,339	Reactive
H&M	0,469	0,603	0,894	0,656	Active
Huafu	NA	NA	0,312	0,312	Reactive
Levi Strauss & Co	0,351	0,456	0,866	0,557	Active
Li & Fung	0,367	0,515	0,698	0,527	Active
LVMH	0,268	0,342	0,580	0,397	Reactive
Viyellatex	NA	NA	0,597	0,597	Active
Wal-Mart Stores	0,246	0,404	0,725	0,459	Reactive
Total	**0,298**	**0,434**	**0,648**	**0,472**	**Reactive**

Note: *inactive (0-0,25), reactive (0,25-0,5), active (0,5-0,75) and proactive (0,75-1)

[7] SSCM2000: 0,208; SSCM2005: 0,304; SSCM2010: 0,648; SSCMav.: 0,387.

5.1.1. SSCM variables

The following will analyse how the change in SSCM from a reactive to active approach came about. Average scores were calculated for each SSCM variable and period, see Appendix 9 for an overview. Comparing these scores across cases and time shows which firms take the lead or lag behind at industry-level. By analysing the underlying variables on which they differ, it is possible to detect what variables significantly hamper or support the business case for sustainable supply chain management.

Risk awareness

Although reporting has increased over the years, generally, firms do not publish much information on this variable. This explains the small change in average score over the past decade to reach only 1/3rd of the score that is possible in 2010. The only references found for this variable, concern the country of origin of certain suppliers or the percentage threshold of products that were maximally sourced from a single supplier.

Risk exposure

Apparel firms increasingly adopt formal sustainability risk identification systems. Often supplier risks are assessed based on their country of origin, commercial importance to the firm and social or environmental standards like labour conditions. The ban on cotton sourced from Uzbekistan is an example of risk exposure, in that firms do not want to be caught to indirectly subsidize bonded child labour. Levi Strauss is the first to obtain the full possible score on this variable, whilst only in 2010, the majority of other firms exhibit an active approach to risk exposure.

Risk management measures

From 2000 onwards, all sample firms have at least adopted standards with respect to basic human rights, business ethics, working conditions and occupational health & safety. Differences arise regarding the adoption of supplier codes of conduct or policies. Except for Li & Fung, the other three sample suppliers have not published an official document with standards for suppliers. Despite of this, however, they do uphold certain standards in their general management policies. Also, the timing of adoption varies amongst cases, where Levi's was one of the first firms in the apparel industry to define a supplier code of conduct in 1992, whilst LVMH only drafted such a document in 2008 at Group level, see the timeline in Appendix 10. Before that, however, the firm had already known a long tradition of extensive policies on environmental management systems at manufacturing sites and left the formulation of supplier standards to the individual brands. Notably, Li & Fung on average has the highest score on risk management measures, which could be explained by the fact that this Hong Kong firm is an expert in supply chain management and due to its responsibility towards buyers has to have a sophisticated system in place to reduce risks.

Throughout time, firms have updated their codes of conduct, with for example more extensive clauses on wages, working hours and the right to freedom of association. An interesting case is Levi's, who from 2011 onwards has been developing a new Terms of Engagement for suppliers. In doing so, the firm takes a progressive approach by focusing the content of the code on workers' lives in line with the Millenium Development Goals and by inviting various stakeholders for feedback to jointly formulate standards (Levi Strauss & Co, 2011). Concerning environmental performance data, LVMH is one of the few cases that started measurement early on. Most other firms only began measurement around 2007 or just recently started to gather data at suppliers on energy and water consumption for goal-setting purposes. Disclosure on social performance is medium. In general, firms report on audit results throughout the years, but only lately have they started to report on code of conduct violations and improvements made at suppliers. These developments in the content of the code of conduct, environmental and social performance data and more collaborative initiatives with suppliers explain the jump in average scores on this variable from 0,07 in 2000 to 0,17 in 2010.

Monitoring

Firms that have a supplier code of conduct monitor standards through audits. Cases differ on their audit methods, for example, C&A has outsourced monitoring to the independent third-party SOCAM, whilst other firms have in-house auditors and occassionally invite external auditors to verify findings. Despite such monitoring, often NGOs still find code of conduct violations in factories which were assessed by lead firms as having no violations. Throughout time, firms learned from these discrepancies and introduced more effective auditing procedures. For example in 2005 H&M launched the Full Audit Program as an improvement on previous monitoring methods. Not only was the program extended to audits at subcontractors, also the percentage of unannounced visits, off-site worker interviews and third party audits was increased. Similar improvements at other firms mark an almost doubling of the average score of this variable for the period from 2005 and 2010.

Another reason for the shift in this variable concenrs firms' approach to code of conduct violations. At first, firms would end contracts if certain violations, such as child labour, were found at suppliers. Again NGOs pointed out that ending relations with suppliers may lead to even worse situations. Consequently, firms changed their approach from one that was policing to one that is more collaborative and focuses on capacity building. This can be illustrated by Levi's recent initiative to develop a tool with which suppliers themselves can assess whether they are in violation of their buyers' standards. At the same time, Walmart is developing capacity-building guidelines for suppliers. Overall, there is a trend towards more relational supply chain governance, as illustrated by Li & Fung's launch of a new supplier relationship strategy focused at long-term business relations with joint responsibilities for development.

Capacity building & incentives

In 2000, only H&M and Li & Fung seemed engaged in capacity-building initiatives with suppliers, through trainings on compliance and management competence. Soon they were joined by others, such as Viyellatex which informs suppliers about environmental and social issues, or Arvind which trains cotton farmers to adopt more sustainable farming practices. In 2010 almost all firms engage in some type of capacity-building activity. With regards to the incentives for suppliers to perform and comply with buyers' ethical standards, most firms have taken up a clause in their codes of conduct where contracts are ended or orders are halted if too extreme violations are found at suppliers. H&M is on the forefront of a more progressive incentive, namely the Supplier Sustainability Performance Index. Suppliers are scored on social and environmental dimensions and receive more orders or not according to this index. Since most firms are still in the process of gathering data at suppliers on these dimensions, however, such incentives are rare in the apparel industry. Improvements in this area could well contribute to the business case for a sustainable apparel supply chain.

ESG integration into SCM strategy

This is one of the lower scoring variables, where even in 2010 the average score (0,067) is not even half of the total score possible (0,14). Most firms define ESG goals for their supply chain, however, these often cover only one sustainability dimension. For example Fast Retailing (FR), which formulates recycling objectives to reduce the environmental impact of its supply chain. With regards to supplier selection, this is mainly based on price, quality and suppliers' ability to adhere to the labour standards as defined by buyers. Although almost every lead buyer has a supplier database, storing suppliers' sustainability performance is a new phenomenon. In 2011, H&M is one of the first to start using an Index Code of Conduct system, which measures supplier sustainability performance and uses that as input for purchasing decisions. Generally, procurement staff is trained on sustainability issues that often relate to the general ESG goals set by the firm. Therefore, trainings differ in the dimensions they cover, where for example LVMH emphasizes the goal to reduce CO2 emissions and provides environmental training to employees, whilst C&A focuses on social compliance. In the latter half of the period, more firms seek dialogue with suppliers to better understand the effect of their purchasing decisions on their suppliers' capacity and business operations. Few firms disclose ESG-related KPIs for procurement staff, which may be due to the fact that these are kept internal for human resource management purposes. On a side note, the majority of the indicators in this variable are only applicable to firms with large networks of suppliers, so that for smaller and more integrated suppliers like Viyellatex the latter four indicators were not included in the overall score.

Opportunities

Organic cotton farming, energy efficiency, productivity enhancing measures, increasing supplier ownership, water reducing methods, these are all examples of opportunities in the apparel supply chain, of which almost all firms have benefitted. Nevertheless, the average score on this variable is relatively low for the first half of the period (0,01 out of 0,1), due to the other indicator of this variable, namely lifecycle assessments. So far, only few firms have undertaken a holistic approach to their products and assessed their impact on the environment. Compared to the other firms, LVMH was early to conduct environmental lifecycle assessments. Part of this can be explained by the progressive environmental policies at the Group's wine and spirit division, which acted as a source of inspiration for the fashion and leather division. Several years later, Levi's is one of the few other firms to conduct a lifecycle assessment of its most traditional 501 jeans. The majority of firms, like Fast Retailing have garment recycling programs, which are a first indication of a more holistic approach, however, on this indicator such initiatives are scored as inactive.

Measurement

Scores on this SSCM variable are relatively low and reporting on the different indicators varies significantly per firm. Depending on whether firms have a supplier code of conduct, they report on the number of audits conducted and contracts ended due to violations. However, some firms regard this information as confidential and consequently do not disclose it. Generally, firms with a supplier code of conduct require their suppliers to adhere to this agreement and have thus taken up an ESG clause in their contracts. If firms train staff on ESG issues or have capacity-building activities, they generally report on these in terms of the number of training hours or people they have invested in. With respect to environmental performance data such as GHG emissions and water consumption at suppliers, however, firms disclose little data, since they only recently started measurements. All in all, the apparel industry could improve on measurements.

Transparency and Communication

As reflected in the increase in score on this variable from 0,008 in 2000 to 0,02 in 2010, firms have become more communicative about their supply chain management over the years. For example through online channels, supplier trainings or workshops and supplier conferences, firms show a general move towards stakeholder dialogue. Walmart, with its supplier conference in 2008, entered a new phase in which it took a cooperative approach and was open to comments from suppliers. Except for Levi's and Viyellatex, none of the sample firms has so far published a list of suppliers. The former initiated this practice to trigger industry collaboration on audits and address common issues in the supply chain, which was relatively successful. Similarly, few firms report on suppliers' ESG-related KPIs. A possible explanaition for this can be the fact that firms regard this as confidential information. On the other hand, the adoption rate of GRI standards is relatively high, even supplier Viyellatex uses the guidelines in its CSR report. Generally, firms report at G3 B- or C-levels.

Collaboration

Firms work together with a variety of stakeholders such as (local) NGOs, suppliers, industry peers and consumers. Where a higher number of stakeholder groups and initiatives translates into a higher score on this item. Over the years, scores increased from 0,01 in 2000 to 0,04 in 2010 out of a total obtainable score of 0,05, which indicates that firms are cooperating with more and a wider variety of stakeholders. Most firms, like Fast Retailing, start out with joint projects with NGOs, after which they expand collaboration to other stakeholders throughout the years. H&M on the other hand, already reports on its first stakeholder dialogue in the beginning of the period under study. Such a session with multiple stakeholders was a new experience for the firm of which it did not know what to expect. Thus, generally stakeholder collaboration increases and firms differ in their stakeholder management approaches.

5.1.2. Conclusion: From reactive to active SSCM

Overall reporting on SSCM variables has increased over the past decade. Especially with respect to risk management measures, monitoring, capacity building, opportunities in the supply chain and collaboration, firms take an increasingly active approach. Whilst the other variables of awareness, risk exposure, incentives, ESG integration into SCM strategy, life cycle assessments, measurement, and transparency and communication show lower scores. This explains why the compound SSCM score is reactive. Improvements on each of the variables in this latter group will contribute to the business case of a more sustainable apparel supply chain.

5.2. Relationship between Firm and SSCM approach

This section analyses how firm characteristics influence frims' approach to sustainable supply chain management. The theoretical propositions of section 3.4.5 were tested by probabilistic hypotheses. After sorting the data on SSCM scores, none of the independent Firm variables ranked perfectly with the scores on SSCM. Consequently, average group scores were calculated for each hypothesis and assessed as to whether they ranked perfectly with SSCM. Ultimately, results lead to acceptance or rejection of propositions for each of the periods and indicate which independent Firm variables play a role in determining the business case for a sustainable apparel supply chain.

5.2.1. Firm features and SSCM approach

Size

Larger firms were expected to have a more active SSCM approach than smaller firms. Group averages in Table 5.2 show an almost perfect rank order, except for in 2010 where group 2 has a slightly higher score than group 3. This is an interesting trend, that could indicate that sustainability is becoming more mainstream in business, so that also smaller companies are increasingly taking it up into their business models. Thus, proposition 1 is supported by the case study data for the two periods of 2000 and 2005 only.

Table 5.2 Hypothesis 1: Size

Firm	**Size 2000**	**SSCM 2000**	**GroupAv.**	**Firm**	**Size 2005**	**SSCM 2005**	**GroupAv.**	**Firm**	**Size 2010**	**SSCM 2010**	**GroupAv.**
Huafu	0	0		Huafu	78	0		Viyellatex	206	0,597125	
Viyellatex	25	0	**0**	Viyellatex	100	0	**0**	Huafu	250	0,311875	**0,4545**
Arvind	328	0		Arvind	289	0		Arvind	482	0,373875	
Fast Retailing	2147	0,02625		Fast Retailing	3447	0,31275		Levi Strauss & Co	4674	0,8655	
Li & Fung Limited	2512,38	0,36675	**0,131**	Levi Strauss & Co	4125	0,4555	**0,256083**	C&A	8300	0,760625	**0,666667**
LVMH	3939	0,267675		Li & Fung Limited	4848,4	0,514625		Fast Retailing	10691	0,677125	
C&A	4300	0,3581		LVMH	5921	0,34225		LVMH	10719	0,57975	
Levi Strauss & Co	4645	0,351	**0,3255917**	C&A	6300	0,407	**0,421292**	Li & Fung Limited	12911	0,69825	**0,651708**
H&M	5171	0,46905		H&M	8824	0,603125		H&M	15854	0,894375	
Wal-Mart Stores, Inc.	36352,51	0,246125	**0,3575875**	Wal-Mart Stores, Inc.	46864,05	0,40425	**0,503688**	Wal-Mart Stores, Inc.	31069,78	0,725375	**0,809875**

Ownership

Privately-owned firms were expected to take a more active approach to SSCM than publicly-owned firms. Three out of the ten sample firms are owned by families and their group average is higher for the years 2000 and 2010 than that of publicly owned firms. Generally, however, averages do not differ much between the two types of ownership as shown in Table 5.3. This overall lack of difference can be explained by the fact that indeed, privately-owned businesses take up responsibility for the next family generation and therefore actively manage the supply chain to ensure long-term performance. However, publicly-owned businesses also have an external responsibility towards investors, who may withdraw funds if the firm does not adopt more sustainable operations. Additionally, some publicly-listed firms, like LVMH, are still owned by an almost majority of family members, or were a family business before, like Li & Fung, so that to a certain extent, decisions on SSCM in these firms will also include long-term performance. In conclusion, proposition 2 was supported for the periods 2000 and 2010.

Table 5.3 Hypothesis 2: Ownership structure

Firm	Ownership structure	SCM 2000	GroupAv.	Firm	Ownership structure	SCM 2005	GroupAv.	Firm	Ownership structure	SCM 2010	GroupAv.
C&A	Private	0,3581		C&A	Private	0,407		C&A	Private	0,760625	
Levi Strauss & Co	Private	0,351		Levi Strauss & Co	Private	0,4555		Levi Strauss & Co	Private	0,8655	
Viyellatex	Private	0	**0,236367**	Viyellatex	Private	0	**0,2875**	Viyellatex	Private	0,597125	**0,741083**
Arvind	Public	0		Arvind	Public	0		Arvind	Public	0,373875	
Fast Retailing	Public	0,02625		Fast Retailing	Public	0,31275		Fast Retailing	Public	0,677125	
H&M	Public	0,46905		H&M	Public	0,603125		H&M	Public	0,894375	
Huafu	Public	0		Huafu	Public	0		Huafu	Public	0,311875	
Li & Fung	Public	0,36675		Li & Fung	Public	0,514625		Li & Fung	Public	0,69825	
LVMH	Public	0,267675		LVMH	Public	0,34225		LVMH	Public	0,57975	
Walmart	Public	0,246125	**0,19655**	Walmart	Public	0,40425	**0,311**	Walmart	Public	0,725375	**0,608661**

5.2.2.Strategy and SSCM approach

It was proposed that firms with a differentiation or niche strategy are more likely to exhibit an active approach towards SSCM than firms with a cost leadership strategy. Interestingly, the data in Table 5.4 show the exact opposite relationship, where firms offering products at affordable prices to the mass market over the past decade, on average take a significantly more active SSCM approach than differentiators. Part of this can be explained by the fact that the differentiation group contains three out of four firms with SSCM scores of ‘0’ for the first two time periods, which reduces the average group score. Also, a possible reason is that cost leaders use more active SSCM approaches, as this is an attractive opportunity for them to save costs and prevent financial losses. Moreover, it should be noted that it is challenging to categorize firms into the generic strategies, as firms increasingly adopt strategies positioned in-between cost leadership and differentiation. Low cost retailers like Walmart are extending their own brands, whilst differentiators like Levi’s launch low-cost denim lines through retailers like Walmart. The one niche player in the sample, LVMH, ends up in the niche between the two other strategies. Thus, proposition 3 can not be accepted for any of the periods, rather the opposite proposition is supported by the data. So firms with a cost leadership strategy take a more active SSCM approach than firms with a differentiation strategy. Moreover, firms with a niche strategy take a more active approach than differentiators and a less active approach than cost leaders.

Table 5.4 Hypothesis 3: Strategy

Firm	Strategy	SCM 2000	GroupAv.	Firm	Strategy	SCM 2005	GroupAv.	Firm	Strategy	SCM 2010	GroupAv.
C&A	Cost leadership	0,3581		C&A	Cost leadership	0,407		C&A	Cost leadership	0,760625	
Fast Retailing	Cost leadership	0,02625		Fast Retailing	Cost leadership	0,31275		Fast Retailing	Cost leadership	0,677125	
H&M	Cost leadership	0,46905		H&M	Cost leadership	0,603125		H&M	Cost leadership	0,894375	
Li & Fung	Cost leadership	0,36675		Li & Fung	Cost leadership	0,514625		Li & Fung	Cost leadership	0,69825	

Walmart	Cost leadership	0,246125	**0,293255**	Walmart	Cost leadership	0,40425	**0,44835**	Walmart	Cost leadership	0,725375	**0,75115**
Arvind	Differentiation	0		Arvind	Differentiation	0		Arvind	Differentiation	0,373875	
Huafu	Differentiation	0		Huafu	Differentiation	0		Huafu	Differentiation	0,311875	
Levi Strauss & Co	Differentiation	0,351		Levi Strauss & Co	Differentiation	0,4555		Levi Strauss & Co	Differentiation	0,8655	
Viyellatex	Differentiation	0	**0,08775**	Viyellatex	Differentiation	0	**0,113875**	Viyellatex	Differentiation	0,597125	**0,537094**
LVMH	Niche	0,267675	**0,267675**	LVMH	Niche	0,34225	**0,34225**	LVMH	Niche	0,57975	**0,57975**

5.2.3. Business model and SSCM approach

Generic business models

The fourth proposition relates to the difference in SSCM approach between brands and retailers, where the former were expected to have a more active approach than the latter. The sample contains two brands, which only in the 2000 period had more active SSCM approaches than the four retailers, see Table 5.5. In general, the groups take similar approaches, except for in the last period, where the retailers just enter the proactive dimension. A possible reason for this is that as previously described, the difference in value propositions of brands and retailers is blurring. Where brands extend their retailing network and own more stores to control brand image, whilst retailers invest in more private label brands. Both developments, make firms equally prone to adopt more active approaches to their supply chains. Thus, proposition 4 was only supported in 2000, whilst for the other periods the opposite relation was found to be true.

Table 5.5 Hypothesis 4: Business model (brands > retailers)

Firm	Type	SCM2000	Group Av.	Firm	Type	SCM2005	Group Av.	Firm	Type	SCM2010	Group Av.
LVMH	Brand manufacturer	0,267675		LVMH	Brand manufacturer	0,34225		LVMH	Brand manufacturer	0,57975	
Levi's	Brand marketer	0,351	**0,3093375**	Levi's	Brand marketer	0,4555	**0,398875**	Levi's	Brand marketer	0,8655	**0,722625**
C&A	Mass merchant retailer	0,3581		C&A	Mass merchant retailer	0,407		C&A	Mass merchant retailer	0,760625	
Walmart	Mass merchant retailer	0,246125		Walmart	Mass merchant retailer	0,40425		Walmart	Mass merchant retailer	0,725375	
Fast Retailing	Specialty apparel retailer	0,02625		Fast Retailing	Specialty apparel retailer	0,31275		Fast Retailing	Specialty apparel retailer	0,677125	
H&M	Specialty apparel retailer	0,46905	**0,2748813**	H&M	Specialty apparel retailer	0,603125	**0,431781**	H&M	Specialty apparel retailer	0,894375	**0,764375**

Zooming in on the difference in SSCM approach between specialty apparel retailers and mass merchants, the data in Table 5.6 shows that the former take a more active approach on average in the last two time periods. A possible reason for this is the trend towards more relational supply chain management. Where looking at the difference in value propositions and key activities of the two types of retailers, specialty retailers are more concerned with the quality and design of garments than mass merchants, who focus mainly on price. So that the former have less transactional supplier relationships than the latter, because of more last-minute changes to orders and design specifications suppliers are expected to implement. Another difference concerns the channel and key resources components of the business model, where specialty retailers such as Fast Retailing own manufacturing facilities, which makes it easier to control the supply chain and introduce more active supply chain management like labour standards and environmental reduction programs, compared to C&A

which does not own any factories. Generally, the difference in scores between the two types of business models is small, however in the periods of 2000 and 2010 the firms are grouped into different categories of approaches. Thus, proposition 4.1. is supported for 2005 to 2010, while the opposite is true in 2000.

Table 5.6 Hypothesis 4.1: Business model (specialty retailer > mass merchant retailer)

Firm	Type	SSCM2000	GroupAv.	Firm	Type	SSCM2005	GroupAv.	Firm	Type	SSCM2010	GroupAv.
C&A	Mass merchant retailer	0,3581		C&A	Mass merchant retailer	0,407		C&A	Mass merchant retailer	0,760625	
Walmart	Mass merchant retailer	0,246125	**0,3021125**	Walmart	Mass merchant retailer	0,40425	**0,405625**	Walmart	Mass merchant retailer	0,725375	**0,743**
Fast Retailing	Specialty apparel retailer	0,02625		Fast Retailing	Specialty apparel retailer	0,31275		Fast Retailing	Specialty apparel retailer	0,677125	
H&M	Specialty apparel retailer	0,46905	**0,24765**	H&M	Specialty apparel retailer	0,603125	**0,457938**	H&M	Specialty apparel retailer	0,894375	**0,78575**

As Table 5.7 shows, proposition 4.2 is supported by the data for all periods. Where brand marketer Levi's, on average takes a more active approach than brand manufacturer LVMH. Interestingly, the difference in channel and key resources that was found to play a role for retailers, does not seem to explain the difference in SSCM approach between brands. Here the effect of marketers' value proposition concerning image and status seems to play a larger role. In that marketers dedicate more resources to supply chain management to ensure that their brand name is not associated with negative publicity about labour standards. Rather they undertake responsible sourcing practices to receive positive reviews from stakeholders.

The same data do not support proposition 4.3, because luxury brand LVMH is not more active in sustainable supply chain management than mainstream brand Levi's. Rather, the opposite is found true, since Levi's scores consistently higher than LVMH and the difference between the scores of the firms increases from 0,11 in the first half to almost 0,3 in the second half. It should be noted, that the decision to accept these propositions or their reverse, is based on the scores of only two cases, therefore generalizability is limited. On the other hand, they show a consistent trend over the years, which again makes it more probable that the expected relation exists.

Table 5.7 Hypothesis 4.2: Business model (brand marketer > brand manufacturer) and Hypothesis 4.3: Business model (luxury brand > mainstream brand)

Firm	Type	SCM2000	Firm	Type	SCM2005	Firm	Type	SCM2010
LVMH	Brand manufacturer	**0,267675**	LVMH	Brand manufacturer	**0,34225**	LVMH	Brand manufacturer	**0,57975**
Levi's	Brand marketer	**0,351**	Levi's	Brand marketer	**0,4555**	Levi's	Brand marketer	**0,8655**

Degree of internationalization

Sourcing from suppliers located in a larger number of countries was expected to lead to more active SSCM behaviour than sourcing from a smaller number of international suppliers. This proposition was tested for the third time period only, due to a lack of data for the other time periods and due to the fact that this variable is expected to significantly differ throughout the period, so using the 2010 data would not be representative when used for the other periods. As can be read from Table 5.8, averages show a perfect rank order moving from reactive to active to proactive SSCM. This can be partly explained by the large difference between the number of supplier countries in the first 2 groups and the last 2 groups. That is, when firms reach a certain number of countries from which they source, say over 10, they are likely to dedicate more sources to supply chain management for efficiency and risk purposes, which automatically makes their approach more active. Interestingly however, Walmart, which sources from double the amount of countries compared to the cases in group 3 and 4, does not have the highest SSCM score. This may be due to the fact that the retailer has always emphasized efficiency and only recently started to become more active on social and environmental matters. Although group 3 and 4 scores only differ slightly, proposition 5 can be accepted for the period 2010.

Table 5.8 Hypothesis 5: Degree of internationalization

Firm	Int2010	SCM2010	GroupAv.
Arvind	2	0,373875	
Huafu	3	0,311875	0,342875
Fast Retailing	5	0,677125	
Viyellatex	5	0,597125	
LVMH	6	0,57975	0,618
H&M	30	0,894375	
C&A	40	0,760625	
Li & Fung	40	0,69825	0,784417
Levi Strauss & Co	42	0,8655	
Walmart	80	0,725375	0,795438

Supply chain composition

Proposition 6 expected that firms with a more downstream position take a more active SSCM approach than firms more upstream in the supply chain. To test this, the sample was divided into four groups based on their distance to the end-consumer: group 1 brands, group 2 retailers, group 3 OBM&ODM suppliers and group 4 OEM and CMT suppliers. As reported in Table 5.9, players further down the supply chain take a less active approach than those closer to the end-consumer. This can be partly explained by external stakeholder pressure, where firms who are located further down the supply chain are less a victim of negative media coverage than firms at a downstream position. This can also be linked back to the degree of internationalization variable, where players further down the supply chain, have a much smaller international supply base, than lead buyers like Walmart with a highly international sourcing network. So that the latter are more active in SSCM. On the other hand, the scores do not show a perfect rank order, because, as already found before, the difference in average score between brands and retailers is relatively small and in the most recent years retailers have overtaken brands. Possibly, this relates to the trend that stakeholder pressure has increased and nowadays extends across the whole supply chain. Lead firms are increasingly held responsible for a larger part of their supply chain, so that also more downstream positioned firms have to take a more active approach to SSCM. Thus, proposition 6 can only be accepted for the first period.

Table 5.9 Hypothesis 6: Supply chain position

Firm	Type	SCM2000	Group Av.	Firm	Type	SCM2005	Group Av.	Firm	Type	SCM2010	Group Av.
LVMH	Brand manufacturer	0,267675		LVMH	Brand manufacturer	0,34225		LVMH	Brand manufacturer	0,57975	
Levi's	Brand marketer	0,351	**0,3093375**	Levi's	Brand marketer	0,4555	**0,398875**	Levi's	Brand marketer	0,8655	**0,722625**
C&A	Mass merchant retailer	0,3581		C&A	Mass merchant retailer	0,407		C&A	Mass merchant retailer	0,760625	
Walmart	Mass merchant retailer	0,246125		Walmart	Mass merchant retailer	0,40425		Walmart	Mass merchant retailer	0,725375	
Fast Retailing	Specialty apparel retailer	0,02625		Fast Retailing	Specialty apparel retailer	0,31275		Fast Retailing	Specialty apparel retailer	0,677125	
H&M	Specialty apparel retailer	0,46905	**0,2748813**	H&M	Specialty apparel retailer	0,603125	**0,431781**	H&M	Specialty apparel retailer	0,894375	**0,764375**
Huafu	Supplier	0		Huafu	Supplier	0		Huafu	Supplier	0,311	

	(CMT)				(CMT)				(CMT)	875	
Li & Fung	Supplier (OBM)	0,366 75		Li & Fung	Supplier (OBM)	0,514 625		Li & Fung	Supplier (OBM)	0,698 25	
Arvind	Supplier (ODM)	0	**0,1833 75**	Arvind	Supplier (ODM)	0	**0,2573 13**	Arvind	Supplier (ODM)	0,373 875	**0,5360 63**
Viyella tex	Supplier (OEM)	0	**0**	Viyella tex	Supplier (OEM)	0	**0**	Viyella tex	Supplier (OEM)	0,597 125	**0,4545**

Degree of vertical integration

Firms with a high degree of vertical integration (DVI) were assumed to have higher SSCM scores than firms with a lower degree of vertical integration. The scores in Table 5.10 point in the opposite direction, where firms such as Li & Fung which manage a global souring network, score higher than largely integrated suppliers like Viyellatex. This same trend is detected when comparing the two groups with a high degree of vertical integration to the two lower groups. One of the reasons for this is that not owning parts of your supply chain, makes it necessary to track operations and the flow of goods through sophisticated information networks. Both Walmart and Li & Fung are known for having such a system, with which they efficiently manage their supply chain. Thus, they have an advantage with respect to the other firms when it comes to managing risks, monitoring compliance and communicating new initiatives, which are all characteristics of more active SSCM. Another reason can be the lack of data for the highly integrated firms in the first half of the period, which influences the representativeness of the scores. The data do not show a perfect rank order, except in 2005, so the reverse of proposition 7 is only supported for that period.

Table 5.10 Hypothesis 7: Degree of vertical integration

Firm	DVI 00	SCM20 00	GroupA v.	Firm	DVI 05	SCM20 05	GroupA v.	Firm	DVI 10	SCM20 10	GroupA v.
Li & Fung	0,14	0,3667 5		Li & Fung	0,14	0,5146 25		Li & Fung	0,22	0,6982 5	
Walmart	0,14	0,2461 25	**0,3064 38**	Walmart	0,14	0,4042 5	**0,4594 38**	Walmart	0,22	0,7253 75	**0,7118 13**
C&A	0,5	0,3581		C&A	0,5	0,407		C&A	0,5	0,7606 25	
Levi Strauss & Co	0,5	0,351		Fast Retailing	0,53	0,3127 5		Levi Strauss & Co	0,58	0,8655	
H&M	0,55	0,4690 5	**0,3927 17**	Levi Strauss & Co	0,54	0,4555	**0,3917 5**	Fast Retailing	0,64	0,6771 25	**0,7677 5**
Fast Retailing	0,59	0,0262 5		H&M	0,63	0,6031 25		H&M	0,66	0,8943 75	
LVMH	0,79	0,2676 75		LVMH	0,78	0,3422 5		Arvind	0,67	0,3738 75	
Huafu	0,8	0	**0,0979 75**	Huafu	0,8	0	**0,3151 25**	LVMH	0,78	0,5797 5	**0,616**
Viyellate x	0,9	0		Arvind	0,87	0		Huafu	0,8	0,3118 75	
Arvind	0,91	0	**0**	Viyellate x	0,9	0	**0**	Viyellate x	0,9	0,5971 25	**0,4545**

Degree of horizontal diversification

The last proposition concerns horizontal diversification, where it was expected that firms which are less diversified take a more active SSCM approach than firms that are more diversified. From Table 5.11 it is unclear whether scores support this reasoning, as throughout time, firms with a lower degree of diversification are almost as active on SSCM practices as firms with a high degree of diversification. Over the years, however, the difference in scores between the two extreme groups is growing, so that as was expected, firms at the lower end take a proactive approach, whilst firms at the higher end still take an active approach. Also, no perfect rank order was detected, since the two groups of firms in between the two extremes score lower in comparison. All in all, proposition 8 is rejected for all periods.

Table 5.11 Hypothesis 8: Horizontal diversification

Firm	Horizontal diversification	SCM2000	GroupAv.	Firm	Horizontal diversification	SCM2005	GroupAv.	Firm	Horizontal diversification	SCM2010	GroupAv.
Fast Retailing	0	0,02625		Fast Retailing	0	0,31275		Fast Retailing	0	0,677125	
H&M	0	0,46905	**0,24765**	H&M	0	0,603125	**0,457938**	H&M	0	0,894375	**0,78575**
Huafu	0	0		Huafu	0	0		Huafu	0	0,311875	
Levi Strauss & Co	0	0,351		Levi Strauss & Co	0	0,4555		Levi Strauss & Co	0	0,8655	
C&A	3	0,3581	**0,236367**	C&A	3	0,407	**0,2875**	C&A	3	0,760625	**0,646**
Li & Fung	3	0,36675		Li & Fung	3	0,514625		Li & Fung	3	0,69825	
Arvind	4	0		Arvind	4	0		Arvind	4	0,373875	
Viyellatex	4	0	**0,12225**	Viyellatex	4	0	**0,171542**	Viyellatex	4	0,597125	**0,556417**
LVMH	6	0,267675		LVMH	6	0,34225		LVMH	6	0,57975	
Walmart	11	0,246125	**0,2569**	Walmart	11	0,40425	**0,37325**	Walmart	11	0,725375	**0,652563**

5.2.4. Conclusion: Link Firm and SSCM approach

Table 5.12 provides an overview of all the propositions that were tested, the respective independent variables and whether scores led to acceptance (Y), reverse (R) or rejection (N) of the proposed relationship for each of the time periods. From this, it can be read that only four propositions have a consistent assessment for all periods. Firstly, the independent variable Strategy was found to influence firms' approach to SSCM in the opposite direction. So that firms with a cost leadership strategy have a more active approach to SSCM than firms with a differentiation strategy. Additionally, firms with a niche strategy seem to have a more active SSCM approach than differentiators and a less active approach than cost leaders. Also, for the Business Model element, the proposition on brand types is accepted for all years, whilst the proposition regarding the difference between luxury and mainstream brands was supported in the opposite direction, with mainstream brands having a more active approach. Lastly, the proposition regarding the degree of horizontal diversification is rejected.

The other propositions received different assessments per period. That is, in 2000, also the proposition with respect to the degree of vertical integration was rejected. The rest of the propositions were accepted, except for proposition 4.1 concerning the two retailer business model types, which was found to be true in reverse. So mass merchants take a more active approach to SSCM than specialty retailers. In 2005, however, this proposition is accepted, whilst the reverse proposition is supported with respect to the generic business model types of brands and retailers, and the degree of vertical integration. Thus, retailers take a more active approach than brands and firms with a lower degree of vertical integration were found more active than firms with a higher degree of vertical integration. Notably, the propositions on ownership and supply chain position are rejected in this period. Lastly, in 2010 the proposition regarding size is rejected for the first time, whilst ownership is again found to relate to SSCM approach. Also, the proposition on the degree of internationalization is accepted, on the other hand, the degree of vertical integration is no longer found to relate to SSCM.

Including the propositions that proved the reverse of what was expected, findings indicate that there is a relation between Firm and SSCM approach. Where the elements Firm features and Business model are moderately related to SSCM approach. Whilst the Strategy element is highly related to SSCM approach. The specific relations between the independent variables and SSCM that were found per period, will be summarized in the conceptual models presented in section 5.4. Based on the number of propositions that were (reversely) accepted for a certain element and the difference between average scores on the independent variables, it is possible to determine the degree to which firm characteristics influence the business case for SSCM.

Table 5.12 Overview of accepted and rejected propositions

Proposition	Variable	Accept (Y) / reverse (R) / reject (N)		
		2000	2005	2010
1. Larger firms take a more active approach to SSCM than smaller firms.	Size	Y	Y	N
2. Firms that are family owned take a more active approach to SSCM than firms that are publicly owned.	Ownership	Y	N	Y
3. Firms with a differentiation or niche strategy take a more active approach to SSCM than firms with a cost leadership strategy.	Strategy	R	R	R
4. Brands take a more active approach to SSCM than retailers.	Business model	Y	R	R
4.1. Specialty apparel retailers take a more active approach to SSCM than mass merchants.	Business model	R	Y	Y
4.2. Brand marketers take a more active approach to SSCM than brand manufacturers.	Business model	Y	Y	Y
4.3. Luxury brands take a more active approach to SSCM than mainstream brands	Business model	R	R	R
5. Firms with a larger foreign supply base take a more active approach to SSCM than firms with a small foreign supply base.	Internationalization	NA	NA	Y
6. Firms with a more downstream position in the value chain (closer to end-user) will take a more active approach to SSCM than firms further upstream in the value chain (supplier/manufacturer).	SC position	Y	N	N
7. Firms with a high degree of vertical integration take a more active approach to SSCM than firms with a lower degree of vertical integration.	DVI	N	R	N
8. Firms with a low degree of horizontal diversification take a more active approach to SSCM than firms with a higher degree of horizontal diversification.	Horizontal diversification	N	N	N

5.3. Relationship between Sustainability approach and SSCM

This section presents the analysis of the relation between Sustainability approach and SSCM in the three periods. Sustainability approach consists of two elements: stakeholder approach and issues approach. Each firm received a score for the eight stakeholder groups and nine issues, based on the indicators in the framework by Van Tulder (2009) and individual instances of stakeholder or issue management. Scores are presented in Appendix 10 and can range from inactive: 0-1 to reactive: 1-2, to active: 2-3 and proactive: 3-4. They were averaged into a total score for stakeholder and issue approach per firm per year, which in turn were compounded into overall industry scores. In turn, these scores were added to calculate the average Sustainability approaches. Below follows a discussion of the relation between stakeholder, issue and sustainability, and SSCM approach.

5.3.1. Stakeholder approach and SSCM

Some firms, like Li & Fung exhibit a gradually more active approach over the three time periods (1,9 - 2,1 - 2,4), whilst others make a significant jump such as LVMH from 2,1 in 2005 to 2,8 in 2010. The underlying reasons for these transitions will be further unravelled by zooming in on each individual stakeholder group through cross-case comparisons on moral attitude and responsiveness. After that, it will be assessed whether changes in stakeholder approach have influenced firms' SSCM approach.

Table 5.13 Stakeholder approach total and average scores*

Firm	Stake2000	Stake2005	Stake2010	StakeAv.	Av. approach
Arvind	1,4	1,5	2,6	**1,8**	Reactive
C&A	2,3	3,1	3,6	**3,0**	Active/proactive

Fast Retailing	1,3	1,6	2,4	**1,8**	Reactive
H&M	2,5	2,8	3,3	**2,8**	Active
Huafu	1,5	1,8	2,4	**1,9**	Reactive
Levi Strauss & Co	2,3	2,9	3,3	**2,8**	Active
Li & Fung	1,9	2,1	2,4	**2,1**	Active
LVMH	2,0	2,1	2,8	**2,3**	Active
Viyellatex	1,7	2,2	2,6	**2,2**	Reactive/active
Wal-Mart	0,9	1,5	2,1	**1,5**	Reactive
Total	**1,8**	**2,2**	**2,7**	**2,2**	**Reactive**

Note: *inactive: 0-1 to reactive: 1-2, to active: 2-3 and proactive: 3-4

gives an overview of firms' total Stakeholder approach scores for the three periods. Over the years, apparel firms have become more active in their stakeholder management. Moving from a reactive (1,8) approach in 2000 to an active (2,7) approach in 2010. As firms became more sensitive to external pressure, they underwent a transition of internal alignment and started formulating internal protocols. The overall stakeholder approach of the apparel industry is tipping on the reactive/active boundary, characterized by stakeholder debates and informal stakeholder contracts. Notably, C&A is the only firm with an average proactive approach to stakeholders (3,0), whilst Walmart has the lowest average score (1,5). The other firms have average stakeholder approaches that are smoothly distributed along the reactive/active dimension.

Some firms, like Li & Fung exhibit a gradually more active approach over the three time periods (1,9 - 2,1 - 2,4), whilst others make a significant jump such as LVMH from 2,1 in 2005 to 2,8 in 2010. The underlying reasons for these transitions will be further unravelled by zooming in on each individual stakeholder group through cross-case comparisons on moral attitude and responsiveness. After that, it will be assessed whether changes in stakeholder approach have influenced firms' SSCM approach.

Table 5.13 Stakeholder approach total and average scores*

Firm	Stake2000	Stake2005	Stake2010	StakeAv.	Av. approach
Arvind	1,4	1,5	2,6	**1,8**	Reactive
C&A	2,3	3,1	3,6	**3,0**	Active/proactive
Fast Retailing	1,3	1,6	2,4	**1,8**	Reactive
H&M	2,5	2,8	3,3	**2,8**	Active
Huafu	1,5	1,8	2,4	**1,9**	Reactive
Levi Strauss & Co	2,3	2,9	3,3	**2,8**	Active
Li & Fung	1,9	2,1	2,4	**2,1**	Active
LVMH	2,0	2,1	2,8	**2,3**	Active
Viyellatex	1,7	2,2	2,6	**2,2**	Reactive/active
Wal-Mart	0,9	1,5	2,1	**1,5**	Reactive
Total	**1,8**	**2,2**	**2,7**	**2,2**	**Reactive**

Note: *inactive: 0-1 to reactive: 1-2, to active: 2-3 and proactive: 3-4

5.3.1.1.Primary stakeholders

Employees (reactive - active)

Most apparel firms have competitive HRM procedures. As can be seen in Table 5.14, in 2000, Levi Strauss and Viyellatex are the only firms with an active approach to employees. Both firms own manufacturing facilities and thus regard employees as a more strategic asset than other firms. Therefore they dedicate more resources to ensure good employee relations. Viyellatex for example has a proactive HR policy, by offering employees wages that are 20% higher than the industry standard. Also, additional benefits such as insurance, free medical checks and an on-site daycare are available, as well as training and membership of the Workers' Participation Committee, which represents the interests of workers in negotiations with management on working conditions (Viyellatex, 2011). The latter is exceptional in Bangladesh, where only recently the labour law includes a clause on the right to freedom of association.

Over the years, other firms have enhanced their employee relations. Such as LVMH, which under external pressure adjusted policies on non-discrimination. Other improvements include more interaction with labour unions, adjusted working conditions like minimum wage and maximum hours of overtime per week or training on sustainability matters. However, some firms, like Walmart, are still inactive on matters like unionization and discrimination. None of the lead firm cases show explicit employee action for better working conditions at suppliers. So employees influence SSCM only directly through their role in procurement and an indirectly as customers. At apparel suppliers, on the other hand, employees actively request higher wages and better working conditions, which leads to improvements in the apparel supply chain. Overall, firms have become more externally-oriented and underwent a process of internal alignment through awareness raising about their codes of conduct and sustainability programs.

Table 5.14 Stakeholder approach: employees

Firm	Employees 2000	Employees 2005	Employees 2010
Arvind	1	1	2
C&A	2	2	3,5
Fast Retailing	2	2	2,5
H&M	2	3	3
Huafu	2	2	2
Levi Strauss & Co	3	3	3
Li & Fung	2	2	2,5
LVMH	2	2	3
Viyellatex	3	3	4
Wal-Mart	1	1	2
Total	**2,0**	**2,1**	**2,8**

Suppliers (reactive – proactive)

In line with the findings on firms' SSCM approach, the interaction with suppliers transitioned from a reactive (2,1) to a just on the border of proactive approach (3,1), see Table 5.15. Firms seem to grasp the importance of managing chains on the basis of more than just price. Although in 2000 the emphasis was still mainly on quality, gradually, firms have started to select suppliers that share their philosophy for responsible business. Over the years, an increasing number of lead firms has formulated supplier codes of conduct that stipulate basic social, governance and sometimes environmental standards, which suppliers are expected to uphold. In 2000, most audits were characterized by a monitoring and checking style. Suppliers were expected to solve code of conduct violations themselves and if they did not do so in time, relationships would end. Nowadays firms take a more collaborative approach, so that working conditions are addressed in dialogue with suppliers or local NGOs. Although some firms, like H&M, actively address the issue of fair wages in consultation with suppliers, still, none of the firms has taken up a definition of a fair (living) wage in their supplier code of conduct. Notably, Walmart is the only lead firm in 2000 with an inactive approach, as it did not have a supplier code of conduct at the time and was known for pressurizing suppliers to lower prices.

Regarding the supplier firms in the sample, some have defined supplier code of conducts covering basic human rights and working conditions. The sourcing of raw materials is often based on product price and quality, except for some firms, like Arvind, which include sustainability criteria and only source organic cotton. Additionally, the degree of vertical integration affects supplier relationships. For example Viyellatex is highly integrated, so it mostly deals with in-house suppliers, which automatically makes the approach more relational and fair in terms of labour conditions. Moreover, it is easier to implement environmental impact reduction measures. As worker's rights gain recognition in supplier countries, the number of strikes and requests for more adequate working conditions rises. Thus, in general, apparel firms have taken a more externally-oriented approach to suppliers and show a gradual shift in moral attitude towards responsibility. Hence, it can be concluded that supplier demands have an increasingly large affect on firms' SSCM approaches.

Table 5.15 Stakeholder approach: suppliers

Firm	Suppliers 2000	Suppliers 2005	Suppliers 2010
Arvind	1	1	3,5
C&A	3	4	4
Fast Retailing	2	2	3
H&M	3	3	4
Huafu	2	2	3
Levi Strauss & Co	2	2	3
Li & Fung	2	2	2
LVMH	3	4	4
Viyellatex	2	2	2
Wal-Mart	1	2	2,5
Total	**2,1**	**2,4**	**3,1**

Customers (reactive – active)

In the beginning of the period, firms regard customers merely as buyers who are interested in clothes, which is why most firms have product quality and safety assurance procedures. However, customers can put external pressure on firms to adopt more sustainable supply chain practices. This was for example the case at Fast Retailing, which, upon calls from customers to recycle their clothes, started the Fleece recycling initiative in Japan, which was later on extended to other countries (Fast Retailing, 2006). If the firm would not have responded to customers' wishes, they could have started to buy garments from competitors instead. Such active customer pressure for more responsible sourcing was however found in only few cases. Rather, their interests are represented by NGOs, as can be read about in the following section on secondary stakeholders.

Over the years, firms have developed additional procedures to enhance their customer relations, such as a helpdesk for complaints, customer satisfaction surveys and product labelling. More recently, they start to regard customers as CSR-interested buyers, which also led to the initiation of the Sustainable Apparel Coalition. Like Walmart, this organization is in the process of developing a sustainability index to inform customers on the social and environmental impact of their buying behaviour (SAC, 2012; Walmart, 2012). Also, firms engage with customers to reach their own sustainability goals and reduce products' lifecycle impact. For example, Levi's introduced the Water<Less jeans line, Care Tag for Our Planet and a Facebook page for water-saving tips to trigger more sustainable behaviour at consumers (Levi Strauss & Co, 2012). Both the index and sustainable clothing line are examples of how firms actively educate customers, so that they can indirectly influence firms' supply chain and thus the business case for SSCM.

As shown in Table 5.16, suppliers generally take a reactive approach towards customers, mainly because of the business-to-business environment and their position in the supply chain. This is especially true for intermediary Li & Fung, which sources on behalf of buyers and thus follows their wishes in terms of price, quality and labour conditions in factories. Increasingly, however, suppliers start to see the importance of adopting sustainable practices, as buyers require more responsible working conditions and less environmentally polluting products As explained by Viyellatex, their customer M&S introduced more requirements concerning the environment, as part of their Plan A program. Consequently, the firm adopted these environmental standards in its production process (Viyellatex, Survey on business case for SSCM, 2012). Also, they engage in more joint initiatives to develop environmentally less harmful products, such as Huafu, which offers yarn made from bamboo, soya and organic cotton (Huafu, 2012). Still, the initiative mainly comes from lead firms and only a small group of suppliers actively encourages customers to become more sustainable. With respect to supplier firms, it can thus be inferred that over time customers' wishes are having a stronger influence on their SSCM approach. This is also reflected in the total customer approach, which has shifted from reactive (1,8) in 2000, to active (2,5) in 2010.

Table 5.16 Stakeholder approach: customers

Firm	Customers 2000	Customers 2005	Customers 2010
Arvind	1	1	2
C&A	2	2,5	2,5
Fast Retailing	2	2,5	3
H&M	2	2	3
Huafu	2	1	2,5
Levi Strauss & Co	2	2	3
Li & Fung	1	2	2
LVMH	3	3	3
Viyellatex	2	2	2
Wal-Mart	1	2	2
Total	**1,8**	**2,0**	**2,5**

Investors (reactive)

With regards to investor relations, apparel firms take a reactive approach and as shown in Table 5.17 they have not changed this over time. Privately-owned firms were not included in the analysis and are indicated with 'NA' in the table. Generally, shareholders are informed about firms' financial performance through a variety of channels. Most of the sample firms are listed on one of the major sustainability stock exchanges, like FTSE4Good or DJSI and although some publish CSR reports, none seem to actively search for ethical investors. Interestingly, LVMH was delisted from the FTSE4Good in 2007, due to inadequate supply chain standards and Walmart was delisted from the Domini400 Social Index due to human rights violations. Moreover, in 2001, a coalition of shareholders representing 3 million shares, requested Walmart to eliminate sweatshop conditions at suppliers producing goods for the company (Schilling, 2001). Also, Walmart was added to the blacklist of the progressive Norwegian pension fund for allowing child labour at suppliers and obstructing unionization. In 2005, the fund sold its Walmart shares, after it found that the firm additionally engaged in gender discrimination and hired illegal immigrants (Landler, 2007). Walmart only gradually seems to respond to the allegations, by adopting more responsible internal policies. Thus, although investors can send a strong signal to firms to take a more active SSCM approach, firms are low in responsiveness. So that investor approach has only a small effect on the business case for SSCM.

Table 5.17 Stakeholder approach: investors

Firm	Investors 2000	Investors 2005	Investors 2010
Arvind	1	1	1
C&A	NA	NA	NA
Fast Retailing	1	1	1
H&M	1	1	1
Huafu	1	1	1
Levi Strauss & Co	NA	NA	NA
Li & Fung	2	2	2,5
LVMH	1	1	1
Viyellatex	NA	NA	NA
Wal-Mart	1	1	1
Total	**1,1**	**1,1**	**1,2**

Competitors (inactive – active)

As mentioned before, the apparel market is competitive and firms strive to increase their market shares with only small percentage points. Throughout the years, firms have become more collaborative and recognize the need to address issues at industry level. As reflected in the transition from an inactive approach of 0,8 in 2000 to a nowadays active approach of 2,8, see Table 5.18. Some firms, like Levi's, proactively stimulate cooperation with industry peers. By publishing a list of its factories, the firm intended to trigger other firms to do the same, so that they could collaborate on audits and address issues more effectively. This proved to be successful (Levi Strauss & Co, 2012). Also, Levi's was one of the first to publicly ban the practice of sandblasting in its supply chain. Together with H&M, it has promoted the ban amongst competitors, some of whom have joined by now. Besides, almost all firms are member of one of the larger multi-stakeholder initiatives as shown in Appendix 10. Hence, although firms seem to differ in their moral attitude, most have responded to calls for more collaboration. Overall, the competitor stakeholder group plays an increasingly significant role for lead firms in making the apparel supply chain more sustainable.

Table 5.18 Stakeholder approach: competitors

Firm	Competitors 2000	Competitors 2005	Competitors 2010
Arvind	0	0	3
C&A	3	3	4
Fast Retailing	0	0	2
H&M	3	3	4
Huafu	0	1,5	2
Levi Strauss & Co	0	4	4
Li & Fung	2	2	3
LVMH	0	0	3
Viyellatex	0	1	1
Wal-Mart	0	1	2
Total	**0,8**	**1,6**	**2,8**

5.3.1.2.Secondary stakeholders

Governments (reactive – active)

Almost all sample firms have signed the UN Global Compact and refer to the ILO Standards in their codes of conduct. That is, apparel firms mostly comply with national and international regulations regarding labour conditions and the environment. For example, in 2010 The California Transparency in Supply Chains Act came out to address the issue of human trafficking, in response to which many firms have adjusted their codes of conduct. With respect to legislation on hazardous chemicals, however, lead firms take a more active approach, by monitoring changes in legislation and being a member of respective authorities. Also, some firms, like LVMH, lobby for public policies with respect to climate change, whilst others, such as Li & Fung, are part of the boards of government authorities concerning the economic and environmental development of their business area. Sometimes, firms engage in joint formulation or regulation with governments, such as H&M, which engaged with the Bangladeshi government to draft legislation on freedom of association and to collaborate on fire and safety issues in garment factories. Additionally, many government agencies are part of MSIs, where they also cooperate with firms. Table 5.19 shows that throughout the years, firms engage more actively with governments and started to do more than the law requires, also with regards to SSCM. Changes in supply chains are slow however, so government relations only moderately influence SSCM.

Table 5.19 Stakeholder approach: government

Firm	Government 2000	Government 2005	Government 2010
Arvind	2	2	2,5
C&A	1	3	3
Fast Retailing	0	1	1

H&M	3	3	3
Huafu	2	3	3
Levi Strauss & Co	3	3	3
Li & Fung	3	3	3
LVMH	3	3	3
Viyellatex	1	2	2
Wal-Mart	0	1	2
Total	**1,8**	**2,4**	**2,6**

NGOs (reactive – proactive)

In the period of 2000, firms took an almost active approach towards NGOs, see Table 5.20. After years of attacks on sweatshop conditions at factories and defensive responses, firms started to draft supplier codes of conduct. They underwent a steep learning curve with regards to the auditing process and the root causes of some of the issues that had been present in their supply chain for a number of years already. As H&M highlights, when it first started to check wages, suppliers had no reporting systems, so the firm introduced ways to report payrolls to them. Only afterwards, H&M could check whether workers effectively received their wages (H&M, 2002). Still, firms are reactive to NGOs, as illustrated by the Greenpeace report on chemical substances found at Chinese garment suppliers. Firms responded to the NGO's challenge to set up a Joint Roadmap Towards Zero Discharge of Hazardous Chemicals in the supply chain by 2020 (ZDHC, 2011). Nowadays, many firms partner with NGOs like the Water Footprint Network to assess their environmental impact, or with (local) NGOs to improve auditing procedures and set up joint projects in supplier or neighbouring communities. For example, Arvind collaborates with local NGOs on a project to enhance the quality of life in nearby slums. Also, NGOs are consulted to research the issue of living wages and freedom of association and formulate a common standard. In the more recent period, some roundtables took place specifically for the apparel industry, such as the Garment Sector Roundtable in India and the 2nd Roundtable on Promoting Sustainable Cotton. Overall, NGOs play an increasingly important role in changing firms' SSCM, whilst previously they had an aggressive approach, which led firms to pay attention to the issues. Nowadays NGOs have taken up a collaborative attitude, thereby allowing firms to make actual changes in their supply chains and thus largely impact the business case for a sustainable apparel supply chain.

Table 5.20 Stakeholder approach: NGOs

Firm	NGOs 2000	NGOs 2005	NGOs 2010
Arvind	2	3	3
C&A	2	3	4
Fast Retailing	2	2	3,5
H&M	3	3	4
Huafu	1	2	3
Levi Strauss & Co	3	3	4
Li & Fung	1	2	2
LVMH	2	2	3
Viyellatex	2	3	3
Wal-Mart	1	2	3
Total	**1,9**	**2,5**	**3,3**

Community (active – proactive)

Apparel firms' interaction with community takes many forms. From sponsoring and volunteering at the Olympics by Fast Retailing, to strategic philanthropy by Arvind through teaching the poor sewing skills and providing them jobs, or by C&A's initiative to educate women so that they can escape the Sumangali system. Generally, firms take an active stance to community as can be read from Table 5.21. Often they start with activities in areas where employees or customers live and after a certain while they extend corporate philanthropy to an international level, to also target supplier communities. Firms' activities in supplier communities can improve the livelihoods of workers, which has an indirect effect on the sustainability of their supply chain. Thus, community approach is found to have a strong influence on SSCM approach.

Table 5.21 Stakeholder approach: community

Firm	Community 2000	Community 2005	Community 2010
Arvind	3	3	3,5
C&A	3	4	4
Fast Retailing	1	2	3,5
H&M	3	4	4
Huafu	2	2	3
Levi Strauss & Co	3	3	3
Li & Fung	2	2	2
LVMH	2	2	2
Viyellatex	2	2,5	4
Wal-Mart	2	2	2
Total	**2,3**	**2,7**	**3,1**

5.3.1.3.Conclusion: stakeholder approach and SSCM

As becomes clear from the above analysis, stakeholder approach has a different effect on the SSCM approach of lead firms and suppliers. Where the adoption of SSCM practices by lead firms is mainly influenced by their approach to suppliers, competitors and NGOs. Suppliers' approach to SSCM is more influenced by their approach to employees, customers and NGOs. Another observation is that firms have become more externally-oriented throughout the years, as reflected in the slightly less active approach to primary stakeholders than secondary stakeholders. Notably, the only stakeholder group to which firms' approach has not changed is towards investors. Looking at the stakeholder groups that belong to the highest category per period, it can be seen that for 2000, especially employees, suppliers and community seem to influence SSCM. A period later, the approach to suppliers and community still has an effect on SSCM, in addition to government and NGOs. More recently, SSCM is mainly affected by the approach to suppliers, NGOs and community. In conclusion, over the years firms' stakeholder approach increasingly influences the business case for sustainable supply chain management.

5.3.2.Issue approach

An overview of the total and average scores on issue management is given in Table 5.22. Similarly to stakeholders, the apparel industry has undergone a transition of internal alignment with respect to issue management. From a reactive approach in 2000 (1,4) to a more active approach in 2010 (2,3). Throughout the whole period, however, the industry displays reactive issue management that is characterized by compliance. On average, none of the firms has a proactive approach towards issues, although H&M comes close with the highest average score of 2,9. At the other end comes Fast Retailing, which with a score of 1,1 just enters the reactive phase. Interestingly, some firms do not show a change in approach throughout the years, for example LVMH, which continues to have a steady reactive approach around 1,4.

Table 5.22 Issue approach total scores and averages*

Firm	Iss2000	Iss2005	Iss2010	IssAv.	Av. approach
Arvind	1,6	1,7	2,1	**1,8**	Reactive
C&A	1,3	1,9	2,8	**2,0**	Reactive/active
Fast Retailing	0,8	0,9	1,7	**1,1**	Reactive
H&M	2,3	2,8	3,7	**2,9**	Active
Huafu	1,5	1,7	1,9	**1,7**	Reactive

Levi's	2,2	2,5	3,2	**2,6**	Active
Li & Fung	0,9	1,1	1,7	**1,2**	Reactive
LVMH	1,3	1,3	1,4	**1,4**	Reactive
Viyellatex	1,8	2,3	2,4	**2,2**	Active
Wal-Mart	0,7	1,0	2,1	**1,3**	Reactive
Total	**1,4**	**1,7**	**2,3**	**1,8**	**Reactive**

Note: *inactive: 0-1 to reactive: 1-2, to active: 2-3 and proactive: 3-4

5.3.2.1.Socio-economic issues

Bonded labour (reactive)

In the period of 2010, all firms have publicly prohibited the use of forced (bonded) labour. Firms differ in their formulations, in that some have specific guidelines for suppliers to ensure that they do not use management systems that could lead to forced labour practices. For example, in line with the California Transparency in Supply Chains Act of 2010, both Li & Fung and Walmart have added requirements with respect to human trafficking to their supplier codes. Also, Viyellatex has extensive labour policies with preventive measures on forced labour. Still, NGOs continue to find instances of bonded labour in apparel factories, most recently in the form of the Sumangali practice at several Indian farms. In response to such findings, firms mostly publish a public affairs statement in which they point out the supplier codes of conduct and monitoring activities they have in place. Also, often they state to stop orders at the suppliers where violations are found if these do not address the violations sufficiently. Recently, however, firms have changed their responses, as reflected in the small increase in the total score in Table 5.23. In that, a small group of firms started investigating violations found by NGOs and in the case of a structural problem like the Sumangali practice, they initiated collaboration with suppliers, local NGOs and governments as in the Tirupur Stakeholders Forum (TSF, 2010). Another example of a firm that takes up more responsibility for the issue of bonded labour is C&A, which collaborates with NGO Terre des Hommes to educate young women who were formerly part of a Sumangali scheme, so that they no longer have to work under such circumstances (C&A, 2012). Generally, however, firms take a reactive approach and comply with ILO standards, so that the approach to this issue only has a small impact on the business case for SSCM.

Table 5.23 Issue approach: bonded labour

Firm	**Bonded labour2000**	**Bonded labour2005**	**Bonded labour2010**
Arvind	1	1	1
C&A	1	1	2
Fast Retailing	1	1	1
H&M	2	2	3
Huafu	1	1	1
Levi Strauss & Co	1	1	1
Li & Fung	1	1	2
LVMH	1	1	1
Viyellatex	3	3	3
Wal-Mart	1	1	2
Total	**1,3**	**1,3**	**1,7**

Child labour (reactive)

Child labour is a longstanding issue in the apparel supply chain, which, according to the majority of lead firms, is rarely detected in audits nowadays. Next to a prohibitive clause in their supplier codes of conduct and a zero tolerance approach, firms do not seem to take active measures to eliminate child labour from the supply chain. In case child labour is found at a supplier, firms have special protocols for auditors that stipulate how they should deal with the matter. Each case of child labour is analysed seperately and often firms reach an agreement with suppliers where the latter finance the child’s education or vocational training and promise them a fulltime job when they reach the legal working age. Similarly to the previous issue, firms have taken a reactive approach to child labour over the past decade as can be read from Table 5.24. Thus, this issue does not trigger active SSCM approaches.

Table 5.24 Issue approach: child labour

Firm	Child labour 2000	Child labour 2005	Child labour 2010
Arvind	1	1	1
C&A	1	3	3
Fast Retailing	1	1	1,5
H&M	2	2	3
Huafu	1	1	1
Levi Strauss & Co	3	3	3
Li & Fung	1	1	1
LVMH	1	1	1
Viyellatex	2	2	3
Wal-Mart	1	2	2
Total	**1,4**	**1,7**	**2,0**

Migrant /women / home workers (reactive)

Generally, firms take up a clause on non-discrimination in their supplier code of conduct. Some, like Walmart, go a step further and pay special attention to migrant workers who may not understand their rights and take up additional points of attention for auditors in such a situation. One of the instances concerning migrant workers is the large migration influx of workers coming to the Eastcoast in China. Suppliers in this area exhibit significant increases in overtime work, since these migrant workers want to make long hours to earn more money. For firms it is difficult to address this issue in a culturally accepted manner and explain that reducing working hours is in the interest of employees' health (C&A, 2012). Thus, they take a reactive approach to migrant workers.

Many firms pay special attention to women, since they make up the majority of the global apparel workforce. In cooperation with NGOs they organize training programs, to develop leadership among women and improve their position in society. As Viyellatex explains in its CSR report, it is a cultural given that women only work when they are young and go back to their hometowns when they become pregnant to raise their children. This is why the firm opened a daycare facility for women, so that they can combine their career with having children. For Bangladesh this is a progressive move with which the firm states to contribute to the welfare of women in society (Viyellatex, 2012). Hence, firms take a relatively active approach towards women workers.

In its CSR report, C&A explains the complexity of the issue of home work. The firm allows home work only in case workers are registered at a central unit. The feasibility of such a system however is the exception rather than the rule. Also H&M reports that it merely allows home work for orders that require special embroidery or other techniques. Generally, firms have clauses on subcontracting and do not seem to have a responsible moral attitude towards the issue of home work. As reflected in the data in Table 5.25, firms' approach to migrant, women and home workers has increased only slightly over the years. Still many issues are present in the supply chain with respect to this group of workers, thus firms' approach to this issue so far has not contributed to the businessc case for a sustainable supply chain.

Table 5.25 Issue approach: migrant / women / home workers

Firm	Migrant / women workers2000	Migrant / women workers2005	Migrant / women workers2010
Arvind	1	1	2
C&A	1	2	2

Fast Retailing	1	1	2
H&M	3	3	3
Huafu	1	1	1
Levi Strauss & Co	3	3	3
Li & Fung	1	1	2
LVMH	1	1	1
Viyellatex	1	1	1
Wal-Mart	1	2	3
Total	**1,4**	**1,6**	**2,0**

Wages (reactive – active)

Firms require suppliers to comply with local labour laws or industry standards on minimum wage levels and working hours. From 2000 onwards, apparel firms have paid due attention to the issue of a living wage and adjusted their supplier codes by including a clause to encourage suppliers to pay wages that cover the basic needs of workers and their families. H&M is one of the few firms that takes a strategic issues management approach, as reflected in the high score in Table 5.26. The firm collaborates with the Fair Wage Network, to research payment practices among a number of suppliers and develop a standard from which proper living wages can be derived. Likewise, Viyellatex is at the forefront when it comes to wages and pays workers 20% above the industry average. On the other hand, Walmart was relatively late to adjust the maximum number of working hours in its code of conduct, only after calls from NGO Clean Clothes Campaign, did the firm change the number of hours from 72 to 60 per week. Also, when Arvind faced a strike by employees to increase wages, the firm responded by saying that negotiations with worker representatives had already started and a few days later wages were increased. After the workers had gone back to the factory, however, show-cause notices were hung up with the names of those participating in the strike, thereby causing six workers to stop. Although it is unclear whether the strike was illegal or not, the firm does not exhibit internal alignment when it comes to issue management. In general, firms tend to take up a bit more responsibility for the issue and thus have moved towards a more active approach to the issue of wages. This indicates, that the approach to the issue of wages can significantly contribute to the business case for sustainable supply chain management.

Table 5.26 Issue approach: wages

Firm	Wages 2000	Wages 2005	Wages 2010
Arvind	1	1	2
C&A	1	2	2
Fast Retailing	1	2	2
H&M	3	3	4
Huafu	1	1	1
Levi Strauss & Co	1	2	2,5
Li & Fung	1	1	1
LVMH	1	1	1
Viyellatex	2	3	3
Wal-Mart	1	1	2
Total	**1,3**	**1,7**	**2,1**

Freedom of association (reactive)

At the beginning of the period, firms required suppliers to allow workers to organize themselves in accordance with law. Some countries do not stipulate such rights in the law, however, so that over the years, clauses were extended with workers' right to organize themselves in 'parallel means'. Especially Walmart has been the target of employees, shareholders and NGOs regarding this issue, since the firm has long obstructed unionization. H&M on the other hand, pays much attention to this right, as shown in the firm's score in 2000 in Table 5.26. Then, the firm already entered into dialogue with the Bangladeshi government to establish workers welfare committees in the country's Export Processing Zones, to facilitate the transition to labour unions in 2004. Also, suppliers of H&M were required to establish such workers committees and with the new audit program, auditors can better detect whether workers are indeed represented. Except in China, where workers are merely allowed to associate in the national labour union. H&M also collaborates with the FLA on the issue. Compared to all the other firms, however, H&M is an exception and the general approach to freedom of association is reactive. Again, firms become more active on this issue throughout the years, however, it seems that this has only a moderate effect on the sustainability in the apparel supply chain.

Table 5.27 Issue approach: freedom of association

Firm	Freedom of association 2000	Freedom of association 2005	Freedom of association 2010
Arvind	1	1	1
C&A	1	1	2
Fast Retailing	1	1	1
H&M	3	3	4
Huafu	1	1	1
Levi Strauss & Co	1	2,5	3
Li & Fung	1	1	2
LVMH	1	1	1
Viyellatex	1,5	2	1
Wal-Mart	0	1	2
Total	**1,2**	**1,5**	**1,8**

Health & safety (reactive – active)

On the issue of health and safety, apparel firms again show a compliant attitude, by including a clause on the issue in their (supplier) codes of conduct. On the other hand, there are also examples of firms that take a somewhat more active approach. Such as H&M, which, in response to fires that broke out in garment factories in Bangladesh and mass faintings in Cambodian factories, started investigations, requested suppliers to check their fire safety standards and in cooperation with them started to address health standards. Both countries are strategic suppliers to H&M, which is why the firm takes up responsibility and also set up a development program to enhance the quality of life there. Levi's also actively addresses the issue through training programs and improvements at suppliers regarding sanitation, which were shown to lead to higher worker productivity (HERproject, 2012).

In 2010, a NGO report came out on the issue of sandblasting which held firms responsible for the ending of this unhealthy practice at suppliers. In reaction, H&M and Levi's together issued a public ban on sandblasting and invited other firms to join them. Interestingly, both firms have a strong tradition of upholding health and safety standards, however, they did not seem to take preventive measures to end the practice of sandblasting before the report came out. Thus they took a reactive approach to the issue. On the other hand, despite the ban, the two firms continue to audit suppliers on the practice of sandblasting, which symbolizes an active approach. The latter action is important, as a more recent report showed that sandblasting was still taking place. Now that suppliers were not allowed to use the technique anymore, they would do it at night, so that auditors would not find it on their visits during the day (CCC, 2012). From Table 5.28 it can be seen that for the period of 2000-2010, firms have moved from a reactive approach, with a score of 1,3 in 2000, to an active approach with a score of 2,5 in 2010. Overall standards in supplier factories have improved, which means that this issue has a relatively high effect on SSCM.

Table 5.28 Issue approach: health & safety

Firm	Health & Safety 2000	Health & Safety 2005	Health & Safety 2010

Arvind	2	2	3
C&A	1	1	2
Fast Retailing	1	1,5	2
H&M	1	2	4
Huafu	1,5	2	2
Levi Strauss & Co	2	2	4
Li & Fung	1	1	1
LVMH	1	1	1
Viyellatex	1	2	3
Wal-Mart	1	1	3
Total	**1,3**	**1,6**	**2,5**

5.3.2.2. Environmental issues

Chemicals (reactive – active)

Both lead firms and suppliers adhere to regulations on restricted substances and constantly monitor changes in legislation. After the Greenpeace report, firms became more active and started a joint issue campaign in the form of the Joint Roadmap Towards Zero Discharge of Hazardous Chemicals. Other firms were invited to participate and online updates are given on the progress that is being made. Also, other groups of stakeholders are invited to comment or take part in dialogues, in order to achieve the ultimate goal of elimination of harmful chemicals in the apparel supply chain by 2020 (ZDHC, 2012). LVMH is also active, with a score of 2 in Table 5.29. The firm has long been involved with suppliers to replace solvent-based with water-based glues for its products. Supplier firms take a more compliant approach to this issue and adhere to their buyers' standards and environmental regulations. So that overall, the apparel industry borders on the reactive/active dimension with respect to chemical treatment. This indicates that the approach to this issue can significantly contribute to the business case for SSCM.

Table 5.29 Issue approach: chemicals

Firm	Chemicals 2000	Chemicals 2005	Chemicals 2010
Arvind	2	2	3
C&A	3	3	4
Fast Retailing	1	0	2
H&M	3	3	4
Huafu	2	3	4
Levi Strauss & Co	3	3	4
Li & Fung	1	1	1
LVMH	2	2	2,5
Viyellatex	1	1	1
Wal-Mart	1	1	1
Total	**1,9**	**1,9**	**2,7**

Water (reactive – active)

Some of the sample firms were early to address the issue of water. As shown in Table 5.30, Arvind took an active approach in the beginning already, by installing a water effluent recycling plant. Also, Huafu from its foundation has integrated the issue of water into its business model by offering yarn that saves up to 50% of water normally consumed with conventional spinning methods. Also, Levi's had defined wastewater effluent guidelines for suppliers in 1992 already. Nowadays, Levi's takes a strategic approach to the issue, by extending the guidelines to tier-2 suppliers, challenging designers to develop jeans that require less water in the manufacturing process, launching the Water<Less jeans line and engaging consumers with the Care Tag for Our Planet and Facebook page for watersaving tips. Other firms have embraced the issue of water through

measurements of suppliers' water usage or through their programs on organic cotton production, where farmers receive training to reduce water consumption. Next to that, suppliers are increasingly responsive to the issue, for example Viyellatex installed a groundwater and rainwater recycling facility. Concluding, apparel firms have transitioned from a reactive to an active approach to the issue of water, which supports the business case for sustainable supply chain management in the apparel industry.

Table 5.30 Issue approach: water

Firm	**Water 2000**	**Water 2005**	**Water 2010**
Arvind	3	3	3
C&A	0	1	4
Fast Retailing	0	0	2
H&M	1	3	4
Huafu	3	3	3
Levi Strauss & Co	3	3	4
Li & Fung	1	1	2
LVMH	2	2	2
Viyellatex	2	3	3
Wal-Mart	0	0	2
Total	**1,5**	**1,9**	**2,9**

Climate change (reactive – proactive)

Apparel firms underwent a transition from internal to external alignment with respect to the issue of climate change. After adopting more environmentally friendly working methods internally, firms started to take a more outward approach and engage with other stakeholders. At the same time, there are also firms which have integrated the environment into their business strategy from their foundation year onward. The young supplier Viyellatex is such an organization and is currently building two carbon-neutral factories with the purpose to become carbon-neutral by 2016. Similarly, Huafu is actively dedicated to cleaner production methods and promotes these amongst its suppliers as well. As can be read from Table 5.31, Fast Retailing takes the least active approach to climate change. The firm merely promotes waste minimization and efficiency in terms of energy use at each production stage, however, no mention is made of similar standards specifically targeted at suppliers. Also, the firm does not engage in organic cotton production or takes water reduction measures.

Whilst many apparel firms become dedicated to sourcing organic cotton from the second half of the period onwards. Numerous projects are undertaken to facilitate the transition from conventional to organic cotton, for example the Better Cotton Initiative. In addition to that, firms establish their own NGOs or firms, like CottonConnect by C&A, to support farmers in formulating sustainable business models. Or firms seek cooperation with (local) NGOs on a project base as done by Arvind. H&M and C&A have designed organic cotton clothing lines to make consumers more aware. Intermediary Li & Fung has also researched the feasibility of organic cotton manufacturing and collaborated with clients, which led to the launch of an organic cotton line at Walmart USA. Also, Huafu produces yarn made from sustainable materials including organic cotton. The majority of lead firms have set the goal to source at least a certain percentage of organic cotton by 2015. These examples indicate that firms are increasingly taking up responsibility for the issue of climate change. Thus, the approach to this issue largely underwrites the business case for sustainable supply chain management.

Table 5.31 Issue approach: Climate change

Firm	Climate change 2000	Climate change 2005	Climate change 2010
Arvind	2	3	3
C&A	3	3	4
Fast Retailing	0	1	1,5

H&M	3	4	4
Huafu	2	2	3
Levi Strauss & Co	3	3	4
Li & Fung	0	2	3
LVMH	2	2	2
Viyellatex	3	3,5	4
Wal-Mart	0	0	2
Total	**1,8**	**2,4**	**3,1**

5.3.2.3. Conclusion: issue approach and SSCM

Looking at the differences in compound scores on socio-economic versus environmental issues, it is interesting to find that for each time period, firms have taken a more active approach towards the latter type of issues. This, whilst the apparel industry is mainly targeted by stakeholders on social issues. The foregoing indicates that only the approach to wages and health & safety shows a transition from reactive to active. With respect to the other socio-economic issues firms have mainly remained reactive. As some of these problems call for more transparency regarding all players involved in the production of certain products, which is difficult to achieve. Besides, other socio-economic issues, like living wages, are of such ethical and contextual nature that it is difficult to come to a consensus amongst stakeholders. At the same time, still many issues need to be addressed, however, firms are not taking a more active approach to them than before.

Whilst for all three environmental issues the industry takes a more active or even proactive approach. A possible explanation for the emphasis on environmental issues, is the increasing attention for climate change, also in terms of governmental policies, and the financial crisis over the past ten years. These developments may have instigated firms to benefit from possible cost savings due to more efficient and cleaner production methods. Another explanation may be that, firms can still make significant improvements concerning environmental issues, as compared to what has been done so far. Whilst on the social side, many initiatives have already been undertaken and firms no longer seem able to address these issues at an individual firm-level. Rather, a tipping point is reached where industry collaboration on socio-economic issues is taking up a more prominent role. Since firms only know to a certain extent how to deal with this type of issues at an individual level, based on the experience they have gained throughout the past ten years. In conclusion, for each of the periods, the environmental issues belong to the highest category in terms of activeness and thus have the strongest affect on SSCM.

5.3.3. Sustainability approach

Now that it has become clear how apparel firms have changed their approach to stakeholders and issues over the past decade, the scores on these two items were averaged and compounded to represent firms' approach to sustainability. Table 5.32 shows the total scores per year and the average sustainability approach of each firm for each period.

Table 5.32 Sustainability compound scores and averages*

Firm	**Sust2000**	**Sust2005**	**Sust2010**	**SustAv.**	**Av. approach**
Arvind	1,5	1,6	2,3	**1,8**	Reactive
C&A	1,8	2,5	3,2	**2,5**	Active
Fast Retailing	1,0	1,3	2,1	**1,4**	Reactive
H&M	2,4	2,8	3,5	**2,9**	Active
Huafu	1,4	1,7	2,2	**1,8**	Reactive
Levi's	2,3	2,7	3,2	**2,7**	Active
Li & Fung	1,4	1,6	2,0	**1,7**	Reactive
LVMH	1,7	1,7	2,1	**1,8**	Reactive
Viyellatex	1,8	2,3	2,5	**2,2**	Active
Wal-Mart	0,8	1,3	2,1	**1,4**	Reactive

Total	**1,6**	**1,9**	**2,5**	**2,0**	**Reactive/active**

Note: *inactive: 0-1 to reactive: 1-2, to active: 2-3 and proactive: 3-4

The overall approach to sustainability (2,0) in the apparel industry lays exactly on the reactive/active border. Firms have made a shift from a liability to a responsibility attitude, both with respect to stakeholders and issues. Where for each period, the approach to stakeholders is slightly more active than that to issues. This is partly due to more external pressure coming from stakeholders, which can also be read from the timeline of multi-stakeholder initiatives and NGO projects in Appendix 10. The timeline shows at what time apparel firms joined which sustainability projects. Since the period of 2005, firms started to join an increasing number of NGO projects and MSIs. Levi's, in its role as a pioneer, was one of the first to collaborate with an NGO in the period under study, namely the FLA. Interestingly, many firms participate in similar initiatives like Better Factories Cambodia, Textile (Organic) Exchange, IFC/ILO Better Work Program, Better Cotton Initiative and Business for Social Responsibility (BSR) working groups. Generally, suppliers join industry initiatives for sustainability somewhat later than lead firms. What is more, in the second period, most initiatives target socio-economic issues, whilst in the later period, firms join more environmental-related projects. The overall number of initiatives that firms join increases over the years.

Generally, firms show a transition of internal alignment. They have already adopted sustainability standards and policies for risk management and now attempt to further integrate sustainability into their strategies to improve their competitive advantage (Van Tulder, 2009). When comparing scores in 2000 and 2010, it is indeed found that the number of firms that take an active/proactive sustainability approach has increased significantly. On average, H&M has the highest score and reaches the active/proactive dimension with a score of 2,9. Whilst Walmart and Fast Retailing share the lowest place and with an average score of 1,4 they have a reactive approach to sustainability. A possible explanation for this difference, may be the country of origin of these firms. H&M comes from Sweden, which is known for being progressive in the area of sustainability and is therefore more active than Walmart from the US and Fast Retailing from Japan, where sustainability has only recently become more important in business. The data does not show a large difference in sustainability approach between suppliers and lead firms. Hence, based on the industry transition towards business case 3, it can be concluded that firms' sustainability approaches have influenced the apparel supply chain and are expected to do so in the future.

5.3.4. Conclusion: Relation Sustainability and SSCM approach

To assess whether there is a relation between sustainability and SSCM approach, the total and average scores on the two concepts, as presented in Table 5.1 and Table 5.32, are compared. The exact same trend is detected, where both concepts move from a reactive approach in the first half of the period to an active approach in the second half. This indicates that there is a likely relationship between firms' approach to sustainability and supply chain management. In addition, almost all individual cases have matching scores on both concepts, except for Li & Fung, which scores reactive with respect to sustainability (1,7) and active in terms of SSCM (0,53). As a sourcing expert, the firm's emphasis on supply chain management may have contributed to that slightly higher score on SSCM. However, from 2009 onwards Li & Fung started to implement a sustainability strategy, so it is expected that the two scores will get closer in the near future. Notably, the average score on sustainability (2,0) is slightly higher than for SSCM (0,47), which could mean that firms' approach to sustainability may trigger more responsible sourcing strategies. In conclusion, sustainability has an influence on SSCM.

5.4. Business case for SSCM?

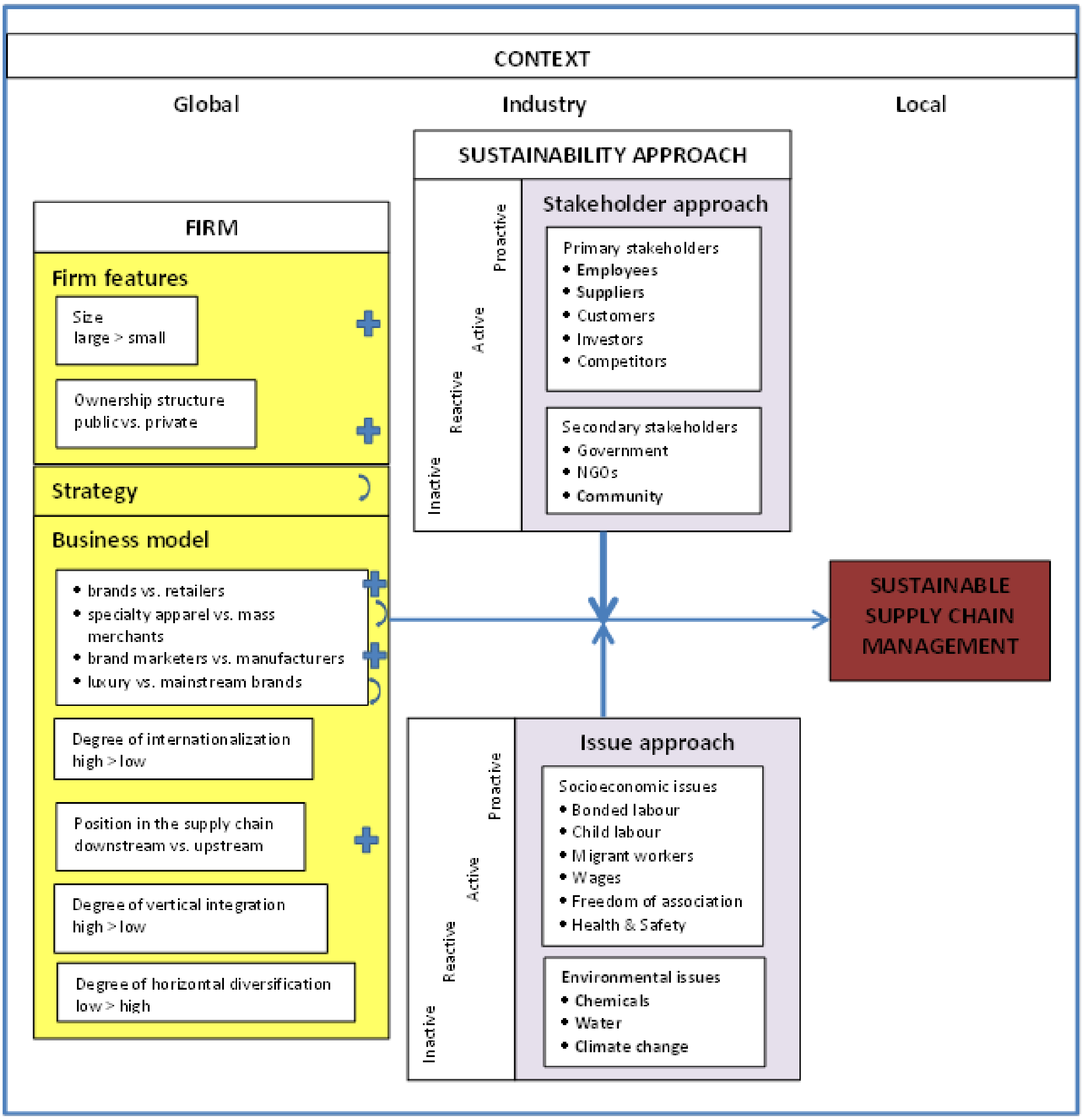
This section places SSCM in context, by reflecting on the relation between the concepts Firm, Sustainability approach and Sustainable Supply Chain Management for each of the three periods and how these are influenced by global, industry and local trends. Findings from the foregoing sections are added to the conceptual model to create new models per time period. In these models, accepted propositions with regards to Firm are indicated with a plus sign and reversely accepted hypotheses with a backward arrow. Next to that, the influence of the individual stakeholders and issues is indicated with bold, whilst the overall effect of stakeholder and issue approaches on SSCM are symbolized by the width of the arrows. After the three periods are analysed a discussion follows on whether there is a business case for a sustainable apparel supply chain and what this means for the future of the apparel industry.

5.4.1. 2000-2004: SSCM – the reflection of an image

The period from 2000 to 2004 is characterized by a high degree of globalization and intense competition, in which firms which firms expand their operations through low-cost sourcing strategies. Sustainable supply chain management is management is mainly adopted by large, publicly-owned brands, see

Figure 5.1 on the next page, who in previous years have been subject to external critique from customers and NGOs on social issues in their supply chain, such as child labour and freedom of association. Consequently, they now take up a more active approach towards their employees and suppliers, by implementing codes of conduct. Especially lead firms that target the mass market and fall into the category of factoryless firms take a more active approach towards SSCM. They are motivated to reduce risks, gain more power in their supply chain and create a good public image. The increasing emphasis on climate change, also triggers them to grasp the opportunities of more environmental friendly SCM. While lead firms do so to enhance their corporate image, suppliers are either influenced by the conditions in their country, such as water scarcity, or the demand from international buyers (Viyellatex, 2012). Additionally, through charitable activities in local communities, firms become popular amongst potential customers or employees.

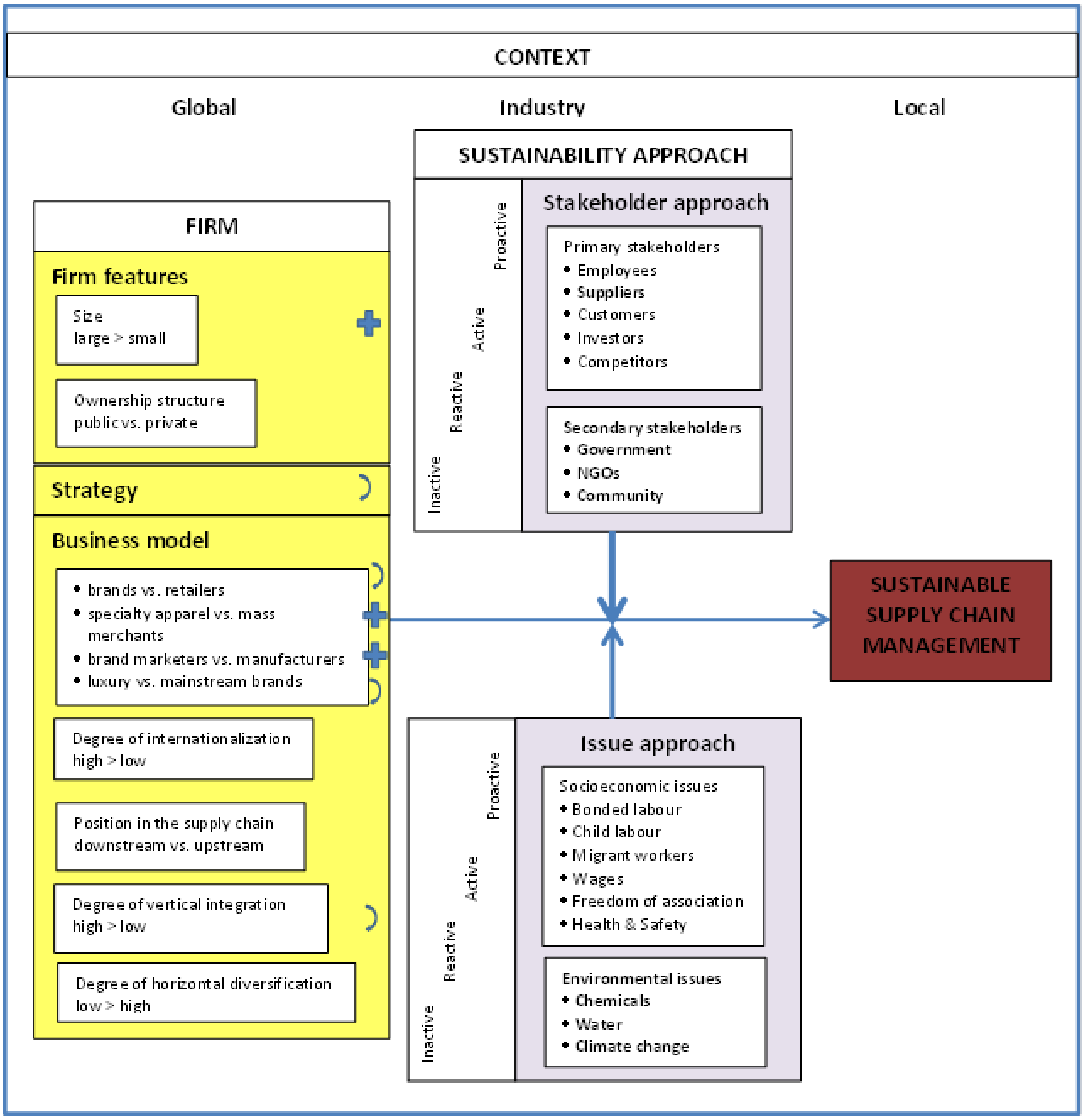
Figure 5.1 Conceptual model for 2000


CONTEXT
Global
Industry
Local
SUSTAINABILITY APPROACH
Proactive
Active
Reactive
Inactive
Stakeholder approach
Primary stakeholders
• Employees
• Suppliers
• Customers
• Investors
• Competitors
Secondary stakeholders
• Government
• NGOs
• Community
FIRM
Firm features
Size
large > small
Ownership structure
public vs. private
Strategy
Business model
• brands vs. retailers
• specialty apparel vs. mass merchants
• brand marketers vs. manufacturers
• luxury vs. mainstream brands
Degree of internationalization
high > low
Position in the supply chain
downstream vs. upstream
Degree of vertical integration
high > low
Degree of horizontal diversification
low > high
SUSTAINABLE SUPPLY CHAIN MANAGEMENT
Issue approach
Proactive
Active
Reactive
Inactive
Socioeconomic issues
• Bonded labour
• Child labour
• Migrant workers
• Wages
• Freedom of association
• Health & Safety
Environmental issues
• Chemicals
• Water
• Climate change

5.4.2. 2004-2008: SSCM wins ground

The most important development for the period from 2004 to 2008 is the increase in competition, combined with more difficult economic conditions. As Figure 5.2 shows, especially small firms find it difficult to remain profitable, whilst already large apparel firms manage to increase in size. The integration of sustainability in the supply chain is still mostly the privilege of the latter type of firms. Naturally, competition has a larger effect on firms with a low-cost than a differentiation strategy. Particularly specialty apparel retailers with a low degree of vertical integration adopt more SSCM practices, so as to cut costs and increase efficiency. Supplier relations become more modular as they rationalize their supply base and help suppliers to upgrade. Besides, they maintain supplier relations based on price, quality, child and forced labour, and human resource management practices (Viyellatex, 2012), as these are the most prominent social issues at the time.

Figure 5.2 Conceptual model for 2005



At industry level, brand loyalty becomes an important source of competitive advantage, which also adds to especially brand marketers' wish to enhance supply chain control. Some suppliers have upgraded to become service providers, with a low degree of vertical integration and expertise in effectively managing a network of designers, factories and logistics. Taken together, these developments lead to more risk management measures, stricter supplier selection, more dialogue with suppliers, efficiency-enhancing projects and more transparency, which supports the second type of business case for SSCM.

Another industry trend is the MFA phase-out, which causes a shift in global sourcing patterns to the lowest-cost country: China. NGOs continue to criticize firms with regards to working conditions in terms of wages, overtime hours, freedom of association and health & safety, which are stil a problem in the industry. Especially the more mainstream brands are sensitive to this criticism and enter into dialogue with NGOs. Similarly, firms start to collaborate more with governments, who have also increased regulations on for example the environment. In turn, this stimulates firms to invest in energy- and water-saving measures in the supply chain. In this period, organic cotton also receives more attention, so that both suppliers and lead firms invest in local communities to prepare them for the shift from conventional to organic cotton production. Overall, sustainability in this period is mainly approached from a reactive/active standpoint and wins ground in the apparel supply chain.

5.4.3. 2008-2012: SSCM connects the chain

The financial crisis is the most important global development in the period from 2008 to 2012. Both small and large firms have less financial resources available, so sustainable practices become a way to enhance efficiency and reduce costs. This is especially attractive for firms with a low-cost strategy, which is why mainly retailers engage in more responsible sourcing activities, refer to Figure 5.3 (next page). The effects of the financial crisis have made buyers aware of the risks in the global system and triggered them to reduce their dependence on China. They further rationalize their supply chains and form more strategic partnerships with fewer suppliers. Such sourcing strategies enhance transparency and control, which also make it easier to address environmental issues such as the use of hazardous chemicals and cotton production at suppliers. Still, specialty apparel retailers are more active in SSCM than mass merchants, possibly because sustainability is increasingly trendy amongst customers and they use it as a source for differentiation.

Another global trend that continues to influence the apparel industry is globalization. Firstly, developments in international information systems and transportation, allow firms with large international supply base to better track orders and make last-minute changes. Secondly, they enhance supplier relations as data sharing becomes easier, so joint projects to improve labour standards or reduce energy consumption can be implemented more effectively. Thirdly, stakeholders such as NGOs, benefit from the international communication network, which allows them to better scrutinize firms on the social and environmental impact of their supply chains. Consequently, brand marketers that target the mainstream customer segment are found to undertake more sustainable sourcing practices than brand manufacturers.

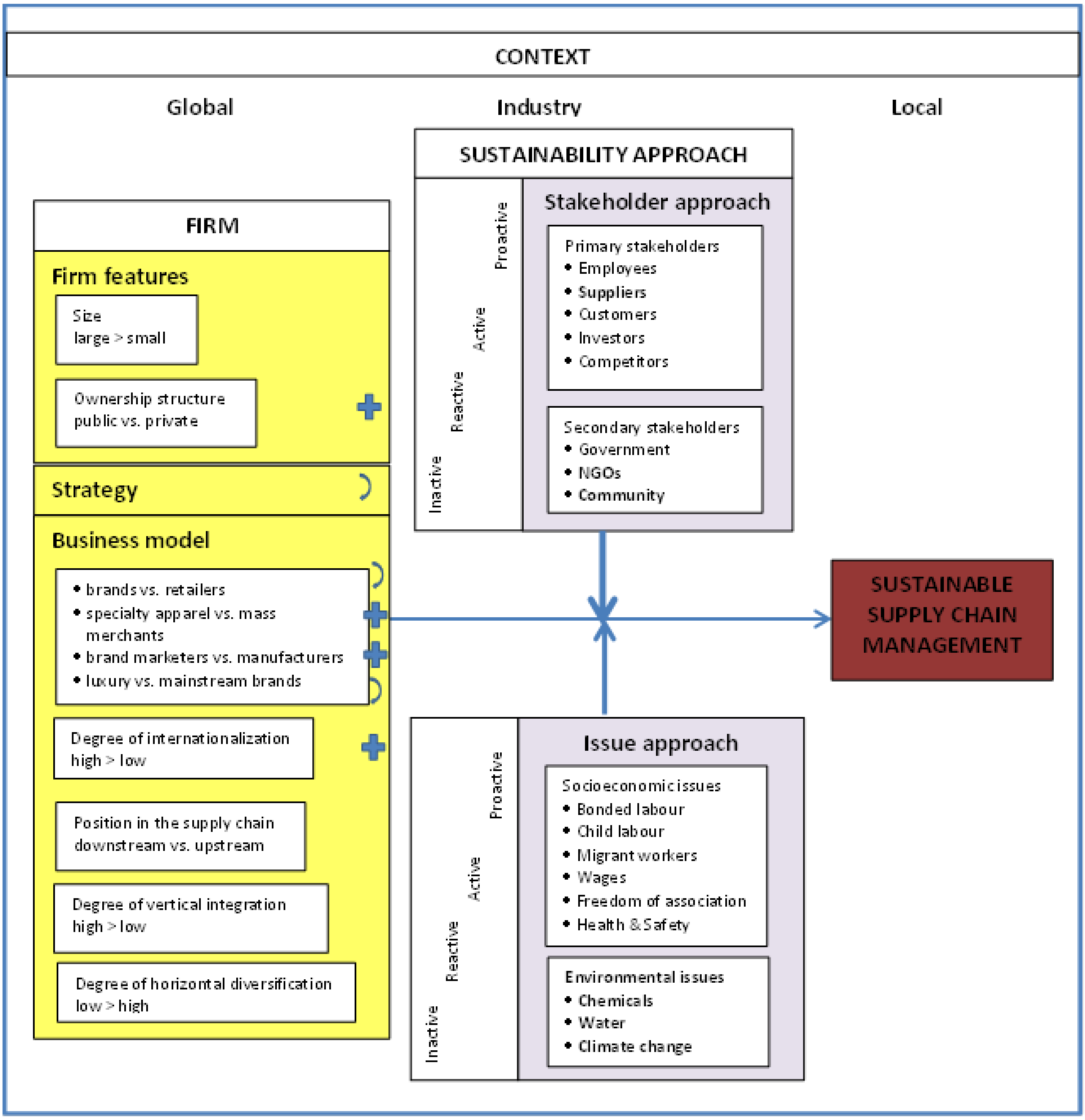
The rise of the BRIC countries also stimulates investment in suppliers, as these are often located close to new markets. These are attractive for lead firms, who see demand in Western countries decrease. Similarly, suppliers that are located in these countries flourish due to better economic conditions, which allows them to invest in more sustainable manufacturing facilities. Local governments stimulate apparel production to boost the economy. However, in such a booming context, cotton seems to become scarce, as illustrated by the Indian governments' decision for a barrier on the export of cotton. Firms are forced to source from different countries and stimulated to become more self-sufficient, so they invest in local communities to ensure a consistent supply of organic cotton.

Also, the continuing attention for climate change induces both lead firms and suppliers to address environmental issues in the supply chain. Not only, because reducing energy and water consumption saves costs and improves efficiency, but also because it stimulates process, product and business model innovations. In turn, these help firms to ensure their competitive advantage in the long term. Lead firms start to select suppliers on the basis of environmental performance. They in turn become increasingly aware of sustainability in their operations and start to invest in more environmental friendly facilities to enhance their brand image for buyers.

At industry-level, the wage increase in China stimulated firms to shift production to again lower-cost countries Bangladesh, Vietnam and Cambodia. Compared to the previous shift to China, however, firms are more active in addressing working conditions in these countries. Both suppliers and lead firms collaborate with (local) NGOs and governments to enhance workers' rights and health & safety standards. Through their community approach they enhance people's quality of life in the local communities in supplying countries.

In conclusion, firms start to operate more connected supply chains, in which they recognize the different stakeholders and issues that are affected by their operations. They start to underwrite the third type of business case for sustainable supply chain management and hint towards the fourth type of business case. For external co-alignment to unfold, however, firms still have a long journey ahead.

Figure 5.3 Conceptual model for 2010



5.4.4. Conclusion: The future of SSCM in the apparel industry

There is a business case for sustainable supply chain management in the apparel industry. Under the influence of mainly global and industry developments, the apparel supply chain has shown a gradual transition from reactive to active SSCM in the past decade. In the beginning of the period, this change is mainly triggered in large publicly-owned brands that target the mainstream market, because this type of firm has long been subject to calls from NGOs to improve working conditions in their supply chains. Later on, they are overtaken by specialty apparel retailers with a low-cost strategy, which integrate sustainability into their supply chain for risk management purposes. The introduction of these SSCM practices also reaches suppliers, which means that an increasing number of firms start to contribute to a more sustainable apparel supply chain. The transition is further influenced by firms' response to calls from secondary stakeholders and triggered by environmental issues. Taken together, these developments suggest that the apparel industry approaches a tipping point. At that point, apparel firms have developed business models for sustainability, which changes the basis for competition and thus the overall apparel supply chain.

It remains questionable however, whether the pace and direction in which the industry currently moves, will continue in the near future and is going to be enough to survive in one of the future worlds as illustrated by Forum for the Future in Appendix 3. Next to industry, global and local developments, this will largely depend on the definition of business models for sustainability. Some firms are already preparing for one of the future scenarios. For example, C&A seems to view the future of the apparel supply chain in terms of the 'Slow is Beautiful' scenario, with garments made from organic materials, where consumers know exactly how their clothes impact the environment and workers are paid a living wage. Preparations for this world, include dedicating many resources to the transformation of conventional into organic cotton farming, using a Bio cotton product label and taking part in discussions on living wages.

Also Viyellatex believes in a future world of 'Slow is Beautiful', where it would place sustainability at the core of its business model. The initiatives to reduce current energy and water consumption, will play a role in all business activities. With regards to structure, the firm is in a process to simplify production, so as to become more cost effective, use less inputs and produce less waste. Ultimately, this will result in a closed-loop system, where waste is a source of input and all activities are linked. In order to operate such a business system, the firm proposes that sustainability becomes a separate functional area and that the sustainability director should get a larger role in terms of governance (Viyellatex, 2012).

Huafu, on the other hand, sees a future of 'Techno Chic', in which fashion is fast and low-carbon, and garments are made of recyclable fibres and composed by machines. Such developments urged the firm to collaborate with suppliers and customers to develop innovative raw materials for yarn and cleaner production methods. Only, if the firm continues investment in environmental reduction initiatives, will it be able to compete in such a future world. Interestingly, Arvind is taking a two-pronged approach that lays exactly in-between the two future scenarios. Through its organic cotton farming projects, the firm prepares for the 'Slow is Beautiful' world, whilst the establishment of two low-carbon manufacturing facilities, together with the firm's latest launch of the denim-line Excel Denim, point in the direction of the 'Techno Chic' world.

Remarkably, none of the firms in the sample seem to prepare for a world of 'Community Couture' or 'Patchwork Planet'. No reference was made to more local sourcing activities, the development of recycling initiatives or more regionally customized clothing lines. Whilst, as highlighted by trend forecaster Lidewij Edelkoort (2012), the world can be expected to move towards regionalism through so called un-globalization. In this world, large brands will come back to produce in Europe, because India is becoming too expensive and Africa is not yet ready for garment production. This goes hand in hand with less risk and more flexibility, which allows firms to meet consumers' wishes to co-create. Such a scenario can co-exist with a 'Techno Chic' world, so that there is a hyperindustry of 3D printing, while at the same time firms manufacture hand-made clothes through machines. All in all, firms each take their own sustainability measures to prepare for the future. There is only one way to find out whether they are making the right choices, namely by waiting for the world of 2025 to arrive.

6. The business case for a sustainable apparel supply chain

Sweatshops, child labour and overtime work; the apparel supply chain has been connected with social issues for a long time. With the rise of sustainability in business in general and the apparel industry in specific, firms have taken up more responsibility for their supply chain practices. Still, however, many issues are present in the supply chain and stakeholders demand more changes, which is why this study investigated the main research question:

Is there a Business Case for Sustainable Supply Chain Management in the Apparel Industry?

To answer this question, first an academic literature review was conducted to analyse the concept of sustainable supply chain management. Many studies have investigated the business case, or underlying rationale, for Corporate Social Responsibility (CSR). Findings on the link between CSR and financial performance are inconsistent, which indicates that a broader perspective on the business case is required, where the effect of CSR on performance depends on the convergence between firms' economic goals and societal objectives. This suggests that strategies for sustainability are influenced by mediating variables and contextual factors (Carroll & Shabana, 2010). These should be taken into account when making the transition to a sustainable industry, which can be achieved if the business case is complemented with business models for sustainability (Van Tilburg et al., 2012). The supply chain function can facilitate the transition towards more sustainable business models, however, there is no common definition of what constitutes sustainable supply chain management. Research calls for industry-specific and longitudinal studies to further conceptualize SSCM (Seuring & Müller, 2008).

Consequently, this study aimed to identify the factors that influence sustainable supply chain management in the apparel industry and analyse how these factors affect the business case for a sustainable apparel supply chain. After a general review of the apparel industry in terms of production, several global and industry developments were found to influence the supply chain composition and sourcing practices. A media-analysis on sustainability issues in the apparel industry detected six socio-economic and three environmental issues, which are still present in the supply chain. Together with stakeholder expectations, these affect firms' approach to sustainability, which is a second factor that influences the business case for a sustainable apparel supply chain. To further understand how sustainability has influenced the supply chain, academic literature on SSCM in the apparel industry was reviewed. Based on these findings, propositions were formulated on the relationship between specific firm characteristics and the degree to which firms integrate sustainability into their supply chain.

The influence of firm characteristics, sustainability approach, and global and industry trends was analysed by a retrospective, longitudinal, comparative multiple-case study. Expected relations were defined in a conceptual model, which was analysed by hypotheses on the influence of firm characteristics, by transition trajectories for the influence of sustainability and for the three periods from 2000 to 2012 to analyze contextual influences. The results were presented in new conceptual models for each time period, which supported the business case for sustainable supply chain management in the apparel industry.

6.1. Sustainable Supply Chain Management

The approach to SSCM in the apparel industry changed from reactive to active. Firstly, there was a shift in risk management measures, from the formulation of supplier codes of conduct for compliance to addressing societal and environmental issues in collaboration with suppliers. Secondly, firms' monitoring practices moved from a policing to a capacity-building method that takes into account suppliers' business models, management systems and knowledge. Now, the industry is moving towards supplier ownership practices such as self-assessments. Thirdly, firms shifted attention from the social to the environmental dimension of SSCM. For example, audits on social conditions are merely improved by covering more n-tier suppliers or extending reporting, whilst the majority of firms recently started to gather data on suppliers' environmental performance. This more holistic approach to SSCM is in line with the fourth observation that ESG is further integrated into supply chain management. Firms are developing sustainability indices for supplier selection and orders, and start to make sustainability more part of their business models. Such supply chain intelligence will also feed into more transparency, which in turn enables more effective management. Considering these developments, the apparel industry seems to believe it beneficial to invest in supply chain management. The recent shift to a more active approach indicates that firms underwrite the business case for sustainable supply chain management.

6.2. Firm and SSCM approach

All in all, firm characteristics moderately influence SSCM. Several propositions on the link between firm features, strategy and business models, and SSCM approach could be (reversely) accepted for the different time periods. Larger firms with a public ownership structure were found to take a more active SSCM approach for two of the periods. Firms with a low-cost strategy were also found to take more active SSCM approaches than firms with a differentiation strategy. Lastly, in terms of business models, first brands, but later on retailers were found to undertake more active SSCM. Similarly, mass merchants were first found to be active on SSCM, however, in the last two periods they were overtaken by specialty apparel retailers. Whilst for all periods brand marketers targeting the mainstream rather than niche market adopt more SSCM practices than brand manufacturers. Also, firms with a larger international supply base take a more active approach to supply chain management than firms with a smaller supply base. Firms' supply chain position only plays a role in the first period, whilst a low degree of vertical integration is related to more active SSCM around 2005. The last proposition on the degree of horizontal diversification did not show a specific relation with SSCM approach.

6.3. Sustainability and SSCM approach

Based on transition trajectories, a clear link was found between firms' sustainability and SSCM approach. Over a period of ten years, the apparel industry gradually transitions from a reactive to a more active approach to sustainability. Lead firms are mainly stimulated by expectations from NGOs and governments to address issues in their supply chain. Suppliers follow somewhat later with sustainable practices in response to customer demands. Possibly, due to the status of sustainability in their countries, where for example Asia has only recently started reporting on CSR and the concept is much less prominent in developing countries. Environmental issues receive most attention in the apparel industry, as these are easy for firms to address at an individual level. The number of multistakeholder initiatives and joint issue campaigns has increased over the years and also shifted in focus from the social to the environmental dimension of sustainability. Overall, firms more actively implement sustainability in the supply chain, which supports that there is a business case for SSCM in the apparel industry.

6.4. The Business Case for SSCM

This research untangled the business case for SSCM in the apparel industry. In a context of globalization, financial crisis and trade liberalization, sustainable supply chain management underwent a transition of internal alignment. Over the years, the majority of apparel firms has adopted sustainability into their policies and are now trying to integrate it further into their business models. A tendency towards more active SSCM, in combination with more sustainable strategies and business models, will certainly trigger a first transformation in the apparel supply chain, towards one characterized by more stakeholder collaboration, transparency and sustainability.

In the past decade firms have focused on addressing environmental issues, whilst social issues continue to exist in the apparel supply chain. Acts by individual firms no longer suffice to address socio-economic issues and create a sustainable apparel supply chain. Rather, an industry shift is needed, in terms of governance and firm-to-firm relations. Where firms and suppliers collaborate on sustainable projects and share the extra costs that come with for example living wages, freedom of association and higher health and safety measures. At the same time, this also requires a shift in mindset, from a narrow one focused on financial performance to a more holistic one that also values social and environmental performance.

With regards to environmental issues, firms will also have to step up activities if they wish to thrive in a future world of resource scarcity. The shift from conventional to organic cotton requires close collaboration and interaction with different groups of stakeholders. Customers will also play an essential role in this transition and need to be engaged in the process towards organic clothes and more environmentally friendly consumption patterns. Although it is complex to change people's behaviour, the apparel industry is a master in setting the trend. Business model innovation will integrate sustainability into the complete production process of

Figure 3.1. A closed-loop system, operated by employees who are fully aware of the impact of their design, sourcing and sales decisions on society, the environment and community, will be required for the apparel industry to pass the tipping point for a sustainable supply chain.

6.4.1. Theoretical implications

The main theoretical contribution of this research lays in the finding that, next to stakeholders and contextual factors as identified by Carroll & Shabana (2010), also firm characteristics influence the business case for CSR. Mediated by firms' CSR approach, firm features, strategies and business models were found to affect the status of sustainability in the apparel industry. This is empirical support for the suggestion by Van Tilburg et al. (2012) that when the business case for CSR converges with business models for sustainability, there will be a tipping point at which an industry becomes truly sustainable. The same finding, can also explain some of the variance in the findings of studies on the link between responsibility and financial performance.

Next to insights in the field of strategy, this study also answers to the call for a more distinct conceptualization of the business model from related concepts, and clarity about the consequences or mechanisms through which it operates (Zott, Amit & Mass, 2011). The business model was conceptualized by using the framework of building blocks for a business model of Osterwalder, Peigneur et al. (2009), which made it a distinct variable from related concepts such as strategy and the supply chain. Also, the finding that business models have an effect on supply chain management that is mediated by the approach to stakeholders and issues helps to further conceptualize it. Additionally, this research touches upon the effect of individual business models for sustainability on the status of sustainability at industry level, which few studies have investigated so far. It was found that the further integration of sustainability in firms' business models can form a trigger for systematic change at industry level to a sustainable supply chain.

This study also contributes to the further conceptualization of sustainable supply chain management. Firstly, the empirical data show that stakeholder expectations influence firms' approach to SSCM, which supports the idea that stakeholder theory underpins the concept of SSCM. Secondly, studying SSCM over a longer period through transition trajectories, showed that firm characteristics, sustainability approach and context had a different influence on the evolution of SSCM from reactive to active over the years. Future research should replicate the conceptual model used in this study in other industries and further analyse how the concepts relate to each other. Findings could then indicate whether the relations found in the different time periods of this study are industry-specific or generalizable to the concept of SSCM. Moreover, it would show whether theoretical bases for SSCM differ per industry. The data supported the majority of the theoretical propositions that were formulated in this research. Testing these with statistical methods will add to the external validity of the findings and possibly determine the strength of the suggested relationship between firm characteristics and SSCM. Lastly, future studies on SSCM are also recommended to continue to include several players from the supply chain in their sample. As this study found that suppliers and lead firms in the apparel supply chain differ in their approach to stakeholder relations and issues and thus had a different effect on the business case for SSCM.

6.4.2. Managerial implications

One of the reasons for this research was the discrepancy between CEOs' increased support for the business case of CSR and the actual implementation of their CSR strategies. Based on the findings of this research, they are advised to engage in business model innovation for sustainability to ensure the future success of their business. While designing new business models, they should take into account the various stakeholders and issues that are affected by their decisions. Only then will their business thrive in a new system based on sustainability.

6.5. Limitations and future research

Despite an attempt to analyse the factors that influence the business case for sustainable supply chain management through a well-structured conceptual model, this study comes with several limitations. First, the literature review revealed that academia has not yet formulated a common definition of sustainable supply chain management in general and for the apparel industry in specific. On the one hand, this complicated the operationalization of the concept and consequently the degree to which findings can be compared with other studies. On the other hand, it allowed the current study to contribute to a better understanding of SSCM in the apparel industry. Second, even though this study used frameworks of indicators and quantified these through scores to measure the concept of sustainability and SSCM, still the scores were based on the subjective interpretation of the researcher. To avoid this, it is recommended that future studies on these concepts are done by multiple researchers, to further increase construct validity. Related to this is the third limitation of the current study, namely the low response rate from external stakeholders for further details and opinions on SSCM. In addition, it proved difficult to find data on each of the indicators before 2005, as most firms started sustainability reporting only after that point in time. Although extra sources were consulted to gather information on the indicators, these limitations still affected the data triangulation process. Therefore, future studies should attempt to establish relations with firms to facilitate external stakeholder input and enhance data collection. Fourth, of the independent firm variables that were tested for their relation to SSCM, only few showed a consistent relation over the years. Part of this can be explained by the fact that conclusions on some of the variables were based on only two cases in the sample. Although these were selected for their representativeness, it is still recommendable to replicate this study using a larger sample to increase validity. Another reason relates to the lack of a coherent understanding of what constitutes a business model. Although this research consciously explained which business model concept it used, still the theoretical building blocks by Osterwalder, Peigneur et al. (2009) showed significant overlap, so that finally fewer variables were included.

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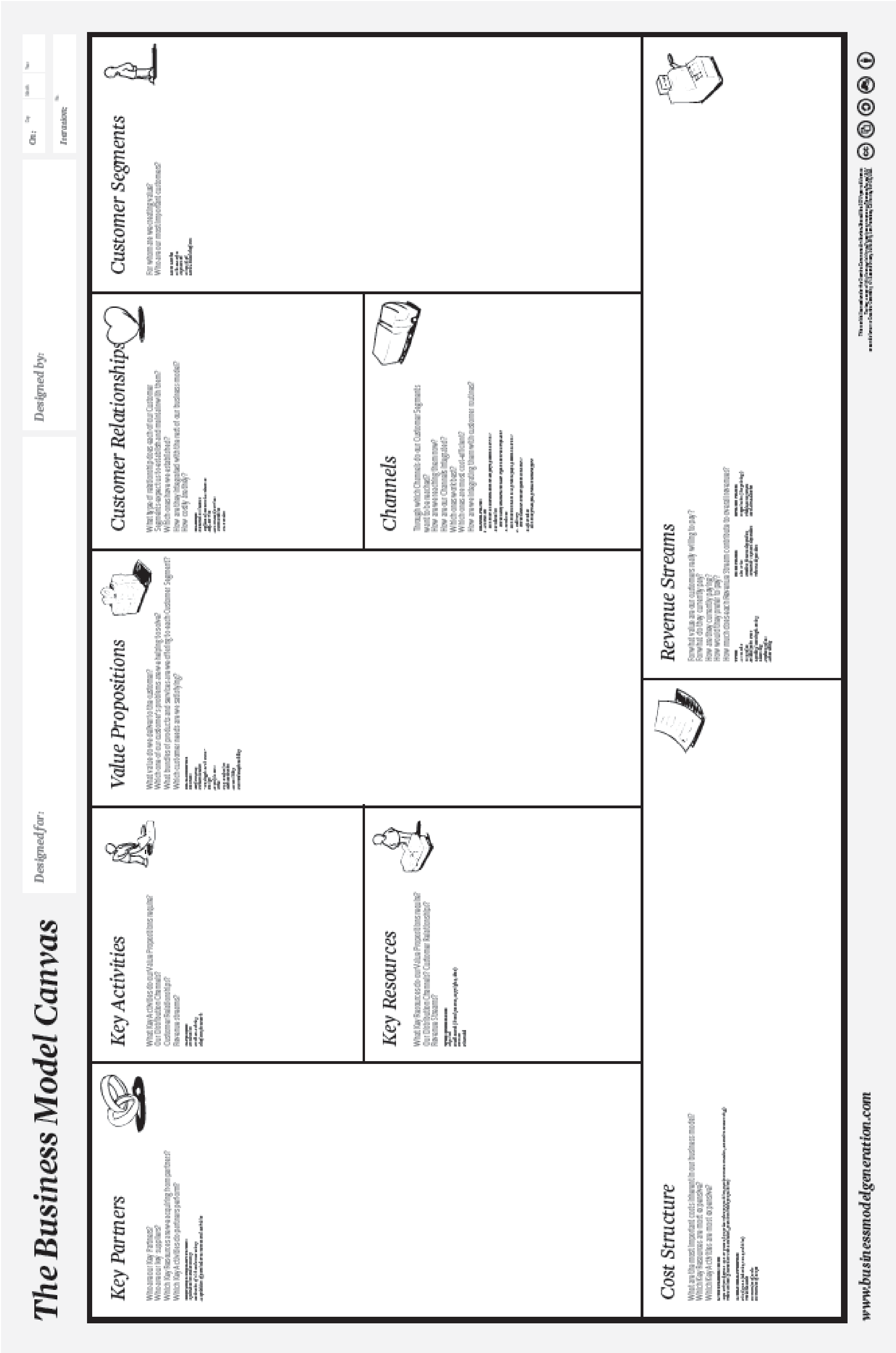
8. Appendix

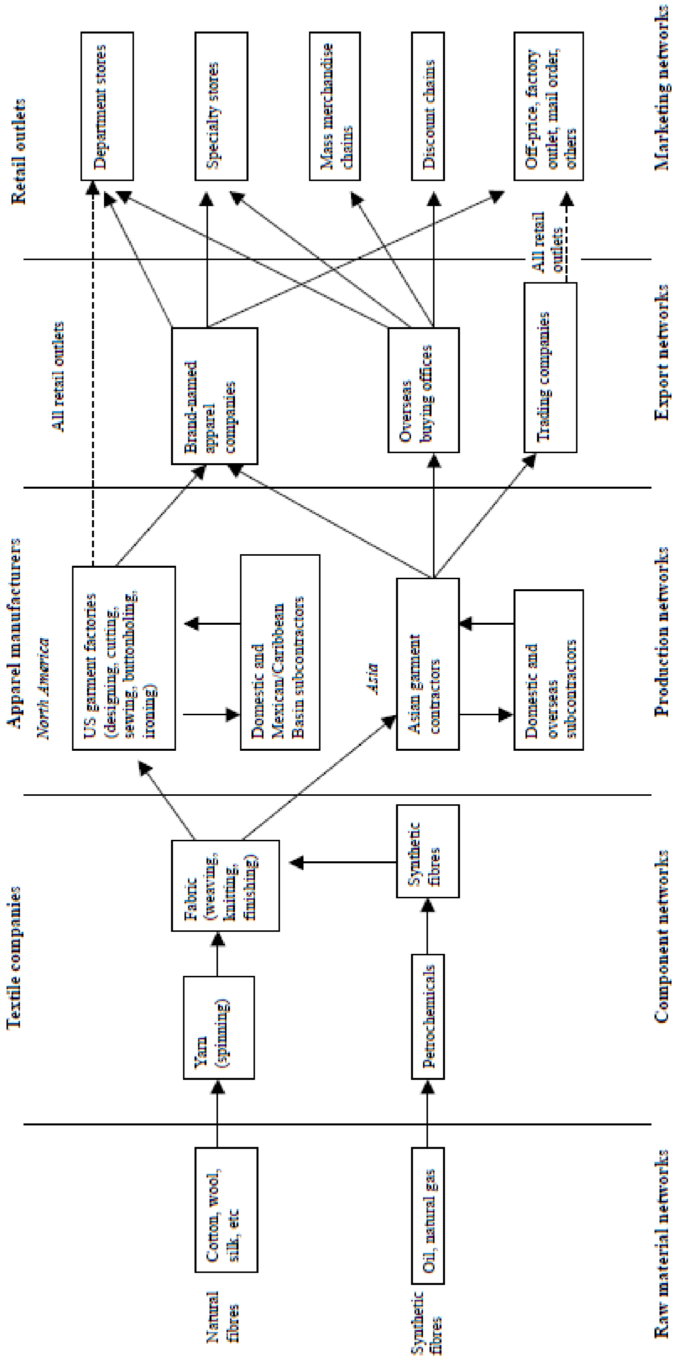
Appendix 1 Business Model Canvas



Source: Osterwalder, Peigneur et al., 2009

Appendix 2 The Apparel Value Chain

Figure 1. The apparel value chain



Source: Appelbaum and Gereffi (1994), p. 46.

Source: Gereffi & Frederick, 2010

Appendix 3 Global scenarios for 2025

Slow is beautiful	Community couture
1.The world is… moralistic, risk-averse, low-carbon, tightly regulated, with sustainable lifestyles and mindsets.	1. The world is… struggling to cope with the impacts of climate change and resource shortages but community bonds are strong - many strive for self-sufficiency.
2. Fashion is… über sustainable and über cool… most consumers are prepared to pay more for a smaller number of high-quality sustainable clothing items	2. Fashion is… expensive new or cheap and second-hand… very high costs of raw materials and disrupted supply chains have resulted in a dramatic fall in the production and sale of new clothing.
3. The fabrics we wear are… durable… organic natural fibres…man-made materials from renewable resources… handcrafted, vintage, second-hand… 'smart clothes' monitoring health.	3. The fabrics we wear are… second-hand, 'pre-loved' clothing… community-grown hemp… only the rich can afford 'certified new' clothes made from expensive synthetics or virgin raw materials.
4. We get our clothes… from small or virtual stores with hyper-efficient logistics or we swap with friends.	4. We get our clothes… at vibrant second-hand markets with tailors and stylists on hand, in retail stores with extra security, on the black market or from clothing libraries.
5. Clothes are made… in different regions of the world according to the manufacturing processes they require… India and Nigeria have big 'refurbished clothing' industries… most workers are paid a 'living wage'.	5. Clothes are made… at home or in community-run recycling centres linked to local, hyper-efficient factories.
6. We care for clothes… without harmful chemicals… clothes last longer and are washed less at low temperatures.	6. We care for clothes… using community laundries… one cup of water washing machines… 'make do and mend' is taught in schools.
7. When we have finished with clothes… we take them back to where we bought them to be shipped and remanufactured in Japan.	7. When we have finished with clothes… we sell them back for reuse to boost our incomes.
8. The industry is sustainable through… SustainGrade labelling and digital tagging, ensuring consumers know exactly where their clothes have come from and what impact they've had… but a 'grey economy' with poor labour standards still exists to satisfy those who refuse to conform to the new, slower world order.	8. The industry is sustainable through… second-hand clothing becoming a valuable resource… nothing is disposed of.
9. Successful fashion businesses are… radically transparent: the most sustainable and best value.	9. Successful fashion businesses are… part of the local community: providing energy supply, education and even food to employees.

Techno chic	**Patchwork planet**
1. The world is… healthy, wealthy and ultra-high-tech – materialism is out of favour and the aim is 'lightweight living'.	1. The world is… broken into cultural blocks with unequal economic performance – Asia is the economic and cultural powerhouse…there is conflict over scarce resources.
2. Fashion is… fast-paced, low-carbon and cheap.	2. Fashion is… strongly influenced by regional trends and celebs and highly personalized.
3. The fabrics we wear are… made from new high-tech, low-impact fibres… biodegradable, non-toxic spray-on clothing… nano-tech fabrics… programmable clothing.	3. The fabrics we wear are… made locally for local manufacture – bamboo in Asia, wool in Australia, flax in India… smart nano-tech materials… choice of colours is limited to save water and energy in dyeing.
4. We get our clothes… using 3D body scanners that allow people to 'try on' clothes in virtual mirrors and on interactive screens.	4. We get our clothes… online via mobile devices… consumers can personalise their clothes virtually.
5. Clothes are made… by machines not people… sharp declines in the use of labour create pockets of crippling unemployment… modular clothing is manufactured in China and delivered to stores to be customised to consumer demand.	5. Clothes are made… in regional factories – short supply chains mean clothes reach consumers quickly.
6. We care for clothes… using high-tech, personalised clothing valet services… nano-tech coatings that reduce the need for washing (now recyclable)… 'smart' solutions for low-impact clothing care and advanced recycling networks.	6. We care for clothes… according to wide regional differences…some have developed waterless washing machines, others use coatings to limit need for washing
7. When we have finished with clothes… they are composted, disassembled, remanufactured or reused according to design.	7. When we have finished with clothes… they are (often illegally) dumped… edible clothing is a popular trend in Europe.
8. The industry is sustainable through… financially viable lowcarbon, low-impact production… technology delivers sustainable solutions but some can't keep up with the fast pace.	8. The industry is sustainable through… a variety of locally appropriate strategies… sustainability know-how is guarded jealously so progress is slow and the world is struggling to cope with mounting social tensions and environmental constraints.

Source: adopted from Forum of the Future, 2009

Appendix 4 Dominant business models in the apparel industry

Type	Customer segments	Value propositions	Channels	Customer relationships	Revenue Streams
Mass Merchant Retailers	Mass market Segmented Diversified	Low price Speed	Outsourcing Own stores Online	Self-service	Asset sale Price volumes Licensing
Specialty Apparel Retailer	Mass market Segmented	Low price Quality Newness Speed	Mix of owned and outsourced manufacturing Own stores Online	Self-service	Asset sale Licensing Price / product feature Customer segment
Brand Marketers	Segmented	Quality Speed Newness Image / status Customization	Outsourcing Own stores Online Partner stores (e.g. retailers)	Personal assistance	Asset sale Licensing Price / product feature Customer segment
Brand Manufact urers	Segmented	Quality Speed Design	Own production facilities Own stores Online Partner stores (e.g. retailers)	Personal assistance	Asset sale Price / Product feature Customer segment

Type	Key resources	Key activities	Key partnerships	Cost structure	Examples
Mass merchant retailers	Physical: Stores Distribution centers Logistics infrastructure Human: Sales force	Distribution Sales	Optimization and economy of scale partnerships	Cost-driven High proportion of variable costs Economies of scale	Walmart C&A
Specialty apparel retailers	Physical: Stores Distribution centers Manufacturing facilities Human: Sales force	Distribution Design Marketing Sales	Optimization and economy of scale partnerships Acquisition of resources /activities	Cost-driven High proportion of variable costs Economies of scale	GAP H&M
Brand marketers	Intellectual: Brand Human: Designers Marketeers	Design Marketing Sales	Optimization and economy of scale partnerships Acquisition of resources/ activities	Cost-driven Value-driven High proportion of variable costs Economies of scope	Levi's Gucci
Brand manufact urers	Physical: Manufacturing facilities Logistics infrastructure Human: Designers Garment makers	Production Design	Optimization and economy of scale partnerships Acquisition of resources /activities	Cost-driven Value-driven Both fixed and variable costs Economies of scope	VF Inditex

Source: Adopted from Osterwalder, Peigneur et al., 2009

Appendix 5 Lead firm type and brand type with regional examples

Table 8: Lead Firm & Brand Types with Regional Examples

Lead Firm Type	Type of Brand	Description	Examples	
			U.S.	EU-27
Retailers: Mass Merchants	**Private Label:** the retailer owns or licenses the final product brand, but in almost all cases, the retailer does not own manufacturing.	Department/discount stores that carry private label, exclusive, or licensed brands that are only available in the retailers' stores in addition to other brands.	Walmart, Target, Sears, Macy's, JC Penney, Kohl's & Dillard's	Asda (Walmart), Tesco, C&A, Marks & Spencer
Retailers: Specialty Apparel		Retailer develops proprietary label brands that commonly include the stores' name.	Gap, Limited Brands, American Eagle Abercrombie & Fitch,	H&M, Benetton, Mango, New Look, NEXT
Brand Marketer	**National Brand:** the manufacturer is also the brand owner and goods are distributed through multiple retail outlets.	Firm owns the brand name, but not manufacturing, "manufacturers without factories." Products are sold at a variety of retail outlets.	Nike, Levi's, Polo, Liz Claiborne	Ben Sherman, Hugo Boss, Diesal, Gucci
Brand Manufacturer		Firm owns brand name and manufacturing; typically coordinate supply of intermediate inputs (CMT) to their production networks often in countries with reciprocal trade agreements	VF, Hanesbrands, Fruit of the Loom, Gildan	Inditex (Zara)

Source: Adopted from Gereffi & Frederick, 2010

Appendix 6 Supplier types in the apparel industry

<table>
<tr><th>Type</th><th>Competencies</th><th>Supplier tier</th><th>Governance structure</th><th>Countries</th></tr>
<tr><td>CMT</td><td>Assembly</td><td>Marginal supplier</td><td>Market
Captive</td><td>Cambodia, SSA, Caribbean, Vietnam</td></tr>
<tr><td rowspan="2">OEM</td><td>Manufacturing
Sourcing inputs
Inbound logistics</td><td rowspan="2">Preferred supplier
Niche supplier</td><td>Market
Captive</td><td>Bangladesh, Indonesia</td></tr>
<tr><td>Increased codification of transactions</td><td>Modular</td><td>Sri Lanka, Mexico</td></tr>
<tr><td rowspan="2">ODM</td><td rowspan="2">Design
R&D
Manufacturing
Sourcing inputs
Inbound logistics</td><td rowspan="2">Strategic supplier</td><td>Relational (if in cooperation with buyer)</td><td rowspan="2">Turkey, EU,
India, China</td></tr>
<tr><td>Captive
Modular (if buyer attaches brand to supplier product)</td></tr>
<tr><td rowspan="2">OBM</td><td rowspan="2">Design
R&D
Manufacturing
Sourcing inputs
Inbound logistics
Marketing
Sales</td><td rowspan="2">Coordinators
Foreign investors</td><td>Relational (if maintains relationship with buyer and develops brands with buyer)</td><td rowspan="2">Hong Kong, South Korea, Taiwan, Singapore, Malaysia</td></tr>
<tr><td>Lead firm (if stops relationship with buyer and develops own distribution channels)</td></tr>
</table>

Source: Adopted from Gereffi & Frederick, 2010

Appendix 7 Sustainable supply chain management indicators and their weights

Table 8.1 Sustainable supply chain management indicators and weights

SSCM Approach	gen/ ind	Eco/soc/env	Question weight	Variable weight	SSCM score
Awareness				**0,03**	
Spend analysis	gen	eco	0,5		0
% of spend covered in spend analysis	gen	eco	0,25		0
Critical suppliers	gen	eco	0,25		0
Risk exposure				**0,05**	
Formalized sustainability risk identification analysis	gen	eco	1		0
Risk management measures				**0,2**	
Supplier code of conduct / policy/ standard	gen	soc	0,1		0
Environmental standards for supplier's processes, products or services	ind	env	0,11		0
Fundamental human rights	gen	soc	0,07		0
Working conditions	ind	soc	0,17		0
Occupational health and safety	ind	soc	0,07		0
Business ethics	ind	soc	0,05		0
EMS ISO14000 certified	ind	env	0,03		0
Environmental performance data	ind	env	0,05		0
Social Performance data	ind	soc	0,1		0
Guidance regarding sub-contracting	ind	eco	0,05		0
Collaborative initiatives	ind	soc	0,1		0
Contract clauses including ESG factors	ind	eco	0,1		0
Monitoring				**0,13**	
Third-party audits	ind	soc	0,15		0
On-site visits (announced)	ind	soc	0,1		0
On-site visits (unannounced)	ind	soc	0,15		0
Interviews with management	ind	soc	0,1		0
Interviews with employees (on-site)	ind	soc	0,15		0
Interviews with employees (off-site)	ind	soc	0,2		0
Corrective Action Plans	ind	soc	0,15		0
Capacity building & incentives				**0,1**	
Capacity building initiatives	ind	soc	0,65		0
Incentives for suppliers	ind	eco	0,35		0
ESG integration in SCM strategy				**0,14**	
ESG objectives for SCM	ind	eco	0,15		0
ESG factors in supplier selection	ind	eco	0,2		0
Incentives for ESG for procurement staff	ind	eco	0,2		0
Access to ESG supplier database	ind	eco	0,15		0
Training on ESG issues in procurement	ind	soc	0,15		0
ESG-related KPIs	ind	eco	0,15		0
Opportunities				**0,1**	
Leveraging opportunities in the SC	ind	eco	0,45		0
C2C and lifecycle assessments	ind	env	0,55		0
Measuring supplier performance				**0,15**	
% of suppliers audited	gen	eco	0,05		0
% of 'prime contact' procurement staff trained on (ESG) issues relevant to procurement decisions	gen	eco	0,1		0
% of supplier contracts including ESG contract clauses	gen	eco	0,1		0
% of suppliers with ISO 14001 certification or equivalent	gen	env	0,15		0

% of suppliers' contracts terminated, not awarded or not renewed for ESG reasons	gen	eco	0,1		0
% of procurement spent with preferred suppliers	gen	eco	0,05		0
GHG emissions	ind	env	0,15		0
Suppliers' water use	ind	env	0,15		0
Outcome of capacity building activities	ind	soc	0,15		0
Transparency /Communication				**0,05**	
Standards for suppliers and/or sustainable purchasing policy	gen	soc	0,15		0
Risk awareness	gen	soc	0,1		0
Risk management measures	gen	soc	0,2		0
GRI standard adoption (G3 guidelines)	gen	soc	0,15		0
Factory list	ind	soc	0,2		0
Sustainability performance (KPIs) of suppliers	ind	soc	0,2		0
Collaboration with stakeholders				**0,05**	
Collaboration with stakeholders	ind	soc	1		0
TOTAL					**0**

Source: Adopted from SAM Group, 2012

Appendix 8 Sources for data collection

Firm	Annual Report	CSR report	Website	Press releases	NGO reports	Other
Arvind	2002/2003 2005/2006 2010/2011	NA	www.arvindmills.com	-	-	UNDP World Bank Water and Sanitation Program – South Asia
C&A	NA	2006 2008 2012	www.c-and-a.com www.socam.org www.candacr.com www.cofraholding.com http://apparelresources.com	C&A Commitment to Zero Discharge C&A to change over to sustainable cotton by 2020 C&A Zero tolerance of child labour C&A Sumangali in India illegal and unacceptable C&A Sandblasting C&A Joint Response to Greenpeace letter related to upcoming detox publication	-	Code of Conduct Code of Conduct for the Supply of Merchandise (1998, 2006 Commentary on Code of Conduct Graafland, J.J. (2002): Sourcing ethics in the textile sector: The case of C&A. Business Ethics: A European Review , Vol. 3, No. 11, pp. 282-294.
Fast Retailing	2000 2005 2011	2006 2011	www.fastretailing.com www.uniqlo.com	-	-	Uniqlo newsletter Case study - Fast retailing: an analysis of FDI and supply chain management in fashion retailing
H&M	2000 2005 2011	2002 2005 2011	www.hm.com	-	CCC (2006) H&M's infrastructure for the auditing and improvement of working conditions in supplier factories BSR Apparel Supply Chain Carbon Report	H&M Code of Conduct Kogg, B. (2009) PHD Dissertation - Responsibility in the Supply Chain: Interorganisational management of environmental and socialaspects in the supply chain -Case studies from the textile sector
Huafu	NA	2009 2010	www.e-huafu.com www.huafuyarn.com	-	-	Worldbank (2009) The Declaration of Social Compliance by China Textile and Apparel Industry Chen (2009) Master thessis - Identified opportunities and challenges in CSR certification: The case of CSC9000T in China's textile industry

Levi Strauss & Co	2006 2010 (10-K report)	2011	www.levistrauss.com www.herproject.org	-	"Toward a Safe, Just Workplace: Apparel Supply Chain Compliance Programs" - As You Sow.	Terms of Engagement Terms of Engagement Guidebook LS Global sourcing practices FAQ LS GHG emissions reports 2006/2011 The Asia Foundation (2001) Improving Women's Working Conditions in the Pearl River Delta.
Li & Fung	2000 2005 2011	NA	www.lifung.com	Press release LF USA and Walmart Support Earth Day With Eco-Friendly Initiative that lets Consumers go Green	Oxfam (2008) Transparency Report 2 HSI CSR Asia & Oxfam HK, 2008 and 2009	Code of Conduct UN Global Compact (UNGC) Communication on Progress 2010 / 2007 Stahl & Stalmaker (2002) A case study illustrating the relationship between core labour standards HBR Li & Fung Fashion value chain HBR case study Li & Fung Internet Issues
LVMH	2001 2005 2011	2001 2005 2011 (environmental report)	www.lvmh.com www.louisvuitton.com	-	WWF Deeper Luxury	Reference document (2011) Suppliers Code of Conduct Code of Conduct (2010)
Viyellatex	NA	2010/2011 2011	www.viyellatexgroup.com	-	-	UNGC Communication on Progress 2011/2012 ViyellaTalk January / February 2012 Questionnaire and follow-up questions filled out by Head of Sustainability at Viyellatex.
Wal-Mart	2001 2006 2011 (10-K report)	2005 2006 2012	www.walmartstores.com	-	CCC (2009) Cashing in: Giant retailers, purchasing practices, and working conditions in the garment industry.	Walmart Supplier Standards 2005 Walmart Standards for Suppliers Manual Case study: SCM at Walmart Making Change at Walmart - Factsheet Walmart and Workers Heying (2009) A Case Study of Wal-Mart's "Green" Supply Chain Management.

Appendix 9 Average scores on SSCM variables

Table 8.2 Average scores on SSCM variables for 2000

Firm	Awareness	Risk exp.	Risk man.	Monitoring	Capa. & inc	ESG integr.	Opportunities	Measurement	Transparency	Collaboration
Arvind	0	0	0	0	0	0	0	0	0	0
C&A	0	0,0125	0,1335	0,13	0	0,0021	0	0,0375	0,0175	0,025
Fast Retailing	0	0	0	0	0	0	0,01375	0	0	0,0125
H&M	0	0	0,1167	0,102375	0,1	0,0406	0,028	0,043125	0,01325	0,025
Huafu	0	0	0	0	0	0	0	0	0	0
Levi Strauss & Co	0,015	0,05	0,144	0,0845	0	0	0	0,015	0,0175	0,025
Li & Fung	0,01125	0	0,154	0,0715	0,05	0,0175	0	0,0075	0,0175	0,0375
LVMH	0	0,025	0,0945	0,026	0	0,00805	0,0775	0,011625	0,0125	0,0125
Viyellatex	0	0	0	0	0	0	0	0	0	0
Wal-Mart	0	0	0,134	0,112125	0	0	0	0	0	0
Average	**0,002625**	**0,00875**	**0,07767**	**0,05265**	**0,015**	**0,006825**	**0,011925**	**0,011475**	**0,007825**	**0,01375**
Total possible	***0,03***	***0,05***	***0,2***	***0,13***	***0,1***	***0,14***	***0,1***	***0,15***	***0,05***	***0,05***

Table 8.3 Average scores on SSCM variables for 2005

Firm	Awareness	Risk exposure	Risk management	Monitoring	Capacity building & incentives	ESG integration in SCM strategie	Opportunities	Measurement	Transparency	Collaboration
Arvind	0	0	0	0	0	0	0	0	0	0
C&A	0	0,0125	0,144	0,13	0	0,028	0	0,0375	0,0175	0,0375
Fast Retailing	0,0015	0	0,113	0,04225	0,0175	0,021	0,05875	0,0375	0,00875	0,0125
H&M	0,0075	0,05	0,1645	0,10725	0,0825	0,06825	0,0225	0,04125	0,021875	0,0375
Huafu	0	0	0	0	0	0	0	0	0	0
Levi Strauss & Co	0,0075	0,05	0,144	0,0845	0,0175	0,0595	0	0,015	0,0275	0,05
Li & Fung	0,01125	0,025	0,144	0,08775	0,05	0,021	0,1	0,020625	0,0175	0,0375
LVMH	0	0,0375	0,099	0,01625	0,01625	0,02975	0,08875	0,01725	0,0125	0,025
Viyellatex	0	0	0	0	0	0	0	0	0	0
Wal-Mart	0	0	0,175	0,117	0,01625	0,021	0	0,0375	0,0125	0,025
Average	**0,002775**	**0,0175**	**0,09835**	**0,0585**	**0,02**	**0,02485**	**0,027**	**0,020663**	**0,011813**	**0,0225**
Total possible	***0,03***	***0,05***	***0,2***	***0,13***	***0,1***	***0,14***	***0,1***	***0,15***	***0,05***	***0,05***

Table 8.4 Average scores on SSCM variables for 2010

Firm	**Awareness**	**Risk exposure**	**Risk management**	**Monitoring**	**Capacity building & incentives**	**ESG integration in SCM strategie**	**Opportunities**	**Measurement**	**Transparency**	**Collaboration**
Arvind	0	0	0,1205	0,0325	0,065	0,04025	0,045	0,01125	0,009375	0,05
C&A	0,00375	0,05	0,174	0,13	0,07375	0,091	0,1	0,06	0,028125	0,05
Fast Retailing	0,0015	0	0,194	0,125125	0,09125	0,049	0,08625	0,0825	0,0225	0,025
H&M	0,03	0,05	0,1765	0,10725	0,1	0,14	0,1	0,105	0,035625	0,05
Huafu	0	0	0,15	0,03575	0,0175	0,021	0,05875	0,0045	0,011875	0,0125
Levi Strauss & Co	0,0225	0,05	0,1755	0,13	0,1	0,1225	0,1	0,0825	0,0325	0,05
Li & Fung	0,01125	0,05	0,2	0,13	0,0825	0,042	0,1	0,015	0,0175	0,05
LVMH	0,0225	0,05	0,17	0,0715	0,03375	0,06475	0,08625	0,0435	0,0125	0,025
Viyellatex	0,0075	0	0,17	0,13	0,1	0,01925	0,01	0,07725	0,033125	0,05
Wal-Mart	0,00225	0,05	0,19	0,117	0,0825	0,0805	0,0725	0,06	0,033125	0,0375
Average	**0,010125**	**0,03**	**0,17205**	**0,100913**	**0,074625**	**0,067025**	**0,075875**	**0,05415**	**0,023625**	**0,04**
Total possible	***0,03***	***0,05***	***0,2***	***0,13***	***0,1***	***0,14***	***0,1***	***0,15***	***0,05***	***0,05***

Appendix 10 Average scores on Stakeholder and Issue approach

Table 8.5 Average scores on Stakeholder approach for 2000

Firm	Employees	Suppliers	Customers	Investors	Competitors	Government	NGOs	Community	Stake2000
Arvind	1	1	1	1	0	2	2	3	**1,4**
C&A	2	3	2	NA	3	1	2	3	**2,3**
Fast Retailing	2	2	2	1	0	0	2	1	**1,3**
H&M	2	3	2	1	3	3	3	3	**2,5**
Huafu	2	2	2	1	0	2	1	2	**1,5**
Levi Strauss & Co	3	2	2	NA	0	3	3	3	**2,3**
Li & Fung	2	2	1	2	2	3	1	2	**1,9**
LVMH	2	3	3	1	0	3	2	2	**2,0**
Viyellatex	3	2	2	NA	0	1	2	2	**1,7**
Wal-Mart	1	1	1	1	0	0	1	2	**0,9**
Total	**2,0**	**2,1**	**1,8**	**1,1**	**0,8**	**1,8**	**1,9**	**2,3**	**1,8**

Table 8.6 Average scores on Stakeholder approach for 2005

Firm	Employees	Suppliers	Customers	Investors	Competitors	Government	NGOs	Community	Stake2005
Arvind	1	1	1	1	0	2	3	3	**1,5**
C&A	2	4	2,5	NA	3	3	3	4	**3,1**
Fast Retailing	2	2	2,5	1	0	1	2	2	**1,6**
H&M	3	3	2	1	3	3	3	4	**2,8**
Huafu	2	2	1	1	1,5	3	2	2	**1,8**
Levi Strauss & Co	3	2	2	NA	4	3	3	3	**2,9**
Li & Fung	2	2	2	2	2	3	2	2	**2,1**
LVMH	2	4	3	1	0	3	2	2	**2,1**
Viyellatex	3	2	2	NA	1	2	3	2,5	**2,2**
Wal-Mart	1	2	2	1	1	1	2	2	**1,5**
Total	**2,1**	**2,4**	**2,0**	**1,1**	**1,6**	**2,4**	**2,5**	**2,7**	**2,2**

Table 8.7 Average scores on Stakeholder approach for 2010

Firm	Employees	Suppliers	Customers	Investors	Competitors	Government	NGOs	Community	Stake2010
Arvind	2	3,5	2	1	3	2,5	3	3,5	**2,6**
C&A	3,5	4	2,5	NA	4	3	4	4	**3,6**
Fast Retailing	2,5	3	3	1	2	1	3,5	3,5	**2,4**
H&M	3	4	3	1	4	3	4	4	**3,3**
Huafu	2	3	2,5	1	2	3	3	3	**2,4**
Levi Strauss & Co	3	3	3	NA	4	3	4	3	**3,3**
Li & Fung	2,5	2	2	2,5	3	3	2	2	**2,4**

LVMH	3	4	3	1	3	3	3	2	**2,8**
Viyellatex	4	2	2	NA	1	2	3	4	**2,6**
Wal-Mart	2	2,5	2	1	2	2	3	2	**2,1**
Total	**2,8**	**3,1**	**2,5**	**1,2**	**2,8**	**2,6**	**3,3**	**3,1**	**2,7**

Table 8.8 Average scores on Issue approach for 2000

Firm	**Bonded labour**	**Child labour**	**Migrant /women workers**	**Wages**	**Freedom of association**	**Health & Safety (Sandblasting)**	**Chemicals**	**Water**	**Climate change(cotton)**	**Iss2000**
Arvind	1	1	1	1	1	2	2	3	2	**1,6**
C&A	1	1	1	1	1	1	3	0	3	**1,3**
Fast Retailing	1	1	1	1	1	1	1	0	0	**0,8**
H&M	2	2	3	3	3	1	3	1	3	**2,3**
Huafu	1	1	1	1	1	1,5	2	3	2	**1,5**
Levi Strauss & Co	1	3	3	1	1	2	3	3	3	**2,2**
Li & Fung	1	1	1	1	1	1	1	1	0	**0,9**
LVMH	1	1	1	1	1	1	2	2	2	**1,3**
Viyellatex	3	2	1	2	1,5	1	1	2	3	**1,8**
Wal-Mart	1	1	1	1	0	1	1	0	0	**0,7**
Total	**1,3**	**1,4**	**1,4**	**1,3**	**1,2**	**1,3**	**1,9**	**1,5**	**1,8**	**1,4**

Table 8.9 Average scores on Issue approach for 2005

Firm	**Bonded labour**	**Child labour**	**Migrant /women workers**	**Wages**	**Freedom of association**	**Health & Safety (Sandblasting)**	**Chemicals**	**Water**	**Climate change(cotton / energy)**	**Iss2005**
Arvind	1	1	1	1	1	2	2	3	3	**1,7**
C&A	1	3	2	2	1	1	3	1	3	**1,9**
Fast Retailing	1	1	1	2	1	1,5	0	0	1	**0,9**
H&M	2	2	3	3	3	2	3	3	4	**2,8**
Huafu	1	1	1	1	1	2	3	3	2	**1,7**
Levi Strauss & Co	1	3	3	2	2,5	2	3	3	3	**2,5**
Li & Fung	1	1	1	1	1	1	1	1	2	**1,1**
LVMH	1	1	1	1	1	1	2	2	2	**1,3**
Viyellatex	3	2	1	3	2	2	1	3	3,5	**2,3**
Wal-Mart	1	2	2	1	1	1	1	0	0	**1,0**
Total	**1,3**	**1,7**	**1,6**	**1,7**	**1,5**	**1,6**	**1,9**	**1,9**	**2,4**	**1,7**

Table 8.10 Average scores on Issue approach for 2010

Firm	Bonded labour	Child labour	Migrant /women workers	Wages	Freedom of association	Health & Safety (Sandblasting)	Chemicals	Water	Climate change(cotton / energy)	Iss2010
Arvind	1	1	2	2	1	3	3	3	3	**2,1**
C&A	2	3	2	2	2	2	4	4	4	**2,8**
Fast Retailing	1	1,5	2	2	1	2	2	2	1,5	**1,7**
H&M	3	3	3	4	4	4	4	4	4	**3,7**
Huafu	1	1	1	1	1	2	4	3	3	**1,9**
Levi Strauss & Co	1	3	3	2,5	3	4	4	4	4	**3,2**
Li & Fung	2	1	2	1	2	1	1	2	3	**1,7**
LVMH	1	1	1	1	1	1	2,5	2	2	**1,4**
Viyellatex	3	3	1	3	1	3	1	3	4	**2,4**
Wal-Mart	2	2	3	2	2	3	1	2	2	**2,1**
Total	**1,7**	**2,0**	**2,0**	**2,1**	**1,8**	**2,5**	**2,7**	**2,9**	**3,1**	**2,3**

Appendix 11 Timeline of MSI memberships and joint issue campaigns

Year/Firm	**Arvind**	**C&A**	**Fast Retailing**	**H&M**	**Huafu**	**Levi Strauss & Co**	**Li & Fung**	**LVMH**	**Viyellatex**	**Walmart**
1990										
1991						First Supplier Code of Conduct				
1992										First Supplier Code of Conduct
1993										
1994										
1995										
1996		First Supplier Code of Conduct								
1997		> First Environmental Report (UK)		First Supplier Code of Conduct						
1998										
1999						> FLA				
2000							> BSR			
2001				> UNGC			> UNGC	First environmental report		
2002				First CSR Report						
2003				>Textile Exchange				> UNGC		
2004		> First C&A Report	First Supplier Code of Conduct	> BCI		> Fair Factories Clearinghouse	> BSR Labor Standards Working Group			
2005		> Textile Exchange ETI		> Better Factories Cambodia > MFA Forum Bangladesh		First factory list > Better Factories Cambodia				First report on Ethical Sourcing > Better Factories Cambodia program > BSR Better Work Buyers' Forum
2006		> BSR > CCC > GRI	First CSR Report >ETI	> FLA Buyers Forum Bangladesh > BSR Beyond monitoring workgroup > CDP		> UNGC > Clinton Global Initiative	> BSR Beyond monitoring workgroup	> CDP		

2007	> BCI			> Better Work Buyers' Forum		> BCI (funding) > Signatory to UN CEO Water Mandate > Better Work Buyers' Forum > BSR HERproject				> CDP
2008		> Global Social Compliance Program				> Business for Innovative Climate & Energy Policy (Ceres)		First Supplier Code of Conduct		> Global Social Compliance Program
2009	> Textile Exchange	> BCI				> IFC/ILO Beter Work Program >CDP	> Global Social Compliance Program		> UNGC	> IFC/ILO Beter Work Program
2010		> Global ban on sandblasting > Joint Roadmap Towards ZDHC		> Global ban on sandblasting > Joint Roadmap Towards ZDHC > NRDC Clean by Design project > BSR Energy Efficiency Partnership > UN CEO Water Mandate (Water Disclosure Working Group)	First CSR Report	> Global ban on sandblasting > Joint Roadmap Towards ZDHC > BCI (member) > NRDC Clean by Design project > BSR Sustainable Water Group > BSR Energy Efficiency Partnership	> NRDC Clean by Design project > BSR Sustainable Water Group > BSR Energy Efficiency Partnership > SEDEX > Sustainable Fashion Business Consortium	> CDP Water Disclosure	First CSR report	> NRDC Clean by Design project
2011	> SAC > BSR Mills and Sundries Working Group	> RSN Company Pledge Against Forced Child Labor in Uzbekistan Cotton		> SAC > RSN Company Pledge Against Forced Child Labor in Uzbekistan Cotton > NRDC > Fair Wage Network	> NRDC Responsible Sourcing Initiative (Mill) Program > BCI	> RSN Company Pledge Against Forced Child Labor in Uzbekistan Cotton > NRDC	> SAC > RSN Company Pledge Against Forced Child Labor in Uzbekistan Cotton	> BSR Working Group on exotic leathers		>RSN Company Pledge Against Forced Child Labor in Uzbekistan Cotton
2012										> BCI First CSR Report

Appendix 12 Case studies

Case study Arvind Mills Ltd.

Firm

Established in 1931 by the three brothers Lalbhais in India, Arvind Mills Ltd (Arvind) is nowadays one of the largest denim suppliers in the world. The textile crisis in 1980 led the firm to change strategy and with 'Reno Vision' it took a global move targeting the high-end quality markets in denim and fabric for shirts and trousers. With the phase-out of the MFA in 2005, demand for textiles and apparel retailing saw a surge, so the Indian government took measures to promote the national textile industry. Arvind benefitted from this development and is in the process of furthering vertical integration. The goal is to become a one-stop-shop for garments serving both domestic and international brands. In 2007 the firm also became active in the retailing sector by launching its first MegaMart store. Several years later, this concept is followed by the introduction of the Arvind Store, where consumers are offered high quality fabrics, brands and tailor-made denim. Currently, Arvind employs 20,324 people as workmen and over 5,296 people as management staff (Arvind, 2012). They are responsible for net sales of $482 million in 2012, see Appendix 13.

Arvind is headquartered in Ahmedabad, Gujarat and part of the Lalbhai Group, which in turn is active in a range of business divisions. Arvind itself also knows a medium degree of horizontal diversification into the business segments engineering, telecom and real estate. Denim manufacture remains the firm's core activity, next to which it produces shirtings, khaki, knits and voile. Also, the firm is active in the retail sector where it sells its own denim brands through exclusive retail or department stores. Some of the brands Arvind manufactures are obtained through a license, whilst others are joint venture brands such as Tommy Hilfiger and Bridge to Luxury. Although the firm focuses on the high-end market segment, overall, it manufactures for a variety of customers, with which it reduces uncertainty in economically difficult times. In 2012, new high-end customers were acquired like Hugo Boss and G-Star (Arvind, 2011). Generally, horizontal differentiation is relatively high. In its denim segment, the firm emphasizes design, innovation and sustainability as highlighted with the launch of the new clothing line 'Excel denim' (The Financial Express, 2011).

Arvind sources cotton from over 1,000 Indian farmers and has manufacturing facilities for each of the business segments: denim, knitwear, shirting, shirts and jeans. The firm is expanding to Bangladesh, through a joint venture with Nitol Group it is building a denim manufacturing facility to increase capacity (Arvind, 2010). Although, Arvind has global exports to for example the US, Europe and Japan, the overall degree of internationalization is medium, as the firm mainly manufactures and owns 524 retail stores in the domestic Indian market. Next to that, brands are sold at 975 multibrand counters in India. Research and development are core to its business model, which is why the firm has invested in the newest machines for denim manufacturing.

Sustainability

CSR has long been present in the corporate philosophy of Arvind Mills. From its foundation onwards, the firm has engaged in philanthropic activities, which explains its strong presence in the local community. Nowadays, sustainability is one of the core values and part of the firm's design and production process. Although most emphasis is placed on the social dimension of sustainability, more recently, the firm is also setting goals for environmental sustainability. So that Arvind moved from a reactive to an active sustainability approach.

Stakeholders

For an overview of Arvind Mills Ltd.'s approach to SCM refer to Appendix 14.

Employees

Arvind was found to pay legally required wages and has good human resource practices (Patagonia, 2011). That is, employees receive a basic salary, next to which they have the right to different kinds of allowances, related to travel, medical, housing and child education. Arvind provides training to employees and depending on their function they receive on the job training, workshops or external training. Workers can become member of the Textile Labour Association in which their interests are represented when negotiating working conditions with their employer.

Suppliers

Since Arvind is highly-integrated, the majority of its supply chain is covered in-house and its main third-party suppliers are raw cotton farmers. Through the organic farming program, Arvind works with over 3,700 farmers to trigger the conversion of conventional into organic cotton. The firm takes a cooperative approach, by a buying-at-the doorstep policy, seven day payment cycles and contributing to the elimination of exploitative middle-men. More recently, Arvind started to take part in the Better Cotton Initiative, thereby it engages with an additional 1,200 farmers to reduce the environmental impact of their cotton harvest and enhance their living standards at the same time (Arvind, 2012). It is unclear whether Arvind Mills has policies to select suppliers on the basis of their ability to comply with working conditions. However, since the firm is largely vertically integrated, its suppliers are expected to uphold sufficient labour standards.

Customers (consumers)
The firm manufactures for a variety of customers and consumers. As described before, Arvind produces jeans for high-end fashion brands in addition to its own brands, which target a wider group of consumers. Arvind also uses its products to address societal needs. For example, it designed the Ruf ‘n Tuf jeans, which are ready-made and targeted at the bottom of the pyramid. Recently, the firm launched Excel Denim jeans, which is an environmentally-friendly produced jeans, through which the firm also targets the sustainability interested consumer.

Investors
Arvind is a publicly owned company and publishes financial results at a quarterly and annually basis on its website. In 2009 the firm drafted a Code of Conduct for Directors and Senior Management Personnel, containing clauses on governance matters such as conflict of interest and insider trading (Arvind, 2009).

Competitors
As a founding member of the Sustainable Apparel Coalition, Arvind collaborates with other garment suppliers to share best practices and problems with regards to sustainable supply chains and the development of a sustainability performance index.

Secondary stakeholders
The government encourages firms to establish themselves in backward areas and contribute to rural development programs by giving fiscal incentives.

With the SHARDA (Strategic Help Alliance for Relief to Distressed Areas) Foundation established in 1995, Arvind is active in nearby communities to improve the quality of life of the poor. It does so, by funding basic needs such as access to water, medical help, education and economic self-sufficiency. SHARDA also cooperated with Ahmedabad Municipal Corporation in the Sanjay Nagar project, to improve the physical infrastructure and living standards of a slum (UNDP-Worldbank, 1999). Collaboration was also sought with local hospitals to develop secondary and tertiary healthcare for the poor, thereby helping around 800 people. Another project in cooperation with the National Institute of Fashion Technology (NIFT), Gandhinagar, provided sewing machine training to the urban poor. Consequently, the foundation helped over 300 people to start working at local garment manufacturers in Ahmedabad. Lastly, in collaboration with the Chandraprasad Desai Memorial Foundation, projects were undertaken to teach children of poor families basic English, mathematics and computer skills.

The Narottambhai Lalbhai Rural Development Fund and The Lalbhai Group Rural Development Fund also address the needs of the economically deprived. In addition to that, these funds have activities related to nutrition, food and solar energy. Moreover, indirectly, farmers benefit from the organic farming projects undertaken by the firm. Also, with respect to education and research, Arvind was co-founder of the Indian Institute of Management, Ahmedabad (IIMA), the Ahmedabad Textile Industry Research Association (ATIRA), and the Kasturbhai Lalbhai Textile Training Center. Thereby contributing to the development of skills amongst textile workers (Arvind, 2012).

In conclusion, for the period from 2000-2010 Arvind underwent a transition from reactive to highly active.

Socio-economic issues

For an overview of Arvind's issue management, refer to Appendix 15. Generally, Arvind complies with human rights, working conditions and business ethics standards as stipulated in the UNGC and ILO standards, since it is a supplier to large international brands like Levi's who require suppliers to have high social standards and management systems in place. In principal, workers receive basic wages and additional allowances, for example women workers are provided maternity leave benefits.

In June 2012, employees at the Naroda Denim Plant and Ankur Textiles facility abstained from working in request of a 30% increase in wages. The company responded through a press release in local newspapers in which it asked workers to resume production. Also, it stated that the strike was illegal as the Ahmedabad Textile Mills Owners Association, State Labour Department and Majur Mahajan Sangh at the time were in the process of settling on an increase in wages for a period of six months, meaning that Arvind could not promptly decide on the matter (The Hindu Business Line, 2012). A month later, Arvind publishes a statement on its website for shareholders, in which it explains that the employees have resumed work and elaborates on the effects of the strike on production (Arvind, 2012). The firm has signed an agreement with the Textile Labor Association to increase wages with Rs 1,935 per month. However, most recently, Arvind used show-cause notices to identify the 40 employees who participated in the strike and in turn had affected production. This led to the voluntary leave of six workers, whilst other workers complained at the Textile Labor Association that such show-cause notices were in violation of the agreements (Ganguly, 2012).

Arvind uses the Japanese 5S system (Tidiness, Orderliness, Cleanliness, Standardization and Discipline) to ensure a healthy and safe workplace. Additionally, employees are provided personal protective equipment and safety trainings. The firm is proud to have a laboratory in place for quality and health assurance, covering cotton, chemical testing, colour quest and calibration. Safety measures are checked on a regular basis. Patagonia found that Arvind locks its first-aid boxes, so that employees cannot take items to home. However, in case of emergency it may take long to open the boxes, so the firm was requested to locate them close to management offices while leaving them open.

Environmental issues

Similar to the above, Arvind adheres to the environmental standards as set by international brands for which it manufactures jeans. This means that for example the firm has set the mid-term goal to have zero solid waste discharge (Arvind, 2011). In an audit by Patagonia, the firm was found to store chemicals improperly, however, this problem was solved relatively quickly (Patagonia, 2011).

Since 1997, Arvind operates a Water Effluent Recycling plant at its Santej facility, which shows that environmental sustainability has already played a role in the firm's business operations for a long time. Moreover, Arvind is one of the few Indian factories that have such a water recycling facility. That same location, contains a ground water recharging facility, which collects rain water in a ground water table after which it can be used again for production. All production sites have adequate wastewater treatment facilities as in line with regulations and standards from customers like Levi Strauss & Co and Nike. The Arvind International plant received ISO14001 certification and a new garment facility will obtain all its water from recycled sewage water of Bangalore City. The medium term goal of the firm is to reduce water consumption with 50%.

Arvind is engaged in two organic cotton farming projects with which it helps rural farmers to improve their quality of life, while at the same time reducing the firm's environmental impact and ensuring the supply of quality cotton. In collaboration with NGO Better Cotton Initiative, some 3,500 farmers located in Akola and Nizar are enrolled in the program. The project has already led to an improved local economy and reduction in the environmental footprint of the firm as well.

Currently, the firm is measuring its environmental footprint, with regards to steam, water, energy and compressed air consumption. Data will serve as a baseline from which the firm can measure performance and make continuous improvements. In line with this, the firm wants to achieve best-in-class material efficiency in the mid-term (Arvind, 2011). Throughout the years, Arvind transitioned from reactive to active issue management.

Sustainable supply chain management

Since Arvind does not publish a CSR report or gives information about sustainability in its annual report, it was only possible to assess its approach to sustainable supply chain management for the period around 2010, see Appendix 16 for an overview.

As already mentioned, Arvind Mills is a highly integrated firm, therefore sustainable practices mainly apply to in-house suppliers. As they produce for international customers as well, they are expected to uphold the same labour standards as Arvind Mills, including human rights, working conditions, occupational health & safety, business ethics and environmental policies. Still some instances of unsafe working conditions were detected in an audit by Patagonia. For example, a tarp was hung to separate the area in the factory for the 'organic' orders from the conventional denim, however, this reduced airflow and increased temperature for workers. Arvind management was under the impression that the tarp was required for 'organic' certification, however, later certifiers informed the firm that this was not the case and the tarp was promptly removed. For third-parties the firm does not seem to have an official supplier code of conduct or risk management system. Several of Arvind's plants have obtained ISO14001 certification, indicating that they have sufficient environmental management systems in place. Also, Arvind promotes environmentally friendly operations at suppliers. In the organic farming project, farmers are required to adhere to certain socially and environmentally beneficial procedures. Thus, contracts with these farmers are expected to contain ESG clauses. No evidence was found on guidelines with respect to subcontracting.

Arvind does not publish on social audits, other than that the BCI checks compliance of farmers with respect to working conditions. This is also one of the major capacity-building projects the firm is undertaking, where 3,400 farmers in the Vidarbha region in Akola learn how to harvest cotton in an environmentally friendly manner. Although the project has led to improved economic conditions for the farmers, it is unclear whether Arvind has specific incentives in place to enhance sustainable production.
In another capacity-building project, the firm provides vocational training in sewing, with which it helps the poor to gain skills and employment.

Sustainability is partly integrated in the firm's supply chain strategy through the organic cotton project. That is, the firm has set the goal to double the amount of farmers that participate in the program and they are selected on the basis of their attitude towards transforming from conventional to organic cotton production. Next to that, the firm wants to go beyond what is required by environmental laws and regulations. That is, it has formulated goals for zero solid waste discharge, water consumption reduction and improving material efficiency. Also the firm takes preventive measures to reduce effluent, waste and air emissions and wants to maximize waste recycling. The latter is done by having sludge dewatering facilities, where after sludge has been dewatered, it is put in a solar evaporation pan which reduces volume and produces waste oil, which can be recycled. Additionally, staff is trained on environmental matters, however, as a supplier the firm does not publish on ESG-related measures specifically for procurement staff, like a supplier database and ESG-related KPIs.

In cooperation with the Ditya Birla Group, Arvind launched Excel Denim, an eco-friendly jeans. This is one of the ways in which the firm leverages opportunities in its supply chain. In addition to the organic farming projects through which it engages farmers and ensures a stable supply of quality cotton. Also, the firm is asked to contribute to the development of a BCI index grading cotton growers on amongst others their labour practice, carbon footprint, chemical usage and gender equality (Pathak & Tivredi, 2011). Another example of leveraging opportunities, is the Ruf 'n Tuf jeans; a ready-to-make jeans offered to the BOP made by 4,000 manufacturers in small rural towns (Usui, 2002). Moreover, with export sales decreasing and disposable incomes in rural areas rising, the firm plans to expand its domestic retailing network and offer shirts in grocery stores and petrol pumps (Vyas, 2012).

With regards to measurement, Arvind publishes on the outcomes of these projects. Moreover, the firm has started to actively track environmental performance through a data collection study covering water, steam, compressed air and energy usage. Findings will provide baseline data against which performance will be measured in the following years.

The firm does not publish much information on sustainable supply chain management and has no CSR report. Arvind did agree to participate in Patagonia's transparency effort, to show how it resolved violations with the firm's standards. In the future, Arvind will contribute to studies related to the Triple Bottom Line concept and environmental footprint of a product, which will inform the customer about the sustainability impact of a product. As mentioned before, Arvind collaborates with various stakeholders to address societal issues.

Business case for SSCM

Overall, Arvind takes a reactive approach to sustainable supply chain management. This can be partly explained by the fact that as a jeans manufacturer it has to adhere to the standards set by both regulation and large international customers such as Levi's. Moreover, it seems that only with the phase-out of the MFA in 2005, the firm also started to embrace the concept of sustainability. From then onwards, the firm would take initiatives to become an attractive supplier for international buyers, by becoming a one-stop-shop for garment manufacturing, see the timeline in Appendix 17. This is also why the firm expanded capacity and added garment manufacturing facilities to its portfolio. As international buyers have increased their requirements with regards to sustainability at supplier sites, it was only natural for Arvind to adopt these into its business model. Another factor that may have influenced Arvind's change in attitude towards sustainability is the fact that the firm became a retailer of garments as of 2007 as well. Such a shift in business model is met with a shift in the stakeholders and issues the firm has to deal. That is, it makes the firm more prone to external stakeholder pressure, as it is now the face of a brand and has to attract consumers.

Support for the business case of sustainable supply chain management at Arvind is found in the organic cotton farming project.
Table 11 gives an overview of the social and economic benefits that organic cotton farming brings to both the farmers enrolled in the program and Arvind's business processes.

Table 11 Overview of benefits of organic farming projects (Arvind, 2011)

Benefits to farmers	Benefits to Arvind
Reduced input costs	Assured supply of Organic Cotton
Better Farming Practices	Delinking from the open market
Better price realization	Easy to establish 'Chain-of-custody'
Assured market	Test a pilot that benefits the environment, the cotton growing community, and Arvind.
Better liquidity	
Formation of Self-help groups/Learning Groups	
Arvind's presence has attracted other social development funding to the region	

Also, the firm reports that with the expansion of the BCI project in 2011 to 5,000 farmers in Gujarat it will bring even more benefit. In that, this region will produce 50,000 bales of cotton per year, next to the 15,000 bales the firm sources from the Maharashtra region. Besides, it is estimated that the project will directly benefit 10,000 farmers and indirectly 60,000 people (Pathak & Tivredi, 2011).

In its own business processes, Arvind finds the first business case for sustainability. For example, by adopting measures to reduce environmental impact such as more efficient material use and waste recycling. At the same time, Arvind takes an innovative approach to denim design, reducing the environmental impact during production. Also, the firm seems to take up a moral responsibility for the farmers in nearby areas, by engaging them in organic cotton farming, the urban and rural poor by teaching them sewing skills which they can use to contribute to the local economy and by offering its Ruf ‘n Tuf jeans line. In addition to the slum upgrade project with which the company helped over 1200 people to gain access to clean drinking water and sanitation facilities. These are elements pointing in the direction of the fourth business case for a societal supply chain.

Appendix Case study Arvind Mills Ltd.

Appendix 13 Firm characteristics

	2000	2005	2010
Size	$328	$289	$482
Ownership	Publicly held		
Internationalization			
# of suppliers	-	-	>5000 farmers
# of countries	1	1	2
# of manufacturing facilities	4	4	5
Strategy	Differentiation		
Customer segment	Mid / high, segmented.		
Value proposition	Quality, newness, customization, brand/status.		
Horizontal differentiation	8	8	11
Horizontal diversification	3	3	4
Channels			
# of stores	NA	NA	524
# of countries	0	0	1
DVI	0,91	0,87	0,67
Customer relationship	Personal assistance, self service		
Revenue streams	Asset sale / Licensing		
Key resources	Physical / Human		
Key activities	Raw material sourcing, fabric supplier, apparel manufacturer, retailer.		
Partnerships	Acquisition of particular resources/activities Joint venture Licensing arrangement		
Cost structure	Value-driven Fixed costs Economies of scale		

Table 12 Firm characteristics – Arvind Mills Ltd.

Appendix 14 Stakeholder approach

	2000	2005	2010
Primary stakeholders			
Employees	Employees receive basic salary and additional allowances for travel, medicine and housing amongst other things.	Employees receive basic salary and additional allowances for travel, medicine and housing amongst other things.	Training and development of staff is an important part of Arvind's HR policy. Employees are allowed to organize themselves.
Suppliers	Arvind is largely vertically integrated, so suppliers are expected to uphold the same working conditions as the firm itself.	Arvind is largely vertically integrated, so suppliers are expected to uphold the same working conditions as the firm itself.	Arvind collaborates with a large number of farmers to adopt more sustainable farming practices. Thereby it can source cotton that is of high quality and produced under good social and environmental conditions.
Customers	Arvind has a broad portfolio of	Arvind has a broad portfolio of buyers and	Arvind has a broad portfolio of buyers and

	buyers and launched the Ruf 'n Tuf jeans targeting consumers at the bottom of the pyramid.	launched the Ruf 'n Tuf jeans targeting consumers at the bottom of the pyramid.	launched the Ruf 'n Tuf jeans targeting consumers at the bottom of the pyramid. Recently the firm designed Excel Denim for the sustainability interested consumer as well.
Investors	Arvind is a publicly-owned firm and publishes annual and quarterly reports with updates on financial performance for shareholders and holds AGMs. The information is published online and stock is listed on the Indian and local Ahmedabad stock exchange.	Arvind is a publicly-owned firm and publishes annual and quarterly reports with updates on financial performance for shareholders and holds AGMs. The information is published online and stock is listed on the Indian and local Ahmedabad stock exchange.	Arvind is a publicly-owned firm and publishes annual and quarterly reports with updates on financial performance for shareholders and holds AGMs. The information is published online. Additionally, the firm formulated a Code of Conduct for Directors and Senior Management Positions.
Competitors	NR	NR	Arvind is founding member of the SAC in which it collaborates with other suppliers and retailers on designing a sustainability index.
Secondary stakeholders			
Government	Through the SHARDA foundation Arvind Mills has collaborated with local government authorities in projects to improve the quality of life of people living in neighbouring slums.	Through the SHARDA foundation Arvind Mills has collaborated with local government authorities in projects to improve the quality of life of people living in neighbouring slums.	Through the SHARDA foundation Arvind Mills has collaborated with local government authorities in projects to improve the quality of life of people living in neighbouring slums.
NGOs	The SHARDA foundation collaborates with various NGOs in community projects.	The SHARDA foundation collaborates with various NGOs in community projects. Next to that, Arvind cooperates with the Better Cotton Initiative.	The SHARDA foundation collaborates with various NGOs in community projects. Next to that, Arvind cooperates with the Better Cotton Initiative and is part of the SAC which also regularly interacts with NGOs.
Community	Through the organic cotton farming project, Arvind is actively contributing to the development of farmers. Additionally, the SHARDA foundation, Narottambhai Lalbhai Rural Development Fund and The Lalbhai Group Rural Development Fund all have projects to address the needs of the poor and enhance their quality of life.	Through the organic cotton farming project, Arvind is actively contributing to the development of farmers. Additionally, the SHARDA foundation, Narottambhai Lalbhai Rural Development Fund and The Lalbhai Group Rural Development Fund all have projects to address the needs of the poor and enhance their quality of life.	Through the organic cotton farming project, Arvind is actively contributing to the development of farmers. Additionally, the SHARDA foundation, Narottambhai Lalbhai Rural Development Fund and The Lalbhai Group Rural Development Fund all have projects to address the needs of the poor and enhance their quality of life.

Table 13 Stakeholder approach Arvind Mills Ltd.

Appendix 15 Issue approach

	2000	**2005**	**2010**
Socio-economic issues			

Bonded labour	Arvind complies with the working standards as stipulated by the ILO as a supplier to large intenrational brands with strict supplier codes of conduct, no explicit statements or procedures were found concerning the practice of bonded labour.	Arvind complies with the working standards as stipulated by the ILO as a supplier to large intenrational brands with strict supplier codes of conduct, no explicit statements or procedures were found concerning the practice of bonded labour.	Arvind complies with the working standards as stipulated by the ILO as a supplier to large intenrational brands with strict supplier codes of conduct, no explicit statements or procedures were found concerning the practice of bonded labour.
Child labour	Arvind abides to the working standards as stipulated by the ILO, no explicit statements about child labour were found.	Arvind abides to the working standards as stipulated by the ILO, no explicit statements about child labour were found.	Arvind abides to the working standards as stipulated by the ILO, no explicit statements about child labour were found.
Migrant / women workers	Arvind abides to the working standards as stipulated by the ILO, no explicit statements about migrant labour were found. Women workers have the right to maternity leave.	Arvind abides to the working standards as stipulated by the ILO, no explicit statements about migrant labour were found. Women workers have the right to maternity leave.	Arvind abides to the working standards as stipulated by the ILO, no explicit statements about migrant labour were found. Women workers have the right to maternity leave.
Wages	Employees receive basic wages	Employees receive basic wages	The organic farming project has led to an increase of farmers' basic income, due to the eliminination of middle-men, a buying at the doorstep policy and seven day payment cycle. In 2012 workers went on strike in request for higher wages, however, negotiations had already started. Finally wages were increased, however Arvind hang up show-cause notices, which led six workers to leave.
Freedom of association	Workers are allowed to unionize.	Workers are allowed to unionize.	Workers are allowed to unionize. In 2012, a strike took place concerning the increase of wages that was negotiated with the labour association.
Health & safety (sandblasting)	Through the 5S system Arvind ensures a healthy and safe working environment.	Through the 5S system Arvind ensures a healthy and safe working environment.	Through the 5S system Arvind ensures a healthy and safe working environment.
Environmental issues			
Chemicals	Arvind is ISO14001 certified and adheres to environmental standards set by buyers like Levi's.	Arvind is ISO14001 certified and adheres to environmental standards set by buyers like Levi's.	Arvind is ISO14001 certified and adheres to environmental standards set by buyers like Levi's. The firm has a laboratory to test chemical substances.

Water	Arvind has a water effluent recycling plant and ground water recycling facility. Wastewater treatment facilities are present at each location. The firm adheres to water standards set by buyers.	Arvind has a water effluent recycling plant and ground water recycling facility. Wastewater treatment facilities are present at each location. The firm adheres to water standards set by buyers.	The NLRDF provides farmers with improved seeds, which require much less water than other seeds, thereby reducing their water consumption.
Climate change (cotton/energy)	Through the NLRDF fund, Arvind promotes the use of biogas in surrounding communities. Since 1997 the firm is operating a water effluent recycling plant.	Arvind sources organic cotton through its own farming project.	Arvind undertakes the BCI project and is expanding efforts to increase the number of farmers from which it sources organic cotton.

Table 14 Issue approach Arvind Mills Ltd.

Appendix 16 Sustainable supply chain management

SSCM Indicator		**2010**
Risk awareness (3)	0	The firm does not publicly report on: a) spend analysis, b) the percentage of spend covered by its spend analysis, c) critical suppliers.
Risk exposure (1)	0	The firm does not publicly report on: a) formalized sustainability risk identification analysis.
Risk management (12)	11	Arvind sources from organic cotton farmers, thereby setting standards concerning working conditions and the environment. The firm supplies to large international brands, so it has human rights policies, employees receive minimum wages and are unionized. Workers receive safety training, are offered PPEs and have access to medical facilities. The firm has a Code of conduct for directors and senior management covering business ethics topics like insider trading. Also, the firm is ISO14001 certified and started measuring its environmental footprint. Vocational training in sewing is provided to 300 unemployed. Arvind collaborates with cotton farmers through the BCI, they are only contracted if they adhere to the standards set in the BCI program. The firm does not publicly report on: a) guidance concerning subcontracting.
Monitoring (7)	2	The BCI checks compliance at farmers part of the organic cotton project. The firm does not report on a) on-site visits (unannounced), b) interviews with management, c) interviews with workers (on-site), d) interviews with workers (off-site), e) corrective action plans.
Capacity building & incentives (2)	1	For the organic farming project, Arvind closely works together with 3,400 farmers in the Vidarbha region in Akola to grow organic cotton. The firm does not publicly report on: a) incentives for suppliers.
ESG integration in SCM strategy (6)	3	Arvind has the goal to double the amount of farmers with which it collaborates in the BCI project and encourages suppliers to be more environmentally sustainable. Farmers have to be open to producing organic cotton. Also, staff is trained on ESG matters. The firm does not publicly report on a) incentives for ESG for procurement staff, b) training on ESG factors in procurement, c) ESG-related KPIs.

Opportunities (2)	1	In cooperation with the Ditya Birla Group, Arvind launched Excel Denim, an eco-friendly jeans. Additionally, the organic cotton projects are examples of how Arvind leverages opportunities in the supply chain. The firm does not publicly report on: a) C2C and lifecycle assessments.
Measurement (9)	1	The firm reports on capacity building initiatives: the BCI project covers over 10,000 acres of farmlands and involves nearly 1200 farmers. The firm does not publicly report on: a) % of suppliers audited, b) % of 'prime contact' procurement staff trained on ESG issues, c) % of supplier contracts including ESG factors, d) % of suppliers with EMS certification, e) % of suppliers' contracts terminated, f) % of procurement spent with preferred suppliers, g) GHG emissions from transportation, h) supplier water usage.
Transparency (6)	3	Arvind communicates standards for suppliers and risk management measures through trainings for farmers on social and environmental matters. Also, the firm cooperates with the BCI to develop an index that assesses the degree to which suppliers of cotton are eco-friendly. The firm does not publicly report on: a) communication of risk awareness, b) GRI standard adoption, c) factory list.
Collaboration (1)	1	Arvind is founding member of the SAC. In collaboration with local NGO Ahmedabad Municipal Corporation and slum dwellers, the Sharda fund of Arvind has contributed to the upgrading of infrastructure in Sanjay Nagar.

Table 15 SSCM approach Arvind Mills Ltd.

Appendix 17 Timeline

Year	Event
1931	Arvind is founded
1978	Narottam Lalbhai Rural Development Fund
1980	Global strategy focused on high-end quality garments
1995	Strategic Help Alliance for Relief to Distressed Areas (SHARDA)
1997	Installation of Water Effluent Recycling plant
2005	One stop shop service for national and international customers
2007	Launch of the MegaMart One retail store
2010	Launch of the Arvind Store. First Better Cotton bale exported.
2012	Launch of Excel Denim.

Table 16 Timeline Arvind Mills Ltd.

Case study C&A

Firm

C&A was established in 1841 in Sneek, Holland by the two brothers Clemens and August Brenninkmeijer. In the tradition of their family they continued business in the textile industry, theirs being revolutionary at the time. They opened a store that offered ready-to-wear clothes of good quality and at affordable prices. Soon the retailer expanded across borders and is nowadays present in 19 European countries with 1,523 stores (C&A, 2011). In total C&A employs around 36,000 people. As a privately held company, C&A is discrete about financial performance, the only figure found for 2011, was that of total sales, which amounted to $8.3 billion (Euromonitor, 2012).

C&A's generic strategy is cost leadership, which it operates through 11 brands that offer fashion for the whole family. The firm has three independently operating subsidiaries in Mexico, Brazil and China, which have their own strategies. For example, in the Latin American market, the customer segment is young women, with a focus on more fashionable clothing C&A attracts customers through social media channels. Next to that, C&A is also active in two other business areas, namely C&A Money and C&A Online. In general, the firm offers clothing for the mass market and exhibits medium horizontal differentiation. The manufacture of garments is outsourced to 900 suppliers located in 40 countries, who in their turn operate in 60 different markets, mainly in the Asia-Pacific. As a result, the firm is assumed to have a high variable cost structure and a low degree of vertical integration. Due to limited reporting on financial results it was not possible to calculate the specific degree of vertical integration. C&A is a specialty apparel retailer.

Sustainability

'As a family company, we think in generations, not quarters and we will continue to operate in this way, recognizing that we have a role in ensuring that the world which future generations inherit will be one which they can continue to enjoy, and in which they can prosper.' (C&A, 2012, p.3). This statement reflects C&A's sustainability approach, which is assessed as reactive/active. Throughout the years, C&A showed to move from a reactive position, where it would address issues in response to allegations by external stakeholders, to a more strategic issue management attempting to ensure sustainable performance in an uncertain future.

Stakeholders

From 2000 onwards, C&A has been collaborating with governmental and non-governmental organizations to tackle issues in the apparel value chain. Throughout the years, the firm has taken a more strategic approach towards stakeholder management. As reflected in its community engagement, which shifted from primarily philanthropic contributions towards more long term projects: "the foundation both contributes to local, charitable initiatives in the countries in which C&A has a retail presence and supports larger initiatives that aim to improve the social, economic and environmental conditions across the cotton and clothing value chain in Asia, Africa and the Middle East." (C&A, 2012, p. 85). Also, the firm bases its stakeholder dialogues more on issues. For example, by participating in the Joint Roadmap for the Elimination of Discharge of Chemicals, taking part in the industry initiatives to tackle the Sumangali scheme and supporting NGO terre des hommes to educate 9000 women as alternative to the Sumangali system. On the other hand, except for offering an organic cotton line, the firm does not seem to engage customers in its efforts for sustainability. Overall, C&A takes an active/proactive approach to stakeholder management.

Socio-economic issues

Bonded labour
A research by De Volkskrant and SOMO in 2010 showed that C&A sources from KPR mills, a supplier that engages in the practice of Sumangali, not allowing workers off the terrain and giving them wages after three

years only. In response to their findings, C&A stated that it was under the impression to source from Quantum Knits and had just shortly found out that this is a wholly owned subsidiary of KPR mills. Moreover, C&A only recently started placing orders with them. However, the circumstances at KPR mills are not in line with C&A standards, therefore the firm stated to end business relations as soon as possible (Es, 2010).

Additionally, C&A was accused of placing orders with three Indian suppliers engaged in the Sumangali practice in 2011. A spokesman of C&A stated that the firm had sourced garments from Eastman Exports for over 10 years, since it has the technical qualities required for the production of C&A's garments. According to C&A it never found any violations pointing in the direction of exploitation of workers. The supplier also denies any of the accusations. Regarding the other two factories, C&A does not give any comments, other than stating that any firm doing business in the apparel sector in India will be directly or indirectly in contact with the Sumangali system (Es, 2011).

Together with other firms, C&A is signatory to a statement in response to the SOMO report, in which it commits to recognize the role they as a buyer play in eliminating labour right issues. Also, the firm is involved in the Brands Ethical Working Group, a group of brands sourcing from India in which the issue of Sumangali is discussed and which is part of the local Tirupur Stakeholders Forum. Moreover, in the coming four years, C&A is funding a program of terre des hommes to provide 9000 women with an alternative to working under this system. On its website, the firm reports that it has already helped 1,418 former Sumangali workers in four regions in India (C&A, 2012).

Child labour

In 2012, instances of child labour were detected in two out of four factories that were inspected by SOMO. Local researchers spoke with a girl, aged 13, who started working at supplier Super Spinning Mills (SSM) a year before. The supplier denied that it employs workers aged below 16. Both C&A and Primark source goods from SSM and state never to have encountered child labour during audits. C&A was considering an investigation into the issue. Additionally, the firm states that together with local organizations it attempts to address the situation, for example by warning parents for recruiters of their 14 year olds. This was also reinstated by SOMO, in that C&A sincerely tries to address the issue, however, as an individual organization this is not possible (Es, 2012).

Another area where child labour was detected was Uzbekistan. Here cotton harvest was done by children who were unpaid and exposed to chemicals. Moreover, the harvest has severe environmental consequences. Therefore, C&A decided to ban the sourcing of all cotton from Uzbekistan and has requested its suppliers to do so. Although it is difficult to monitor, since C&A does not have contractual relations with the lower ends of the supply chain, the firm has designed verification methods to trace the origin of cotton (C&A, 2012).

Migrant /women / home workers

A research by Brazilian organization Observatorio Social in 2006 showed that C&A was sourcing from suppliers that subcontract orders to unregistered workshops. In these locations, workers are often illegal immigrants from neighbouring countries, who work under exploitative circumstances (Casara, 2006). C&A had a meeting with the CCC, FNV and LBC (Belgian union) and started an investigation after their Brazilian suppliers. Also, the firm collaborated with a local migrant organization to support the illegal migrants (CCC, 2006).

Another issue related to migration, concerns the move of many Chinese workers to the East coast of China for work. Often they cannot find housing and work long hours, sometimes 15-18 per day, which is not in compliance with C&A's code of conduct. A large part of C&A's clothes is sourced from Chinese suppliers, however, workers often do not want to work less hours, since then they will also earn less. Thus, the firm finds itself in a difficult situation, where stopping orders from these suppliers will not help the Chinese migrants. Instead, it states that it is necessary to educate workers on the need to limit working hours for protective reasons (C&A, 2012).

With regards to home work, C&A has a zero tolerance policy and prohibits the manufacture of goods at home. Despite the fact that this will not always benefit workers, the firm states that the other alternative, namely registered home-work centers are commonly not feasible (C&A, 2012).

Wages

C&A's code of conduct requires 'fair and honest pay that must correspond to the local tariffs and laws in the supply countries.' This is in accordance with the ILO guidelines, which states that wages must meet the needs of workers and their families. NGOs have criticized this stance and argue that a minimum wage should exceed one's basic needs. C&A recognizes the need for fair living wages, however, this is a highly political discussion in which C&A as an individual company cannot achieve much. Despite of this, the firm actively follows discussions and participates in stakeholder dialogues to come to a better understanding of the issue.

Freedom of association
In its code of conduct, C&A states to respect 'all lawful organizations that can be formed by employees in order to establish their entitlement' (C&A, 1996). This does not yet cover the right of employees to free collective bargaining (Edwards & Rees, 2006). In a commentary to its code of conduct, C&A confirms that it actively engages in case workers do not have the right to freedom of association or if other structures to organize collectively are suppressed. However, the firm also will not enter in conflicts with any of its suppliers on this issue, since it should be adhered to by them and solved in a democratic fashion (C&A, 2006). This is also reflected in C&A's upholding of its standards in the situation in China, where despite of a new labour law in 2008, workers are only allowed to unionize with the state-controlled ACTFU (C&A, 2012).

Health & Safety (Sandblasting)
In 2006, reports were published that showed the harmful effects of sandblasting on the health of workers. As of 2009, SOCAM also pointed out to C&A and suppliers that this is a harmful practice. In 2011, C&A joined the global ban on sandblasting, whilst SOCAM continues to monitor the practice.

Other (independent audits)
C&A's independent audit organization SOCAM has been accused of not being transparent. As the Clean Clothes Campaign and Fair Wear Foundation argue, the firm has a commercial interest in positive outcomes. Moreover, it uses different standards than that of other individual auditors, which makes it difficult to be transparent. Although C&A responded by arguing that SOCAM has large competence in auditing and also monitors 2nd tier suppliers, the CCC disagrees, in that its audits will often not reveal all violations, since workers do not fully trust the organization (Tol, 2010).

Environmental issues

Chemicals
Since 2007, all garment suppliers have been subject to the European regulation on chemicals REACH. In 2009, the ministry of environmental affairs in the Netherlands found an amount of the chemical benzene in a shipment of C&A that was higher than the legally allowed amount. The firm states that it received the shipment, but does not disclose anything about whether the clothes will be sold or not (Trommelen, 2009). In 2011, C&A accepted the challenge posed by Greenpeace to eliminate the use of hazardous chemicals in its supply chain. Together with five other apparel companies it committed to a Joint Roadmap for complete elimination by 2020.

Water
C&A recognizes the importance of water as a natural resource and promotes production ecology, through which environmentally friendly production technologies such as wastewater treatment plants help to save water. Additionally, the firm has sponsored the Water Footprint Network, which helps identify the company's water footprint. Once data will be gathered, C&A will use this as input for water saving initiatives at supply partners. Currently, C&A has invested in a fund to provide farmers in Gujarat with the financial means to buy a drip irrigation system for their farms, which will save up to 4,2 million litres water per year as compared to current practice (C&A, 2012).

Climate change
Environmental protection is part of C&A's strategy and the firm requires suppliers to uphold the same standards. Sometimes, however, suppliers are found ignorant or lacking infrastructures, which leads to violations of the standards. Therefore, the firm takes an educational approach through which it makes small positive changes in suppliers' environmental processes (C&A, 2012).

In 1996 C&A was criticized by environmental - and customer organizations, for producing clothes under harmful social and environmental circumstances. In response, the firm decided to look into the possibility of an ecological clothing line. As one of the first apparel firms, in 2001 C&A introduced an organic cotton line for baby clothing. This, whilst other retailers still did not want to start producing organically, as they feared that supply would be too low, so that in the case of a success, costs would be too high (Thijssen, 2001). In 2005, C&A joined non-profit Organic Exchange to promote the production of organic cotton, four years later leading to the foundation of CottonConnect, in cooperation with the Shell Foundation. This is a for-profit organization that intends to partner with retailers and brands with the aim to transform current supply chains into ones that allow for organic cotton and to define sustainable cotton strategies (C&A, 2012).

In 2010 a German newspaper found that the so claimed 'organic cotton' line Bio Cotton was made of a mixture of genetically modified cotton. Consequently, the firm proposed to intensify controls (Stormezand, 2011). Later that year, C&A´s European Executive Board (EEB) announced that tests by the TLR International Laboratories (NL) confirmed that garments sold under C&A's "Bio Cotton" label do not contain genetically modified cotton. "We remain fully committed to C&A's sustainability strategy", stated Andreas Seitz, a member and spokesperson of C&A's EEB. "We have made a pledge to our customers and we are determined to stand by it: C&A´s Bio-Cotton collection is truly organic..." Seitz underlined. Consequently, C&A will collaborate more intensely with certifying organizations and put in place additional internal improvement processes to enhance traceability.

In conclusion, C&A highlights numerous supply chain issues and reports progress on its dedicated CR website. The general impression is that the firm is doing a good job in addressing the issues. Taking an active approach towards for example bonded labour, child labour, chemicals, sandblasting and resource depletion through collaboration with governmental and non-governmental organizations, industry peers and suppliers. However, on other issues the firm seems to take a somewhat more reactive stance, for example with regards to fair wages, freedom of association or homeworkers. Where the firm ends orders with suppliers that do not abide to its standards and presents no intentions to investigate the issues in collaboration with others. Overall, C&A undertakes reactive/active issue management.

Sustainable supply chain management

In 2011 C&A adopted a new strategy called 'Caring & Amazing', with which it aims to emphasize the brand's reliability and trust towards customers and the enthusiasm with which the firm wishes to surprise them. Also, it reflects the responsibility C&A takes for customers and the environment. As stipulated by its ethical, social and environmental standards in the code of conduct (1998) that is binding to all business relations. The independent auditor SOCAM (Service Organisation for Compliance Audit Management), checks whether suppliers uphold these standards and next to auditing and inspecting, also increasingly trains suppliers on safety and working conditions. In 2007, the firm decided to increase the use of organic cotton in its production. Nowadays bringing more organic cotton clothes to the market at the same price as conventional cotton, so as to contribute to making bio cotton mainstream.

Sourcing is organized by C&A Buying, which is located all over the world under the name 'Mondial'. Next to that, C&A procures direct goods via subsidiary Canada OHG, which also organizes part of the sourcing process for C&A. Over the past few years, C&A has increased the share of direct sourcing to 80% in order to increase transparency and control. Supply base rationalization also led to a decrease in the number of manufacturing units from 1984 in 2010 to 1570 in 2011. More than 40% of the firm's suppliers have been working with C&A for over 20 years and the majority of goods comes from India, China, South-East Asia and Eastern Europe. C&A organizes conferences and meetings with suppliers so as to maintain personal contact and ensure healthy business relations.

C&A scores medium on awareness, as it does not report on spend analysis or systems through which it detects critical suppliers until 2007. In its latest CSR report, the firm placed a 'Materiality Matrix' in which it identified the concerns of stakeholders and the impact these have on C&A and translated those into 6 focus sustainability areas. Thus, the firm has a formalized sustainability risk identification system in place. Regarding risk management measures, C&A adopted only part of these in 2000, however, in 2011 the firm extended them, except for the environmental performance data of suppliers. In its 2006 CSR report, C&A states that it is difficult to obtain this type of data from suppliers, however, that the firm aims to collect it at some point in the future. The firm does engage in all monitoring activities as already mentioned through SOCAM.

C&A recognizes the need for capacity building at suppliers to tackle sustainability issues in the supply chain, as it states "the infringements that they (SOCAM) detect frequently occur simply due to ignorance, lack of experience or inadequate management capacity." (C&A, 2012, p. 74). Through commercial incentives, the firm states to motivate suppliers to enhance their social and environmental commitments. Concerning supplier performance measurement C&A has still some improvements to make, that is, it does report on the number audits, suppliers that were suspended and capacity building activities. Although data is being gathered about the firm's water footprint, there was no reporting on GHG emissions, procurement spent with preferred suppliers and supplier contracts including ESG contract clauses. Over the years, C&A has improved its communication of sustainable supply chain practices, which is in line with its wish to make the supply chain more transparent. As stipulated by the last indicator, this is only possible in collaboration with other stakeholders. C&A recognizes this fact as true with regards to its cooperation with NGOs and suppliers.

Business case for SSCM

Concluding, C&A first exhibited a reactive approach to SSCM. However, after its re-emphasis on sustainability in 2007, the firm also improved its supply chain management practices and is nowadays found to take have an active/proactive attitude. Over the past 10 years, C&A thus underwent a transition trajectory of internal alignment.

Zooming in on the triple bottom line performance of the firm, the following describes the economic, social and environmental changes that were detected. Despite limited availability of financial data about C&A, several newspapers reported that the firm made a new start in 2000. After a failing business in England, the firm decided to close all shops and refocus on Europe. Profitability entered the picture again in 2005, when it for the first time in history published its turnover figure. A few years later, profits went down again, however, in 2011 C&A is said to have total sales of $ 8.3 billion and regained profitability. With respect to C&A's triple bottom line effect from organic cotton, the firm's supply chain is managed in such a way that the premiums that used to raise the price for organic cotton are reduced, thereby making organic garments more accessible to the consumer. So that in 2011, the firm sold more than 32 million pieces of 100 % organic clothing (Mulder, 2012).

The firm's social performance takes many forms. For example, the firm's auditor SOCAM helps to improve the living standards of employees working in the factories that supply goods to C&A. As one director explained, SOCAM was set up for four reasons, firstly, the Brenninkmeijer family regards ethical sourcing as highly important, secondly, to answer questions of customers or organizations, thirdly, audit data would help to implement improvements and fourthly, to prevent reputational damage. Improvements are made through the audits and training given to suppliers by SOCAM on safety and working conditions. One supplier states to keep the measures it has taken upon recommendations by SOCAM, for example with respect to fire safety exists. Not only, because workers were now used to them, also international retailers require them. Other changes have even led to improved productivity, such as sanitary improvements, causing fewer workers to leave the firm (Graafland, 2001).

Another way in which C&A contributes to social development is through the various organic cotton projects in which it is involved, which improves the living standards of farmers. Additionally, it has enhanced insight into the firm's cotton supply chain, as stated by Philip Chamberlain, Head of Sustainable Business Development, C & A. "Since 2004, we have decided to take a holistic approach to our cotton supply chain and we are proud to be able to demonstrate that our investments are beneficial for both farmers on the ground, and for our company, which in turn makes the business case even stronger."(http://www.candacr.com/en/news-updates/)

Also, the C&A Foundation targets supplying countries and attempts to improve the social, economic and environmental conditions through direct funding of local NGOs. Projects that were funded, include a €500,000 donation to flood victims in Bangladesh, support of the UNICEF program for street children in Russia, help for tsunami victims with terre des hommes, €250,000 for earthquake victims in Pakistan and drinking water projects.

Regarding its environmental performance, in 2005 C&A reports on savings of materials, waste paper and paper consumption. Also, the firm is active in energy and greenhouse gas emissions reduction in its stores and transport activities. However, in 2011 GHG emissions increased as compared to previous year e.g. energy consumption by buildings: 336,816 CO_2e (+5%).

Taken as a whole, C&A does not seem to show a stable business performance over the past decade. Also when the firm decided to re-instigate sustainability as part of its business, its triple bottom line did not seem to improve as a result. Now, with the introduction of the Caring and Amazing strategy, however, the firm seems to have taken a more radical route. This is also reflected in its most recent CSR report, where the firm indicates to adopt a new view on sustainability. C&A formulates a business model for the 'new world' characterized by transparency, mutual commitment and cooperation throughout the whole supply chain. Where all players work together in the planning and production of products, so that clothes are made of sustainable materials, next to being produced, transported and traded in a sustainable manner. Also, consumers play a role in the new business model, in that they are aware of the ecological impact of their product choice. As C&A sees it, they are the ultimate drivers to ensure the success of the concept. In recognition that C&A is now only at the start of such a dramatic shift in its supply chain, the firm has set goals to improve its supply chain management. For example, by increasing capacity-building initiatives to players further down the supply chain, enhancing control of supplier performance and increasing audit capacity in important markets specifically with respect to environmental matters (C&A, 2012).

All in all, C&A has the tendency to support the strategic business case for SSCM, by improving organic cotton production and engaging more with stakeholders to move towards the business model for the 'new world'. Thereby enhancing economic, social and environmental performance.

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Appendix 18

	2000	2005	2010
Size	-	$6.300	$8.300
Ownership	Privately held		
Internationalization			
# of suppliers	1191	1015	90
# of countries	-	60	40
# of manufacturing facilities	7	7	5
Strategy	Differentiation		
Customer segment	Low / mid, mass market.		
Value proposition	Low price, quality.		
Horizontal differentiation	11	11	11
Horizontal diversification	1	2	3
Channels			
# of stores	500	1000	1490
# of countries	11	13	19
DVI	-	-	-
Customer relationship	Self service		
Revenue streams	Asset sale		
Key resources	Physical		
Key activities	Marketing and sales.		
Partnerships	Acquisition of particular resources/activities Reduction of risk and uncertainty		
Cost structure	Cost-driven		

Appendix 19

	2000	2005	2010
Primary stakeholders			
Employees	C&A provides competitive wages, social benefits and training. It recognizes employees' right to freedom of association.	C&A provides competitive wages, social benefits and training. It recognizes employees' right to freedom of association.	C&A provides fair wages, social benefits, training and an employee bonus system. Employees are allowed to join unions. The firm cooperates with employee associations to achieve joint goals regarding sustainability.
Suppliers	Suppliers are selected on the basis of price, quality and social responsibility. Suppliers are responsible for labor conditions. C&A organizes conferences to enter into dialogue with suppliers about issues.	Suppliers are selected on the basis of price, quality and social responsibility. Suppliers are responsible for labor conditions, however, SOCAM assists them in order to improve conditions whenever these do not meet the standards as set out in the firm's Code of Conduct. C&A organizes conferences to enter into dialogue with suppliers about issues.	Suppliers are selected on the basis of price, quality and social responsibility. Suppliers are responsible for labor conditions, however, SOCAM assists them in order to improve conditions whenever these do not meet the standards as set out in the firm's Code of Conduct. C&A organizes conferences to enter into dialogue with suppliers about issues.
Customers	Customers are regarded as cost minimisers. The firm operates several channels to gather customer opinions about its products.	Customers are regarded as cost minimisers. The firm operates several channels to gather customer opinions about its products. A survey indicated that customers are interested in information on the firm's sustainability policy. C&A launched its first organic cotton clothing line. Oeko-tex label.	Customers are regarded as cost minimisers. The firm operates several channels to gather customer opinions about its products. A survey indicated that customers are interested in information on the firm's sustainability policy. C&A launched its first organic cotton clothing line. Bio Cotton Label.

Investors	C&A is a privately held company, so it does not have to manage relationships with this stakeholder group.	C&A is a privately held company, so it does not have to manage relationships with this stakeholder group.	C&A is a privately held company, so it does not have to manage relationships with this stakeholder group.
Competitors	C&A is member of several national and international business/trade associations.	C&A is member of several national and international business/trade associations.	C&A is member of several national and international business/trade associations, these include offensive alliances such as: Global Social Compliance Programme, Sustainable Apparel Coalition (founding member).
Secondary stakeholders			
Government	C&A admits to fully comply business operations with what is legally required.	C&A admits to fully comply business operations with what is legally required. The firm takes a precautionary approach towards chemical restrictions.	C&A admits to fully comply business operations with what is legally required. The firm takes a precautionary approach towards chemical restrictions. Through dialogues with governmental organizations, the firm is able to match its business interests with social and environmental considerations.
NGOs	C&A is the target of many NGOs, who especially focus on the labour conditions at suppliers.	C&A is the target of many NGOs, who especially focus on the labour conditions at suppliers. The firm responds to allegations, by investigating the issue at hand and cooperating with the respective NGO. C&A is in dialogue with numerous NGOs like BSR, CCC, UNICEF etc.	C&A is the target of many NGOs, who especially focus on the labour conditions at suppliers. The firm responds to allegations, by investigating the issue at hand and cooperating with the respective NGO. Recently, C&A has entered into a partnership agreement with NGO GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit) to improve the wellbeing of factory employees in Asia, related to productivity, improving wages and working conditions.
Community	C&A undertakes philanthropic activities in its supply countries, together with local partners it supports projects related to education, health and infrastructure.	C&A undertakes philanthropic activities in its supply countries, together with local partners it supports projects related to education, health and infrastructure. Together with SOCAM, the firm also cooperates with local organizations in India to address the issue of child labour. Also, the firm partners with numerous NGOs.	C&A undertakes philanthropic activities in its supply countries, together with local partners it supports projects related to education, health and infrastructure. Also, the firm partners with numerous NGOs to support initiatives targeted at improving the economic, social and environmental situation across the apparel supply chain.

Appendix 20

	2000	**2005**	**2010**
Socio-economic issues			
Bonded labour	In its Code of Conduct for the Supply of Merchandise C&A prohibits forced labour.	In its Code of Conduct for the Supply of Merchandise C&A prohibits forced labour.	A research by De Volkskrant and SOMO in 2010 showed that C&A sources from KPR mills, a supplier that engages in the practice of Sumangali. In response to their findings, C&A states that it was under the impression to source from Quantum Knits and has only recently found out that this is a wholly-owned subsidiary of KPR mills. Moreover, C&A only recently started placing orders with them. The circumstances at KPR mills are not in line with C&A standards, therefore the firm will end business relations as soon as possible. In another research, C&A was accused to source from three Indian suppliers that engage in Sumangali systems. C&A stated that it had not detected any conditions at one of these suppliers that were not in line with its code of conduct. On the other two factories the firm did not comment. Moreover, it stated that any firm doing business in the apparel sector in India will

			be directly or indirectly in contact with the Sumangali system. C&A has joined various initiatives to end the Sumangali system: they are an active member of the forum initiated by the Ethical Trading Initiative, part of the Brands Ethical Working Group, which in turn participates in the Tirupur Stakeholders Forum. Over the coming four years, C&A is funding a program of Terre des hommes to provide 9,000 women with an alternative than working under this system.
Child labour	In its Code of Conduct for the Supply of Merchandise C&A prohibits child labour.	In its Code of Conduct for the Supply of Merchandise C&A prohibits child labour. If child labour is detected, the firm has procedures in place to ensure that the child does not end up in uncomfortable situations. C&A supports projects against child labour together with local partners.	In its Code of Conduct for the Supply of Merchandise C&A prohibits child labour. If child labour is detected, as was done in a recent investigation by SOMO, the firm has procedures in place to ensure that the child does not end up in uncomfortable situations. C&A supports projects against child labour together with local partners. In 2009 the firm decided to ban all cotton sourced from Uzbekistan and required all suppliers to do so as well, until the situation around child labour in this country would be resolved.
Migrant /women / home workers	In its Code of Conduct for the Supply of Merchandise C&A does not tolerate the exploitation of vulnerable groups of people.	In its Code of Conduct for the Supply of Merchandise C&A does not tolerate the exploitation of vulnerable groups of people. In 2006 a report was published by the Brazilian research organisation Observatorio Social, uncovering that C&A's suppliers subcontract production to unregistered workshops exploiting illegal immigrants from neighbouring countries. C&A started an investigation to their (sub)contracting chain in Brazil, spoke to all its suppliers and contacted a migrant organisation to support the illegal migrants.	Large numbers of people move to the Eastcoast of China for economic reasons, they find work but not suitable housing there, and they work 15-18 hours per day. This is not in accordance with C&A guidelines, however, employees do not accept a limiting of working hours, since this allows them to earn additional wages. The situation calls for explanation to these employees, that limiting working hours is a protective measure. C&A categorically prohibits orders manufactured by home workers. This may not be beneficial for them, however, the alternative of registered home-working centers (where employees work at a central location instead of home) provides limited opportunity and is the exception rather than the rule.
Wages	C&A requires suppliers to pay the minimum wage that is in accordance with law and the principle of fair and honest dealings.	C&A requires suppliers to pay the minimum wage and if this is far below what is needed to make a sufficient living, it expects them to adjust it. The firm follows current discussions between NGOs on guidelines concerning living wages and shows interest to enter into dialogue on the issue.	C&A requires suppliers to pay the minimum wage and if this is far below what is needed to make a sufficient living, it expects them to adjust it. The firm follows current discussions between NGOs on guidelines concerning living wages and shows interest to enter into dialogue on the issue. The firm states that it is a highly political issue, that they as individual firm cannot influence much. Despite of that, C&A puts many resources into the issue.
Freedom of association	C&A recognizes the right to freedom of association when this is legal and requires suppliers not to interfere with such legitimate activity.	C&A respects employees' right to freedom of association. However, there are regional differences with respect to this right, for example in Bangladesh, the state established “Economic Processing Zones” where workers were not allowed to unionized, since the government already represents their interests. Both workers and international NGOs have shown disagreement. C&A continues relationships with suppliers in this area, since termination would not improve the situation. The firm	C&A respects employees' right to freedom of association. This is also the case regarding China, where even following the implementation of a new labour law in 2008, the state-controlled umbrella union ACTFU retains the sole right of representation for all workers. The CCC highlights violations of the right to collective bargaining at Turkish garment manufacturer Paxar. It is said to have fired worker activists, pressure union members to renounce their membership, and failed to negotiate with a lawful trade union. All brands, (also C&A) that source from the manufacturer are members of MSIs that address this issue. Pressure was enough for the firm to start conversations.

		continues intensive auditing so as to promote supplier's adherence to their worker's interests.	
Health & Safety (Sandblasting)	C&A requires suppliers to ensure a safe and healthy working environment.	C&A requires suppliers to ensure a safe and healthy working environment. The firm supports healthcare projects in producing countries.	In 2009, SOCAM signalled the harmful effect of sandblasting on workers health and safety. As of 2011 C&A decided to stop any use of sandblasting in its products. SOCAM continues audits on the technique.
Other (trade regulations)		In 2005, the WTO stopped trade quotas on textile, thereby increasing competition. C&A sources a significant amount of garments from China and admits to continue sourcing from there, paying extra attention to the social circumstances that may not always develop in a similar fashion as economic conditions.	
Environmental issues			
Chemicals	In its General Delivery Instructions, C&A reports quality standards for manufacturing goods in terms of the chemical substances and their limits.	In its General Delivery Instructions, C&A reports quality standards for manufacturing goods in terms of the chemical substances and their limits. C&A adheres to the highest standards and collaborates with inspection bureaus to obtain the latest standards, so as to eliminate risks. The firm supports the EU's harmonization and transparency initiative regarding the chemical substances that are allowed. Moreover, C&A increases the number of products carrying the Oeko-tex standard.	Since 2007, suppliers have been subject to the European regulation on chemicals REACH. In 2011, C&A accepted the challenge posed by Greenpeace to eliminate the use of hazardous chemicals in its supply chain, together with five other apparel companies it committed to a Joint Roadmap.
Water		C&A supports drinking water projects in manufacturing countries.	C&A supports initiatives to save and reduce the use of water, such as wastewater treatment plants. The Water Footprint Network is investigating the use of water in the firm's value chain, the outcome of which will be used to set goals for reduction. Additionally, the firm provides money to a fund that allows farmers to install water-saving drip-irrigation machines.
Climate change (cotton / energy)	As one of the first apparel retailers, C&A started purchasing organic cotton in 2001. C&A was one of the first apparel firms to obtain the ISO14001 certificate.	C&A became a member of and supports international NGO Textile Exchange so as to increase knowledge sharing between farmers and traders on the transfer from conventional to organic cotton farming. C&A launched its first organic cotton clothing line. Also, the firm commits to introduce organic cotton fibres in 1% of its garments in the next two years. The firm has several energy-saving initiatives in place in stores, logistics (biodiesel).	In 2010, C&A's Bio Cotton clothing line was accused to contain genetically modified organic cotton. Investigations showed this was not the case. Still, the firm restated its commitment to sustainability, introduced more internal improvement procedures and cooperation with certification organizations to increase traceability. Each year C&A organizes conferences on organic cotton. Together with Textile Exchange the firm detects common challenges of farmers that make the move to organic cotton. In 2009, C&A and the Shell Foundation established CottonConnect, an organization that helps farmers to develop business models for organic cotton production. In 2011, C&A signed a 3-year contract with Cotton made in Africa, so as to stimulate market forces and thereby improve the livelihoods of numerous African farmers and their families. The farmers receive training and C&A receives a certain amount of cotton supply in return.

Appendix 21

SSCM Indicator		**2000**		**2005**		**2010**

Risk awareness (3)	0	The firm does not publicly report on: a) spend analysis, b) the % of spend covered in the analysis and c) the number of critical suppliers.	0	The firm does not publicly report on: a) spend analysis, b) the % of spend covered in the analysis and c) the number of critical suppliers.	1	C&A uses 3 categories for suppliers.
Risk exposure (1)	1	Supplier country risk determines the number of factory audits SOCAM conducts.	1	Supplier country risk determines the number of factory audits SOCAM conducts.	1	C&A uses an International Control Risk Management System, which tracks possible influences on the company and risks. Also, in its CSR Report 2012 the 'Materiality matrix', shows critical issues as perceived by various stakeholders and the impact of these on the firm.
Risk management (12)	8	Since 1996 C&A publishes a Code of Conduct for the Supply of Merchandise (updated in 1998), this contains clauses on: fundamental human rights, working conditions - (child labour: minimum age 14, forced/bonded labour, minimum wage, collective bargaining: C&A takes an interest if this right is suppressed, but will not get in conflict with the supplier), health & safety, business ethics, environmental standards (C&A recognizes this is a complex issue, especially in developing countries and will only go so far as to what is realizable) and social performance data. Supplier contracts include ESG factors. The company does not publicly report on: a.) EMS certification, b.) environmental performance data, c.) guidance regarding subcontracting, d.) collaborative initiatives.	9	In addition to what was previously reported, C&A also states to provide guidance for subcontracting and indicates that obtaining environmental performance data is limited by the firm's influence on factories' environmental systems. The company does not report on: a.) EMS certification, b.) environmental performance data, c.) collaborative initiatives.	10	In response to increased external stakeholder interest, C&A updates its Code of Conduct for the Supply of Merchandise in 2006. This document elaborates on: child labour (legal minimum ages differ per country, if no standard has been ratified 14 years is still the minimum age, if child labour is detected, suppliers are required to provide education and financial means) and wages & benefits (suppliers are requested to adjust if the legal minimum wage is not sufficient to make a living, overtime and moment of salary payment. Regarding environmental standards, C&A follows the EU General Product Safety Directive and will explain what his entails to suppliers if they lack the necessary knowledge. Additionally, C&A undertook a collaborative initiative by investing in the development of organic cotton farmers that supply their business partners. The company does not report on: a.) EMS certification, b.) environmental performance data.
Monitoring (7)	7	SOCAM is a semi-independent organization that conducts audits for C&A. This includes announced and unannounced visits, in which management and employees are interviewed, both in- and outside the factory site. If necessary corrective action plans are made and preferred over contract cancellation.	7	SOCAM is a semi-independent organization that conducts audits for C&A. This includes announced and unannounced visits, in which management and employees are interviewed, both in- and outside the factory site. If necessary corrective action plans are made and preferred over contract cancellation.	7	SOCAM is a semi-independent organization that conducts audits for C&A. This includes announced and unannounced visits, in which management and employees are interviewed, both in- and outside the factory site. If necessary corrective action plans are made and preferred over contract cancellation.
Capacity building & incentives (2)	0	The firm does not publicly report on: a) capacity-building initiatives or b) incentives for suppliers	0	The firm does not publicly report on: a) capacity-building initiatives or b) incentives for suppliers	2	SOCAM provides counselling services to suppliers, for example to explain overtime calculations, law provisions etc. Through commercial incentives C&A makes clear to suppliers that it is beneficial if they adhere to the standards of their Code of Conduct for the Supply of Merchandise.

ESG integration in SCM strategy (6)	1	C&A trains employees and suppliers in understanding their Code of conduct. The firm does not publicly report on: a) ESG objectives for supply chain management, b) ESG factors in supplier selection, c) incentives for procurement staff, d) access to ESG supplier database, e) ESG-related KPIs.	2	Supplier evaluations form input in C&A's decision to continue supplier relations. The firm does not publicly report on: a) ESG objectives for supply chain management, b) incentives for procurement staff, c) access to ESG supplier database, d) ESG-related KPIs.	4	C&A commits to obtain cotton only from sustainable sources by 2020. Social responsibility is one of the factors included in the evaluation of suppliers. In collaboration with Textile Exchange, organic cotton farmers were assessed on economic, social and environmental KPIs. The firm does not publicly report on: a) incentives for procurement staff, b) access to ESG supplier database
Opportunities (2)	0	The firm does not publicly report on: a) Leveraging opportunities in the SC, b) C2C and lifecycle assessments.	0	The firm does not publicly report on: a) Leveraging opportunities in the SC, b) C2C and lifecycle assessments.	1	Through CottonConnect, C&A supports farmers that want to switch from conventional to organic cotton production. This helps them to save costs and C&A to achieve its objective to make more products with less environmental impact. The firm does not publicly report on: a) C2C and lifecycle assessments.
Measurement (9)	2	C&A visited 1882 production units and terminated 22 contracts. All contracts contain the obligation to adhere to the Code of Conduct. The firm does not publicly report on: a) % of procurement staff trained in ESG, b) % of suppliers with EMS certification, c) % of procurement spent with preferred suppliers, d) GHG emissions from transport, e) supplier water usage, f) outcome of capacity-building initiatives.	3	C&A visited 1412 production units and 50 suppliers were suspended. All contracts contain the obligation to adhere to the Code of Conduct. The firm does not publicly report on: a) % of procurement staff trained in ESG, b) % of suppliers with EMS certification, c) % of procurement spent with preferred suppliers, d) GHG emissions from transport, e) supplier water usage, f) outcome of capacity-building initiatives.	4	C&A visited 1742 production units and 157 suppliers were suspended. All contracts contain the obligation to adhere to the Code of Conduct. Together with Textile Exchange, C&A engages in projects to help 15,000 farmers transfer to organic cotton, for example by giving trainings. The firm does not publicly report on: a) % of procurement staff trained in ESG, b) % of suppliers with EMS certification, c) % of procurement spent with preferred suppliers (C&A has set the goal to spend 30% with A & B-rated suppliers), d) GHG emissions from transport, e) supplier water usage (The Water Footprint Network is helping C&A to gain insight in the water used throughout its supply chain).
Transparency (6)	2	C&A holds supplier conferences to explain its standards, also through the General Information Network (GIN) suppliers have access to the most important social and environmental data they need in order to adhere to the firm's Code of Conduct. The firm does not publicly report on: a) communication of risk awareness, b) GRI standard adoption, c) factory list, d) sustainability performance KPIs of suppliers.	2	C&A holds supplier conferences to explain its standards, also through the General Information Network (GIN) suppliers have access to the most important social and environmental data they need in order to adhere to the firm's Code of Conduct. The firm does not publicly report on: a) communication of risk awareness, b) GRI standard adoption, c) factory list, d) sustainability performance KPIs of suppliers.	4	C&A holds supplier conferences to explain its standards, also through the General Information Network (GIN) suppliers have access to the most important social and environmental data they need in order to adhere to the firm's Code of Conduct. In its CSR report 2012 it partially publishes on risk awareness measurements and adopted the GRI-level B+, third party checked. The firm does not publicly report on: a) factory list, b) sustainability performance KPIs of suppliers.
Collaboration (1)	1	Since 1996 C&A collaborates with the non-profit Grameen, for example by providing technical assistance in the establishment of a weaving center with accompanying laboratory to test the quality of fabric.	1	Since 2005, C&A is member of the non-profit Textile Exchange and collaborates in organic cotton projects.	1	Next to collaboration with NGOs, C&A also organizes supplier conferences to enter into dialogue about issues with them.

Appendix 22

Year	Event
1841	C&A was founded
1861	C&A opens first store
1996	> Code of Conduct for the Supply of Merchandise > Independent auditor Service Organisation for Compliance Audit Management (SOCAM) established
1998	Review of Code of Conduct for the Supply of Merchandise
2001	C&A starts buying organic cotton
2006	C&A launches first organic cotton clothing line
2007	C&A European Environmental Working Group established
2011	> Launch of the Caring and Amazing program > C&A signed a 3-year contract with Cotton made in Africa (CmiA) > C&A commits to Joint Roadmap for the Elimination of Hazardous Chemicals > C&A bans the use of sandblasting

Case study Fast Retailing

Firm

Fast Retailing Co. Ltd (FR) is a Japanese holding firm starting out with menswear shop Oguri Shoji in 1949. From 1985 it started operating as the specialty apparel retailer of the UNIQLO brand that sells casual clothing to men and women. Opening its first store in 1984, in Hiroshima city, nowadays, the firm is the nation's largest apparel retailer and has 843 stores in Japan in addition to an online shop. From 2001 onwards, Uniqlo entered the international market, currently selling garments in a total of 181 stores. Also, the company diversified its product portfolio by acquiring the brands Comptoir des Cotonniers, Princesse tam.tam, Theory and g.u. Uniqlo ranks fourth of all global apparel specialty stores with net sales of $10,691 m. in 2011, of which 73,2% is sold in Japan.

The brand's value proposition is to offer fashionable, good quality, basic casual clothing at reasonable prices – 'Made for all'. In order to fulfill this proposition, the company operates a Specialty store retailer of Private label Apparel (SPA) business model. By integrating all steps of the production process, so design, manufacture, distribution and retail, the firm minimizes waste and prevents losses (Fast Retailing, 2006). This model allows Fast Retailing to continuously improve processes and optimize product quality. Plus, the firm can keep costs down and purchase high volumes since its business model does not depend on fashion, so that "…it books factory capacity in advance, and produces garments at a steady pace year round, rather than rushing to produce trendy items from specialty factories." as Yasunobu Kyogoku, chief operating officer for Uniqlo's U.S. division said (Clifford, 2012).

With the purchase of the brand g.u. in 2006, however, the firm seems to shift to another business model. Where g.u. only determines the concepts and wholesalers translate these into designs. Together the brand and wholesaler will select fabrics and factories and ultimately g.u. buys finished garments from the wholesaler. This is a step away from FR's traditional SPA model (unknown author, 2006). The g.u. brand will focus on the mass market through a low-priced value proposition.

Nowadays, FR has a strategy of global expansion through aggressive M&A. Stores will be opened in new countries like India and more stores will be added in China. Where sales in the latter country are expected to overtake Japanese sales by 2017, due to a slow down caused by an ageing population (NG, 2007). In order to still give Japanese sales a boost, Uniqlo, after settling in the urban areas, will expand into suburban areas in Japan. There are also shifts on the production side. Although China has long be the favorite production country for its cheap labour and improved quality and productivity, in 2008, the Japanese government introduced the China+1 strategy. FR followed by opening an office in Dhaka and signing an agreement with Grameen Bank Group to start operations in its factories in Bangladesh (unknown author, 2011).

Sustainability

Stakeholders

Established in 2001, the Corporate Citizenship / Environmental Action department represented FR's approach to corporate social responsibility. The firm fulfilled its role as a corporate citizen through philanthropic activities for example, by donating garments to Special Olympics Nippon, an international sports organization for mentally challenged children and volunteering activities. With the introduction of the group's CSR department in 2004, FR focused attention on more stakeholders and took up a more responsible approach, which translated in the launch of a Code of Conduct for Production Partners and the kick-off to monitor factories. Two years later, FR publishes its first CSR report in which the firm recognizes its immaturity regarding CSR as compared to other international retailers. As stated by CEO Tadashi Yanai: "we at the FAST RETAILING Group intend to steadily carry out CSR management into the future. Having said that, however, our progress is still less than mature compared to other progressive companies around the world." (CSR Report 2006, p.5).
However, as Mr. Yanai stipulates, the firm's responsibility to society extends beyond volunteering, to also entail customer, shareholder, supplier and employee satisfaction.

This resulted in the launch of a new corporate philosophy in 2008: “Changing clothes. Changing conventional wisdom. Change the world.” Through this philosophy the firm aims to improve quality and efficiency in its supply chain through long-term business relationships with producers in China. Also, by providing training and career development to staff, recycling initiatives and donating clothes in partnership with the UNHCR to help communities and by transparent business reporting targeting investors and shareholders. Together, these activities should lead to FR’s CSR statement: ‘Making the world a better place’, through enriching people’s live through innovative and ethically produced garments.

In its latest CSR Report of 2012, Fast Retailing adds a fourth CSR challenge to the ones it has reported on until then, namely that of the environment. That is, although Uniqlo already had Global Quality and Safety standards in place and started environmental assessments at production partners with the launch of its supplier code of conduct, in 2010, the firm introduced new environmental standards and monitoring so as to ensure compliance.

Socio-economic issues

With regards to issue management, FR, in the beginning of its CSR program, mainly focuses on the socio-economic dimension, as reflected by the special attention it pays to child and forced labour. The approach of the firm is one of legal compliance and monitoring so as to educate production partners on their responsibility. From 2010 onwards the firm seems to shift to somewhat more active issue management, by encouraging supplier ownership through checklists and raising awareness at factories in Cambodia and Vietnam about the importance of compliance. Also, the collaboration with the Grameen Bank to establish a social business in Bangladesh is an example of how Uniqlo attempts to contribute to the prosperity of the local community in which it conducts business and the position of women.

Environmental issues

Only recently, FR seems to put more effort into ensuring that suppliers adhere to environmental standards, thereby emphasizing the advantage of minimizing waste and optimizing productivity in terms of energy use. Although the firm does not report on the use of organic cotton, it has responded to the Greenpeace report on hazardous chemicals by committing to elimination from its supply chain in collaboration with other stakeholder. The statement is however vaguely formulated, repeating the measures FR already has in place to address the issue, without explaining concrete additional actions.

Considering both FR’s approach to stakeholders and issues, it can be concluded that the firm underwent a transition from inactive to reactive with respect to sustainability. Notably, the move abroad seemed to trigger a change in mindset towards more responsibility. Possibly, because operating as an international firm comes with greater challenges with respect to control and risk management. This automatically forces a firm to rethink its approach to responsibilities.

Sustainable Supply Chain Management

As already mentioned before, Fast Retailing’s business model is one of a Specialty store retailer of Private label Apparel. That is, the firm manages the whole production process of garments from design to disposal. Controlling all processes and being a large retailer allows the firm to negotiate high-volume, quality materials at low cost. So that in order to prevent abuse of this position, the business ethics committee designed the Guidelines to Prevent the Abuse of Superior Bargaining Power in order to ensure equal relationships.

The firm has partnerships with producers, 80% of which are currently located in China and the rest in Southeast Asia. In 2000, FR has production offices in Shanghai and Guangzhou so as to improve quality control at Chinese manufacturers. FR does not have many production partners and therefore takes a collaborative approach to issues that may arise in order to nurture the long-term and trustful business relationship. Supply chain management is focused on efficiency and meeting consumer demand in terms of volume and timing. The firm actively refines production flow, supplemental output, capacity adjustments and inventory control. A system that tracks sales data on color and size is used in forecasts and production plans. Moreover, in order to control inventory levels, the order and distribution system are revised (Annual Report, 2000).

Moving further in time, Uniqlo is making great strides and embarks on a journey abroad. With the implementation of a CSR strategy on a group-wide level in 2004 and the introduction of a code of conduct, the firm recognizes that supply chain management extends from an emphasis on quality and safety to compliance at production partners. Thus, focus is on monitoring and raising awareness about compliance at factories. Future plans include more elaborate code of conduct requirements for n-tier suppliers and factories that make non-Uniqlo brand products as well as environmental assessments (FR, 2006).

In 2010, the firm launched the Environmental Guidelines for Fabric Production, which symbolizes a shift to increasing the monitoring of waste water treatment, waste materials and chemicals and health and safety procedures. Inspections were started and the company recognizes the need to collaborate with others in the apparel industry to lobby for more stringent environmental regulations. Uniqlo also incorporates environmental considerations in the design of its products. Moreover, in response to the Greenpeace report on hazardous chemicals, the firm commits to complete elimination of chemicals from its supply chain in collaboration with stakeholders. In response to economic developments concerning wages in China, FR also changes sourcing strategy to less production in China and a move to other Asian countries like Bangladesh and Vietnam. An additional benefit to this is that the company becomes dependent on China and has set the goal to source less than 60% from China in the next years.

Notably after the introduction of the supplier code of conduct the firm started to report well on risk management, monitoring, measurement and to a certain extent collaboration with suppliers and other stakeholders for more sustainable supply chain activities. With regards to the integration of SCM into the firm's strategy, risk awareness and exposure and transparency, however, FR could improve its reporting. This seems to indicate a lack of sustainability positioned at the core of the firm's business.

Business Case for SSCM

Overall, Fast Retailing's sustainable supply chain management has undergone a transition from inactivity in 2000 to reactivity and activity in 2010. The firm has a strong sense of self-awareness of its influence on manufacturers. Several statements were found to contain views on the business case for SSCM. For example Yukihiro Nitta, the FR Group officer in charge of CSR states that: "It's important that our production partners understand that their CSR efforts benefit them. … They increase the appeal of factories for workers, which helps us to recruit outstanding personnel and ensure stable employment." (FR, 2012). This leans towards the third business case in which the firm uses responsible supply chain practices for strategic HR matters.

With regards to the environment, FR seems to take represent the first business case. In that it recognizes the fact that it cannot fully eliminate its environmental impact and therefore improves management efficiency. This leads to a minimization of waste in all business processes and automatically reduces costs.

Although FR does not formulate clear statements about the future, the production of innovative products like Heattech and Dry lines, indicate that the firm is moving in the direction of innovation as a solution to environmental issues. Thereby supporting the latter business case for sustainable supply chain management. In conclusion, now that FR is moving to a more active approach to SSCM and is maturing in its sustainability only time will tell whether the firm indeed represents a business case for SSCM.

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Appendix 23

	2000	2005	2010
Size	$2.147	$3.447	$10.691
Ownership	Privately held		
Internationalization			
# of suppliers	-	50	70
# of countries	-	5?	5?
# of manufacturing facilities	-	-	-
Strategy.	Cost Leadership		
Customer segment	Low / mid, mass market.		
Value proposition	Low price, quality.		
Horizontal differentiation	4	5	6
Horizontal diversification	-	-	-
Channels			
# of stores	421	932	1003
# of countries	1	3	11
DVI	0,59	0,53	0,64
Customer relationship	Self service		
Revenue streams	Asset sale		
Key resources	Physical / Human		
Key activities	Apparel manufacturer, marketing and sales.		
Partnerships	Acquisition of particular resources/activities Reduction of risk and uncertainty		
Cost structure	Cost-driven Fixed and variable costs Economies of scale		

Appendix 24

	2000	2005	2010
Primary stakeholders			
Employees	FR hires people with disabilities. The firm has set the goal to increase training and the number of full-time employees.	FR determines employee compensation based on performance, enhances development, hires people with disabilities, has programs for female employees in place. The firm established Guidelines for the Prevention of Improper Behavior Based on Superior Positions and the Volunteer Club.	FR determines employee compensation based on performance, enhances development, hires people with disabilities, has programs for female employees in place (targeting maternity leave), launched 'No Overtime Days' to avoid excessive overtime and increase productivity and established the Volunteer Club.

Suppliers	FR has partnerships with factories to ensure quality and minimize prices. The firm takes responsiblity for the risks related to volume, so that its partners can contribute proactively.	FR builds longterm partnerships with suppliers to fulfill its CSR goals.	FR builds long-term trustful relationships with its small supply base. It engages in joint problem solving, whilst upholding working conditions and reducing environmental impact at factories. Partners are selected based on the degree to which they share FR's philosophy.
Customers	FR is focused on customer satisfaction and has systems in place to receive feedback. Customers are interested in recycling clothes.	FR is focused on customer satisfaction and has systems in place to receive feedback, especially on product quality.	FR is focused on customer satisfaction and has systems in place to receive feedback, especially on product quality. UNIQLO launched two clothing lines that allow customers to be more environmentally friendly (HeatTech and Dry-Line).
Investors	FR reports on information relevant to shareholders.	FR commits to efficient business with high returns and transparent disclosure of its performance.	FR commits to efficient business with high returns and transparent disclosure of its performance.
Competitors	-	-	FR commits to set industry-wide environmental standards together with other firms, since factories produce for a number of firms.
Secondary stakeholders			
Government	-	The firm's code of conduct requires employees and supplier to act in accordance with the law, in terms of ethical and environmental standards.	The firm's code of conduct requires employees and supplier to act in accordance with the law, in terms of ethical and environmental standards.
NGOs	UNIQLO makes in-kind and cash donations to NGOs.	UNIQLO makes in-kind and cash donations to NGOs.	FR established a partnership with Grameen Bank for a social business in Bangladesh and a global partnership agreement with the UNHCR to donate garments and share business expertise with refugees.
Community	Upon request of customers, UNIQLO started recycling fleece clothing. Also, it supports the Setouchi Olive Foundation.	Upon request of customers, UNIQLO recycles fleece clothing. Also, it supports the Setouchi Olive Foundation. The firm states that it can contribute only little to its community, but does so in a step-by-step fashion.	FR recycles clothing, works with the United Nations High Commissioner for Refugees (UNHCR) to donate garments to people in need, and protecting the environment in cooperation with major NGOs. FR also contributes to the education of individuals, who can then earn their own income through social business.

Appendix 25

Socio-economic issues			
Bonded labour	-	FR prohibits forced labour. In a factory in China workers had to ask permission to go to the bathroom, have a break or drink water. The factory was requested to stop these rules and FR found adjustments were made in a check-up.	FR prohibits forced labour.
Child labour	-	FR prohibits child labour (minimum age 15 years)	FR pays special attention to child labor during pre-contract monitoring. In 2009 FR came across workers aged 16 years and required the respective factory to implement systems to double-check worker ages. Despite improvements, the factory had document deficiencies, consequently FR reduced orders. In 2010 FR encountered a case of child labour in one of its factories, although this was merely seasonal work, FR requires factories to verify employee ages, consequently orders were reduced.
Migrant / women / home workers	-	FR prohibits discriminiation on the basis of race, gender, color, nationality, religion, age, etc.	FR prohibits discriminiation on the basis of race, gender, color, nationality, religion, age, etc. The Grameen-UNIQLO partnership empowers women and girls in Bangladesh to earn their own incomes.
Wages	-	FR pays wages that comply with regulations.	FR pays wages that are 'fair' and 'competitive', however, it does not refer to living wages in its code of conduct. In response to an email from NGO Measureup, the firm states to have and continue to undertake efforts to look into the issue of living wages. In 2009 FR came across a case of falsified reporting, where hours reported did not match with pay statements. FR requested the factory to publish correct time sheets and compensate affected workers, FR reduced orders. FR detected a factory where employees worked too many days in a row (14-20 days) and required the respective factory to manage working hours. Follow-ups showed improvements.
Freedom of association	-	Production partners must respect the right to freedom of association	Production partners must respect the right to freedom of association
Health & Safety (sandblasting)	-	Production partners are required to provide a safe and healthy working environment. For Uniqlo's employees, the firm provides childcare, prohibits overtime and provides information on mental healthcare. No information is provided on whether the firm is active in health & safety at production partner factories.	Production partners are required to provide a safe and healthy working environment. This is also monitored in the firm's environmental guidelines. Additionally, FR raises awareness at production partners in Vietnam and Cambodia about its CSR standards, thereby contributing to safer workplaces in these countries. Through a checklist factories are motivated to take action regarding compliance issues such as safety standards.
Environmental issues			

Chemicals	-	Uniqlo has Global Safety and Quality Guidelines with which production partners have to comply.	FR responded with a commitment to eliminate hazardous chemicals from its supply chain in reaction to the report "Dirty Laundry 2: Hung Out to Dry - Unravelling the toxic trail from pipes to products." released by Greenpeace International on August 23, 2011. It was claimed that samples of Uniqlo stores in Moscow, Tokyo and Hong Kong contained the hazardous chemicals nonylphenol ethoxylates (NPEs). However, as Greenpeace revises: "the levels of NPEs detected in all articles are not known to constitute any direct health risk to the wearers of the clothing." FR agrees with Greenpeace's conclusion on this matter. In addition to the Global Safety and Quality guidelines, its Production Partner Code of Conduct and environmental guidelines, the firm now also actively commits to collaborate with other stakeholders on the complete elimination of chemicals. So far no action plan has been formulated.
Water	-	-	FR encountered plants that were discharging wastewater from boilers to rainwater ditches. The firm requested the plants made improvements, which consequently happened. The firm monitors third-party providers, so as to control environmental compliance, also regarding water treatment.
Climate change (cotton/energy)	-	-	FR takes a waste-minimization and efficiency approach towards energy, through adopting energy-saving measures at each stage of the production process.
Other	-	-	Concerns about mulesing sheep have led FR to ask merino wool suppliers to phase out sourcing wool from farms that engage in the practice of mulesing sheep.

Appendix 26

SSCM Indicator		**2000**		**2005**		**2010**
Risk awareness (3)	0	The firm does not publicly report on: a) spend analysis, b) the percentage of spend covered by its spend analysis, c) critical suppliers.	1	FR reports to source 90% of products from China. The firm does not publicly report on: a) the percentage of spend covered by its spend analysis, b) critical suppliers.	1	FR reports to source 80% of products from China. The firm does not publicly report on: a) the percentage of spend covered by its spend analysis, b) critical suppliers.
Risk exposure (1)	0	The firm does not publicly report on: a) formalized sustainability risk identification analysis.	0	The firm does not publicly report on: a) formalized sustainability risk identification analysis.	0	The firm does not publicly report on: a) formalized sustainability risk identification analysis.

Risk management (12)	0	The firm does not publicly report on: a) Supplier code of conduct, b) environmental standards, c) human rights, d) working conditions, e) health & safety, f) business ethics, g) EMS certification 14001 h) environmental performance data, i) social performance data and j) guidance concerning subcontracting, k) collaborative initiatives, l) contract clauses including ESG factors.	7	In 2004, FR established the Code of Conduct for Production Partners, this contains clauses on: human rights, working conditions, health & safety, business ethics. The firm introduced environmental guidelines and the code of conduct applies to all suppliers. The firm does not publicly report on: a) EMS certification 14001 b) environmental performance data, c) social performance data and d) guidance concerning subcontracting, e) collaborative initiatives.	11	In 2008, FR reviewed its Code of Conduct for Production Partners and started monitoring in 2009. The document contains clauses on: human rights, working conditions, health & safety, business ethics. The firm introduced Environmental Guidelines for Fabric Production, to extend environmental standards to production facilities. FR reports on water usage by sewing facilities and the most common social compliance violations. Also, the firm intends to conduct pre-contract monitoring and collaborates with suppliers to fine-tune orders with their working conditions. The CoC applies throughout the supply chainThe firm does not publicly report on: a) EMS certification 14001.
Monitoring (7)	0	The firm does not report on a) third-party audits, b) on-site visits (unannounced), c) interviews with management, d) interviews with workers (on-site), e) interviews with workers (off-site), f) corrective action plans.	3	FR hires two independent auditors, these make announced visits and define plans for improvement if needed. The firm does not report on a) on-site visits (unannounced), b) interviews with management, c) interviews with workers (on-site), d) interviews with workers (off-site).	7	FR uses external parties to monitor partner factories. These make (un)announced visits, interview management and employees, both on- and off-site. In case of infringements an action plan is formulated.
Capacity building & incentives (2)	0	The firm does not publicly report on: a) capacity building initiatives, b) incentives for suppliers.	1	FR will reduce or terminate transactions with partner factories that do not improve conditions in case violations are detected. The firm does not publicly report on: a) capacity building initiatives.	2	FR introduced self-assessment tools to suppliers, sends Takumi; experts who advice on technicalities and human resource management. Contracts are revised in case partner factories are assessed with gross violations.
ESG integration in SCM strategy (6)	0	The firm does not publicly report on a) ESG objectives for SCM, b) ESG factors in supplier selection, c) incentives for ESG for procurement staff, d) access to ESG supplier database, e) training on ESG factors in procurement, f) ESG-related KPIs.	1	FR states to plan environmental impact reduction throughout its supply chain. The firm does not publicly report on a) ESG factors in supplier selection, b) incentives for ESG for procurement staff, c) access to ESG supplier database, d) training on ESG factors in procurement, e) ESG-related KPIs.	2	FR set the goal to reduce emissions of hazardous chemical substances in its supply chain. The firm conducts pre-monitoring audits at potential partners. The firm does not publicly report on a) incentives for ESG for procurement staff, b) access to ESG supplier database, c) training on ESG factors in procurement, d) ESG-related KPIs.

Opportunities (2)	1	In 2001 FR initiated a recycling program in Japan. The firm does not publicly report on: a) leveraging opportunities in the SCM.	2	Together with partner Toray Industries, the firm introduced HeatTech; a fabric that keeps people warm and allows them to turn their heaters lower, thereby contributing to Japan's energy efficiency. Also, the firm continues its fleece recycling program.	2	Together with partner Toray Industries, the firm introduced HeatTech; a fabric that keeps people warm and allows them to turn their heaters lower, thereby contributing to Japan's energy efficiency. Also, the firm states to investigate each part of its supply chain to reduce its environmental impact.
Measurement (9)	0	The firm does not publicly report on: a) % of suppliers audited, b) % of 'prime contact' procurement staff trained on ESG issues, c) % of supplier contracts including ESG factors, d) % of suppliers with EMS certification, e) % of suppliers' contracts terminated, f) % of procurement spent with preferred suppliers, g) GHG emissions from transportation, h) supplier water usage, i) outcome of capacity building activities.	3	59 partner factories were audited, all suppliers sign FR's code of conduct and no supplier was subject to a 2nd-round follow up after receiving the lowest assessment. LF reports the number of audits that were conducted. The firm does not publicly report on: a) % of 'prime contact' procurement staff trained on ESG issues, b) % of suppliers with EMS certification, c) % of procurement spent with preferred suppliers, d) GHG emissions from transportation, e) supplier water usage, f) outcome of capacity building activities.	6	188 partner factories were audited, all suppliers sign FR's code of conduct, 4 suppliers received E-grades and improved their situation. The firm reports 13,903 tons of CO2 emission (distribution in Japan) and 5,846,711 tons (sewing factories). One factory was found to miscalculate wages for piece-rate workers, FR sent staff and the factory improved calculations. The firm does not publicly report on: a) % of 'prime contact' procurement staff trained on ESG issues, b) % of suppliers with EMS certification, c) % of procurement spent with preferred suppliers.
Transparency (6)	0	The firm does not publicly report on: a) standards for suppliers, b) communication of risk awareness, c) communication of risk management measures, d) GRI standard adoption, e) factory list, f) sustainability performance KPIs of suppliers.	2	In 2004, FR introduced the Code of Conduct for Production Partners and Guidelines for the Prevention of Improper Behavior Based on Superior Positions, so as to regulate the imposition of unreasonable terms that would not be accepted in an equal partnership(s). The firm does not publicly report on: a) communication of risk management measures, b) GRI standard adoption, c) factory list, d) sustainability performance KPIs of suppliers.	3	In 2008, FR reviewed its Code of Conduct for Production Partners and the firm has in place guidelines to ensure its staff does not require unreasonable orders from suppliers. CSR staff visit factories to ensure understanding of FR's standards. In 2010/2011, FR held supplier conventions to discuss improvements in labour conditions. The firm does not publicly report on: a) GRI standard adoption, b) factory list, c) sustainability performance KPIs of suppliers.
Collaboration (1)	1	FR works with NGOs to support refugees and victims of natural disasters. Also, the firm starts to support the Setouchi Olive Foundation.	1	FR engages in a recycling program in collaboration with the UNCHR and nonprofit Japan Relief Clothing Center.	1	FR together with Grameen Bank has started a social business in Bangladesh to generate jobs and improve living standards. Also, the firm cooperates with suppliers to ensure orders match with production capicity and do not lead to excessive overtime.

Appendix 27

Year	Event
1949	Oguri Shoji shop opened
1985	UNIQLO brand launched
2001	Corporate citizenship / Environmental Action Department established.
2002	Official partner of Special Olympics Nippon
2004	Code of Conduct for Production Partners FR starts monitoring at production factories. Group's CSR Department Establish Fast Retailing Volunteer Club
2005	Holding company structure + established a CSR committee.
2006	First CSR Report published Recycle all products sold at UNIQLO Launch of HeatTech clothing line
2007	Environmental Policy, FR Environmental Standards
2008	New evaluation criteria of production partners so as to include other Group companies. Launch of new corporate philosophy the 'FR Way'. Start of operations in Bangladesh.
2010	Environmental Guidelines for Fabric Production Launched a social business to help address social issues such as poverty, sanitation and education in Bangladesh through the planning, production and sales of clothing.

Case study H&M

Firm

Hennes & Mauritz AB (H&M) was established in 1947 in Sweden by Erling Persson. Although the firm is publicly traded, it remains controlled by the Persson family. H&M sells clothing to women, men and children by offering 'fashion and quality at the best price'. In 2011, the firm reported net sales of $15,854 million, making it the second largest specialty apparel retailer in the world after Inditex. H&M sells cosmetics, accessories and shoes through its 2472 stores (located in 43 countries), mail order and online shop channels. In addition, H&M has 100 design centers and 16 production offices, for which it employs a total of 87,000 people. Through its low cost strategy, H&M targets mainly young women that wish to wear fashionable clothing coming right off the runway. Since 2008 the firm has extended its portfolio with five new brands, targeting different styles and customer segments. Overall, H&M offers clothing for the mass market and can be characterized as having a medium horizontal differentiation. The firm does not own any manufacturing factories, which explains the low degree of vertical integration, in 2011 this was 0.06. All products are sourced from around 750 suppliers, which in turn own around 1650 production units worldwide. Consequently, the firm faces high variable costs and knows a high degree of internationalization.

Sustainability

H&M's approach to issues has undergone a significant change over the past decade. Although the firm already published a Code of Conduct in 1997, only five years later it started reporting on corporate social responsibility. Reaching out to stakeholders through the new concept of stakeholder dialogue, H&M was early to have an active approach to sustainability. Recognizing that the production of garments comes with numerous issues, it started investigating underlying factors and possible improvements, mainly focused at socio-economic issues.

Moving forward, by 2005 H&M had significantly increased collaboration with other stakeholders and started to take an almost proactive approach. Through audits, evaluations and workgroups the firm gained a better understanding of the issues that appeared in its supply chain. As emphasized by an external comment from Joel Lindfors: “Overall, H&M responds properly to cases of violations,... What would make H&M’s ambitions really hold true would be if they could go beyond this, and make sure that violations don’t happen in the first place. A proactive, structural approach, starting from the workers’ perspective, is what can make H&M stand out.” (H&M, 2005, p.46).

So that by 2010 H&M shows a more proactive attitude towards sustainability. Now taking the lead regarding issues such as the use of chemicals and sandblasting, whilst continuing investigations into working conditions in producing countries like Cambodia, Bangladesh and China. Still, the firm highlights the many challenges and limitations of its individual acts and the need to act collaboratively.

Stakeholders

In 2000, H&M was relatively new to the concept of stakeholder management. However, the firm had already been in contact with the majority of its stakeholders in terms of feedback and dealing with business issues. So its generic stakeholder approach can be typified as active. Throughout time, the firm has increased stakeholder collaboration, so that the firm has shifted towards a more active approach. That is, the firm increased dialogue with various stakeholder groups, collaborates with for example competitors on issues that span the industry, takes a more strategic approach towards issues so as to fulfil its sustainability mission.

With respect to employees, H&M states to provide fair wages and allow freedom of association. Moreover, it has signed contracts with trade unions on working conditions of its employees. Additionally, employees are engaged in sustainability, through environmental trainings and the design of an organic cotton collection. The firm’s engagement with suppliers has shifted from a monitoring to a capacity-building and supplier ownership approach, for more details see the section below on sustainable supply chain management. The interaction with customers has also changed, from one that focused on product quality and safety to a responsibility for customers to trigger more sustainable lifestyles. The design of the ‘Garden Collection’ and the blending of organic cotton into garments are examples of how H&M engages customers into sustainability. Besides, customers can purchase products that contribute to societal projects like WaterAid or HIV/Aids. At the same time, the firm inspires consumers to reduce their environmental impact when washing clothes. H&M is publicly owned and communicates with investors through quarterly and annual reports. Also, the firm has been publishing CSR reports since 2002 and is listed on several sustainability indices. The firm has a long tradition of engaging with industry peers on labour rights issues and environmental matters such as chemicals. Being a member of numerous multi-stakeholder initiatives also exposes the firm to interaction with other brands and retailers on shared issues in the supply chain, for example water consumption, which is the focus of the BSR Workinggroup on Water Quality.

H&M’s engagement with the government has been steadily active over the past decade. As the firm goes beyond what is legally required and participates in meetings with national and international authorities. Also, concerning chemical regulations, the firm actively monitors changes in the law and adjusts its policies accordingly, while taking part in discussion on regulations so as to act by the precautionary principle. H&M also has supported NGOs in research and collaborates with them either in projects, partnerships or multi-stakeholder initiatives on supply chain related issues. The firm is present in communities, through projects related to its code of conduct and a strategic partnership with UNICEF to address the HIV/Aids issue.

Socio-economic issues

Bonded labour

In response to the report published by NGO SOMO, and international media attention for the Sumangali scheme used by supplier KPR Mill, H&M decided to stop business relations with the supplier. As stated by the company, it was not possible to discuss the issue of Sumangali with the supplier, so that the trust that was necessary to continue business relations was lacking (SOMO, 2011). The Clean Clothes Campaign judged the firm's decision to stop orders as irresponsible, since this will not help the girls to get out of their situation (CCC, 2010).

Together with other firms, H&M is signatory to a statement in response to the SOMO report, in which it commits to recognize the role it plays to eliminate labour right issues. H&M has started to map all spinning mills used by suppliers in India and Bangladesh. Also, the firm is involved in numerous multi-stakeholder initiatives, like the newly established Garment Sector Roundtable India. Moreover, H&M joined the Brands Ethical Working Group, a group of brands sourcing from India in which the issue of Sumangali is discussed and which is part of the Tirupur Stakeholders Forum.

Women workers

H&M upholds the principle of non-discrimination and educates suppliers with respect to this. The firm checks whether suppliers do not inaccurately dismiss pregnant women. In 2005 trainings were organized on maternity leave for both factory management and women workers. Through the Bangladesh Development Program, womens' positions are improved, by providing grants to female students and the implementation of a helpline for women who are victim of violence or discrimination. Additionally, H&M set up the Women in Retail project in Saudi Arabia to enhance their health and wellbeing.

The majority of the workforce in the garment sector is female and often they work at home, whilst taking care of the children. H&M allows home work under certain circumstances, since it generates a vital source of income for women. This is the case if products require handicraft, such as embroidery, which cannot be done in a factory.

Wages

In 1997 H&M published its first Code of Conduct (CoC), which contains a clause stating that: "The legal minimum wages should be a minimum, but not a recommended, level." (CSR Report 2002, p.77). Since the introduction of the CoC H&M has considerably improved salary payment at suppliers, for example by consulting suppliers on how to keep records, which in turn makes it possible for auditors to check compliance. In 2005, H&M joined the MFA Forum to address issues related to working conditions in Bangladesh, such as low minimum wages. Throughout the years, H&M has upgraded its standards with respect to wages. That is, in its CoC 2010, H&M states that suppliers must pay: "at least the statutory minimum wage, the prevailing industry wage or the wage negotiated in a collective agreement, whichever is higher…" (p.3). Thus, recognizing the validity of wage levels established through collective bargaining. Current debates surround the appropriate level of a 'living wage', which meets the basic living needs of workers. This is why H&M joined the Fair Wage Network, in order to discover how it can contribute to fair wages. Also, the Fair Labor Association conducts a study after the wages paid in 200 factories that supply to H&M (CSR Report, 2011). Next to that, the firm recognizes the difficulty in assessing whether farmers taking part in their organic cotton project receive fair wages, as Henrik Lampa states: 'We don't have direct relationships with farmers. The spinner is the one who buys the cotton. When we place an ordere, it's at the garment maker, who in rare cases can be integrated with the spinner.' (Mulder, 2012).

Wages in Bangladesh – public policy and workers' rights.

In Bangladesh there is no automatic system for revising the minimum wage, so until 2010 the last revision was done in 2006. H&M, together with several other large corporations, requested the Bangladeshi government to increase the minimum wage for textile workers, which it did in 2010. Recently, however, numerous garment industry labour union leaders and workers protested again, as living costs have been rising, but the government has not increased wages. In response, manufacturers closed down their facilities and the protests were violently repressed by the Bangladesh police who arrested three labour leaders. Although facilities have reopened, factory owners refuse to pay the protesting employees and enter negotiations for higher wages. Bangladesh is highly dependent on the garment industry for its welfare, as it is the country's largest export product. Thus, producers fear that a wage increase will harm the country's competitive position as compared to Vietnam and other countries that have more efficient production lines (Bajaj & Manik, 2010). The Clean Clothes Campaign urges companies to ensure living wages are paid at all manufacturing facilities and that authorities are stimulated to raise minimum wage levels (CCC, 2012). In 2011, H&M organized a multi-stakeholder conference in Dhaka to discuss possibilities to improve relations between workers and management. As a result, the firm is now piloting a project at five suppliers to establish workers' committees through, which can negotiate with management on better working conditions (H&M, 2012)

Wages in China – increasing transparency

One of the main issues in China is overtime, which in turn relates to wage levels. Meaning that workers choose to work excessive hours, since they will then earn more. In 2008, China introduced a new labour law, which increased minimum wages, however, still workers engage in overtime. Also, it remains difficult for employees and auditors to know what salaries are actually paid out. Due to a complex system of piece-rate wages and bonuses that differ per supplier. H&M attempts to ensure that workers receive the right wage and to improve transparency concerning wage systems. The firm has given training to 40 suppliers and set up an External Support Program through which suppliers are advised on proper HR systems that increase transparency on salary and working hours (H&M, 2012).

Wages in Cambodia – improving working conditions

In February 2010, thousands of Cambodian garment workers went on strike in order to demand better working conditions. This ended up in a shooting and wounding of protestors, which led several brands (amongst which H&M) to demand the Cambodian government to conduct an investigation. In 2011, almost 300 workers in Cambodian garment factories passed out, of these factories five were producing for H&M. In response, H&M hired an external expert to investigate the reasons for the fainting incidents (McPherson, 2011). It was shown that the fainting was a result of inadequate grievance and feedback mechanisms, overtime and psychological problems (Andrew, 2011). What is more, negotiations about working conditions with local unions are difficult due to the fact that many factories are managed by Chinese or Taiwanese owners. Additionally, the production system is complex with a workforce coming from a diverse range of countries (ten Have, 2011).

In February 2012 a people's tribunal was held in Cambodia where 200 workers testified about their working conditions and international apparel firms were called upon to address the living wage issue. The CCC found it 'disappointing' that H&M did not take part in the panel. Instead, the firm decided to supply information about how it would address the issue (CCC, 2012). Interestingly, H&M also does not address the influence of its pricing strategies on the wages of factory workers. Whilst "A spokeswoman for H&M, Malin Bjorne, said the Swedish company was willing to pay more for clothing to help support higher wages. It is unclear whether other companies would do the same." (Bajaj, 2010). H&M will discuss an action plan to improve the situation in Cambodia with the Better Factories Cambodia project, in which it has participated since 2005 (H&M, 2011). As suggested by NGO Labour Behind the Label, a first step in the right direction would be for H&M to define the concept of a living wage and update its Code of Conduct accordingly (Labour Behind the Label, 2012).

Freedom of association

H&M upholds the right to freedom of association and collective bargaining. In Bangladesh' Export Processing Zones this was prohibited, therefore the H&M entered into dialogue with the Bangladesh Export Processing Zone Association since 1999. Now, members of the association are required to allow Workers Welfare Committees, in order to facilitate the transition to labour unions under the law in 2004. H&M organized workshops and requires new suppliers to implement the same measures.

In China the law only allows employees to be represented by the state-controlled national labour union. In 2006, the FLA conducted unannounced, independent audits at Chinese factories producing for H&M in order to further understand the issue. Throughout the years, H&M has gained insight into the practice of unionization and with the introduction of its Full Audit Programme has improved its methodology, by assessing whether workers indeed have access to trade unions, instead of assessing whether suppliers uphold the right to association. H&M states to believe that 'sustainable wage development is achieved by negotiations in good faith between employer and employees' organizations.', thus the firm is in dialogue with industry associations.

Health and safety

Improving safety standards in Bangladesh

In 2010, in Bangladeshi factory Garib & Garib Newaj producing garments for H&M at least 21 workers died after a fire broke out at night when workers attempted to fulfil orders. H&M stated that audits of the factory did not reveal serious problems, except for two covered fire extinguishers which were promptly adjusted. The Clean Clothes Campaign reacted by saying that audits are not enough and a more structural approach is required, which involves the workers and labour unions (CCC, 2010). H&M is a small buyer from the factory and after the incident visited the supplier to enter into dialogue with management and authorities like the Bangladesh Garment Manufacturers and Exporters Association and local unions. H&M states that only by continuing its presence in Bangladesh it will help the country improve working conditions as it has done over the years that H&M has audited factories (Hickman, 2010).

H&M requested NGO Save the Children Sweden Denmark (SCSD) to assess what compensation was needed for family members of the deceased and injured workers. According to CCC, however, there was no inclusive process to determine compensation and the NGO urged H&M to negotiate with unions and worker representatives. Moreover, compensation was not based on the loss of future income of the deceased worker. ITGLWF has organized a meeting on the Garib Garib case, which H&M will attend. Additionally, the firm urged all Bangladesh suppliers to review safety standards and has reserved 1 million Swedish Krona for fire prevention measures, like experts on electricity safety and fire drills and trainings for workers (CCC, 2012).

Sandblasting

In 2006, reports were published showing the harmful effects of sandblasting on worker's health. In response, H&M put in place safety restrictions that would protect workers engaged in the practice of sandblasting and trained suppliers accordingly. The practice, however, remained a risk to its supply chain, which is why in 2010, H&M, together with Levi Strauss & Co, was one of the first brands to announce a global ban on sandblasting for all products. As frontrunners regarding this issue, the firms support ITGLWF's call to other apparel brands to follow their example, so as to eliminate the practice from the whole apparel supply chain. Despite the ban, H&M decided to continue safety audits at suppliers, so as to make sure that health and safety standards are upheld. This is important, since the recently published report by NGOs CCC and Labour Behind the Label showed that suppliers secretly continue to engage in the practice (Riddselius & Maher, 2012).

Environmental issues

Chemicals

H&M has a long tradition in eliminating the discharge of hazardous chemicals in the production process. The firm takes a precautionary stance to the issue and requires suppliers to adhere to a list with restricted substances. By engaging with authorities the firm ensures that the list remains updated. Also, in 2001 H&M collaborated with other brands to define industry standards for chemical restrictions. Harmonization improved further with the introduction of REACH.

In July 2011, Greenpeace released a report on the discharge of hormone-disrupting chemicals by a Chinese supplier. H&M confirmed to have a business relationship with the supplier, however, only with separate entity Ningbo Youngor Yingchen Uniform, which did not pollute the Fenghua river. Although H&M stated that its code of conduct only applies to its direct suppliers, the company says to be concerned about the discharge of chemicals into the environment and "That is why we run a set of activities and procedures to limit and eliminate hazardous chemicals and improve overall environmental standards throughout our value chain and the entire industry." (Watts, 2011). Positively, Youngor has agreed to collaborate with the environmental working group of Greenpeace to address the problem. Additionally, Greenpeace challenges H&M and the other leading apparel firms to adopt more extensive environmental policies and standards regarding the discharge of chemicals in the production process. Together with several other brands, the firm committed in that same year to a Joint Roadmap towards Zero Discharge of Hazardous Chemicals in the industry by 2020 (ZDHC, 2012).

Water

Although H&M took an inactive stance towards gathering data on water usage in 2000, nowadays the company is committed to water saving initiatives. In 2005 the firm introduced the cleaner production project with which it helps suppliers to reduce water pollution in fabric dyeing and wet processes. Showing them how to save water and energy and therefore costs, is a strong motivator for suppliers to collaborate. As a consequence, new denim production methods led to a saving of 50 million litres of water. On the other hand, there are countries in which water is not paid for, thereby making it difficult for H&M to convince suppliers to participate in the program. Another way in which H&M promotes water saving is through the Better Cotton Initiative, since organic cotton production requires less water than conventional cotton production (H&M, 2011).

Climate change (cotton and energy)

H&M has addressed the issue of climate change ever since it started reporting on greenhouse gas emissions from own operations in 1999. From 2005 onwards, the firm decided to reduce emissions relative to sales by 10% in 2009 and committed to a minimum use of renewable energy in its operations. After reaching its target, H&M increased the percentage of emission reduction and included other greenhouse gases like methane and nitrous oxide. Additionally, H&M is active in the field of energy efficiency and launched Supplier Energy Efficiency Programmes, which link local energy providers with suppliers to detect areas of efficiency improvement. First data show that efficiency has improved by 20% (H&M, 2011).

In 2010, H&M was the largest consumer of organic cotton and the firm has set the goal to source all cotton from sustainable resources by 2020. In order to promote more sustainable production of conventional cotton, H&M is part of the Better Cotton Initiative, which was responsible for educating a total of 68,000 farmers on sustainable practices. The company uses 15,000 tonnes of organic cotton. Also, H&M is part of the Sustainable Apparel Coalition (SAC), which develops a social and environmental impact index of clothing and footwear products. In 2012, the SAC launched the first version of the Higg-index and H&M tested the index with two suppliers. The firm will continue testing the index on more products and in the future publish scores (Helmersson, 2012).

Sustainable supply chain management

Over the years H&M has expanded its global reach, which was accompanied by an increased responsibility for the numerous suppliers in Asia and Europe from which it sources garments. Through its sourcing activities, the company recognizes that it contributes to the economic wellbeing of more than a million employees. Also, the firm includes sustainability in its emphasis on quality and wishes for customers to wear clothes that are made under good social and environmental conditions. Therefore, H&M designers incorporate sustainability in their design, ultimately creating clothes that customers can wear again throughout several seasons.

In 1997, the company first published a code of conduct and a year later started to map its supply chain and conduct the first inspections. Going into more detail, suppliers were audited on documentation of wages, working hour records, age certificates and employment contracts. From 2000 onwards, H&M enters into dialogue with suppliers, introduces training for them and includes environmental requirements in audits. Around 2005, the firm moves even further and starts capacity-building programs through its Full Audit Program (FAP), moving from a policing role to one that helps suppliers sustain the improvements they have made through their management systems, see
. Nowadays, H&M focuses even more on capacity-building programs, supplier ownership, worker empowerment, responsible purchasing and auditing second-tier suppliers. To do so, the firm has recently adopted a stronger audit methodology to better monitor freedom of association and bonded labour.

Box 2Details of the Full Audit Program

FAP in brief

- Searching to find the causes rather than just the violations.
- From a policing approach to improvements sustained by effective factory management systems.
- Fewer but more comprehensive audits.
- Extended audit form containing more than 300 items.
- Worker interviews are an integrated part of each FAP audit.
- A FAP audit takes two to seven working days to complete.
- Issues that depend on poor routines are included in management action plans (MAP).
- Continuous follow-up of suppliers’ action plans

Concerning awareness, H&M conducts regular supplier evaluations every season and has categorized suppliers according to their degree of compliance with the code of conduct. From the beginning onwards, H&M has many risk management measures in place, which can be explained by the fact that the firm is fully dependent on external parties for the delivery of its products. Therefore, a smooth process that constitutes proper social and environmental conditions is of utmost importance. Through audits and contractual agreements H&M attempts to ascertain that suppliers abide by their standards. Next to factories, the firm also audits mills and weaving centers further down the supply chain. Additionally, the FLA conducts independent audits, H&M’s brand Cheap Monday is part of the Fair Wear Foundation, which also monitors suppliers, and all garments made in Cambodia are monitored by Better Factories Cambodia. Whenever possible, H&M communicates pre-orders to suppliers 6 to 12 months in advance to plan purchasing. Although the fast fashion market requires late changes to orders, such planning can make it easier for suppliers to adjust production processes accordingly. However, the company took a reactive stance towards ISO 14001 standards, as it states consumers are not interested in this. Also, already before 2002 H&M had extensive monitoring systems and several capacity building programs in place, which it has improved over time.

With the introduction of a new supplier relationship strategy in 2010 and the index of code of conduct in 2011, ESG became further integrated in H&M's sourcing practice. In order to track supplier performance, especially in terms of sustainability requirements, H&M introduced an index-based grading system to compare suppliers. Through this system, buyers can determine whether they source products from certain suppliers and H&M is able to more effectively communicate to suppliers how they can improve their sustainability performance. Another method is joint assessments, where suppliers together with H&M staff conduct an audit and often reveal areas of improvement. Although the firm only exhibits light tendencies to a life cycle perspective, over the years it has significantly improved measurement of supplier performance. Despite its inactive attitude towards data gathering about water usage in the supply chain, also in recent years, with the more pronounced threat of resource scarcity and increasing price levels, H&M has committed to a project to assess its water use. Additionally, it has communicated bold goals to source more organic cotton and cut GHG emissions. Clearly, the firm was new to the concept stakeholder collaboration in 2002 when it reported the results of two master theses on the topic, nowadays, H&M takes part in numerous initiatives and states that it is the only way to address some of the issues in the supply chain.

Looking at the overall SSCM assessment of H&M it can be concluded that the firm started off with a reactive/active SSCM approach in 2000 and has developed into one that is proactive. Thus, the firm underwent a transition that took the track of internal alignment on to external co-alignment, in which it has taken the first steps to integrate CSR into its business model and strategically address issues. However, this is only a recent change and the future will tell whether the firm will continue successfully on the road it has taken.

Business case for SSCM

Overall, H&M shows a strong financial performance, with an increase of net profit over the years 2000-2011 to $3,016 million. Also in terms of social performance the firm shows a strong development, from 2000 onwards it was already active in sustainable development activities in its supply market in Bangladesh. Throughout time, H&M has increased the number of strategic partnerships with NGOs and started activities in numerous other countries. Recently, H&M has also initiated a project that targets the socio-economic issue of the Sumangali scheme in India, by providing education to 9000 women who would otherwise end up working under the scheme. Participation in the Better Cotton Initiative is another way in which H&M contributes to the social and economic development of communities in its supply chain. Overall, however, there is a lack of social performance data, therefore making it difficult to assess the degree to which the firm's social activities have led to increases in the triple bottom line. Lastly, in terms of environmental performance, from 2000 onwards this has been the main focus of H&M. As a learning organization, H&M has gained knowledge about its environmental performance and managed to reduce the amount of GHG emissions with 5% relative to sales in 2011. Also, although at first the firm did not measure the amount of water used in the process of production, in 2011 H&M reports that it saved 300 million litres of water in denim production.

In conclusion, H&M shows support for the active/proactive business case of sustainable supply chain management. As it results in an improved triple bottom line and underwrites the strategic importance of managing your supply chain responsibly.

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Appendix 28

	2000	2005	2010
Size	$5.171	$8.824	$15.854
Ownership	Publicly held		
Internationalization			
# of suppliers	900	700	700
# of countries	-	>22	30
# of manufacturing facilities	-	-	-
Strategy	Cost Leadership		
Customer segment	Low / mid, mass market.		
Value proposition	Low price, quality, speed, newness, design.		
Horizontal differentiation	5	5	5
Horizontal diversification	-	-	-
Channels			
# of stores	682	1193	2472
# of countries	14	22	43
DVI	0,55	0,63	0,66
Customer relationship	Self service		
Revenue streams	Asset sale		
Key resources	Physical		
Key activities	Marketing and sales		
Partnerships	Acquisition of particular resources/activities Reduction of risk and uncertainty		
Cost structure	Cost-driven Variable costs		

Appendix 29

	2000	2005	2010
Primary stakeholders			
Employees	H&M believes in continuous learning of individuals and provides training on the job. Employees received training on ESG issues. The firm's environmental policy was communicated to employees through several channels.	H&M provides fair wages, reasonable working hours, training for development and respects freedom of association. In 2005, the firm signed a three-year contract between the trade union UNITE-HERE and H&M warehouse employees in New Jersey and Connecticut.	H&M provides fair wages, reasonable working hours, training for development and respects freedom of association as reflected in employees' store and union representation. The firm is open to feedback from employees.
Suppliers	H&M wants to establish long-term supplier relationships, so as to improve factory conditions and takes a consultative role to help suppliers. Suppliers are selected on the basis of price, quality and their adherence to the firm's Code of Conduct.	Even though suppliers may offer attractive prices, if they do not comply with H&M's Code of Conduct, the firm will not enter into relations with the respective supplier.	Even though suppliers may offer attractive prices, if they do not comply with H&M's Code of Conduct, the firm will not enter into relations with the respective supplier. Suppliers are H&M's business partners, through its audit process and trainings H&M attempts to develop supplier ownership over sustainability issues.
Customers	H&M wants its customers to be satisfied with the product it offers in terms of quality and safety.	H&M wants its customers to be satisfied with the product it offers in terms of quality and safety. This is reflected in efforts to enhance product safety (chemical restrictions) and the use of organic cotton. H&M uses the EU eco-label 'Flower' for baby clothing.	H&M sees it as its task to help customers live more responsibly. The firm is open to feedback and has offered products through which customers can contribute to projects related to aids/hiv, water and education.
Investors	H&M is a publicly-owned company and therefore accountable to its investors. Listed on several sustainability indices.	H&M is a publicly-owned company and therefore accountable to its investors. Listed on several sustainability indices.	H&M is a publicly-owned company and therefore accountable to its investors. Listed on several sustainability indices.
Competitors	H&M collaborates with industry peers to address overtime issues in China and define industry standards for chemical restrictions.	H&M takes part in the European Retail Round Table and several Swedish industry associations. Also, the firm joined other brands in the Water Quality workgroup of BSR and the Fair Labor Assocation through which it also gets in touch with industry peers.	H&M recognizes the need to address challenges collectively. The firm takes part in several multi-stakeholder initiatives, e.g. FLA, SAC and BCI. Also it is member of several regional initiatives, sector round tables and pre-competitive initiatives. In 2011, together with several brands H&M entered in a Joint Roadmap for the elimination of hazardous chemicals and together with Levi's took the lead in the ban on sandblasting.
Secondary stakeholders			
Government	H&M strives to do more than what is required by law concerning environmental standards.	H&M met at several conferences and meetings with different types of stakeholders, amongst others Swedish and foreign government representatives.	H&M and its suppliers adhere to laws designed by governments. Through individual and industry-wide meetings, and dialogue through intermediaries, H&M is in dialogue so as to remain up-to-date and influence regulations.

NGOs	H&M supported a UNDP study that was conducted by three local NGOs in India to investigate the status of poverty in 20 towns. Also, for the third year, H&M donated money to a terre des hommes project for child prevention in Delhi.	H&M supports Better Factories Cambodia to develop suppliers. Additionally, The firm collaborates with local NGOs for its sustainable development projects and takes part in multi-stakeholder initiatives where it also meets international and national NGOs.	NGOs are experts on supply chain conditions, which is why H&M engages in dialogue, cooperation and partnership with them. For example, the firm collaborates with Greenpeace to eliminate hazardous chemicals from its supply chain.
Community	H&M finances social development projects related to its Code of Conduct, for example vocational training in Bangladesh.	In 2004, H&M entered into a strategic partnership with UNICEF to address Aids/HIV issues and the global girls education program. Also, H&M continues to support WaterAID, local charity, disaster relief and clothing donations.	Next to community investment in areas close to suppliers, H&M also engages in volunteer practices close to retail locations.

Appendix 30

	2000	2005	2010
Socio-economic issues			
Bonded / forced labour	H&M states that compulsory labour is not common in the apparel supply chain.	All cases of bonded labour involved forced overtime.	H&M prohibits Sumangali systems, however, these are difficult to detect since they often occur at spinning mills with which the firm does not have direct contracts. The firm engages in collaborative efforts e.g. the ETI to address the issue. This iniative has asked Indian suppliers to not source from spinning mills known to engage in Sumangali schemes. In 2011, the firm strengthened its audit methodology to better detect cases of bonded labour.
Child labour	H&M prohibits child labour. In case child labour is detected, auditors together with the supplier will design a plan for education and financial support of the child. This should be financed by the supplier or subcontractor who employed the child. The firm supports a non-governmental project in India targeted at preventing child labour.	In 2004, one case of child labour was detected at a subcontractor in Bangladesh. She went back to school with financial support from both the supplier and subcontractor. H&M strengthened detection of child labour through its FAP and requires a minimum age of 15 years.	H&M indicates the difficulty to trace the source of cotton and working conditions at all subcontractors. In 2011, it banned sourcing Uzbek cotton and influenced policy-makers in the European parliament not to accept a bill that would make it easier for Uzbekistan to export fabrics.
Migrant workers / women workers / home workers	H&M stipulates the right to eliminate discrimination, however, it is difficult to detect whether the right is upheld in its supply chain. H&M checks whether pregnant women are dismissed and whether factories adhere to equal pay. The firm supports a 3-year project in Delhi targeting home workers and women's position.	H&M detected low maternal leave rates in supplier factories. The reason was low awareness amongst management and workers about their rights. Consequently, the firm organized sessions to educate them on their rights.	H&M started projects for long-term support in Bangladesh, including strengthening the position of women through grants for female students in higher education and a helpline for women exposed to violence and discrimination. Also, the firm engages in a Women in Retail project in Saudi Arabia to promote their health and wellbeing. H&M has a homework policy.

Wages, Benefits, Working hours.	In collaboration with UK NGO Impactt and four other apparel firms, H&M addresses the issue of overtime in China. By tackling the root causes through technical improvements, human resource management and management/ labour improvements, this should not lead to a reduction in wages.	H&M participates in the MFA Forum Bangladesh to address issues related to overtime and low minimum wages in collaboration with industry peers and NGOs.	In 2010, H&M's CEO sent a letter to the Bangladeshi government requesting the introduction of an automatic review of minimum wages. In 2011, media reported 300 people fainted in a factory producing for H&M. The firm investigated the matter and found several causes: low pay, long working hours and mass hysteria. H&M joined the Fair Wage Network, to address the wage issues in their supply chain. Also, the FLA will conduct supplier audits to detect wage issues in H&M's supply chain. In 2012 there were riots in Cambodia over wage issues, to which H&M together with a group of brands sent a letter to the government. Also, the firm negotiated between the factory producing for them that dismissed employees and the labour union, to ensure their jobs were reinstated.
Freedom of association / Collective bargaining	H&M upholds the right to freedom of association. In Bangladesh' Export Processing Zones this was prohibited, therefore the firm entered into dialogue with the Bangladesh Export Processing Zone Association. Members are required to allow Workers Welfare Committees to facilitate transition to labour unions with the law in 2004. H&M organized workshops and requires new suppliers to implement the same measures.	Through audits H&M does not always detect whether suppliers uphold the right to freedom of association. In China the national labour union is the only organization that may represent employees. H&M introduced the FAP to improve detection of issues related to the freedom of association, also there. And collaborates with the FLA on the matter.	H&M reports better insight in the status of employee representation at its suppliers, except for in China. The firm changed audit procedures and now measures whether labour unions are in place.
Health & Safety (sandblasting)	H&M's code of conduct refers to building and fire safety, first aid and factory conditions.	In response to the collapses of buildings in Bangladesh, H&M renews its attention for building safety.	Mass faintings occurred in five Cambodian factories producing for H&M. Reasons for the incidents are a lack of grievance systems, health & safety standards and psychological issues. The firm has set up an action plan, together with BFC to address the issues. In 2010, H&M, together with Levi's, introduced a ban on the use of sandblasting in its supply chain, having already enforced strict safety requirements since 2006. H&M supports efforts to convince other apparel firms to do the same and continues safety audits at suppliers that no longer produce for the firm.
Environmental issues			
Chemicals	H&M upholds the precautionary principle regarding chemical restrictions. All suppliers must sign the Chemical Restrictions Compliance Commitment. H&M collaborated with the BSR to establish industry standards for chemical restrictions. The firm cooperates with authorities to stay up-to-date about changes in chemical restrictions.	H&M often updates its chemical restrictions list and added new substances in 2005. Many suppliers do not adhere to its standards due to insufficient information provision. Ecotrack updates the firm on legal changes. H&M supports the EU REACH initiative.	H&M collaborates with other firms and Greenpeace in the Joint Roadmap for the Elimination of Hazardous Chemicals in the supply chain.

Water	H&M does not measure water usage of suppliers, due to the difficulty of gathering and aggregating data of water use in its supply chain.	H&M recognizes the importance to reduce the environmental impact in early stages of the supply chain and promotes cleaner production methods amongst suppliers, since this provides them with a financial incentive. H&M cooperates with BSR to define a common wastewater quality standard. The firm is gathering data, however, it cannot aggregate and report on it yet.	H&M reports water savings in 2009 due to cleaner production methods and sets the objective to save 100 million liters in 2011. The firm focuses on water-saving management measures for suppliers that are located in water-scarce areas. H&M faces challenges to convince suppliers in countries where water is for free, however, it continues to promote the use of cleaner production methods.
Climate change	Supplier Environmental Motivation Strategy.	H&M engaged with suppliers and mills to introduce the Cleaner Production program, thereby jointly searching for energy- and water-saving methods that could lead to potential cost-savings. Also, the firm increased its target for organic cotton consumption and started participating in the BCI.	H&M is the largest organic cotton user in the world and set the goal to use only sustainable cotton by 2020. It collaborates with the Better Cotton Initiative. Through the Supplier Energy Efficiency Programme, H&M connects suppliers with local energy suppliers to identify energy-savings and developmental plans.

Appendix 31

SSCM Indicator		2000		2005		2010
Risk awareness (3)	0	NR	1	H&M has a regular supplier performance evaluation process in place. The firm does not publicly report on a) % of spend covered in spend analysis, b) critical suppliers.	3	H&M reports order placement per category of suppliers and factories, spend on direct procurement.H&M reports on the number of strategic suppliers and key factories.
Risk exposure (1)	0	NR	1	The firm conducts a supplier country risk assessment each year, evaluating the supplier in terms of 1.) location, 2.) number of employees and 3.) commercial significance for H&M.	1	The firm conducts a supplier country risk assessment each year, evaluating the supplier in terms of 1.) location, 2.) number of employees and 3.) commercial significance for H&M.
Risk management (12)	8	All suppliers to H&M have to sign its Code of Conduct, which contains clauses on human rights, working conditions, health & safety, business ethics and environmental standards. Through its project Supplier Environmental Motivation Strategy, H&M motivates suppliers to take responsibility for the environment and collaboratively undertakes measurements. The firm does not publcly report on: a) EMS certification 14001 - since customers do not request this, b) environmental performance data, c) social performance data and d) guidance concerning subcontracting.	11	All suppliers to H&M have to sign its Code of Conduct, which contains clauses on human rights, working conditions, health & safety, business ethics and environmental standards. Through its project Supplier Environmental Motivation Strategy, H&M motivates suppliers to take responsibility for the environment and collaboratively undertakes measurements. H&M reports on social and environmental conditions at the factories it audited. From 2005 onwards H&M also sets requirements for water quality. Suppliers are required to inform subcontractors about their Code of Ethics. The firm does not publcly report on: a) EMS certification 14001 - it prefers simplicity and structure..	11	All suppliers to H&M have to sign its Code of Conduct, which was updated in 2010 and contains clauses on human rights, working conditions, health & safety, business ethics and environmental standards. The firm requires suppliers to adhere to its wastewater treatment standards. H&M reports on social and environmental conditions at the factories it audited. Suppliers are required to inform subcontractors about their Code of Ethics and in 2010 H&M introduced the Joint Audit Assessment Program in China. The firm does not publcly report on: a) EMS certification ISO 14001.
Monitoring (7)	7	H&M's production offices have auditors who inspect factories (un)announced, conduct interviews with management and employees, both in- and outside the factory site. If necessary corrective action plans are made and preferred over contract cancellation. H&M also reserves the right that a third-party conducts the audit.	7	H&M's production offices have auditors who inspect factories (un)announced, conduct interviews with management and employees, both in- and outside the factory site. If necessary corrective action plans are made and preferred over contract cancellation. H&M also reserves the right that a third-party conducts the audit. In 2005, H&M launched more stringent monitoring guidelines and in 2006 the FLA audited several factories.	7	H&M's production offices have auditors who inspect factories (un)announced (78% unannounced audits in 2011), conduct interviews with management and employees, both in- and outside the factory site. If necessary corrective action plans are made and preferred over contract cancellation. H&M also reserves the right that a third-party conducts the audit (200 audits in 2011).

Capacity building & incentives (2)	2	H&M started workshops in Bangladesh to improve supplier competences. Suppliers are incentivised through the Supplier Environmental Motivation Strategy.	2	H&m continued capacity building workshops in Bangladesh in collaboration with NGO Karmojibi Nari. Also, it organized a seminar for Bangladeshi factories in which it explained the link between worker's rights and productivity.	2	In 2011 H&M launched the Index Code of Conduct. Orders are more likely to be placed with suppliers that have high sustainability performance scores.
ESG integration in SCM strategy (6)	2	H&M recognizes the impact its supply chain has on the environment and conducts projects to initiate measures to reduce its impact. Also, its Code of Conduct contains minimum ESG requirements for suppliers. The firm does not publicly report on a) incentives for ESG for procurement staff, b) access to ESG supplier database, c)training on ESG issues for procurement, d) ESG-related KPIs.	5	H&M set the goal of full Code of Conduct compliance for 2006. Also, its Code of Conduct contains minimum ESG requirements for suppliers. In case of a rejection, the order system blocks buyers from ordering at the respective supplier. Buyers receive environmental training twice per year. Supplier's Code of Conduct compliance influences their evaluation. The firm does not publicly report on a) access to ESG supplier database.	6	In 2010, H&M launched a new Supplier Relations Strategy. When selecting new suppliers H&M will not enter into a contract if the supplier does not adhere to its Code of Conduct. In 2011, the firm introduced the Index Code of Conduct (ICoC), which scores suppliers based on their management system. These scores are available online to procurement staff, who in turn will place more orders with those suppliers receiving higher scores. H&M buyers received training on ESG matters. The ICoC scores are combined with compliance grades to evaluate supplier performance.
Opportunities (2)	2	H&M organized vocational training for ex-child labourers in Bangladesh. In 2001 the firm conducted two life cycle assessments	1	H&M contributes to organic cotton farming by increasing demand and supporting farmers that transfer from conventional to organic cotton production.	2	H&M helps improve factory management systems and thereby increase supplier ownership. Also, taking a lifecycle approach, the firm has extended its Code of Conduct to apply to suppliers of indirect products.
Measurement (9)	4	H&M reports it audited 105 factories as unacceptable, 100% of its suppliers have to adhere with its Code of Conduct, it terminated relations with 2 suppliers, a total of 12 workshops were organized for suppliers. The firm does not publicly report on: a) % of procurement staff trained in ESG, b) % of suppliers with EMS certification, c) % of procurement spent with preferred suppliers,d) GHG emissions, e) supplier water usage (due to complexity of gathering data across the supply chain).	4	H&M reports it audited 1474 factories, 100% of its suppliers have to adhere with its Code of Conduct, it terminated relations with 5 suppliers, through the Better Factories Cambodia project workshops were organized for suppliers. The firm does not publicly report on: a) % of procurement staff trained in ESG, b) % of suppliers with EMS certification, c) % of procurement spent with preferred suppliers, d) GHG emissions, e) supplier water usage (due to complexity of gathering data across the supply chain).	7	H&M reports it audited 2024 factories, provided additional training to auditors, all suppliers (since 2010 also indirect suppliers) have to adhere with its Code of Conduct, 24% of new suppliers were disapproved, 58% of procurement was spent with suppliers in the two highest categories, transport of goods amounted to 3,16 tonnes CO2 emission per million SEK of sales, capacity-building projects with accessory factories in China show improvements in audit results. The firm does not publicly report on: a) % of suppliers with EMS certification, b) supplier water usage (H&M joined the Water Footprint Network
Transparency (6)	2	H&M provides training to suppliers and employees about its Code of Conduct and risk management measures. The firm does not publicly report on: a) communication of risk awareness, b) GRI standard adoption (the firm used GRI guidelines as inspiration for its CSR report), c) factory list, d) sustainability performance KPIs of suppliers.	4	H&M provides training to suppliers and employees about its Code of Conduct and risk management measures. H&M reports on its risk assessment in CSR Report 2005 and used GRI guidelines as inspiration the report. The firm does not publicly report on: a) factory list, b) sustainability performance KPIs of suppliers.	5	H&M provides training to suppliers and employees about its Code of Conduct and risk management measures. Through the Index Code of Conduct, suppliers are scored per spend category. CSR report 2012 follows the G3 guidelines and is assessed at B-level (self-declared). The firm does not publicly report on: a) factory list, b) sustainability performance KPIs of suppliers.
Collaboration (1)	1	H&M took part in a stakeholder dialogue in 2001.	1	H&M recognizes the challenges in production countries and the importance to join forces with other stakeholders to address these challenges e.g. it participated in Better Factories Cambodia and the MFA Forum Bangladesh.	1	H&M started collaboration with first-tier manufacturing suppliers in order to achieve carbon emission reductions in the early stages of the lifecycle of products. Also, it engages with NGOs, universities and other brands to improve supply chain conditions.

Appendix 32

Year	Event
1947	H&M was founded
1997	Publishes first Code of Conduct

2001	> Participation in the UN Global Compact > H&M supports the OECD Guidelines for Multinational Enterprises
2002	Publishes first CSR Report
2004	H&M starts using organic cotton
2005	H&M introduces new monitoring method: Full Audit Program (FAP) Joined Better Factories Cambodia, MFA Forum Bangladesh, and the Better Cotton initiative.
2006	Member of the Fair Labor Association
2007	H&M launches its first 100% organic cotton clothing line
2010	> Update of Code of Conduct > September: Clean by Design project in collaboration with Natural Resources Defense Council, H&M committed to working with their key textile suppliers to reduce water, energy, and chemical use in their supply. chains.
2011	> H&M initiates ban on sandblasting > Index Code of Conduct launched > Member of the SAC

Case study Huafu

Firm

Huafu Top Dyed Yarn Mélange Co, Ltd. (Huafu) was founded in Shenzen, China in 1993. The firm produces environmentally friendly yarn, which resulted in net sales of $250 million in 2011. By spinning yarn that has already been dyed and using raw materials such as organic cotton, bamboo and soya, the firm wants to become the sustainability frontrunner in the yarn industry. The firm has a total of four manufacturing facilities located in China and its yarn is used in clothes that are exported to amongst others the European, American and Japanese market. Thus making its degree of internationalization medium. Huafu focuses on quality and innovation, with the launch of its new brand image “the fountainhead and engine of fashion” in 2010, the firm attempts to focus more attention on new styles of yarn and bringing them into fashion.

Huafu offers a large variety of yarn products, a total of six types were detected, which corresponds to a medium degree of horizontal differentiation. The firm was not found active in other business segments, so it has a low degree of horizontal diversification. Due to a lack of financial figures, it was not possible to calculate the exact degree of vertical integration, however, looking at the firm’s business model and owned assets, it can be concluded that Huafu is highly integrated. In line with its strategy to innovate, the firm collaborates with large buyers to develop new styles of yarn, made of new types of raw materials that have a lower impact on the environment.

The firm highlights some of the global and local developments that will impact its business operations. For example the decrease in consumption of the West, the increase in wages and raw material prices and the appreciation of the yuen compared to the US dollar have put pressure on international trade. Also, China faces competition from other developing countries and the textiles market is less competitive than before. Concerning local developments, Huafu mentions that rural development and competition from the Midwest economy create a risk to the firm with respect to recruiting sufficient workers. Additionally, educated workers and an ageing population create challenges for the future of business operations.

On the other hand, trends such as an increase in apparel consumption, the rise of emerging markets and the increase in domestic consumption patterns are large opportunities for Huafu. Positioned as a sustainable yarn supplier, the firm emphasizes that it is strategically positioned to meet future demand in the colour spinning market.

Sustainability

Huafu color spinning has sustainability at the core of its business model. Producing environmentally friendly yarn, the firm focuses mainly on the environmental dimension of sustainability. However, Huafu describes corporate social responsibility as a concept extending to stakeholders such as employees and the community, next to shareholders. According to the firm CSR consists of creating profit while at the same time paying due regard to the environment, social responsibility, including compliance with business ethics, product safety, occupational health, protect the legitimate rights and interests of workers and resource conservation. Thus, next to the environmental dimension, the Huafu also states to address the economic, industry and social dimension of sustainability. In 2009, Huafu first published a CSR report in cooperation with the China Textile Industry Association.

Stakeholders

Through its philosophy "close to life, beautify life", sustainability is integrated in operations and corporate culture, so that employees are aware of their contribution to a more sustainable world. Additionally, in 2003 the firm established the Solidarity Fund, through which employees undertake community activities that also contribute to staff cohesion. Lately, Huafu has paid more attention to employees through an employee satisfaction survey, improvements in living facilities and an increase in living allowance. With respect to customers and suppliers, Huafu collaborates with them to develop new styles of yarn made of more alternative raw materials and with cleaner production methods. The firm adequately informs investors about its financial performance and recently defined standards concerning insider trading. Through its Huafu Cup, a fashion contest, the firm engages with competitors to promote the yarn industry.

Huafu has strong relations with the government, by investing in projects for industrial upgrading of the surrounding business areas. Also, the firm donates funds to organizations who are active in community with regards to disaster relief, assisting the poor and environmental protection. Also, the firm collaborates with educational institutions such as the Tianjin Industry University, which established the Huafu color spinning technology center.

Issues

Concerning socio-economic issues, Huafu mainly adopts a compliance attitude, in that it adheres to international standards as stipulated by the international buyers to which it supplies yarn. The firm also states to prohibit forced labour in its code of conduct. With regards to child labour, the firm has a somewhat more active approach, in that it takes special measures when recruiting young workers, to ensure compliance with the law. The firm also states to expect suppliers to uphold ethical standards such as integrity and fairness. Besides it has a strong policy on occupational health and safety, providing sufficient PPEs to workers, offering free medical check-ups and giving training on safety procedures. Huafu actively promotes women's rights and recognizes worker's right to freedom of association.

With regards to the environment, Huafu has a strong environmental policy, therefore it has strict regulations and inspections concerning the treatment of chemicals. Huafu's production method of yarn spinning already uses less water than conventional methods, next to which the firm has installed a wastewater heat recovery and water reuse facility. This also leads to energy savings, next to which, Huafu is replacing backward production facilities that have high rates of energy consumption. Lastly, Huafu produces yarn made of less environmentally harmful products such as bamboo, soy and organic cotton. In 2011, the firm applied to take part in the Better Cotton Initiative.

Sustainable Supply Chain Management

As already described before, Huafu knows a relatively high level of vertical integration, therefore supply chain management mainly corresponds with the firm's internal management systems. However, the firm also needs to manage the supply of raw materials and machines. Huafu only started reporting on CSR and its supply chain with its first CSR report in 2009, thus the scope of the analysis focuses on this time period. See Appendix 36 for an overview of the firm's score on the various sustainable supply chain management items.

Huafu does not publish information regarding risk exposure or a risk identification system, however, the firm scores high with respect to risk management measures. In that it has adopted a supplier code of conduct, which covers human rights, business ethics, working conditions and occupational health & safety topics. The firm actively promotes cleaner production methods amongst suppliers and collaborates with them to develop new production methods that are less environmentally harmful. Huafu obtained ISO14001 certification and publishes on the amount of GHG emissions and water consumption, however no specification of environmental performance data was found for suppliers. Also, with respect to social performance the firm generally does not publish information and no clauses were found to cover the issue of subcontracting.

The firm requires suppliers to adhere to its code of conduct and monitors compliance through audits under the vendor monitoring scheme. Staff receives training on conducting audits and in case violations are found at suppliers, they are put on a blacklist and requested to adjust procedures. If they are found still in violation of Huafu's code of conduct, orders will be stopped, which is used as an incentive for suppliers to increase compliance. Procurement staff is trained on compliance matters. No details were found on the number of audits that were conducted and the results.

Sustainability is part of Huafu's strategy as it has set environmental goals and collaborates with manufacturers such as Donghua Sky to develop new technologies for yarn spinning. Also, the firm engages with suppliers to design renewable raw materials. These are examples of how Huafu leverages opportunities in its supply chain. In terms of recycling, the firm's own product, yarn, is made from recycled raw materials.

Reporting on measurements is rather low, in that the firm merely informs about its GHG emissions and water consumption, thus, transparency and communication can be improved. The firm does present its code of conduct to suppliers, to inform them about the ethical standards to which they are expected to adhere. Also, the firm invested in a guideline and training of procurement staff on code of conduct compliance and auditing procedures.

In general, Huafu is relatively well engaged with several stakeholder groups as explained before. The firm is highly active in the industrial upgrading project in cooperation with the local government. Besides, it collaborates with suppliers and customers for new product and process development.

Business case for SSCM

Overall, Huafu has a reactive approach to sustainable supply chain management. Although the firm has adopted management systems that go beyond the basic level of SSCM, there are still areas in which Huafu could enhance procedures.

With the vision of "becoming a world-class yarn kingdom through the endeavor of several generations", Huafu is undertaking to further its presence on the yarn market. Despite the financial crisis, the firm testified a large increase in profits. Also, Huafu continued environmental investments of 11.243 million yuan in its cleaner production program, which led to water saving of 1,138,800 t, energy-saving 2.27 million kWh and a section of steam of 8420t. Next to that, the firm achieved significant savings in waste and wastewater discharge, which in turn led to economic, social and environmental benefits in the form of cost savings and greenhouse gas emission reductions.

Throughout the years, Huafu supports two different business cases for sustainable supply chain management. On the one hand, it focuses on environmentally friendly production methods to improve efficiency, reduce waste and benefit from cost savings, thereby reflecting the first business case. On the other hand, the firm is actively innovating on renewable materials and cleaner production methods through collaboration with several stakeholders. Next to that, the firm is largely active in the community, by funding economic development projects. Thereby, Huafu also seems to underwrite the fourth business case.

Appendix 33

	2000	2005	2010
Size	-	$78	$250
Ownership	Publicly held		
Internationalization			
# of suppliers	-	-	>4
# of countries	-	-	>3
# of manufacturing facilities	-	-	4
Strategy.	Differentiation		
Customer segment	Low / mid, segmented.		
Value proposition	Quality, speed, newness, service.		
Horizontal differentiation	-	-	6
Horizontal diversification	-	-	-
Channels			
# of stores	NA	NA	NA
# of countries	NA	NA	NA
DVI	-	-	-
Customer relationship	Personal assistance Co-creation		
Revenue streams	Asset sale		
Key resources	Physical / Human		
Key activities	Manufactures cotton yarns, blend yarns, blend fabric, cotton fabric, and other textile products		
Partnerships	Acquisition of particular resources/activities Reduction of risk and uncertainty Joint venture		
Cost structure	Cost-driven Fixed costs Economies of scale		

Appendix 34

	2000	2005	2010
Primary stakeholders			
Employees	Huafu complies with the labour law and has a HR policy to create a culture of engagement amongst employees. Workers can only become a member of the national labour union.	Huafu has set up the Solidarity Fund through which employees are encouraged to participate in community projects.	Huafu regards workers as important for business performance, training is provided, next to benefits like free medical checks, which are organized in collaboration with labour unions. Also, after conducting a customer satisfaction survey, the firm improved living facilities and living allowance. Huafu invested in machines to reduce labour intensity for workers.
Suppliers	Huafu selects suppliers based on	Huafu selects suppliers on the basis of quality, price and labour	Huafu collaborates with suppliers to develop more sustainable products and

	quality and price.	conditions.	production processes.
Customers	Huafu collaborates with customers to develop more environmentally friendly production methods.	Huafu collaborates with customers to develop more environmentally friendly production methods.	Huafu collaborates with customers to develop more environmentally friendly production methods.
Investors	Huafu has an adequate investor relations model.	Huafu has an adequate investor relations model.	Huafu has an adequate investor relations model and defined standards concerning insider trading.
Competitors	-	Huafu does not engage much with competitors.	Huafu organized the Huafu Cup "color spinning fashion design contest" to bring the textile industry together and raise awareness about production and environmental friendly methods.
Secondary stakeholders			
Government	Huafu invests in projects initiated by the government for industrial upgrading. This is part of the western development strategic plan to move production to the Midwest.	Huafu invests in projects initiated by the government for industrial upgrading. This is part of the western development strategic plan to move production to the Midwest.	The firm collaborates with the local government and Xinjiang Production and Construction Corps for industrial upgrading of the Xinjiang province.
NGOs	Huafu donates money to NGOs.	Huafu collaborates with NGOs through its solidarity fund.	Huafu collaborates with NGOs through its solidarity fund. Also, the firm participates in the BCI and has worked together with CSR Asia to publish its first CSR Report.
Community	Through the Huafu fund, the firm donates money to organizations, who undertake community projects related to environmental protection, staff-caring, supporting the poor, education and disaster relief.	Through the Huafu fund, the firm donates money to organizations, who undertake community projects related to environmental protection, staff-caring, supporting the poor, education and disaster relief.	Through the Huafu fund, the firm donates money to organizations, who undertake community projects related to environmental protection, staff-caring, supporting the poor, education and disaster relief.

Appendix 35

	2000	**2005**	**2010**

Socio-economic issues			
Bonded labour	Huafu complies with the working standards as stipulated by the ILO as a supplier to large international brands with strict supplier codes of conduct, in its own supplier code the firm prohibits bonded labour.	Huafu complies with the working standards as stipulated by the ILO as a supplier to large international brands with strict supplier codes of conduct, in its own supplier code the firm prohibits bonded labour.	Huafu complies with the working standards as stipulated by the ILO as a supplier to large international brands with strict supplier codes of conduct, in its own supplier code the firm prohibits bonded labour.
Child labour	Huafu complies with the working standards as stipulated by the ILO as a supplier to large international brands with strict supplier codes of conduct, the firm actively undertakes to stop child labour recruitment and requires young workers to be employed legally.	Huafu complies with the working standards as stipulated by the ILO as a supplier to large international brands with strict supplier codes of conduct, the firm actively undertakes to stop child labour recruitment and requires young workers to be employed legally.	Huafu complies with the working standards as stipulated by the ILO as a supplier to large international brands with strict supplier codes of conduct, the firm actively undertakes to stop child labour recruitment and requires young workers to be employed legally.
Migrant / women workers	Huafu abides to the working standards as stipulated by the ILO, no explicit statements about migrant labour were found. The firm does have a non-discrimination clause and employs minority workers. Also, it actively promote the rights of women workers.	Huafu abides to the working standards as stipulated by the ILO, no explicit statements about migrant labour were found. The firm does have a non-discrimination clause and employs minority workers. Also, it actively promote the rights of women workers.	Huafu abides to the working standards as stipulated by the ILO, no explicit statements about migrant labour were found. The firm does have a non-discrimination clause and employs minority workers. Also, it actively promote the rights of women workers.
Wages	Employees receive basic wages.	Employees receive basic wages.	Employees receive basic wages.
Freedom of association	Huafu recognizes the right to freedom of association.	Huafu recognizes the right to freedom of association.	Huafu recognizes the right to freedom of association.
Health & safety (sandblasting)	Huafu has standards on occupational health and safety in line with CSC9000T. The firm organizes free medical checks for workers in cooperation with labour unions. Also, employees receive adequate PPEs.	Huafu has standards on occupational health and safety in line with CSC9000T. The firm organizes free medical checks for workers in cooperation with labour unions. Also, employees receive adequate PPEs and training on health & safety.	Huafu has standards on occupational health and safety in line with CSC9000T. The firm organizes free medical checks for workers in cooperation with labour unions. Also, employees receive adequate PPEs and training on health & safety. In 2011, the firm launched a special program paying attention to worker's

			health.
Environmental issues			
Chemicals	Huafu commits to recycled yarn spinning, thereby reducing as much as possible the use of chemicals. Also, the firm has chemicals inspection procedures.	Huafu commits to recycled yarn spinning, thereby reducing as much as possible the use of chemicals. Also, the firm has chemicals inspection procedures.	Huafu commits to recycled yarn spinning, thereby reducing as much as possible the use of chemicals. Also, the firm has chemicals inspection procedures.
Water	Huafu uses the fibre dye then spin technique, which saves up to 50 % of water in the production process.	Huafu uses the fibre dye then spin technique, which saves up to 50 % of water in the production process.	Huafu uses the fibre dye then spin technique, which saves up to 50 % of water in the production process. Through wastewater heat recovery and water reuse, the firm was able to reduce water consumption. The water raised funds for drought-hit areas.
Climate change (cotton/energy)	Huafu is dedicated to environmental protection and makes pure cottons, cellulosics and fibres from organic cotton, bamboo and soya.	Huafu is dedicated to environmental protection and makes pure cottons, cellulosics and fibres from organic cotton, bamboo and soya.	Next to making environmentally friendly yarn, Huafu also invested in cleaner production methods to reduce its environmental impact.

Appendix 36

SSCM Indicator		**2010**
Risk awareness (3)	0	The firm does not publicly report on: a) spend analysis, b) the percentage of spend covered by its spend analysis, c) critical suppliers.
Risk exposure (1)	0	The firm does not publicly report on: a) formalized sustainability risk identification analysis.

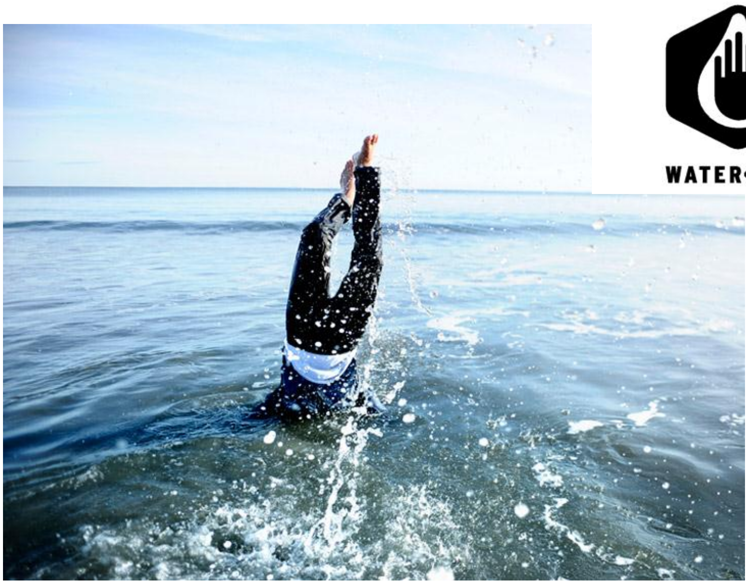
Risk management (12)	10	Huafu has a supplier code of conduct with clauses covering human rights, such as child and forced labour, working conditions, business ethics and health & safety. The firm requires suppliers to take part in its cleaner production project. Huafu obtained ISO14001 certification and reports on its own GHG emissions and water consumption. It requires suppliers to adhere to its code of conduct and in collaboration with them seeks to develop new technologies of colour spinning. The firm does not publicly report on: a) social performance data and b) guidance concerning subcontracting.
Monitoring (7)	3	Huafu was audited and found to adhere to the cleaner production standards. Also, the firm has established a vendor monitoring system with respect to its material suppliers. Suppliers that do not adhere to Huafu's code of conduct are put on a blacklist and asked to improve the situation. If they do not adjust operations, Huafu will stop orders at the respective supplier. The firm does not report on a) on-site visits (unannounced), b) interviews with management, c) interviews with workers (on-site), d) interviews with workers (off-site).
Capacity building & incentives (2)	1	In case suppliers do not adhere to the Huafu's code of conduct they will no longer receive orders, thereby suppliers are motivated to adhere to the ethical standards set by Huafu. The firm does not publicly report on: a) capacity-building initiatives.
ESG integration in SCM strategy (6)	2	Huafu has set environmental goals and trains procurement staff on its code of conduct and auditing procedures to detect violations at suppliers. The firm does not publicly report on a) ESG factors in supplier selection, b) incentives for ESG for procurement staff, c) access to a supplier database and d) ESG-related KPIs.
Opportunities (2)	2	For purposes of more environmentally friendly production, Huafu increased collaboration with Lenzing Tencel and joined the Bamboo Industry Alliance. Also, the firm cooperates with Jingwei Textile Machinery, Cheng Textile Machinery to develop textile process saving technology. Huafu produces recycled yarn.
Measurement (9)	2	In 2011, Huafu reports on its GHG emissions and the amount of water saved. The firm does not publicly report on: a) % of suppliers audited, b) % of 'prime contact' procurement staff trained on ESG issues, c) % of supplier contracts including ESG factors, d) % of suppliers with EMS certification, e) % of suppliers' contracts terminated, f) % of procurement spent with preferred suppliers, f) the outcome of capacity-building initiatives.

Transparency (6)	2	Huafu presents its code of conduct to suppliers. Also, procurement staff is informed about the procedures through the code of conduct guidelines, which contain procedures for strict monitoring and detection of violations at suppliers. The firm does not publicly report on: a) communication of risk awareness, b) GRI standard adoption, c) factory list, d) sustainability performance of suppliers.
Collaboration (1)	1	Huafu collaborates with the government on industrial upgrading. In addition, the firm engages with suppliers to develop more sustainable products and production methods.

Appendix 37

Year	**Event**
1993	Foundation of Huafu Top Dyed Mélange Yarn Co, Ltd.
2010	Published its first Corporate Social Responsibility Report
2011	NRDC Responsible Sourcing Initiative (Mill) Program
2012	Part of the Better Cotton Initiative

Case study Levi Strauss & Co



Firm

Levi Strauss & Co (Levi's) was founded in San Francisco, California in 1853 by Levi Strauss. The company started in the business of dry goods and 20 years later saw the need for a work pants made from denim. This led to the creation of the first blue jeans: Levi's 501, characterized by quality, craftsmanship and innovation. In 1986 the firm's second brand Dockers launched a reinvented khaki. In order to boost sales, Levi's introduced the Levi's Signature jeans in 2003, exclusively sold at Walmart. Denizen is a new brand in the portfolio of the company that was launched in 2010. It targets the global consumer with jeans for a new generation at an affordable price and is sold in franchise stores in China and India and in the US through mass channel retailers like Target and Walmart. The firm is not active in other business segments than apparel, so both horizontal differentiation and diversification are low. Nowadays, under the auspices of CEO Chip Bergh, the firm focuses on quality and product innovations. Levi's is owned by descendants from the Strauss family and only its stock is publicly traded.

The firm distributes products through both own and franchised branded stores (approx. 2,300), traditional retailers, about 55,000 worldwide and online. Levi's sources most of its products from independent contractors located in more than 30 countries in the world. The rest comes from company-owned manufacturing and finishing plants that include innovation and development operations. Next to that, the firm owns and operates 21 distribution centres in 18 countries. Currently, Levi's employs 17,000 people and sells garments in 110 different countries. Thus, overall the firm has a medium degree of vertical integration and a high degree of internationalization.

In the period 2000-2010 Levi's has undergone a reorganization. Losing market share and reduced profitability led the firm to accelerate the close down of manufacturing facilities in Europe and the US. This resulted in the lay-off of thousands of workers and an increase in outsourcing production to low-wage countries. Also, jobs were cut and the firm almost sold its Docker's brand. Together with a frequent turnover of management, these activities hampered stability in performance. So that only after the launch of Levi's Strauss Signature and a strategy to focus on sales to women in Asian countries, from 2004 onwards, Levi's seems to be profitable again.

Sustainability

Levi Strauss & Co views itself as a pioneer, an innovator, constantly searching for new opportunities. As a corporate citizen Levi's takes up that same role; being the first to define a supplier code of conduct that would ensure workers' rights at a global level, reaching out to other apparel brands by publishing a factory list in order to collaboratively improve the working conditions at shared factories and establishing strict Global Effluent guidelines and chemical restricted substance list.

At the same time, the firm also holds on to its values, as reflected in the continuous commitment to the race against HIV/AIDS and the promotion of workers' rights. These themes come back in Levi's advocacy with the government, supplier development programs and the funds provided by the Levi Strauss Foundation. Throughout history, the company is guided by the philosophy 'profits through principles', which symbolizes the belief in being commercially successful whilst being a good corporate citizen. Unsurprisingly, the firm views corporate social responsibility and ethical conduct as part of its competitive advantage (Levi's 10-K Report, 2001). "Our goal at Levi Strauss & Co. is to build sustainability into everything we do. We're constantly striving to reduce the impact our products have on the planet and influence not only what people wear, but the way people think and act." (Levi Strauss & Co, 2011, p.15).

Stakeholders

Levi's is committed to the wellbeing of its employees, as reflected in the additional benefits it provides and the fact that the majority are covered by collective bargaining agreements. Despite large amounts of lay-offs during the closure of factories, there was little unrest, as the firm had proper severance packages. Recently Levi's launched the 'Leading the LS&CO. Way' to familiarize employees with sustainability standards and encourage them to partake in volunteering activities. With regards to suppliers, Levi's has actively promoted social and environmental standards. The firm has some large suppliers of denim with which it has a long-term contract, whilst the rest are usually short-term relations. Levi's started to cooperate with suppliers regarding the definition of its code of conduct and is currently developing a new supplier code of conduct, for which they are also invited.

Levi's consumers care for quality, fashion and innovation. Next to providing an eco-line of denim, however, the firm was not actively engaging consumers in its sustainability efforts. Until recently, when Levi's introduced the Care Tag for Our Planet, asked consumers to donate their ideas for more sustainable garment drying techniques and partnered with NGO Goodwill to promote recycling. Also, the launch of the Water<Less jeans was a success. Despite the fact that Levi's is privately owned, the firm publishes financial information online and commits to SEC Filings. Thereby underwriting a transparent approach towards stakeholders. Likewise, the publishing of its factory list at the end of 2005 was an act of transparency, intended to bring together apparel firms in an attempt to address cross-sector working conditions at supplier factories. This resulted in the Fair Factories Clearinghouse, where retailers and brands share monitoring and best practices.

As already shortly mentioned, Levi's is active in influencing public policy. In dialogue with government, NGOs, industry associations and other stakeholders it seeks to implement labour laws in the countries in which it operates. For example the firm discusses issues regarding minimum wages and freedom of association with governments in Bangladesh, Cambodia and Mexico. Also in its home country Levi's is active, so that in 2007, the US Congress and the US Trade Representative agreed that all Free Trade Agreements would contain a provision to adhere to the ILO Declaration on the Fundamental Principles and Rights to Work. More recently, Levi's participates in the Business for Innovative Climate and Energy Policy (BICEP) to lobby for greenhouse gas reduction regulations in the U.S.

Already in the beginning of the period under study Levi's is actively engaged with NGOs on topics such as HIV/AIDS. The firm is active in multi-stakeholder initiatives, for example as a chair of the Americas Working Group of the MFA Forum or as a member of the Better Factories Cambodia project. Again, Levi's takes up a leadership role in this respect as founding member of the UN Compact's CEO Water Mandate in 2007, the International Labor Organization's Better Work program and the BSR Apparel Mills and Sundries Working Group. After working together with several parties to formulate its new Terms of Engagement, Levi's has invited several different stakeholder groups for comments, discussion and feedback.

Lastly, the Levi Strauss Foundation supports local communities, by focusing on strengthening human rights and working conditions of apparel workers. For example in Latin America, Levi's invests in labour rights and financial literacy training, as a response to the impact of the MFA phase-out. Also, the firm is dedicated to a project on social justice, so as to address the issue of racism. Other projects target communities with a high chance on HIV/AIDS.

In conclusion, throughout the years, Levi's has undergone a transition from a reactive to an active stakeholder approach.

Socio-economic issues

Levi's Terms of Engagement prohibit suppliers to engage in bonded and child labour. Regarding bonded labour, the firm collaborates with several other brands in the Better Work Program to address the issue. Concerning child labour Levi's has procedures in place to ensure that in case a child is found working at a supplier it is well guided and receives the financial and social care it needs. In 2002, a Mauritian supplier of Levi's was found to violate the firm's TOE with respect to migrant workers. Orders were stopped and the firm sought contact with the Mauritian government to address the issue. A governmental organization was set up to improve the definition and monitoring of the labour law.

Wages

Levi's requires suppliers to pay the minimum wage, in 2001 the firm was asked on its progress to define living wages and responds by stating that stakeholder collaboration is needed. Recently the firm has engaged with the Cambodian and Bangladesh government to lobby about living wages. In addition, Levi's engaged in a productivity project with four Chinese factories, which resulted in an increase of wages between 20-44% and productivity. It remains unclear however, to what extent workers were part of the process and whether the project resulted in living wages (Labour Behind the Label, 2012). In 2011, the firm was charged to pay $1 million to its employees due to overtime violations.

Freedom of association

Levi's recognizes the right to freedom of association as reflected in the fact that the majority of its employees are covered by collective bargaining agreements. In 2004, however, a supplier in Haiti was found to violate the firm's clause as stipulated in the TOE. Consequently, Levi's investigated the matter and in collaboration with NGOs and the government managed to reinstate the workers that were discharged for forming a labour union. Critique from NGOs continued however, so that the firm increased efforts in collaboration with NGOs to set up a labour union, after which it scaled-up orders again. A similar situation was found at a Mexican factory, where again Levi's wanted to investigate the matter, however the supplier refused. In response, Levi's stopped orders and wrote a letter to the local governor to request him to uphold labour rights.

Nowadays, Levi's actively educates workers at Chinese suppliers on their rights and engages with the Cambodian and Bangladeshi government to address the issue. It also supports union projects in Vietnam, however, it is unclear what the result of these projects is. Also, in Turkey, supplier Paxar was found to suppress worker unionization, together with other brands Levi's is a member of MSIs that handle this issue and under pressure, the supplier started discussions.

Health & safety (sandblasting)

Levi's requires suppliers to provide a healthy and safe working environment. In 2010 the firm took up its pioneering role again, by being the first, together with H&M, to publicly ban the sandblasting technique from its supply chain. The firm supports efforts to convince other apparel firms to join in on the ban and continues safety audits at suppliers that no longer produce for the firm.

Environmental issues

Chemicals

Concern for the environment has long been part of the firm's tradition, as reflected in the early introduction of Global Effluent Guidelines and a Restricted Substance List. In dialogue and cooperation with its contractors, Levi's attempts to improve the systems that are needed to fulfil the requirements of these guidelines. Also, the firm has published an environment, health and safety handbook to further support suppliers in the process of improving their environmental management systems. In 2010, Levi's joined the Joint Roadmap Towards Zero Discharge of Hazardous Chemicals, to contribute to the complete discharge of chemical substance from its supply chain by 2020.

Water

Levi's was quick with the introduction of its first water quality guidelines and started to extend their scope in 2007, when all suppliers finishing and laundering products for the firm are required to adhere to them as well. Only two years later, n-tier suppliers are also required to adhere to the guidelines on wastewater treatment. Besides, the firm starts engaging designers in the issue, by challenging them to design a more sustainable jeans, which results in the launch of the Water<Less Jeans. Consumers are invited to drop water-saving tips in a Facebook idea box and NGO water.org is supported in sustainable water projects. Since 2008, Levi's tracks water use and now requires suppliers to put water use information in an online system. Additionally, Levi's was a founding member of the UN CEO Water Mandate.

Climate Change (cotton / energy)

From the 1990s onwards Levi's uses organic cotton in part of the jeans it manufactures. The firm has an eco-product line made with organic cotton and is expanding into alternative resources, like recycled fibers, that are even less harmful to the environment. The issue of climate change started to play a role in 2007, when Levi's conducted its first lifecycle assessment to understand the impact of production processes on the environment. Also, the firm started collecting data on GHG emissions from owned and leased facilities, which would be used as a baseline from which future reductions could be formulated. Additionally, the firm conducted a facilities environmental impact assessment. Taking a lifecycle approach to water use, Levi's developed new water recycle reuse standards in 2011. Besides, the firm is scaling up its sustainability activities and has included organic cotton in about 2 million pairs of jeans.

Overall, Levi's has shown a shift in issue management from a reactive approach in the first 5 years of the period under study, to a more active approach in recent years.

Sustainable supply chain management

In 1991, Levi's introduced its Terms of Engagement (TOE), a set of guidelines for suppliers concerning working conditions and environmental practices. Being the first company to introduce such a supplier code of conduct, the firm has monitored suppliers and subcontractors adherence ever since.

In 2000 Levi's' supply chain strategy is to link product supply to customer demand in a timely fashion. The firm still operated 29 company-owned facilities in North America and Europe, however, its intention was to close these and almost fully rely on outsourcing in the near future. Fabric and raw materials (denim and twill) were supplied by several firms, whilst the firm has a long-term contract with Cone Mills, as it is the sole global supplier of denim for the 501® Jeans. With other independent suppliers, Levi's agreed that they are free to terminate their relationship at any time. The materials are shipped either to company-owned facilities for cutting or directly to contractors for garment construction. Increasingly, the firm uses package suppliers, who also purchase the raw material, thereby reducing working capital for inventories. Additionally, the firm detected a trend towards outsourcing.

From 2005 onwards, Levi's changes strategy by leveraging on its global scale in terms of product development and sourcing efficiencies across brands and regions. Still the firm owns five production facilities in Europe and Asia-Pacific. Sourcing increasingly takes the form of package or ready-to-wear arrangements from suppliers in Asia, whilst previously the firm also mainly placed orders at suppliers in South- and Central-America. At the time, Levi's realized that for suppliers to truly embed responsible practices in their business processes, a different approach to supply chain management was required. The firm decided to publish a list of all the factories from which it sources and contacted other brands to start collaboration on monitoring results and remediation plans. Through such cooperation, Levi's had more data available about suppliers, which gave better insight into the issues that occur in the factories. Due to the reduced number of audits, the firm could dedicate more time on tackling these issues.

Next to improving transparency, Levi's also started to embed the TOE more into its business processes. Suppliers were now rated on their compliance performance and their scores were weighed with other factors to determine future orders. The firm also undertook steps to enter into dialogue with suppliers and several business functions, in order to understand how certain orders and last minute changes affect supplier operations. Moreover, the firm set up a supplier ownership program, through which suppliers can improve their management systems and capabilities so as to ensure long-term adherence to the TOE. To a certain extent this could have been a reaction to the increased attention from media, NGOs, consumers and governmental agencies. As stated in its Annual Report: 'Any failure by our independent manufacturers to adhere to labour or other laws or appropriate labour or business practices, and the potential litigation, negative publicity and political pressure relating to any of these events, could harm our business and reputation.' (2006, p.17).

2011 signifies another step forward in the integration of sustainability into Levi's supply chain. The firm starts to produce more jeans with a blend of organic cotton produced under the Better Cotton Initiative. Also, whereas previously the supplier code of conduct applied only to 1st tier suppliers, now the firm requires subcontractors to adhere to the standards as well. Additionally, efforts are increasingly focused on improving the livelihood of manufacturing employees. With feedback from various stakeholders Levi's updated its Terms of Engagement to move beyond the 'do no harm' clause. The idea is to implement the Millennium Development Goals into the code and consequently launch effective employee-focused projects targeted at their needs.

With respect to water use and water quality management, Levi's has expanded activities. For example, by launching the Water<Less™ line of clothing, but also by engaging consumers to commit themselves to water saving behaviour. Also, Levi's introduced an environmental impact measurement system at suppliers and new water recycle reuse standards, together, these measures will allow the firm to improve its reduction efforts.

Over the years, Levi's has made a jump from reactive supply chain management to proactive supply chain management.

Business case

Economic
After several years of decreased profitability due to reorganization and competition, 2004 saw the first time Levi's profit increased again. 2010 profitability is moving upwards. According to annual reports this reflects the firm's ability to realize efficiencies from its global sourcing organization. These efficiencies were said to allow the firm amongst others to invest in achieving the sustainability goals as set by its corporate citizenship program.

Social
Levi's actively engages with suppliers to improve working conditions at manufacturing facilities. In 2001 already, the firm undertook projects in the Pearl River Delta in China to improve women's health and hygiene. Improvements were made at 13 factories, which ranged from an increase in the number of physical and health check-ups of workers, to the installation of new water tanks and pipes to allow for better air circulation. Recently, the Levi Strauss Foundation published to invest $1,5 million into promoting worker's rights amongst 300,000 apparel and textile workers annually in 15 countries where Levi products are made. Also, as a member of the BSR Apparel Mills and Sundries Working Group, the firm has contributed to improvements in working conditions in mill and sundry component suppliers in China and Bangladesh.

Being an active corporate citizen, Levi's employees volunteered on Community Day to a total of 170 projects. Ranging from installing a water supply system at a foster home in Vietnam to a drip irrigation systems at schools in San Francisco. In addition, the Levi Strauss Foundation supports numerous NGOs, for example the HERproject, which targets women's health in factories worldwide. A case study showed that the ROI of this project was fourfold. That is, the project resulted in higher productivity, healthier workers, better worker-manager relations, easier recruitment and optimization of sunk costs, by integrating resources such as nurses and clinics into the project. All in all, the project has a positive effect on both the workers and the workplace atmosphere, which changes to one based on trust, communication and employee ownership (HERproject, 2012).

Environmental
Levi's takes part in the NRDC's Responsible Sourcing Initiative with the objective to promote more environmentally friendly production methods at textile mills in China. As a result, five mills have reduced their energy, chemicals and water use. Since 2008, Levi's started measuring greenhouse gas emissions from suppliers. In 2011, the firm reports 5,590 Scope 1 and 11,438 scope 2 CO_2 emissions from manufacturing. In total, Levi's achieved a reduction of 5,9% and in 2012 reports to have achieved its 2009 goal to reduce greenhouse gas emissions by 11%. Concerning water, the firm challenged its designers to come up with a jeans designed to use less environmental resources. This resulted in the Water<Less collection, which so far has saved 172 litres of water. Levi's is also a member of the BCI, which has projects that prove to enhance productivity and to reduce energy use of suppliers. The firm has produced 2 million pairs of Levi's and Denizen jeans containing a blend with Better Cotton. For 2020, the goal is to increase the percentage of organic cotton in a typical jeans to 20%.

Looking into the future, Levi's will focus on innovation and product design that incorporates sustainable factors. Building on the platforms it created with the Water<Less and Commuter Series jeans. Another element highlighted in the firm's strategy is the opportunity to benefit from global economies of scale. Moreover, it is stated, that if Levi's wishes to reach the 20% organic cotton blend, the firm will need to adjust part of its business model and more directly deal with contractors and farmers (Kaufman, 2011).

In conclusion, Levi's seems to underwrite the reactive business case 2, targeted at risk management at suppliers. By ensuring that they adhere to its code of conduct and improve their standards, Levi's establishes a long-term supply of goods and prevents negative publicity that could harm its reputation as a brand (Levi Strauss & Co, 2006). In addition, the long history of activities at suppliers and their communities by both Levi's and the Levi Strauss Foundation direct to business case 4, whereby the firm takes up the moral obligation to proactively promote worker's rights and set joint standards with suppliers.

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Appendix 38

	2000	2005	2010
Size	$4.645	$4.125	$4.674
Ownership	Privately held		
Internationalization			
# of suppliers	-	600	700
# of countries	40	50	42
# of manufacturing facilities	22	5	4
Strategy	Differentiation		
Customer segment	Mid / high, segmented.		
Value proposition	Quality, newness, customization, brand/status.		
Horizontal differentiation	3 brands	3 brands	4 brands
Horizontal diversification	0	0	0
Channels			
# of stores	10	67	498
# of countries	8	10	32
DVI	0,5	0,54	0,58
Customer relationship	Self-service		
Revenue streams	Asset sale / Licensing		
Key resources	Intellectual / physical		
Key activities	Apparel manufacturer, distribution, sale of products, marketing.		
Partnerships	Acquisition of particular resources/activities Reduction of risk and uncertainty Economies of scale Licensing arrangement		
Cost structure	Cost-driven Variable costs, Economies of scale		

Table 17 Firm characteristics Levi Strauss & Co.

Appendix 39

	2000	2005	2010
Primary stakeholders			
Employees	The majority of employees are covered by collective agreements. Levi Strauss promotes volunteering activities amongst employees. The firm offers additional benefits such as medical, dental, vision and life insurance plans.	The majority of employees are covered by collective agreements. Levi Strauss promotes volunteering activities amongst employees. The firm offers additional benefits such as medical, dental, vision and life insurance plans. In 2003, LS&Co closed down manufacturing facilities and laid-off employees, they received good severance packages.	The majority of employees are covered by collective agreements. LS&Co launched 'Leading the LS&CO. Way' to familiarize employees with the firm's sustainability standards. Also, the BackupCare Options program was launched to help employees that have a temporary breakdown in their care facilities.

Suppliers	LS&Co launched the Terms of Engagement, with which it encourages suppliers to uphold social and environmental standards.	LS&Co launched the Terms of Engagement, with which it encourages suppliers to uphold social and environmental standards.	LS&Co started to develop new TOE to address workers' rights, incorporating the Millenium Development goals and receiving feedback from numerous stakeholders, the firm is now piloting its new approach with key vendors in collaboration with NGOs and other brands. Also, through the BCI, LS&Co motivates suppliers to adopt more sustainable production methods.
Customers	Levi Strauss consumers are value conscious and require innovative products of high-quality, with a fashion a feel.	Levi Strauss consumers are value conscious and require innovative products of high-quality, with a fashion a feel.	LS&Co actively engages customers in its sustainability activities. E.g. through the Care Tag for Our Planet, with which it informs customers how they can use their products with less environmental impact. The firm launched the Water<Less denim line, consisting of jeans made with less water. In 2009, LS&Co asked customers new, sustainable ways to air dry their clothes. LS&Co has partnered with NGO Goodwill to promote recycling amongst customers.
Investors	LS&Co is privately held. On its website, the firm publishes its annual reports and SEC filings, for public stockholders. These have formed a voting trust so as to ensure the firm operates in a socially responsible manner in the long-term benefit of stockholders, employees and other stakeholders.	LS&Co is privately held. On its website, the firm publishes its annual reports and SEC filings, for public stockholders. These have formed a voting trust so as to ensure the firm operates in a socially responsible manner in the long-term benefit of stockholders, employees and other stakeholders.	LS&Co is privately held. On its website, the firm publishes its annual reports and SEC filings, for public stockholders. These have formed a voting trust so as to ensure the firm operates in a socially responsible manner in the long-term benefit of stockholders, employees and other stakeholders.
Competitors	-	LS&Co launched a factory list in order to promote collaboration between apparel firms regarding monitoring of supplier factories.	LS&Co is a member of the Fair Factories Clearinghouse, together with several other apparel brands this initiative was set up to reduce duplication in monitoring efforts and share reporting. Also, to facilitate the implementation of their new standards, LS&Co has invited other brands and retailers to join in programs and workshops designed for suppliers.
Secondary stakeholders			
Government	LS&Co has a tradition of advocating for workers rights in the apparel sector.	LS&Co advocates a public policy on the inclusion of workers rights in all bilateral and multilateral trade policies. It states to be the first apparel firm in the world to take such a position.	LS&Co participates in the Business for Innovative Climate and Energy Policy (BICEP) to lobby for greenhouse gas reduction regulations at the U.S. Administration. Additionally, the firm engages with policy-makers to improve labor laws and their enforcement. Also, Levi Strauss has engaged with governments in Bangladesh, Cambodia and Mexico on the issues of minimum wage and freedom of association.
NGOs	Levi's is subject to critique from some NGOs regarding labour standards at manufacturers. LS&Co collaborated with the FLA to investigate assessment processes of the firm at manufacturers. Also, the firm has long collaborated with NGOs to fight HIV/Aids.	Levi's is subject to critique from some NGOs regarding labour standards at manufacturers. LS&Co participates in the ILO/IFC Better Work Program. Also, the firm has long collaborated with NGOs to fight HIV/Aids.	Levi's is subject to critique from some NGOs regarding labour standards at manufacturers. LS&Co helped establish the International Labor Organization's Better Work program and the BSR Apparel Mills and Sundries Working Group, so as to promote better working conditions at 2nd & 3rd-tier suppliers. The firm has invited NGOs to help formulate its New Terms of Engagement.

Community	The Levi Strauss Foundation supports employee volunteerism and programs in AIDS prevention and care, economic empowerment, youth empowerment and social justice.	The Levi Strauss Foundation has charitable programs focused on: Asset Building, Workers' Rights and HIV/aids in the communities in which the firm has a business presence and in manufacturing communities.	LS&Co works directly with suppliers to develop their communities, in addition to projects facilitated by the Levi Strauss Foundation, through which it focuses on: asset building, worker's rights and HIV/Aids.

Table 18Stakeholder management Levi Strauss & Co.

Appendix 40

	2000	**2005**	**2010**
Socio-eco issues			
Bonded labour	LS&Co prohibits the use of forced labour at suppliers.	LS&Co prohibits the use of forced labour at suppliers.	LS&Co prohibits the use of forced labour at suppliers. Additionally, together with other apparel brands the firm takes part in the Better Work Program, which addresses the issue in its supply chain.
Child labour	LS&Co prohibits child labour (minimum age of 15). The firm has processes in place to ensure that in the case of child labour, the child is provided education, financial support and the promise of a fulltime job at the respective supplier.	LS&Co prohibits child labour (minimum age of 15). The firm has processes in place to ensure that in the case of child labour, the child is provided education, financial support and the promise of a fulltime job at the respective supplier.	LS&Co prohibits child labour (minimum age of 15). The firm has processes in place to ensure that in the case of child labour, the child is provided education, financial support and the promise of a fulltime job at the respective supplier. Additionally, LS&Co prohibits suppliers to source cotton from Uzbekistan.
Migrant /women / home workers	In 2002 a supplier was found in violation of LS&Co's TOE regarding migrant workers. Consequently, the firm addressed the Mauritian government to change the situation, stopped orders, consulted the US government about the situation. As a result, a governmental organization was set up to improve the definition and monitoring of labour laws in Mauritius. The Levi Strauss Foundation supported a project led by the Asia Foundation to help improve the situation of women working in the Pearl River Delta.	Through the Levi Strauss Foundation, the firm supports projects to enhance women empowerment in manufacturing countries.	LS&Co supports BSR in the HER project, which educates women on their health in various production countries e.g. Egypt and Pakistan. Also, the firm has partnered with NGO Sheva Nari O Shishu Kallyan Kendra to enhance women empowerment in Dhaka.
Wages	LS&Co requires suppliers to provide employees the legally required minimum wage or industry wage, whichever is higher.In 2001, NGO Labour Behind the Label approached several apparel firms, also LS&Co, to request their processes and progress to define living wages. LS&Co still monitors on minimum rather than living wages. The company highlights the need for stakeholder collaboration on defining what is a living wage.	LS&Co requires suppliers to provide employees the legally required minimum wage or industry wage, whichever is higher.	In its TOE, LS&Co requires suppliers to provide minimum wages to employees and recognizes the need for a living wage. The firm has lobbied with the Cambodian and Bangladeshi government on the issue of a living wage. No information was provided about how the firm engaged suppliers in the process. Also, it initiated a wage and productivity program at four Chinese factories, which led to an increase of wages by 20-44%. It remained unclear how this was achieved. The firm states to request industry peers to collaborate on its quest for living wages. In 2011, LS&Co was to pay its employees $1 mln, due to overtime rules violations.

Freedom of association	LS&Co recognizes the right to freedom of association and collective bargaining and expects suppliers to do the same.	LS&Co recognizes the right to freedom of association and collective bargaining and expects suppliers to do the same. In 2004, LS&Co started production in Haiti and was notified by local NGOs that 31 workers that attempted to form a labour union were dismissed from work. The firm investigated the matter and collaborated with NGOs and the government to address the issue, resulting in a positive outcome.	LS&Co recognizes the right to freedom of association and collective bargaining, or parallel means, and expects suppliers to do the same. In China, the firm has set up educational programs to inform workers about their rights. Additionally, the firm has been active in dialogue with the Cambodian and Bangladeshi government on the issue and financially supports union capacity projects in Vietnam. The outcome of which are unclear. The CCC highlights violations of the right to collective bargaining at Turkish garment manufacturer Paxar. It is said to have fired worker activists, pressure union members to renounce their membership, and failed to negotiate with a lawful trade union. All brands, (also LS&Co) that source from the manufacturer are members of MSIs that address this issue. Pressure was enough for the firm to start conversations.
Health & Safety (Sandblasting)	LS&Co requires suppliers to have safe and healthy working environments.	LS&Co requires suppliers to have safe and healthy working environments.	In 2010, LS&Co, together with H&M, introduced a ban on the use of sandblasting in its supply chain, having already enforced strict health&safety requirements for a long time. LS&Co supports efforts to convince other apparel firms to do the same and continues safety audits at suppliers that no longer produce for the firm.
Environmental issues			
Chemicals	LS&Co was the first in its industry to launch a Restricted Substance List (RSL), which contains limits to chemicals used in production. Suppliers are required to adhere to this list and share it with their suppliers.	LS&Co was the first in its industry to launch a Restricted Substance List (RSL), which contains limits to chemicals used in production. Suppliers are required to adhere to this list and share it with their suppliers.	LS&Co joined the Joint Roadmap Towards Zero Discharge of Hazardous Chemicals. Using its experience in the area of chemicals, the firm hereby attempts to contribute to full elimination of chemicals in the apparel supply chain.
Water	LS&Co's Global Effluent Guidelines program (1992) defines wastewater treatment procedures to be followed by suppliers before they release water into the environment.	LS&Co extends its wastewater contaminant guidelines in 2007 to all suppliers finishing and laundering products.	In 2009, LS&Co requires 2nd tier suppliers to adhere to its Global Effluent Guidelines as well.LS&Co challenged designers to develop a jeans with a lower environmental impact, the result was the launch of its Water<Less denim line, produced with less water. Also, the firm funds NGO water.org, which in turn runs sustainable water projects. In partnership with Facebook, LS&Co also launched the Water Tank, where customers were asked to drop ideas of how they can save water in their daily lives. LS&Co has been tracking water use at its owned facilities since 2008, nowadays extending measurement to suppliers. The firm is a founding member of the UN CEO Water Mandate.

Climate change (cotton / energy)	LS&Co started using organic cotton in its jeans from the 1990s onwards.	LS&Co started using organic cotton in its jeans from the 1990s onwards. In 2007, the firm started investigating the impact of climate change through lifecycle assessments, GHG inventories and overall environmental impact assessments.	LS&Co participates in the Better Cotton Initiative to promote the production of organic cotton. Also, it has integrated climate change values related to the production, sales and user phase. In 2009, the firm started adding recycled fibers to its eco-cotton line.

Table 19 Issue management Levi Strauss & Co.

Appendix 41

SSCM Indicator		2000		2005		2010
Risk awareness (3)	3	LS&Co reports on key vendors, the percentage of spend they covered, indicating the firm conducted a spend analysis.	1	LS&Co reports on spend analysis on a sourcing country basis. The firm does not publicly report on: a) % of spend covered by spend analysis, b) critical suppliers.	2	LS&Co reports on spend analysis and the percentage of spend this covers. The firm does not publicly report on: a) critical suppliers.
Risk exposure (1)	1	LS&Co describes to assess risks in the countries from which it sources products.	1	LS&Co describes to assess risks in the countries from which it sources products.	1	Additionally, the firm conducts risk assessments specifically related to climate change.
Risk management (12)	8	LS&Co launched its supplier code of conduct in 1991, this contained clauses on fundamental human rights, working conditions, health & safety, business ethics and environmental standards. All suppliers and subcontractors are required to adhere to this code of conduct. The firm does not publicly report on: a) EMS certification 14001, b) environmental performance data, c) social performance data and d) collaborative initiatives.	8	LS&Co launched its supplier code of conduct in 1991, this contained clauses on fundamental human rights, working conditions, health & safety, business ethics and environmental standards. All suppliers and subcontractors are required to adhere to this code of conduct. The firm does not publicly report on: a) EMS certification 14001, b) environmental performance data, c) social performance data and d) collaborative initiatives.	10	LS&Co launched its supplier code of conduct in 1991, this contained clauses on fundamental human rights, working conditions, health & safety, business ethics and environmental standards. The firm has a system in place to track supplier energy data, also it starts a collaborative project with suppliers regarding worker's needs and business benefits, which will feed into the formulation of a new supplier code. All suppliers and subcontractors are required to adhere to this code of conduct. The firm does not publicly report on: a) EMS certification 14001, b) social performance data.
Monitoring (7)	5	LS&Co audits suppliers on their adherence to its code of conduct, through (un)announced visits and interviews with management, sometimes joined by workers. If needed suppliers are subject to continuous improvement plans. In 2001, the FLA conducted an independent audit at its supplier factories. The firm does not report on a) interviews with workers (on-site), b) interviews with workers (off-site).	5	LS&Co audits suppliers on their adherence to its code of conduct, through (un)announced visits and interviews with management, sometimes joined by workers. If needed suppliers are subject to continuous improvement plans. In 2001, the FLA conducted an independent audit at its supplier factories. The firm does not report on a) interviews with workers (on-site), b) interviews with workers (off-site).	7	LS&Co audits suppliers on their adherence to its code of conduct, these can be (un)announced and cover interviews with management and workers both on-site and off-site. If needed, corrective action plans are defined in cooperation with the supplier. Independent audits are conducted at licensee suppliers.
Capacity building & incentives (2)	0	The firm does not publicly report on: a) capacity building initiatives, b) incentives for suppliers.	1	LS&Co incorporates supplier monitoring results in its sourcing decisions. The firm does not publicly report on: a) capacity building initiatives.	2	LS&Co offers training and advice to suppliers to improve factory conditions and define sustainability strategies. Also, the firm warns suppliers that do not adhere to its Terms of Engagement (TOE).

ESG integration in SCM strategy (6)	0	The firm does not publicly report on a) ESG objectives for SCM, b) ESG factors in supplier selection, c) incentives for ESG for procurement staff, d) access to ESG supplier database, e)training on ESG issues for procurement, f) ESG-related KPIs.	3	LS&Co selects suppliers on the basis of their ability to meet the firm's standards as stipulated in its TOE. The firm started ranking suppliers based on several KPIs such as their compliance with TOE, thereby further integrating ESG factors into SCM. The firm does not publicly report on a) incentives for ESG for procurement staff, b) access to ESG supplier database, c)training on ESG issues for procurement.	6	LS&Co takes a lifecycle approach, thus it has set the goal to use 100% renewable energy in its supply chain. The firm uses supplier scorecards and after assessments auditors update information about suppliers in a central database that is accessible to buyers. LS&Co trains its auditors and procurement staff on the TOE and their compensation is partly determined by a 'compliance factor'. Also, LS&Co has introduced a feedback system for procurement staff, to understand how their decisions affect supplier's ability to meet orders and comply with TOE.
Opportunities (2)	0	The firm does not publicly report on: a) leveraging opportunities in the SCM, b) C2C and lifecycle assessments.	0	The firm does not publicly report on: a) leveraging opportunities in the SCM, b) C2C and lifecycle assessments.	2	LS&Co will increase the amount of organic cotton, harvested in through the Better Cotton Initiative, blend in its garments and conducted a lifecycle assessment of its Levi 501 jeans. Levi's has facilities in place to recycle consumer's old jeans.
Measurement (9)	1	All suppliers are required to adhere to the firm's code of conduct. The firm does not publicly report on: a) % of suppliers audited, b) % of 'prime contact' procurement staff trained on ESG issues, c) % of suppliers with EMS certification, d) % of suppliers' contracts terminated, e) % of procurement spent with preferred suppliers, f) GHG emissions from transportation, g) supplier water usage, h) outcome of capacity building activities.	1	All suppliers are required to adhere to the firm's code of conduct. The firm does not publicly report on: a) % of suppliers audited, b) % of 'prime contact' procurement staff trained on ESG issues, c) % of suppliers with EMS certification, d) % of suppliers' contracts terminated, e) % of procurement spent with preferred suppliers, f) GHG emissions from transportation, g) supplier water usage, h) outcome of capacity building activities.	4	All suppliers are required to adhere to the firm's code of conduct. LS&Co reports on GHG emissions from transportation (243,721 MT CO2e). Since 2009, the firm has a system in place to collect data on supplier water usage. LS&Co engaged in projects to reduce water use at suppliers and improve the position of women at suppliers in Pakistan. The firm does not publicly report on: a) % of suppliers audited, b) % of 'prime contact' procurement staff trained on ESG issues, c) % of suppliers with EMS certification, d) % of suppliers' contracts terminated, e) % of procurement spent with preferred suppliers.
Transparency (6)	2	Suppliers are informed about the firm's TOE before entering into a business relationship. Also, employees are informed about the TOE. The firm does not publicly report on: a) communication of risk awareness, b) GRI standard adoption, c) factory list, d) sustainability performance KPIs of suppliers.	3	Suppliers are informed about the firm's TOE before entering into a business relationship. Also, employees are informed about the TOE. In 2005, the firm was one of the first to publish a factory list. The firm does not publicly report on: a) communication of risk awareness, b) GRI standard adoption, c) sustainability performance KPIs of suppliers.	4	Suppliers are informed about the firm's TOE before entering into a business relationship. Also, employees are informed about the TOE. In 2005, the firm was one of the first to publish a factory list. The firm develops KPIs based on energy and water data gathered from suppliers. The firm does not publicly report on: a) communication of risk awareness, b) GRI standard adoption.
Collaboration (1)	0	The firm does not publicly report on a) collaboration with stakeholders.	1	LS&Co published the factory list to encourage collaboration among industry peers.	1	To develop its new TOE, LS&Co engaged with academics, environmental nongovernmental organizations, suppliers, and product finishing specialists.

Table 20 SSCM Levi Strauss & Co.

Appendix 42

Year	Event
1853	Levi Strauss & Co was founded.
1952	The Levi Strauss Foundation is formed to coordinate the company's charitable giving.
1983	Levi's is one of the first firms to provide HIV/aids education and health services for employees and their

	families.
1991	Levi's launched the Terms of Engagement; the first set of standards for suppliers concerning wages, hours, working conditions, ethics and the environment.
1992	The firm becomes the first major U.S. company to offer full medical benefits to the unmarried partners of its employees.
1995	Add water quality requirements to Terms of Engagement.
1999	Joined the Fair Labor Association.
2004	Member of the Fair Factories Clearinghouse.
2005	Levi's publishes its first factory list, so as to trigger industry collaboration. Better Factories Cambodia buyer.
2006	Greenhouse gas inventory of all owned and leased-and-operated facilities. Levi's eco organic line debut.
2007	The firm is one of the founding member signatories of the UN CEO Water Mandate. Conducted a first lifecycle assessment of the Levi's 501 jeans and Dockers Original Khakis. Levi Strauss & Co Foundation starts funding the Better Cotton Initiative.
2008	Levi Strauss & Co. expanded its investments in capacity-building activities with additional suppliers to provide targeted training on management systems to address corrective action plans and ensure greater consistency in future assessments. Joined Business for Innovative Climate & Energy Policy (BICEP) established by CERES, a new business coalition calling for strong climate and clean energy legislation in the U.S. and globally.
2009	Levi's introduces the Care Tag for Our Planet to promote more sustainable consumption of jeans.
2010	Levi's leads a global ban on sandblasting in partnership with other retailers. Joined the Better Cotton Initiative. Launch of the Water<LessTM collection, offering consumers jeans made using less water.
2011	Levi's updates its Terms of Engagement going beyond 'do no harm', integrating the UN Millennium Development Goals and focusing on workers' wellbeing. More than 2 million pairs of Levi's® and Denizen® jeans made with a blend of Better Cotton, cotton that's better for the planet and people who grow it, are offered in Fall 2011.
2012	Levi Strauss & Co. reaches its 2009 goal of reducing greenhouse gas emissions by 11 percent.

Table 21 Timeline Levi Strauss & Co., 2001

Case study Li & Fung Ltd.

"Sustainability needs to be aligned and be woven into the corporate fabric," Mr Bruce E Bergstrom VP, Vendor Compliance, Li & Fung Sustainable Fashion Forum October 7, 2009

Firm

Li & Fung Limited (LF) was founded in 1906 in Guangzhou. The firm is nowadays under the reign of the family's third generation, with Mr William Fung as honorary chairman, Mr Victor Fung as group chairman and Mr Bruce Rockowitz as CEO. Headquartered in Hong Kong, the company is a supply chain manager for large volumes of consumer goods that require just-in-time delivery. The majority of these products are garments, others include toys, sporting goods, home furnishing and travel goods, thus the firm exhibits low horizontal differentiation. At thte same time, LF has a medium horizontal diversification, since in 2011, it reorganized into three business segments: Trading, Logistics and Distribution. In total, the Li & Fung Group has approximately 41,000 employees working in more than 40 countries, resulting in a total sales of US$21 billion in 2011.

Li & Fung Ltd. does not own any production facilities. That is: 'In a sense, we are a smokeless factory. We do design. We buy and inspect the raw materials. We have factory managers, people who set up and plan production and balance the lines. We inspect production. But we don't manage the workers, and we don't own the factories' (Magretta, 1998). This explains the low degree of vertical integration reported in Table 22. The firm is specialized in managing the complete manufacturing of products through an extensive network of 300 sourcing offices and distribution centres, connecting over 15,000 suppliers. With an emphasis on low labour costs, activities were initially mainly focused on Asia, more recently however, the firm has developed capabilities in quick response in other parts of the world as well, like the Mediterranean. Also, the increase in wages in China has triggered cost-sensitive customers to move to lower wage countries like Bangladesh and Vietnam. Throughout the years, the firm has thus shifted from a traditional family trading business broker towards a successful public supply chain management company.

The firm follows a strategy of growth by acquisition and heavily invests in IT solutions to facilitate synergy between specialty apparel retailers' requests and the sourcing process. As part of the Li & Fung Group, the company benefits from economies of scale and competitively positions itself as a low-cost sourcing agent. In the 15 year period from 1992-2006 turnover grew at a compound rate of 22 percent. From then on, the company adopted a strategy of both vertical and geographical diversification. Whilst leveraging on the specialization of its home base in China, the firm also benefits from the integration of the Indian market in the global economy, which is an opportunity to enter new markets and provide clients with high value fashion apparel. Such flexibility allows the firm to reduce supply risks. Moreover, the economic slowdown in the US and Europe have instigated a new strategy at Li & Fung, focused on expanding their presence in upcoming markets in Asia, for example China.

Sustainability

For Li & Fung, corporate social responsibility is mainly targeted at the supply chain, since this is the key function in which the firm does business. In the period 2000-now, reporting on CSR is limited and LF has not published a CSR report. The firm does have a Code of Business Ethics for internal use and introduced a Supplier Code of Conduct. However, the main goal formulated in its latest Three-Year-Plan, is to earn an operating profit of US$1.5 billion by 2013 (Li & Fung, 2011). This shows that sustainability is not an integrated part of the firm's strategy. Rather, the firm has formulated a separate Sustainability Strategy, which was launched in 2009. The purpose of this strategy is to engage more with stakeholders such as employees, customers, suppliers, industry partners and communities, so as to address issues such as climate change, resource scarcity and social development. Thus, the strategy encompasses sustainability both at the level of firm operations and the global supply chain (Li & Fung, 2012).

Stakeholders

Employees

Li & Fung regard employees as its key asset, which is reflected in the opportunities the firm provides in terms of training and development. Wages are based on employees' performance and contribution to the firm. Communication with employees takes place via newsletters. Also, there is a whistleblowing system through which employees can report violations to the Code of Business Ethics. Moreover, the firm reports to have an equal opportunity policy with respect to all human resource activities, ranging from recruitment, evaluation to retirement. In 2011, LF introduced the first Employee Engagement survey, so as to measure employee satisfaction and customer orientation, in order to improve business processes. Also, the firm reinforced its commitment to human rights, by publishing an online statement and raise awareness amongst employees through trainings. Throughout the years employees have engaged in community initiatives such as blood donations to the Red Cross and local projects covering young and elderly people in need, cleaning up beaches and water conservation.

Suppliers

As an intermediary, Li & Fung makes sure that suppliers uphold the quality and labour rights standards as stipulated by clients. Additionally, the firm has also introduced a Supplier Code of Conduct by itself, so as to uphold a certain level of quality and ethical standards when selecting suppliers. LF's in-house auditing team monitors compliance and regularly evaluates conditions at the numerous suppliers working for Li & Fung. In case suppliers violate the code of conduct, they are required to upgrade their standards, for which they have to bear the costs themselves (Stahl & Stålmarke, 2002). Recently, LF has updated its Supplier Code of Conduct and Supplier Compliance Manual to improve transparency and capacity building regarding environmental performance and working conditions.

Customers

Li & Fung provides clients with quick, low-cost and high-quality supply chain management. At the same time, the firm ensures that goods are produced in factories that adhere to clients' codes of conduct, as they increasingly care about the conditions under which goods are produced (Li, 2007). Throughout the years LF has become more active in supplier monitoring and evaluation, for example it increased enforcement of environmental standards as set by clients regarding waste minimization, packaging and recycling. In 2005 the firm collaborated with Reebok to share responsibility for monitoring of working conditions in factories, next to providing trainings to factories on the firm's code of conduct (Reebok, 2005). Together with major client Walmart, the firm's US subsidiary launched an organic cotton clothing line in 2011, which shows a willingness to collaborate with customers in answer to consumer demands for more ethical products. When asked whether the LF is interested in eco-labelling, Harsh Saini, Senior Vice President for Compliance and Sustainability responded that 'it is not something that is on the agenda for us as a company. We are more interested in a systems-based approach to change that is sustainable.' (CWR, 2011).

Competitors

LF has long been a member of Business for Responsibility, which shows the firm's dedication to improve the working conditions of factories (Li & Fung, 2000). In the Labor Standards Working Group, together with industry peers, customers and NGOs, the firm developed a guide concerning labour rights targeted at migrant workers in Chinese factories (Li & Fung, 2005). Recently, the firm announced to increase stakeholder collaboration in several of the organizations it is part of, namely the ILO Better Work Program, the Sustainable Apparel Coalition, BSR and the Global Social Compliance Program.

Government

Regarding the relation between Li & Fung and the government it can be noted that over the years senior executives of the firm have been encouraged to sit in boards of organizations that further Hong Kong exports, multilateral trading schemes and best practices in corporate governance. Additionally, the firm has underwritten the Pearl River Delta Clean Air Charter, initiated by the Hong Kong and Chinese government, to improve the air quality in the respective area. In 2010, the firm joined in with the Business Environment Council of Hong Kong and the Environmental Sustainability Committee of the Hong Kong General Chamber of Commerce, with the purpose to share best practices on environmental policies. Also, through the Green Economy Task Force and Energy and Environment Commission of the International Chamber of Commerce, LF provides input on global policy for environmental issues (Li & Fung Group, 2011).

NGOs / community

As already described, LF is a member of several MSIs, in which it also collaborates with NGOs. In 2011, the firm established the Fung Global Research Institute, which is an NGO focusing on untangling global issues from an Asian business perspective. The LF Foundation provides scholarships to universities and donates cash for projects in the communities in which the firm operates. These can be for disaster relief, community building, supporting social enterprises, business-related clean environment alternatives and entrepreneurship development.

Concluding, over the past decade, Li & Fung exhibits a reactive approach towards stakeholders, only recently showing a slight shift towards a more collaborative and holistic engagement with stakeholders.

Socio-economic Issues

Li & Fung's Supplier Code of Conduct in the period 2000-2011 contained clauses on bonded labour, child labour, non-discrimination, wages, working hours, freedom of association and health & safety. These were not very elaborate and formulations referred to legal compliance. In 2011, the firm revised its code of conduct, especially paying more attention to ethical conduct, improving supplier disclosure of performance and the issue of human trafficking as was in line with the California Transparency in Supply Chains Act. Concerning child labour, the firm formulated policies and actions requiring suppliers to provide adequate financial and educational resources, so as to make sure that the wellbeing of the child is taken into consideration at all times (Li & Fung, 2012). Additionally, the firm has signed the pledge to ban the sourcing of cotton from Uzbekistan (RSN, 2012).

With respect to migrant workers, LF came across a case where workers were treated unequally by their supervisor at one of its suppliers in Dubai shortly after the launch of its Supplier Code of Conduct. The LF audit team investigated the issue and urged management to adjust the situation. In a follow-up visit, the team found that the supervisor was moved to a different position and workers were grouped according to nationality. Workers stated that the situation had improved (Li & Fung, 2003). The revised Supplier Code of Conduct contains elaborate descriptions of how suppliers should provide fair pay and fair treatment to foreigners. Additionally, the firm formulated guidelines with respect to the treatment of women, where suppliers are for example not allowed to force pregnancy tests or contraception upon women. Moreover, they should have adequate housing and policies maternity leave. With regard to the latter topic, it is interesting to note that in a report by Oxfam HK, LF itself was found not to have equal policies for paternity leave for employees across countries (Oxfam Hong Kong, 2009).

LF requires suppliers to pay workers an amount that meets or exceeds the legal or industry minimum level. Whilst the Pearl River Delta in China used to be an important sourcing area for the firm, the past period saw a wage increase of 30%, partly caused by labour unrest (Fung V. , 2011). Since Li & Fung would pass the costs of higher wages on to retailers, low-cost customers moved sourcing to Bangladesh, Vietnam and Cambodia, which may go hand in hand with lower labour standards (Li & Fung, 2011). One of the campaigns by Clean Clothes holds Li & Fung responsible for the payment of 2000 workers at the now bankrupt Turkish supplier Hey Tekstil. After a long period of financial and legal problems the supplier decided to close operations and without notice fired 420 employees. They did not receive the three-month compensation, nor severance or notification payments. The CCC requests Li & Fung to pay the workers the estimated amount of € 4.7 million (CCC, 2012). So far, no response from the firm has been published.

Concerning the right to freedom of association and collective bargaining, LF shows a shift in its approach to this right in its Supplier Compliance Manual. Whilst previously, suppliers were merely expected to uphold this right as was stipulated by local laws, now the firm also requires them to allow workers to organize even if this right is not protected by local labour laws (Li & Fung, 2012). Interestingly, however, the firm did not adjust the formulation of this clause in the revised Supplier Code of Conduct.

Li & Fung was mentioned on CCC's website as one of many firms who placed orders at Bangladesh factories that have major health & safety violations. The NGO requests all firms to press on the Bangladeshi government to inspect all buildings and to conduct audits with suggestions to management on how to improve the health & safety situation in their factories (CCC, 2010).

Environmental issues

Until recently, Li & Fung merely addressed environmental issues with a clause in its Supplier Code of Conduct, requiring suppliers to adhere to environmental laws. With the introduction of its Sustainability Strategy in 2009 however, LF has doubled focus on climate change-related issues and water scarcity. The firm adopts the precautionary principle with regards to environmental protection in its supply chain. Suppliers are prohibited to use ozone-depleting chemicals as indicated by law, Li & Fung or its customers. With regards to water, the firm's Supplier Compliance Manual contains elaborate descriptions of wastewater treatment and the monitoring and measurement of water consumption. LF committed to water-saving goals in its global operations and organized trainings to engage employees in its effort to reduce energy consumption. The firm is a member of the BSR

Sustainable Water Group, where firms share best practices on sustainable water practices in the apparel supply chain. Also, with the BSR Energy Efficiency Partnership, LF engaged 15 suppliers to formulate energy efficiency plans for their heating, ventilation and air condition systems. In addition to a project with the Natural Resources Defense Council, in which it supported supplier mills to reduce energy, water and waste consumption (BSR, 2010). Except for general initiatives to reduce carbon consumption and improve energy efficiency, however, the firm does not publish specific environmental performance goals for suppliers. Since 2005, the firm has cooperated with manufacturers to gain knowledge and expertise on the production of organic cotton, which in 2008 resulted in the launch of the first organic cotton clothing line together with Walmart (McMullan, 2008).

Sustainable Supply Chain Management

As a supply chain manager for consumer goods of large clients, Li & Fung has numerous systems and processes in place to ensure quick, on-time and quality delivery. A sophisticated IT system that stores real-time data on orders and matches customers' order specifications with supplier capacity. Through a system of parallel sourcing, the firm spreads risks by splitting up an order amongst several factories. Also, LF upholds a 30% threshold with regards to the orders it places at its five largest suppliers. Strategically, LF attempts to obtain between 30-70% of a factory's capacity, so as one of the largest buyers it can influence the supplier. As emphasized by "We don't want 100 per cent, because once you have 100 per cent you are morally obligated to keep on feeding the factory." Additionally, this allows suppliers to stay competitive, open to new ideas and other customers that can contribute to their innovativeness (Fung V. , 2011).

Suppliers are screened on country risks, compliance and supply security. Since 2009 environmental and social risks were added to this list, with which the firm states to equate environmental standards with quality, compliance and value (Li & Fung, 2005). Interestingly, considering these issues in its purchasing policy, may well stem from customers' environmental policies on recycling, package waste minimization and sustainable development initiatives (Fung, Fung, & Wind, 2007).

Li & Fung requires all suppliers to adhere to its code of conduct, which contains international standards concerning human rights, labour conditions, business ethics, health & safety and environmental standards. Suppliers are audited on compliance by the vendor compliance division, which visits the factories to review employee-related documents and interview employees on their working conditions. Next to the bear minimum, suppliers are also encouraged to voluntarily reduce environmental impact by sourcing FSC wood, use organic cotton and improve air quality (Fung, Fung, & Wind, 2007). Already in 2000, the firm uses corrective action plans to improve standards at suppliers, however, only recently has LF start to take up a capacity-building approach to suppliers. Although the firm already organized trainings for suppliers to increase awareness about compliance, now, it also started developing an assessment tool and guidelines for suppliers to identify gaps in their compliance with the firm's code of conduct. As stipulated by Harsh Saini, Senior Vice President for Compliance and Sustainability: "When we discover violations and bad practices we don't believe in walking away,.. Many are small businesses without the means to act. Our role is to educate, to supply know-how, facilitate a connection with experts who are able to help suppliers make change. In this case, we see ourselves as facilitators." (CWR, 2011).

In terms of supply chain strategy, LF has integrated sustainability principles to a small extent only. That is, the firm has a supplier code of conduct in place to which suppliers have to adhere before they become approved suppliers and vendor compliance employees receive training on compliance. However, no information was found on clear objects for sustainable supply chain management, incentives for vendor compliance employees or sustainability-related KPIs. Although the firm has an electronic database with information about suppliers, it is unclear whether that database also stores information on suppliers' sustainability performance. From 2009 onwards, the company defined a sustainability strategy, which also symbolized a change in the approach to supply chain management. Now, together with supply chain partners, Li & Fung attempts to address climate change and resource scarcity risks by cutting emissions and water usage, and social development by engaging colleagues to live sustainably and supporting communities (Li & Fung, 2012). Still, these are vague statements, without clearly defined goals or ways the firm will achieve them.

Similarly, Li & Fung scores low on supplier performance measurement, in that it merely reports an estimate figure of the total amount of supplier audits that were conducted in a certain year, without indicating the number of violations found and contracts that were ended. This is also highlighted in the 2nd Transparency Report by Oxfam, where LF, like most other HK firms, scores low on transparency (Oxfam Hong Kong, 2009). Since the firm only recently started to integrate environmental performance standards with suppliers, also no information was found on environmental management systems, greenhouse gas emissions and water usage of suppliers. Another item on which Li & Fung scored relatively low over the past ten years is transparency. In that the firm does educate suppliers on its code of conduct and trains staff on compliance, however, only with the launch of the revised Supplier Code of Conduct in 2012 has the firm formulated more extensive clauses that make it easier for suppliers to understand how they can comply with the code. Notably, LF reports that part of the reason why it revised the Code of Conduct, originated from the fact that consumers and stakeholders at a global level had higher demands. In addition to the increase of knowledge on the interaction between human rights and business operations (UNGC, 2011). The firm does not publish a list of suppliers or sustainability KPIs for suppliers.

Over the years, the firm has engaged with suppliers and other stakeholders to gauge opportunities. For example, by collaboratively gathering knowledge on the manufacture of organic cotton. Also, Li & Fung is a member of Business for Social Responsibility (BSR) where it collaborates with various stakeholders to address worker's rights at manufacturers and sustainable water practices. Taking part in the SAC and conducting a lifecycle assessment of two apparel products are also steps towards taking up environmental impact considerations in purchasing decisions.

In general, LF moved from a supply chain management style focused on risk management, cost reductions and efficiency, towards one that takes up more responsibility. In response to customers' demands for higher labour standards, the firm started implementing higher standards as well. LF attempts to find the role in which it can best serve its customer's sustainability strategy, while at the same time it operates in a context of increased resource scarcity and climate change. Recently, the firm took a full swing in the direction of responsible supply chain management by shifting the focus from mere monitoring to actual capacity-building for suppliers. Also, LF values stakeholder collaboration to improve labour standards and addressing environmental issues.

Business case for SSCM

In line with the Oxfam HK report, Li & Fung scores relatively high on sustainable supply chain management. This can partly be explained by the fact that the act of sourcing is the firm's area of expertise. Looking at the overall sustainability of the firm, this is assessed at the lower end of the scale, towards inactive/reactive. Possibly because the firm is a player in the typical business-to-business market, where sustainability is less visible and only started to play a role once retailers were held responsible for harmful practices in their complete supply chain. The following will shortly present the triple bottom line effects of SSCM for Li & Fung.

Economic performance
Throughout the years, Li & Fung has shown a consistent economic performance in terms of profitability. Strategic acquisitions of new business functions contributed to the steady growth of the firm's sourcing network.

Social performance
Due to minimal reporting on social initiatives in the supply chain, it is difficult to determine the firm's performance in this regard. Li & Fung provides training to suppliers on working conditions and engages in projects with suppliers via the BSR program to for example improve women's health, which in turn leads to higher productivity and lower abseentism. Based on these facts, it can be concluded that the firm makes a serious attempt to have a social impact. However, there is space to increase that impact by engaging in even more projects and focusing them on issues that are of strategic importance both to the supplier and to Li & Fung.

Environmental performance
Also, Li & Fung publishes little data on the environmental performance of suppliers, since it recently started measurements. Therefore, it is not possible to draw cost-benefit conclusions in this regard. What can be

inferred is that, towards suppliers, LF explains environmental initiatives as ways to save money and reduce risks. Its Supplier Compliance Manual reads that through resource conservation and pollution prevention suppliers can save money. Other arguments stem from the fact that the prices of raw material are increasing, so that minimizing waste will reduce dependency on non-renewable resources and ultimately leads to cost savings. Concerning greenhouse gas emissions, LF also supports that reduction will minimize disruptions in supply, dependency on fossil fuels and save money (Li & Fung, 2012). Also, the firm does not seem to have positioned itself in a way that it can inspire customers to adopt more sustainable sourcing practices. Rather, it takes a reactive stance and follows whatever policies their customers uphold.

In the future, chairman Victor Fung expects a trend of increasing bilateral agreements between countries, which will hamper the functioning of global supply chains. Whilst Li & Fung is able to track down all the differences between countries, due to its size, he argues that smaller companies will be less likely to survive such a regime. Making it questionable whether that is good for the global supply of goods as prices will change and the diversity in products will reduce. Another trend Mr Fung highlights is the impact of sustainability on political decisions concerning the location and level of jobs. So that the composition of supply chains will become more important in terms of job creation. A third lesson concerns the Fukushima phenomenon, meaning that the optimization of supply chains over the past years has resulted in too much efficiency, making buyers vulnerable to shocks (Fung V. , 2011).

Also, Fung states that the era of cheap products from Asia is over, with the government planning a 13% increase in wages over the next five years. Now that raw material prices increase, firms are going to focus on making their supply chains more efficient so as to reduce costs, which they then do not have to charge to customers (Wharton School, 2011).

In general, Li & Fung, which sees itself as an orchestrator rather than a controller of a network, can play a viable role in transferring the global apparel supply chain into one that is more sustainable. That is, Li & Fung can act as a sustainability orchestrator in its network. By paying attention to what instruments are joining in or fading away, it can ensure that the overall piece of music can have much more impact on its listeners. The firm can start triggering small sustainable initiatives at every supplier and thereby form the drop in the global pond to cause a large trickledown effect (CWR, 2011).

In conclusion, Li & Fung does not see a contradictio in terminis when it comes to achieving corporate social responsibility and maintaining efficiency. Rather, it argues that compliance with social and environmental standards is required for factories to run smoothly, so it seems Li & Fung pursues a mixture of the first and second business case for sustainable supply chain management. Taking it one step further, the firm even seems to underwrite the fourth business case. When stating that sustainability and business resilience can contribute to innovation and result in sustainable products (Li & Fung, 2011).

Appendix 43

	2000	2005	2010
Size (apparel segment)	$2.512	$4.848	$12.911
Ownership	Publicly held		
Internationalization			
# of suppliers	7500	10000	15000
# of countries	37	40	40
# of manufacturing facilities	NA	NA	NA
Strategy	Cost leadership		
Customer segment	Low / Mid / high, segmented.		
Value proposition	Low price, quality, speed, risk reduction.		
Horizontal differentiation	2	2	2
Horizontal diversification	2	2	3 (trading, logistics, distribution)
Channels			
# of stores	NA	NA	NA
# of countries	NA	NA	NA
DVI	0,14	0,14	0,22
Customer relationship	Dedicated personal assistance Automated service		
Revenue streams	Asset sale / Licensing		
Key resources	Intellectual / physical		
Key activities	Global sourcing network		
Partnerships	Acquisition of particular resources/activities Reduction of risk and uncertainty Economies of scale Licensing arrangement		
Cost structure	Cost-driven Variable costs Economies of scale		

Table 22 Firm characteristics Li & Fung Ltd.

Appendix 44

	2000	2005	2010
Primary stakeholders			
Employees	LF sees employees as its most important asset, it provides adequate compensation and training. From 2001 onwards, LF is legally obliged to contribute to the Mandatory Provident Fund Scheme for retirement benefits. Employees receive newsletters with updates and can take part in semi-annual retreats to discuss strategy. Employees also volunteer.	LF sees employees as its most important asset, it provides adequate compensation (based on performanc and contribution) and training. The firm has a whistleblowing system and a policy on equal opportunity with regards to human resource management. Employees engage in volunteering activities.	LF sees employees as its most important asset, it provides adequate compensation and training. In 2011, the firm launched its first employee engagement survey and organized a campaign to change employee behavior towards saving energy. Employees also volunteer.
Suppliers	Suppliers are selected based on price, quality and adherence to standards.	Suppliers are selected based on price, quality and adherence to standards. LF requires suppliers to upgrade in case of non-compliance and states to not share in possible costs.	In 2011, LF revised its supplier code of conduct to focus more on capacity building, improving working conditions and environmental performance.

Customers	LF provides quick, low-cost and quality supply chain management for its customers.	LF recognizes customers' need to produce in factories which comply with a certain level of working conditions. LF auditors take this responsibility by monitoring supplier compliance. Additionally, the firm enforces customer's environmental standards regarding packaging, recycling, waste minmization and sustainable development. Together with manufacturers it is in the process to learn about possibilities for producing organic cotton.	In partnership with Walmart, LF USA launched an eco-friendly apparel clothing line. In an article Mr. Rockowitz (president of Li & Fung) is quoted, stating: "Buyers used to be focused on price and the end product, but now they care much more about the process of getting there and are concerned with what took place during production, such as whether child or prison labour was used. Did the factories pay overtime, was there proper lighting and air conditioning? "Buyers care about those sorts of things because the consumer cares." In 2010, LF stroke a partnership with HBC to improve social compliance monitoring.
Investors	LF states to have a proactive investor approach, by publishing its annual results online and organizing AGM. The firm is listed on the DJSI from 2001 onwards.	LF states to have a proactive investor approach, by publishing its annual results online and organizing AGM. The firm is listed on the DJSI since 2001 and first listed on the FTSE4Good in 2005.	In 2011 LF organized an Analyst Day to inform and discuss with institutional shareholders and analysts. LF is listed on the DJSI, FTSE4Good and the Hang Seng Corporate Sustainability Index. The firm is open to feedback from shareholders.
Competitors	LF is a member of BSR, where it amongst others collaborates with industry peers on addressing labour rights issues.	Together with other brands, LF published a labor law handbook in a BSR workgroup, so as to inform Chinese migrant workers on their labour rights.	LF commits to continue cooperation with a.o. industry peers to increase collective knowledge on supply chain related issues. The firm is member of the SAC, in which it collaborates with industry partners to develop an environmental impact index. LF participates in several other MSIs.
Secondary stakeholders			
Government	Senior executives are encouraged to take board positions in associations promoting Hong Kong exports, international trade and corporate governance best practices.	Senior executives are encouraged to take board positions in associations promoting Hong Kong exports, international trade, community quality housing and corporate governance best practices.	LF advocates a multilateral trading scheme. The firm also signed the Pearl River Delta Clean Air Charter initiated by the Hong Kong and Chinese government.
NGOs	LF provides charitable donations to different NGOs.	LF is engaged in the Better Work Program, BSR, SAC and GSCP.	LF is engaged in the Better Work Program, BSR, SAC and GSCP.

Community	LF provides scholarships, donates cash to charities and encourages employees to volunteer, for example for the Standard Chartered Hong Kong Marathon and blood donation for Hong Kong Red Cross.	LF supports the communities in which it operates through the Li & Fung Foundation. It raises funds for disaster relief, community building, supporting social enterprises, business-related clean environment alternatives and entrepreneurship development. Also, the firm supports universities.	LF supports the communities in which it operates through the Li & Fung Foundation. It raises funds for disaster relief, community building, supporting social enterprises, business-related clean environment alternatives and entrepreneurship development. Also, the firm supports universities.

Appendix 45

	2000	**2005**	**2010**
Socio-economic issues			
Bonded labour	LF's suppliers code of conduct prohibits the use of bonded labour.	LF's suppliers code of conduct prohibits the use of bonded labour.	LF's suppliers code of conduct prohibits the use of bonded labour. In the revised version, extra attention is paid to human trafficking.
Child labour	LF's suppliers code of conduct prohibits the use of child labour.	LF's suppliers code of conduct prohibits the use of child labour.	LF prohibits child labour (minimum age of 15) and requires suppliers to have remediation processes. In case of detection, the underaged child is to be removed and provided adequate financial and educational support. The firm also signed the Responsible Sourcing Network's pledge not to source cotton from Uzbekistan.

Migrant / women / home workers	LF's suppliers code of conduct contains a clause on non-discrimination. In 2001, Li & Fung came across unequal treatment of migrant workers by their supervisor in one of its supplier factories in Dubai. Factory management was consulted on the issue and requested to address the situation. In a follow-up audit, LF found that the supervisor was moved to a different position and workers were grouped based on nationality. Also, feedback from employees was positive.	LF's suppliers code of conduct contains a clause on non-discrimination.	Suppliers who employ foreigners should have policies on fair pay, fair treatment and other requirements according to law. An article highlights Rockowitz' concern for a consumption-driven economy: "Migrant workers no longer just work and go back to dormitories," Rockowitz said. In a report by Oxfam Hong Kong (2009) ranking the sustainability performance of HK-listed companies, Li & Fung scored 61%. The firm scored low on the item 'workplace quality', mainly due to the lack of a paternity leave policy for Hong Kong employees, employees in mainland China did have such policy. The firm's revised Code of Conduct reads that suppliers should not force pregnancy tests or contraception upon women. Additionally, they should allow for adequate accommodation and maternity leave.
Wages	LF's suppliers code of conduct requires suppliers to pay the legal minimum or industry level wage.	LF's suppliers code of conduct requires suppliers to pay the legal minimum or industry level wage.	Employee compensation must meet or exceed the legal minimum. After the Istanbul factory of supplier Hey Tekstil closed, 420 employees were not paid their three-month compensation, were fired without notice and not paid severence and notification payments. The Turkish supplier was in financial and legal trouble and had to lay off another 1600 people. Now the CCC calls upon Li & Fung as the responsible party to pay the employees. So far no response from Li & Fung was reported.
Freedom of association	LF's suppliers code of conduct requires suppliers to respect the right to freely associate and collectively bargain.	LF's suppliers code of conduct requires suppliers to respect the right to freely associate and collectively bargain.	With the update of LF's Code of Conduct in 2011, the firm commits to respect the right to freedom of association and collective bargaining even if not protected by local labour laws.

Health & safety (sandblasting)	LF's suppliers code of conduct requires suppliers to have a healthy and safe working environment, in line with legal standards.	LF's suppliers code of conduct requires suppliers to have a healthy and safe working environment, in line with legal standards.	The CCC names Li & Fung as one of the firms buying at Bangladeshi factories that have health & safety issues. The NGO calls upon firms to press the Bangladeshi government to inspect all buildings and to conduct audits with suggestions to management on how to improve the health & safety situation in their factories.
Environmental issues			
Chemicals	LF's supplier code of conduct contains a clause on environmental protection. The Labor Standards and Relevant Local Law Guidelines contain a list of restricted hazardous substances.	LF's supplier code of conduct contains a clause on environmental protection. The Labor Standards and Relevant Local Law Guidelines contain a list of restricted hazardous substances.	LF prohibits the use of ozone depleting chemicals as stipulated in law. In its supplier code of conduct the firm states that suppliers may not use chemicals that are prohibited by the law, Li & Fung or its customers.
Water	LF's supplier code of conduct contains a clause on environmental protection.	LF's supplier code of conduct contains a clause on environmental protection.	Suppliers' water extraction, use, storage, transfer and infrastructure shall comply with regulations and permits. Also, LF has written down clauses on wastewater treatment, monitoring/measurement of water consumption. LF commits to reduce water usage at its global operations, no mention is made of water reduction goals for suppliers.
Climate change (cotton / energy)	-	LF engages with manufacturers to gain expertise regarding the production of organic cotton.	LF is signatory to the Pearl River Delta Clean Air Charter. LF USA in cooperation with Walmart launches its first organic cotton garment line. The firm has participated in BSR's Energy Efficiency Partnership to engage 15 suppliers in energy efficiency plans for HVAC.

Appendix 46

SSCM Indicator		**2000**		**2005**		**2010**

Risk awareness (3)	2	LF reports to source less than 30% at its five largest suppliers. The firm does not publicly report on: a) the percentage of spend covered by its spend analysis.	2	LF reports to source less than 30% at its five largest suppliers. The firm does not publicly report on: a) the percentage of spend covered by its spend analysis.	2	LF reports to source less than 30% at its five largest suppliers. The firm does not publicly report on: a) the percentage of spend covered by its spend analysis.
Risk exposure (1)	0	The firm does not publicly report on: a) formalized sustainability risk identification analysis.	1	Supplier factories are screened on their: country of origin, labor standards and supply chain security.	1	LF conducts social and environmental risk assessment as well as due diligence in the case of acquisitions or investments.
Risk management (12)	8	All suppliers to LF have to sign its Code of Conduct, which contains clauses on human rights, working conditions, health & safety, business ethics and environmental standards. Suppliers are required to disclose materials to auditors for social performance assessments and to ensure that subcontractors adhere to the code of conduct as well. The firm does not publcly report on: a) EMS certification 14001 b) environmental performance data, c) collaborative initiatives.	9	All suppliers to LF have to sign its Code of Conduct, which contains clauses on human rights, working conditions, health & safety, business ethics and environmental standards. Suppliers are required to disclose materials to auditors for social performance assessments and to ensure that subcontractors adhere to the code of conduct as well. Li & Fung collaborates with suppliers to introduce more organic cotton. The firm does not publcly report on: a) EMS certification 14001 b) environmental performance data.	12	In 2011, LF reviewed its Code of Conduct for Suppliers and Supplier Compliance Manual. All suppliers to LF have to sign its Code of Conduct, which contains clauses on human rights, working conditions, health & safety, business ethics and environmental standards. Suppliers are required to disclose materials to auditors for social performance assessments, to keep up-to-date EMS systems, track GHG emissions and ensure that subcontractors adhere to the code of conduct as well. The firm helps suppliers to improve their environmental performance.
Monitoring (7)	4	Through (un)announced visits LF audits supplier's compliance with its code of conduct. It conducts interviews with workers at the factory and formulates a corrective action plan in case violations are detected. The firm does not report on a) third-party audits, b) interviews with management, c) interviews with workers (off-site).	6	Through (un)announced or third-party visits LF audits supplier's compliance with its code of conduct. It conducts interviews with management and workers at the factory and formulates a corrective action plan in case violations are detected. The firm does not report on a) interviews with workers (off-site).	7	LF conducts audits and requires suppliers to be open to third-party investigations as well. These can be (un)announced and suppliers should provide access to employees, if necessary off-site in a confidential area. In case a violation is detected corrective action plans will be defined.

Capacity building & incentives (2)	2	LF provides training to suppliers on compliance matters and in case of violations merchandising teams will be blocked from placing orders.	2	LF provides training to suppliers on compliance matters and in case of violations merchandising teams will be blocked from placing orders.	2	If suppliers face compliance issues, LF provides capacity-building resources and expects suppliers to use these, otherwise the firm will discontinue business.
ESG integration in SCM strategy (6)	2	LF provides procurement staff with training in compliance. All suppliers are required to adhere to the firm's code of conduct. The firm does not publicly report on a) ESG objectives for SCM, b) incentives for ESG for procurement staff, c) access to ESG supplier database, d) ESG-related KPIs.	2	LF provides procurement staff with training in compliance. All suppliers are required to adhere to the firm's code of conduct. The firm does not publicly report on a) ESG objectives for SCM, b) incentives for ESG for procurement staff, c) access to ESG supplier database, d) ESG-related KPIs.	3	In 2011, LF implemented a three-year strategy to implement sustainability with its supply chain partners. LF provides procurement staff with training in compliance. The firm does not publicly report on a) ESG factors in supplier selection, b) incentives for ESG for procurement staff, c) access to ESG supplier database, d) ESG-related KPIs.
Opportunities (2)	0	The firm does not publicly report on: a) leveraging opportunities in the SCM, b) C2C and lifecycle assessments.	2	LF undertook environmental initiatives in precaution of environmental changes and to support environmentally friendly production. Education and awareness projects were set up in collaboration with NGOs like the Asia Foundation. The firm also undertook life cycle assessments of several products to better understand their impact and educate stakeholders on the effect of their buying decisions.	2	In 2008 LF undertook lifecycle assessments of two apparel products to better understand their impact.
Measurement (9)	1	All suppliers have to adhere to the firm's code of conduct. The firm does not publicly report on: a) % of suppliers audited, b) % of 'prime contact' procurement staff trained on ESG issues, c) % of suppliers with EMS certification, d) % of suppliers' contracts terminated, e) % of procurement spent with preferred suppliers, f) GHG emissions from transportation, g) supplier water usage, h) outcome	3	LF reports the number of audits that were conducted. All suppliers have to adhere to the firm's code of conduct. Also, training sessions are reported to have a positive impact on compliance. The firm does not publicly report on: a) % of 'prime contact' procurement staff trained on ESG issues, b) % of suppliers with EMS certification, c) % of suppliers' contracts terminated, d) % of procurement spent with preferred suppliers, e) GHG emissions from transportation, f) supplier water usage.	2	LF reports the number of audits that were conducted. All suppliers have to adhere to the firm's code of conduct. The firm does not publicly report on: a) % of 'prime contact' procurement staff trained on ESG issues b) % of suppliers with EMS certification, c) % of suppliers' contracts terminated, d) % of procurement spent with preferred suppliers, e) GHG emissions from transportation, f) supplier water usage, g) outcome of capacity building activities.

		of capacity building activities.				
Transparency (6)	2	LF provides training to suppliers on their code of conduct, human rights and other social standards. The firm does not publicly report on: a) communication of risk awareness, b) GRI standard adoption, c) factory list, d) sustainability performance KPIs of suppliers.	2	LF provides training to suppliers on their code of conduct, human rights and other social standards. The firm does not publicly report on: a) communication of risk awareness, b) GRI standard adoption, c) factory list, d) sustainability performance KPIs of suppliers.	2	LF provides training to suppliers and employees on their code of conduct, human rights and other social standards. A new assessment tool was launched to enable suppliers to identify compliance gaps. The firm does not publicly report on: a) communication of risk awareness, b) GRI standard adoption, c) factory list, d) sustainability performance KPIs of suppliers.
Collaboration (1)	1	LF is a member of BSR, where together with other brands it formulated a labor rights guide pocket. Signatory of the UNGC.	1	LF is a member of BSR's Labor Standards Working Group. The firm collaborates with suppliers to enhance organic cotton production and underwrites the Pearl River Delta Clean Air Charter.	1	LF reviewed its stakeholder relationships to assess which groups to engage with so as to enlarge the impact it can have and build capacity in its supply chain e.g. ILO Better Work Program, BSR, SAC and BSCP.

Appendix 47

Year	Event
1906	Li & Fung Ltd. was founded
2000	Member of Business for Social Responsibility

2001	Signatory to UN Global Compact / Listed on the DJSI
2005	Member of Labor Standards Working Group (BSR) / Listed on FTSE4Good
2007	Hong Kong Productivity Council / The Asia Foundation / WWF / Pearl River Delta Clean Air Charter / Environmental Protection Department / Pearl River Delta Environment Program / Wastewi$e label Hong Kong /
2009	Sustainability Strategy.
2010	Supplier Ethical Database Exchange / Sustainable Fashion Business Consortium / Natural Resources Defense Council / WWF / Business Environment Council of Hong Kong and Environmental Sustainability Committee of the Hong Kong General Chamber of Commerce / Green Economy Task Force and Energy and Environment Commission of the International Chamber of Commerce.
2011	Established three business networks: trading, logistics and distribution. Launched human rights statement on website RSN Pledge against cotton sourced from Uzbekistan Joined Sustainable Apparel Coalition
2012	Launch of revised Code of Conduct for Suppliers and new Supplier Compliance Manual.

Case study Louis Vuitton Moët Hennessy

Firm

The Louis Vuitton Moët Hennessey (LVMH) Group was born in 1987. With a history going far back into the 18th century Champagne when Claude Moët was inspired to continue the work of Dom Pérignon and the 19th century Paris where trunk maker Louis Vuitton designed the first modern suitcase. Nowadays the group is one of the largest luxury goods producers in the world, built up from alliances between brands with strong traditions in craftsmanship and creativity. LVMH is run by chairman and CEO Bernard Arnault and consists of a portfolio of 60 brands, grouped into five business segments: wines & spirits, fashion & leather goods, perfumes and cosmetics, watches and jewelry and selective retailing. A total of 98,000 employees were responsible for net sales of $29,109 million in the year 2011.

Table 23 contains basic information about the LVMH Group, however, since this research focuses on the apparel industry, wherever available, more detailed data about the Fashion and Leather Goods business group is displayed in brackets. As can be read from the table, this business group is responsible for a large portion of net sales of the whole Group and scores medium on horizontal diversification and differentiation. That is, Louis Vuitton is the star brand of the group and shares resources with Donna Karan, Fendi, Loewe, Céline, Kenzo, Marc Jacobs, Givenchy, Thomas Pink, Pucci, Berluti and Rossimoda. These brands, of French, Spanish, Italian, British and American origin produce leather goods, ready-to-wear, shoes, accessories, haute couture and perfumes. To maintain a high level of quality, authenticity and originality, LVMH puts effort in attracting the best designers. Another important element in the group's strategy concerns distribution, where LVMH controls 100% of the distribution channels of its brands, so as to ensure close contact with customers and preserve brand image. In 2011, the Fashion and Leather segment has an international network of 1,246 stores, which indicates a high degree of internationalization in terms of sales.

Manufacturing and subcontracting differs significantly per brand. Louis Vuitton for example has 17 leather goods workshops the majority of which is located in France, and the rest in Spain and the US. The production and development of the brand's footwear mainly takes place in Italy. The firm only uses third party manufacturers for flexibility purposes, so as to supplement production, thus overall vertical integration is high. Raw materials and leather are obtained from a small group of suppliers, however, the firm is expanding this number in order to compose a more balanced portfolio of suppliers. For example, in 2009 the firm partnered with Tannerie Masure to create joint venture Tanneries de la Comète, which exclusively tans hides for Louis Vuitton. Recently, the firm also acquired Heng Long, a high-end supplier of exotic leather. For the other brands, such as Fendi, Loewe and Céline, manufacturers are often located in their country of origin. The supply of fabrics comes mainly from Italian parties (LVMH, 2011).

Sustainability

Luxury is normally equated with a wealth of over-the-top goods made from the earth's precious materials. At the same time, luxury is about longevity, heritage and values, which emphasizes a notion of timelessness. With the implementation of the Environmental Charter in 2001, LVMH first publicly committed itself to environmental protection. That commitment was reinforced when the Group joined the UN Global Compact in 2003. LVMH Group invests in projects to engage employees and customers into more responsible behaviour, to integrate environmental considerations into the design of new products and to reduce the environmental impact of manufacturing through innovative tools and processes (LVMH, 2005). By integrating sustainability into its business model, the Group anticipates current trends in luxury business. Where the 'global elite' is asking for brands that reflect their social and environmental values, besides luxury goods are accessible to an increasing number of people, so that the offer of exclusiveness is not enough to appeal to consumers. Also, in societies where extreme poverty and the affluent live close to each other, the sale of luxury goods can lead to social unrest (Bendell & Kleanthous, 2009).

Stakeholders

LVMH has a global workforce and offers competitive compensation. Integrity, equity and solidarity are the three principles that underline the Group's commitment to employees. Resources are dedicated to recruit talented personnel, training and development and internal communication. The firm places due emphasis on equal opportunity in employment in line with the ILO Standards.. In a 2005 survey covering four types of discrimination on the work floor, however, it was found that only six out of 40 French companies adequately disclose information on diversity. LVMH belonged to the group of 'indifferent' companies that did not meet the minimum level of disclosure, concerning the composition of the workforce based on age, the recruitment of disabled people or minority groups (Novethic, 2005). Nowadays, the firm discloses sufficient information on these themes. Concerning freedom of association and collective bargaining, it is reported that in France the companies have employee representatives, works councils and health & safety committees. Additionally, in 1985 the Group Committee was formed so as to negotiate group-wide agreements on wages, incentives and profit-sharing schemes. Some brands report to encourage sustainable behaviours amongst employees in the beginning of the period under study already, by providing for example water-saving workshops. Over the years, the Group has increased the number of environmental trainings given to employees. In 2009 a Code of Conduct was released to improve the dissemination of ethical behaviour throughout the Group, next to an intranet website where employees can find information on LVMH's activities in the field of corporate social responsibility (LVMH, 2011).

Suppliers to LVMH are selected on the basis of their quality and craftsmanship. The majority is located in France, which makes it easier for LVMH to comply with the ILO standards. Individual companies have drafted supplier standards and codes of conduct, moreover, in 2005, the Group set up a network of agents concerned with supplier relations to share best practices. The Group attempts to uphold long-term relations, so as to safeguard the supply of quality goods. In 2002 the 'Supplier Tool' was launched with the purpose to measure the environmental impact of suppliers, which helps in assessing their environmental policies, auditing and where necessary implementing adjustments. Especially the Wines and Spirits business segment is dedicated to engaging with suppliers on environmental performance, for example by requiring their distilleries to obtain ISO14001 certificates. Also other companies require subcontractors to adhere to environmental standards. Other initiatives at production facilities include water and energy saving and waste minimization (LVMH, 2005). In 2007 LVMH is delisted from the FTSE4Good index due to supply chain violations (Bendell & Kleanthous, 2009) and only in 2008 has the Group developed a Supplier Code of Conduct. A year later, the Group is added back to the index again and a more collaborative approach is taken by developing a supplier self-assessment tool (LVMH, 2011).

LVMH's customers consist of wealthy people who are looking for quality, innovative, high-value added and safe products. The Group commits to encourage customers to adopt more environmentally conscious behaviour. Also, the individual brands make use of innovative tools and materials in the production stage and develop packaging that is less wasteful, thereby they contribute to lower the environmental impact at the consumption phase. LVMH is in dialogue with several consumer and environmental associations to ensure adherence to the requirements consumers have with respect to health & safety and environment. This is increasingly important, since more affluent consumers are becoming more environmentally conscious as well.

The Group is publicly held, with a substantial interest (46,5% in 2011) being held by the Arnault family. The firm operates in the interest of shareholders, by providing them a profitable return on their investment. Communication takes the form of Annual General Meetings, complemented with annual and half-year reports published on the firm's website. Also, LVMH has established the Shareholders' Club for its French-speaking shareholders to get more acquainted with LVMH. LVMH is listed on the DJSI and FTSE4Good index (delisted from the latter during 2007-2009). LVMH Group does not seem to have a specific approach towards its competitors or industry peers, other than that in 2011 it is reported that the firm cooperates with other businesses on matters concerning environmental protection.

Similarly, collaboration with the government and NGOs is mainly focused on discussing environmental issues. Partnerships with local environmental authorities, participation in the ILEC (Institut de Liaison des Entreprises de Consommation) to discuss issues related to the brand, the Febea (French association of cosmetic and perfumes manufacturers) or the National Packaging Council, to reduce packaging and increase consumer awareness, are all examples of LVMH's interaction with these groups of stakeholders. One of the Group's values is solidarity, which explains its long tradition in supporting foundations focusing on art, education and poverty alleviation. Additionally, the Group makes cash donations for disaster relief or displaced people (LVMH, 2011). No partnerships for strategic societal problem solving were reported, so it is assumed that LVMH takes a philanthropic approach to community involvement.

Socio-economic issues

Since the majority of manufacturing takes place in France, it is assumed that the LVMH Group adheres to the ILO standards concerning child labour, forced labour, discrimination, wages, working hours, freedom of association, right to collective bargaining and a healthy and safe working environment. No media was found to refer to socio-economic issues for which the Group was held responsible. As already mentioned, the Group only introduced a Supplier Code of Conduct in 2008, in which it refers to the ILO standards, Universal Declaration on Human Rights and the OECD and UN Global Compact principles. Clauses are formulated in a legal compliance manner, for example no reference is made to living wages or in case local labour laws do not uphold the right to freely associate whether suppliers should recognize other forms of employee organization (LVMH, 2008).

Although the individual brands already have codes of conduct in place, in 2009 the Group also introduced a Code of Conduct for employees. This code stipulates ethical principles which employees are expected to uphold at a global level, for example concerning conflicts of interest, human rights and responsible business relations (LVMH, 2010).

Environmental issues

The Supplier Code of Conduct also refers to environmental standards. The Group takes an anticipatory approach to changes in international regulations, by having experts attend workgroups of national and European authorities.

Chemicals

Suppliers are required to have waste management systems for handling hazardous waste. The Group has implemented the Globally Harmonized System to classify and harmonize the labelling of chemicals, and the REACH framework. In addition, LVMH has an internal document which contain guidelines concerning the materials that may be used in product development. Suppliers are also expected to adhere to these guidelines. Additionally, in anticipation of regulatory changes, the LVMH has decided to ban some of the substances used in products (LVMH, 2011). Since 2001 Louis Vuitton is replacing solvent-based with water-based glues in its workshops (LVMH, 2002). Also, the brand has introduced tools to assess non-compliance with respect to chemical product storage (LVMH, 2011).

Water

Saving water is a main priority of the LVMH Group, this is especially important in the Wines and Spirits business segment. Louis Vuitton collaborates with tanners on the issue of water and has introduced a tool to assess non-compliance with wastewater treatment and discharge. Also, the firm is conducting an investigation after the amount of water sourced from water-scarce areas and encourages suppliers to participate in the research. However, compared to the other business groups, the Fashion and Leather business group is found to have a limited effect on the quality of water.

Climate Change (cotton / energy)

LVMH only recently bought a stake in organic clothing line Edun. It recognizes the need to move into the area of sustainability in the fashion industry. Reasons can be found in the recent financial crisis and the wish from younger affluent consumers to wear more consciously made clothes. Edun founded Conservation Cotton Initiative Uganda in 2008 to facilitate the trade in cotton from Gulu, a recently the warn-torn area in Uganda (LVMH, 2011).

Concerning energy saving, LV replaced light bulbs at stores with more environmentally friendly ones and encourages shipping companies to prefer shipment over sea. Suppliers are motivated to adopt environmental friendly production methods as well. In 2011, Louis Vuitton placed solar panels on the roof of its workshop in California, thereby generating 31% of the energy requirements of the site (LVMH, 2011).

Sustainable supply chain management

In the early 1990s, LVMH's Environmental Department was given the task to develop the firm's environmental policy. With the introduction of the Environmental Charter in 2001, each brand started to become responsible for implementing the environmental goals that were formulated in the document. Reporting on environmental metrics started and in 2001 covered about 74% of global production sites. Companies then also started to audit their manufacturing sites, this can be done by internally trained staff or third-party auditors. In order to facilitate the assessment of suppliers' and subcontractors' environmental policies the Group launched the 'Supplier Tool'. In case suppliers are found in violation of the tool, they can be required to take corrective actions.

As the majority of LVMH and the Fashion and Leather Goods group are 'Made in France', suppliers and subcontractors are located in France or Italy, which automatically allows LVMH to adhere to the ILO standards. At the same time, several brands, such as Louis Vuitton and Donna Karan, have formulated their own codes of conduct and social audits with suppliers. Louis Vuitton has about seventeen workshops which manufacture leather products and depends for 45% on subcontractors. For a large part of raw materials, the brand used to depend on a small number of suppliers, however, in the past years it has increased the number of suppliers. For example by entering in a joint venture or acquiring a specialized tannery. Nowadays, the leading supplier of hides and leathers is responsible for 23% of the total supply of these materials. Overall, suppliers for the Fashion and Leather Goods group present a diversified portfolio and are located in the respective brand's country of origin (LVMH, 2011).

With the Environmental Charter, LVMH has committed itself to minimizing environmental risks. From 1996 the Group started environmental audits and soon after the focus was on obtaining ISO 14001 certificates, which suppliers were encouraged to as well. Through environmental awareness and regulation, Louis Vuitton has further integrated with upstream suppliers. As shown by a carbon assessment, suppliers were responsible for 17% of greenhouse gas emissions by Louis Vuitton. Therefore, the brand contacts tanners to educate them on the environmental impact of their operations. Already in 2001, the firm started to replace solvent-based with water-based glues at one of its manufacturers, in order to reduce gas emissions (LVMH, 2002). Also, tanners are made aware of the large amounts of water that is consumed in their production methods. This resulted in the commitment of suppliers to adopt environmental initiatives. For example, at the Cergy logistics centre employees are sent a safety and environment letter, at the Ducey workshop the brand implemented a guide for waste management and in Barbera staff received training from internal auditors (LVMH, 2005). More recently, one of LV's suppliers installed solar panels on its roof, whilst others have adopted green practices such as reclamation of production waste, waste water treatment, green roofs (at two Asian suppliers) and clean technologies to reduce water pollution. Nowadays, supplier audits include questions on environmental practices and the legal department advices suppliers on local regulations concerning waste, eco-tax and transport. Lastly, a special working group has been set up to develop a substance monitoring tool (LVMH, 2011).

Interestingly, LVMH was de-listed from the FTSE4Good index in March 2007. After the index strengthened its criteria concerning supply chain labour standards, a review detected LVMH did not adhere to its new standards (FTSE4Good, 2007). No details were provided on the specific violations. It seems that in response, in 2008, LVMH Group adopted a Supplier Code of Conduct. Only from then onwards are the already existing environmental audits complemented with social audits. In 2009 the firm is again listed on the FTSE4Good index. The firm reports in 2011 that a total of 453 audits were performed of which 380 were solely social audits. The majority of audits (62%) took place in Asia and the Group reported that 1/3 of the audits did not show violations. For the suppliers that showed violations, corrective action plans were formulated and in 2012 LVMH groups will conduct follow-up visits to track changes. Also, Louis Vuitton started preliminary audits based on SA 8000 and ILO standards, so as to detect the degree to which suppliers comply with social standards before entering into a relationship with them. In case Group companies found suppliers in major violation of its Code of Conduct, they were urged to end business relations (LVMH, 2011).

In terms of the integration of ESG into LVMH Group's supply chain strategy, it can be noted that the firm has had a detailed strategy to reduce its environmental impact for many years now. However, environmental protection is still for a large part not reflected in the firm's generic or individual brand strategy in the Fashion and Leather Goods group. Whilst indirectly, there is a link between environmental protection and risk management or innovation, which contribute to the development of the firm. At the same time, the environment has not been placed at the core of LVMH's business. An exception to this is the acquisition of the brand Edun, which produces garments made from organic cotton only. Also, Louis Vuitton has introduced the 'Green Supply Chain' project with which it targets more environmentally friendly logistics and transport providers (LVMH, 2011). The Group does provide ethical and environmental pre-audit trainings, however, it remains unclear whether there is also a database which records supplier's sustainability performance and whether employees have KPIs related to that.

Concerning communication and transparency, LVMH performs well with regards to environmental metrics, as proven by the launch of a first Environmental Report in 2001. This was also underlined by the Deeper Luxury report from WWF, where the firm was rated with a C+ for environmental, social and governance performance and reputation. This was the highest score given to any of the ten companies under revision and especially with respect to environmental reporting, the firm was said to outperform the other companies (Bendell & Kleanthous, 2009).With respect to social compliance, however, the Group only recently started reporting on audits. At the same time, the Group uses numerous channels to reach employees, suppliers and consumers with information on environmental protection. For example, started in 2005, representatives of supplier relations would meet to exchange best practices concerning codes of conduct and related topics. Also, employees can access the intranet for information about environmental protection and are encouraged to educate themselves on the topic.

Stakeholder collaboration is mainly represented by LVMH's participation in non-profit ORÉE, where it is part of the working group on biodiversity. This organization brings together businesses and government authorities to discuss environmental issues and interacts with NGOs. Next to that, the firm is in dialogue with other stakeholder groups, through various organizations, such as the French National Accounting Board, France's Corporate Social Responsibility watchdog organization (ORSE) and the French National Packaging Council.

Business case for SSCM

In the past decade, LVMH's sustainable supply chain management has shifted from a reactive to an active approach. It has improved internal procedures and started to take a somewhat more outward directed view on supply chain management. Whilst previously the focus was on the environmental dimension, now also including more social parts of sustainability in its business model. This is also reflected in the similar shift of its sustainability approach, which ultimately resulted in several triple bottom line effects.

Economic

Despite the recent financial crisis, LVMH's economic performance is strong. The firm explains this from a revolutionary point of view, where people nowadays go back to their values and therefore buy luxury products that are of quality and last longer. Karl Lagerfeld calls it: 'The new modesty' (Scolino, 2009). Besides the firm's main brand LVMH exhibits strong growth in the Asian market, especially with the growing Chinese middle-class that is attracted to the high quality goods it produces.

Social

In terms of social performance, LVMH does not report many developments over the past ten years. Other than that the majority of its suppliers adhere to the ILO standards, as they are located in countries that have adopted these standards in national laws. Those countries where labour conditions are not that strictly regulated are covered by the Group's recently adopted Supplier Code of Conduct. An increased number of social audits and correction plans at suppliers will improve the working conditions in these countries as well. Through the brand Edun, LVMH also contributes to a foundation which buys organic cotton from Ugandan farmers, thereby supporting the local community.

Environmental

LVMH motivates suppliers to adopt 'green practices', by developing tools and guidelines with information about the environmental impact of production. This has led several suppliers to adopt measures such as improved waste management, wastewater treatment and solar panels. Together, this contributes to the firm's reduction in greenhouse gas emissions and water consumption. For example the solar panels installed at the San Dimas plant will generate 286.2 kW and thereby produce 31% of the electricity requirements (LVMH, 2011).

Also, in their own supply chains, the brands integrate environmental considerations. LV decided to increasingly ship its products via sea instead of air and by improving rail/road combinations from its Barbera workshop, the firm managed to reduce CO2 emissions with 105,400 metric tons in 2003 compared with road transport only. Also, the firm's reduction in packaging material for the Neverfull bag resulted in a 60% reduction in shipped volume. The firm also enhanced water consumption monitoring at the Ducey site and introduced measures to detect water leaks at Cergy 2 and 3, which resulted in water savings of 50 m3 per month. Through ecodesign, LV has reduced the amount of packaging material for stock-keeping items by 100 metric tons and belts now use 60% less canvas (LVMH, 2011).

By participating in stakeholder organizations focused on environmental issues, LVMH also attempts to develop tools and practices that save energy, for example in terms of packaging and transport.

Based on the foregoing, LVMH seems to pay much attention to environmental protection. It is not merely a matter of philanthropy, rather it is an issue that is well integrated into the Group's strategy and values. As stated by CEO Bernard Arnault: "Tradition cannot be separated from innovation, nor nature from creation." (LVMH, 2012). Thus, sustainable development is a notion going beyond what is legally required. It is a way to trigger risk management and more importantly, a way to induce competitiveness and innovation. From this it can be concluded that LVMH supports all business cases for sustainable supply chain management.

Firstly, the firm states that environmental impact reduction measures will lead to cost savings. This is for example reflected in Veuve Clicquot's practice to send emails to employees, in which it explains the cost savings obtained by the green practices that were adopted by the firm. Also, other brands within the group publish guidelines with environmental results to motivate employees to adopt more environmentally conscious behaviour. In 2005, the firm reports 6,800 training hours were provided to employees and suppliers on environmental policies. Thereafter stipulating that the adoption of green practices by each of these individuals will have a significant impact in terms of waste, energy and water consumption reduction (LVMH, 2005).

Secondly, environmental risk management has also been present in LVMH's approach to supply chain management. In that suppliers are required to uphold environmental standards as stipulated by legislation and international regulations. Besides, the Group takes a precautionary approach to environmental risks, as reflected in the processes with which it keeps track of changes in environmental regulations.

The third and fourth business cases are taken together in the firm's core values of creativity and excellence. These instigate a culture to continuously innovate new products and processes, so as to stay ahead of competition. Also, LVMH recognizes that as a business it uses many of the earth's natural limited resources: "These resources are not assets that we shall leave to our children as an inheritance. They form a capital that we are borrowing from future generations. We will be required to restore this capital to them." (LVMH, 2011). This phrase reflects a moral obligation LVMH has to future generations.

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Appendix 48

	2000	2005	2010
Size	$ 14.249 ($ 3.939)	$17.114 ($5.921)	$29.109 ($10.719)
Ownership	Publicly held		
Internationalization			
# of suppliers	-	-	-
# of countries	-	-	6+
# of manufacturing facilities	20	-	181 (22)
Strategy.	Niche		
Customer segment	Luxury, niche		
Value proposition	Quality, service, customization, design, brand/status.		
Horizontal differentiation	50 (12)	50 (13)	60 (13)
Horizontal diversification	5	5	6
Channels			
# of stores	1.526 (566)	1.723 (891)	3.040 (1246)
# of countries	-	-	-
DVI	0,79	0,78	0,78
Customer relationship	Dedicated personal assistance		
Revenue streams	Asset sale		
Key resources	Intellectual / physical		
Key activities	Apparel manufacturer, distribution, sale of products, marketing and promotion.		
Partnerships	Acquisition of particular resources/activities		
Cost structure	Value-driven Fixed and Variable costs		

Table 23 Firm characteristics LVMH (figures in brackets represent the Fashion and Leather Goods business group)

Appendix 49 Stakeholder management LVMH

	2000	2005	2010
Primary stakeholders			
Employees	In France, Group companies have works councils, employee representatives, as well as health and safety committees. Employees are compensated based on performance, receive training, also on environmental standards. Employees can take part in a profit sharing scheme.	LV organized environmental trainings at its workshops, sent environmental and safety letters, and developed a guide for waste management. In 2005 LVMH amongst other French companies was found to lack disclosure on non-discrimination policies.	LVMH prevents discrimination in recruitment, employs people with disabilities, promotes education, supports access to employment and combats exclusion. Employees are informed, aware and motivated by environmental issues.

Suppliers	The majority of suppliers to LVMH are based in France and Italy for quality reasons. LVMH states that: 'Our suppliers hope to form a lasting partnership, to no one's surprise.' Through the Supplier Tool, LVMH attempts to measure the environmental impact of supplier operations.	The majority of suppliers to LVMH are based in France and Italy for quality reasons. LVMH focused on supplier engagement in green initiatives.	LVMH chooses the best suppliers that share their philosophy. LV vertically integrated upstream with suppliers on environmental issues, especially its leather suppliers are motivated to obtain ISO14001 certification. The group plans to develop a tool for suppliers to conduct an environmental self-audit. Some relationships are discontinued if suppliers are found to be in violation with the Supplier Code of Conduct that was introduced in 2008. In 2007, however, LVMH was delisted from the FTSE4Good, because it did not comply with supply chain standards. In 2009, the firm re-entered the index again.
Customers	Customers demand quality, high-value added, innovative and safe products,, in addition to high service levels. LVMH in its Environmental Charter commits to promote responsible environmental behavior amongst customers.	LVMH encourages its group brands to design products with consideration for the environment, by triggering competition through guidelines on trends and innovative materials/processes less harmful for the environment.	LVMH wishes to meet customer expectations regarding information, health & safety and environment standards. LVMH's environmental department is in dialogue with several consumer and environmental protection associations. Especially affluent customers are changing their lifestyles to reflect responsibility towards the environment.
Investors	LVMH's shareholders expect sustainable profitability. Financial information is available upon request and on the firm's website. The firm has formed the Shareholders' Club for its French-speaking shareholders to get more acquainted with LVMH. LVMH is listed on the DJSI and FTSE4Good index.	The firm has formed the Shareholders' Club for its French-speaking shareholders to get more acquainted with LVMH. LVMH is listed on the DJSI and FTSE4Good index.	Shareholders' Club for its French-speaking shareholders to get more acquainted with LVMH. LVMH is listed on the DJSI and FTSE4Good index.
Competitors	-	-	LVMH forms partnerships with groups of businesses on environmental matters.
Secondary stakeholders			
Government	LVMH states to expand dialogue with local authorities on environmental matters.	LVMH forms partnerships with amongst others local authorities for environmental protection beyond its own operations.	LVMH engages in working groups with national and international authorities on the issue of climate change. For example it participates in ILEC (Institut de Liaison des Entreprises de Consommation) which discusses issues related to the brand, the Febea (French association of cosmetic and perfumes manufacturers) or the National Packaging Council, to reduce packaging and increase consumers awareness.
NGOs	LVMH works with Orée, an association of manufacturers, communities and associations, together they designed environmental guidelines for SMEs and logistics companies.	LVMH works with Orée, an association of manufacturers, communities and associations, to adopt environmental best practices.	LVMH takes part in the Climate Project of Al Gore to enhance public awareness about climate change. Also the firm supports the Green Cross International.
Community	Since 1990, LVMH supports several foundations focusing on children, elderly and disabled, medical research and humanitarian and social causes.	Since 1990, LVMH supports several foundations focusing on children, elderly and disabled, medical research.	LVMH supports communities and promotes a responsible production and consumption model. The firm engages in numerous projects in the field of art, education and poverty alleviation. For 20 years the firm supports a foundation active in helping displaced people in the High Central Plateau in Haiti, also the firm provided funds to people that were victims of the tsunami in Japan.

Appendix 50 Issue management LVMH.

	2000	2005	2010
Socio-economic issues			
Child labour	-	-	In its Supplier's Code of Conduct, LVMH prohibits child labour.
Migrant workers	-	-	In its Supplier's Code of Conduct, LVMH upholds the principle of non-discrimination.
Women workers	-	-	LVMH has a policy on equality of opportunity in human resource practices. The
Wages	-	-	Suppliers should comply with wage and working hours regulations.
Bonded labour	-	-	The use of forced labour is prohibited by LVMH's Supplier's Code of Conduct.
Freedom of association	-	-	Suppliers are required to uphold the right to freedom of association. No mention is made of what standards should be adhered to in countries where this right is not stipulated in local law.
Health & Safety (sandblasting)	-	-	Suppliers are required to provide healthy and safe working environments.
Environmental issues			
Chemicals	Kenzo mode monitors suppliers on their adherence to regulations on nitrogen dyes and the use of nickel. LV is replacing solvent- with water-based adhesives.	LVMH continues its project to replace solvent-based with water-based adhesives.	LV promotes the implementation of REACH through a special committee that provides training to buyers, monitors suppliers and helps replacing chemicals with alternatives when needed. LV developed a substance monitoring tool.
Water	-	LV collaborates with tanners on the issue of water usage.	LVMH investigates the amount of water sourced from water-scarce areas and encourages suppliers to collaborate. Also, the firm funded an NGO that has a project to restore water quality in Japan.
Climate change (cotton / energy)			LVMH's ethical brand Edun uses organic cotton in its production line and set up a foundation to facilitate cotton trade from Uganda. LV's Green Supply Chain project is intended to make the firm logistics and transport service providers more environmentally friendly. The firm engages in several packaging minimization and ecodesign iniatives.

Appendix 51

SSCM Indicator		**2000**		**2005**		**2010**
Risk awareness (3)	0	The firm does not publicly report on: a) spend analysis, b) the percentage of spend covered by its spend analysis, c) critical suppliers.	0	The firm does not publicly report on: a) spend analysis, b) the percentage of spend covered by its spend analysis, c) critical suppliers.	2	LVMH sources 45% of sales of its Fashion and Leather Business products from subcontractors. For Louis Vuitton, the leading supplier of hides and leathers represents about 23% of its total supplies of these products.

Risk exposure (1)	1	LVMH has an environmental risk management policy in place.	1	LVMH has a risk assessment tool, which systematically identifies industrial, environmental and operational risks.	1	LVMH initiated a pilot project with its Maisons to identify relevant environmental issues and assign KPIs to each issue to monitor performance of each Maison.
Risk management (12)	9	LVMH has an environmental policy to which suppliers are expected to adhere as well. Since the majority of its suppliers are located in France, Spain, Italy and the US, they are expected to adhere to the ILO standards. All brands are encouraged to adopt ISO14001 certification. LVMH launched the Supplier Tool to create awareness amongst suppliers and subcontractors. Environmental performance data was first reported in 1999. The firm does not publicly report on: a) social performance data and b) guidance concerning subcontracting, c) contract clauses including ESG factors.	9	LVMH has an environmental policy to which suppliers are expected to adhere as well. Since the majority of its suppliers are located in France, Spain, Italy and the US, they are expected to adhere to the ILO standards. All brands are encouraged to adopt ISO14001 certification. LVMH launched the Supplier Tool to create awareness amongst suppliers and subcontractors. Environmental performance data was first reported in 1999. Individual brands formulated ESG factors to which suppliers must commit. The firm does not publicly report on: a) social performance data and b) guidance concerning subcontracting, c) collaborative initiatives.	12	In 2008, LVMH established the Code of Conduct for Suppliers, this contains clauses on: human rights, working conditions, health & safety, business ethics and certified EMS. Suppliers require approval for subcontracting to provide access to documents necessary for social compliance audits (LV started audits using the SA8000 standard). LVMH collaborates with suppliers to promote environmental awareness beyond its own production processes. Call for tenders look into suppliers' commitment to the environment and the improvements they have made over the past period.
Monitoring (7)	3	LVMH uses external auditors, next to an internal environmental audit team. If necessary, suppliers are required to make adjustments. The firm does not report on a) on-site visits (unannounced), b) interviews with management, c) interviews with workers (on-site), d) interviews with workers (off-site).	3	LVMH uses external auditors, next to an internal environmental audit team. If necessary, suppliers are required to make adjustments. The firm does not report on a) on-site visits (unannounced), b) interviews with management, c) interviews with workers (on-site), d) interviews with workers (off-site).	4	LVMH uses external auditors, next to an internal environmental audit team. Visits can be unnanonced and in the case of non-compliance corrective action plans are defined. The firm does not report on a) interviews with management, b) interviews with workers (on-site), c) interviews with workers (off-site).
Capacity building & incentives (2)	0	The firm does not publicly report on: a) capacity building initiatives, b) incentives for suppliers.	1	LVMH engaged in activities to engage suppliers to adopt 'green practices'. The firm does not publicly report on: a) incentives for suppliers.	2	Donna Karan sponsored social compliance and restricted substances trainings for representatives of vendors and factories. Any violation of the Supplier Code of Conduct results in a review and possible termination of business relations.
ESG integration in SCM strategy (6)	2	LVMH group prepared a "Guide to an environmental audit before the purchase or sale of a site", so that companies will consider environmental issues when purchasing property. Also, LVMH promotes training of internal environmental auditors. The firm does not publicly report on a) ESG objectives for SCM, b) incentives for ESG for procurement staff, c) access to ESG supplier database, d) ESG-related KPIs.	3	LVMH integrates environmental practices into its SCM, also it provided training to auditors about ethical and environmental pre-audits. The firm does not publicly report on a) incentives for ESG for procurement staff, b) access to ESG supplier database, c) ESG-related KPIs.	3	LVMH set the goal to measure carbon footprints, so as to formulate measurements to reduce them at production sites. Supplier selection is based on proximity. LV offers training to buyers in SA8000 and REACH.

Opportunities (2)	2	In collaboration with suppliers LV is replacing solvent- with water-based adhesives. LVMH conducts life cycle analyses since 1993.	1	LV raises awareness among independent suppliers about their environmental impact and helps tanners to find solutions to reduce their water usage.	2	Suppliers of LV have adopted environmental friendly initiatives e.g. solar panels. LV in partnership with NGO "La Réserve des arts" donates waste from workshops, which will get a second life when used by artists.
Measurement (9)	3	Since 1996, 16 environmental audits were conducted, LV reports on total greenhouse gas emissions and the outcome of its adhesive replacement. The firm does not publicly report on: a) % of 'prime contact' procurement staff trained on ESG issues, b) % of supplier contracts including ESG factors, c) % of suppliers with EMS certification, d) % of suppliers' contracts terminated, e) % of procurement spent with preferred suppliers, f) supplier water usage.	3	Since 1996, 16 environmental audits were conducted, LV reports on total greenhouse gas emissions of which 17% is caused by suppliers and total water consumption. The firm does not publicly report on: a) % of 'prime contact' procurement staff trained on ESG issues, b) % of supplier contracts including ESG factors, c) % of suppliers with EMS certification, d) % of suppliers' contracts terminated, e) % of procurement spent with preferred suppliers, f) outcomes of capacity building initiatives.	5	In 2011, 453 audits were conducted, staff were trained on environmental issues and LVMH reports 203,417 tons CO2e for transportation in the Fashion and Leather Goods business unit. The firm does not publicly report on: a) % of supplier contracts including ESG factors, b) % of suppliers with EMS certification, c) % of suppliers' contracts terminated, d) % of procurement spent with preferred suppliers, e) supplier water usage, f) outcomes of capacity building initiatives.
Transparency (6)	2	LVMH conducted an awareness program with suppliers about its environmental policy and since 1995 suppliers enjoy trainings designed by the Environmental Commission. The firm does not publicly report on: a) communication of risk awareness, b) GRI standard adoption, c) factory list, d) sustainability performance KPIs of suppliers.	2	LVMH conducted an awareness program with suppliers about its environmental policy and the group has assigned agents within each business group for sharing best practice. The firm does not publicly report on: a) communication of risk awareness, b) GRI standard adoption, c) factory list, d) sustainability performance KPIs of suppliers.	2	Each Maison educates suppliers on social and environmental requirements. Additionally, self-audits increase awareness amongst suppliers on social and environmental standards. The firm does not publicly report on: a) communication of risk awareness, b) GRI standard adoption (LVMH's 2011 Environmental Report reflects the GRI G3 guidelines), c) factory list, d) sustainability performance KPIs of suppliers.
Collaboration (1)	1	LVMH is Secretary General of France's OREE, an association that unites businesses and local governmental entities behind shared environmental objectives.	1	LV is in constant contact to raise awareness and collaborate with tanners to reduce their environmental impact during production.	1	LV partners with NGO "La Réserve des arts," by donating commercial waste from its workshop, which is then recycled by designers. Also, LVMH organized in-house days, which were attended by employees and families, so as to encourage stakeholder dialogue.

Table 24 SSCM indicators LVMH

Appendix 52

Year	Event
1992	Environmental department
2001	Environmental Charter First Environmental Report Included in DJSI and FTSE4Good index.
2002	Carbon Footprints of the Group's Maisons
2003	Signatory of the UNGC
2006	LVMH joins the CDP
2007	LVMH adopts Gordon Brown's "Millennium Development Goals"
2008	LVMH Group launches the Suppliers' Code of Conduct
2009	LVMH Group Code of Conduct
2010	CDP Water Disclosure

2011	BSR Working Group on exotic leathers

Table 25 Timeline LVMH.

Case study Viyellatex Group Ltd.

Firm

Viyellatex Ltd. (Viyellatex) was established in 1996 and is headquartered in Khortoil, Tongi, Gazipur in Bangladesh. The core business of Viyellatex is Knit Garments, which entails the knitting, washing, dyeing and embroidery of garments. The firm produces sleep wear, kids' wear, casual knitwear, fashionable wear and formal shirts, thus the degree of horizontal differentiation is medium. The firm is privately-owned and under supervision of CEO and Chairman David Hasanat, Viyellatex currently employs 18,000 workers and in 2011 reports net sales of $ 206 mln.

In-house suppliers include Viyellatex Spinning Ltd., which specialized in carded, combed and open end cotton yarn. Interfab Shirt Manufacturing Ltd., produces both formal and informal woven shirts. Gothic Design Ltd. is the firm's printing facility and located at the same site. Lastly, Fashion Plastic and Packaging Ltd. (FPPL) is a accessories manufacturer, which services both Viyellatex and outside clients. In 2009 the company horizontally diversified into the business of tea production and logistics management services. Recently, Viyellatex has become active in the electricity sector by adding Power Midland Ltd. to its business portfolio.

Viyellatex itself only has manufacturing units located in Bangladesh, so its degree of internationalization is zero. At the same time, the firm's products are present throughout the world via its customers' channels, so indirectly internationalization is relatively high. The firm specializes in quality and efficient products that use a minimal amount of raw materials. To support this, the firm has introduced an extensive SAP structure at operational level (Viyellatex, 2010).

In a short period of time Viyellatex has managed to become a successfully growing firm and this will be further stimulated by the Bangladeshi government and local trade developments. That is, India has decided to extend non-tariff barriers to 46 Bangladeshi garment items, thereby boosting exports to India. Also, the Bangladeshi government is developing Special Economic Zones to boost local entrepreneurship and job creation. Also, it has reserved a sum of Rp255 billion to subsidize the interest on loans needed by apparel firms for refurbishment (Pakistan Textile Journal, 2011). Lastly, corporate social responsibility is promoted by the country's tax laws (The Financial Express, 2009).

On the other hand, global developments with respect to the sourcing of raw materials have proven difficult to deal with. As the quality of Bangladeshi cotton does not meet requirements for mass production of ready-made-garments (RMG), many manufacturers source cotton from countries such as: China, USA, African countries, Uzbekistan, Turkmenistan, Kazakhstan, Brazil, India, Pakistan etc. the international price for cotton is unstable and requires long-term planning and hedging. The financial crisis caused a surge in the price of cotton, where mainly China and India saw a significant increase in demand, while international production reduced. Thereby many manufacturers saw their profit margins reduce. Additionally, the Indian government banned the export of cotton, so that the Bangladeshi market, which is highly dependent on cotton supply from India, was hard hit.

Concurrently, large US and European buyers are banning cotton sourced from Uzbekistan for child and forced labour reasons. This means, that Bangladeshi manufacturers have to switch sourcing to the US and Africa, where the price/quality ratio is less favorable. Wherever possible, Viyellatex attempts to source CIS cotton, in line with buyer specifications, mainly because this type of cotton has high quality.

Another factor that influences Bangladeshi garment manufacturers concerns the shortage of yarn supply. That is, often the woven fabric does not meet quality standards as specified by the customers. This means that many firms specialized in woven fabric source from factories that are selected by customers on the basis of quality and design. Also, Bangladesh produces little specialized yarn such as lycra, which make it likely that manufacturers source these raw materials from Chinese suppliers (Elance, 2009).

Sustainability

Viyellatex' vision is to contribute to the development of Bangladesh, by being committed to the environment and worker's welfare. The firm is active in its community through educational and health projects. Viyellatex identifies the following stakeholders: employees, locals, buyers, suppliers and creditors/banks. The firm is in dialogue with its suppliers and customers and regularly meets with representatives of the community.

Stakeholders

Employees are regarded as the firm's family. They receive 20% higher wages than the industry average, these are based on performance and work experience. The firm also has a pension plan, composed of a provident fund for all employees and gratuity and service benefits for management and workers. Additional benefits include life and medical insurance. Viyellatex' HR department has a special unit dedicated to employee counseling and assistance, which attempts to help employees in case of health, financial, marital or other problems that can affect their productivity. The compliance unit covers health & safety standards and employee-related documentation. Also, there is a training and development team, supporting newly appointed management staff and workers. Health & safety trainings are provided. The firm has a non-discrimination policy and provides extra benefits such as free eye treatment camps and 0-5 clinics for worker's children (Viyellatex, 2010).

In the past few years, Viyellatex had a high employee turnover rate, especially amongst the young and female workforce. Where workers who receive training leave the firm to continue work at home to take care of their children. Their main motivation to work is to provide short term assistance to their family and once they are self-sufficient, they leave their jobs to move back to the rural areas where they originally come from (Viyellatex, 2010). An employee satisfaction survey was distributed on workplace satisfaction, in general scores were high, whilst air flow and ventilation could be improved.

The majority of suppliers to Viyellatex are in-house, which makes it easy to monitor compliance with labour standards. At the same time, the firm is highly dependent on these in-house suppliers, which in another report was found to contribute to longer leadtimes, less quality and higher prices than if products would be sourced from external parties (Elance, 2009).

Viyellatex' main customers are: Puma, PVH, Esprit, Hugo Boss, M&S, S. Oliver, Calvin Klein, DKNY and Tommy Hilfiger. They are positioned in the mid-/high-end segment and have relatively high quality requirements. Viyellatex reports customer satisfaction regarding product quality (75%) and product price (50%) (Viyellatex, 2011).

The foundation of the Ruthna Tea Estate in 2009 symbolizes the strategic intention Viyellatex finds in social business. Other community investments include, the employment of disabled girls, educational projects and blood donation events. Also, charitable deeds take the form of garment donations and cash donations to SIDR victims and universities.

Socio-economic issues

Viyellatex pays high regard to the freedom of workers. In accordance with the law, Viyellatex does not recruit workers aged below 18 years and requires every new worker to show appropriate identification documents and birth certificates to prove their age. The compliance team takes up responsibility for this issue by conducting audits on child labour at third-party suppliers, so as to ensure that the firm's practice is followed throughout its supply chain. This shows that, by leveraging on its industry connections, the firm takes a proactive commitment to abolish the practice of child labour from Bangladesh (Viyellatex, 2012).

Also, the firm has policies in place to ban forced labour, for example identification papers or monetary deposits may not be withheld, wages are paid directly to employees in cash, recruitment documents are directly managed by the firm, retrenchment procedures and a person is appointed to manage the prohibition of forced labour (Viyellatex, 2010). Especially for pregnant women, Viyellatex provides maternity benefits, which include ultra-sonograms and medicines. Any form of discrimination on the workfloor is managed by a special HR Counseling and Assistance Department (Viyellatex, 2012).

Viyellatex regularly meets with the Workers' Participation Committee in order to discuss any problems and negotiate on issues (Viyellatex, 2012). For health & safety purposes, workers have access to free personal protective equipment. Also, workers receive training on health & safety procedures. Drinking water quality is checked regularly. Moreover, a medical team is available to all workers and organizes several free clinics throughout the year, such as the Expanded Program on Immunization and blood donation (Viyellatex, 2012).

Environmental issues

Viyellatex became ISO14001 certified in 2012. The firm has installed a co-generation and hot-water chiller to chill the air in the spinning mill. Also the firm has systems to re-uses condensed steam and drier exhaust, which contribute to significant reductions in energy consumption. Additionally, Viyellatex has a co-generation boiler and an evaporating cooler system to control temperature on the workfloor, this is an environmentally friendly alternative to air conditioning. The firm uses waste from garments, like cotton dust, and food to produce organic compost fertilizer, which is then used on the tea plantation and given away for free to local farmers. Viyellatex is building two carbon-neutral factories in Dhaka: EcoFab and Eco Couture (Viyellatex, 2012).

The majority of ground water consumption is taken up by the garment production. A water treatment plant makes the water ready for use in the dyeing, washing and utility process. After use, the water from utility is discharged in the local sewage system, since it does not contain any chemicals. Water from spinning is discharged in a local pond and the water used for the dyeing process goes into a water treatment plant after which the purified water is used for toilet flushing, therewith saving 90 million liters of groundwater use. During the rain season, the firm collects rain water from the rooftop, which is then filtered and does not need additional treatment before it can be used. This method allows the firm to save 45 million liter of ground water per year (Viyellatex, 2010). Viyellatex sources organically certified cotton.

Sustainable Supply Chain Management

Viyellatex Group is a highly vertically integrated firm with in-house suppliers. Thus, it has a clear overview of critical suppliers, which also facilitates legal compliance and risk management measures. Being a signatory of the UNGC since 2009, Viyellatex has systems in place to adhere to social and environmental standards. Audits are conducted by third parties who pay (un)announced visits and interact with management and employees both on- and off-site. If necessary, corrective action plans are formulated. Suppliers also receive training on environmental and social issues and are awarded according to their sustainability performance. Next to these suppliers, Viyellatex also sources raw materials from a relatively small group of third parties, which it audits on child labour.

Sustainability considerations are part of Viyellatex' supply chain management as reflected in the selection of suppliers based on compliance and for cotton providers on their certification for organic cotton. On the other hand, the firm does not seem to have measures in place to incentivize its procurement team to adopt sustainable sourcing practices. Concerning opportunities in the supply chain Viyellatex does not seem to collaborate with its third-party suppliers to implement innovative sustainable measures. The firm itself does adopt a sustainable strategy by setting the goal to become carbon-neutral by 2016 as reflected in the building of two carbon-neutral factories according to LEED principles, so as to attract more international buyers. Also, any garments that were made and do not meet buyers' requirements, are sold to local communities and waste from making garments is used in organic fertilizer. These initiatives show the firm's consideration of the lifecycle of products.

With regards to measurement, Viyellatex has detailed data on in-house suppliers, covering social compliance, environmental management systems and water usage. Training and awareness raising activities contribute to the firm's transparency with regards to supplier standards and risk management measures. Sustainability reports follow the GRI guidelines and Viyellatex also publishes a list of its main customers and suppliers. In terms of stakeholder collaboration, the firm active, for example together with local NGO Center for Rehabilitation of the Paralyzed (CRP), Savar and Rotary Club of Dhaka North West it organized a mobile clinic for the disabled (Viyellatex, 2012).

Business Case for SSCM

Overall, Viyellatex scores medium on sustainable supply chain management. Mainly, because its suppliers are located in-house, which facilitates sustainability implementation. The firm reports several triple bottom line effects stemming from its sustainable supply chain management initiatives.

Economic
In a short period of time, Viyellatex has managed to become a highly profitable firm. Although the economic crisis has caused a short drop in exports, the firm is facing increased orders as it has become a strategic partner of Puma (Mohammed, 2012). Also, the firm is increasing capacity at a time where there is a gas and electricity crisis. As it believes that its investment in 'green economy' will offset the extra costs in the near future. Mr. Hasanat believes the RMG sector in Bangladesh will not be hit in the long-term by the financial crisis, because of its competitiveness and capacity (Chowdhury, 2011).

Social
Viyellatex provides health & safety related trainings, which, as the firm states, 'do not add directly to the profit of the group, are of assistance to motivate the workers and ensure safety at work.' (Viyellatex, 2010, p. 52). Health & safety trainings were held in 2011: 5,393 workers were trained on firefighting, 376 on chemical handling and 340 on first aid. The medical team services assisted a total of 4000 people, which was 19% more than in 2010. A camp for the physically disabled and mentally challenged was organized, which benefitted a total of 81 and 225 people (Viyellatex, 2012). Also, the firm sees value in providing extra benefits to employees like provident fund, maternity benefits and the like to keep employees motivated and satisfied.

Environmental
Viyellatex invests in a carbon-neutral factory built according to LEED principles, in order to attract more international buyers (Viyellatex, 2010). Also, the firm has undertaken many environmentally friendly systems to reduce the amount of energy, water and waste consumed. For example it installed a cogeneration boiler and hot water chiller, which saves up to 854,601.23 m3 of natural gas per year or US $70,969.06 per year. Also, by using the rainwater collected on the rooftop, the firm saves 45 million liters of ground water. Lastly, a system to reuse steam water and drier exhaust help save 40% of costs in gas and water and 180,000 cubic meters of gas.

Concluding, the integration of sustainability in the supply chain of Viyellatex has helped the firm to become a highly profitable player in the market. The firm underwrites the first business case, focusing on sustainability for cost saving opportunities, which in turn leads to a higher attractiveness to international buyers, thereby referring to the second business case. While Viyellatex also assumes an important position in the development of Bangladesh, which proves that the firm takes a moral duty approach to employees and the community in which it is active, thus partially contributing to the fourth business case.

Appendix 53

	2000	2005	2010
Size	-	-	$206
Ownership	Privately held		
Internationalization			
# of suppliers	-	-	19
# of countries	-	-	5?
# of manufacturing facilities	-	-	10
Strategy	Differentiation		
Customer segment	Mid / high, segmented		
Value proposition	Quality, speed, service		
Horizontal differentiation	5	5	5
Horizontal diversification	4	4	6
Channels			
# of stores	NA	NA	NA
# of countries	NA	NA	NA
DVI	-	-	-
Customer relationship	Personal assistance		
Revenue streams	Asset sale		
Key resources	Physical / Human		
Key activities	Raw material manufacturer, fabric supplier, apparel manufacturer		
Partnerships	Reduction of risk and uncertainty		
Cost structure	Cost-driven Fixed costs Economies of scale		

Table 26 Firm characteristics Viyellatex Group

Appendix 54

	2000	2005	2010
Primary stakeholders			
Employees	Employees receive wages that are 20% higher than the industry average. Next to allowances for medical, maternity and housing. Employees are allowed to freely associate.	Employees receive wages that are 20% higher than the industry average. Next to allowances for medical, maternity and housing. Employees are allowed to freely associate.	Employees receive wages that are 20% higher than the industry average. Next to allowances for medical, maternity and housing. Employees are allowed to freely associate.
Suppliers	Viyellatex has strong relations with its suppliers, since they are mainly in-house.	Viyellatex has strong relations with its suppliers, since they are mainly in-house.	Viyellatex has strong relations with its suppliers, since they are mainly in-house.
Customers	Viyellatex produces for a variety of customers in the high-end segment. Customer satisfaction is measured.	Viyellatex produces for a variety of customers in the high-end segment. Customer satisfaction is measured.	Viyellatex produces for a variety of customers in the high-end segment. Customer satisfaction is measured.
Investors	NA	NA	NA
Competitors	Viyellatex is a member of several trade union associations.	Viyellatex is a member of several trade union associations.	Viyellatex is a member of several trade union associations.
Secondary stakeholders			

Government	Viyellatex is a member of several trade union associations.	Viyellatex is a member of several trade union associations.	Viyellatex is a member of several trade union associations.
NGOs	Viyellatex donates money to NGOs for disaster relief and development projects.	Viyellatex donates money to NGOs for disaster relief and development projects.	Viyellatex donates money to NGOs for disaster relief and development projects. The firm became member of the UNGC.
Community	The firm invests in several community projects related to health and education in Bangladesh. Viyellatex sits with community representatives on a quarterly basis.	The firm invests in several community projects related to health and education in Bangladesh. Viyellatex sits with community representatives on a quarterly basis.	Viyellatex invested in the Ruthna Tea Estate social business, with which it contributes to the local economic development of the area, employing people and enhancing the environment. Also the firm organizes events for the disabled and participates in seminars on topics like Aids.

Appendix 55

	2000	**2005**	**2010**
Socio-economic issues			
Bonded labour	Viyellatex prohibits the use of forced labour and has special policies in place to prevent it.	Viyellatex prohibits the use of forced labour and has special policies in place to prevent it.	Viyellatex prohibits the use of forced labour and has special policies in place to prevent it.
Child labour	Viyellatex prohibits child labour and employs no workers aged below 18. The compliance team checks birth certificates and conducts audits at third-party suppliers.	Viyellatex prohibits child labour and employs no workers aged below 18. The compliance team checks birth certificates and conducts audits at third-party suppliers.	Viyellatex prohibits child labour and employs no workers aged below 18. The compliance team checks birth certificates and conducts audits at third-party suppliers.
Migrant /women / home workers	The firm prohibits discrimination on the workfloor and has maternity allowances for female workers.	The firm prohibits discrimination on the workfloor and has maternity allowances for female workers.	The firm prohibits discrimination on the workfloor and has maternity allowances for female workers.
Wages	Viyellatex offers competitive wages that are 20% higher than the industry average. Next to that, workers have the right to insurance and retirement benefits.	Viyellatex offers competitive wages that are 20% higher than the industry average. Next to that, workers have the right to insurance and retirement benefits.	Viyellatex offers competitive wages that are 20% higher than the industry average. Next to that, workers have the right to insurance and retirement benefits.
Freedom of association	Workers are allowed to become a member of the Workers' Participation Committee.	Workers are allowed to become a member of the Workers' Participation Committee.	Workers are allowed to become a member of the Workers' Participation Committee.
Health & safety	Viyellatex increasingly improves health and safety standards. Workers have access to adequate PPEs and receive training. Free medical clinics are organized and there is a medical team available.	Viyellatex increasingly improves health and safety standards. Workers have access to adequate PPEs and receive training. Free medical clinics are organized and there is a medical team available.	Viyellatex increasingly improves health and safety standards. Workers have access to adequate PPEs and receive training. Free medical clinics are organized and there is a medical team available. The firm expanded its program on national immunization.

Environmental issues			
Chemicals	Viyellatex is ISO14001 certified, so it has basic procedures concerning chemical treatment.	Viyellatex is ISO14001 certified, so it has basic procedures concerning chemical treatment.	Viyellatex is ISO14001 certified, so it has basic procedures concerning chemical treatment.
Water	Viyellatex installed a wastewater treatment plant and filters rain water.	Viyellatex installed a wastewater treatment plant and filters rain water.	Viyellatex installed a wastewater treatment plant and filters rain water.
Climate change (cotton / energy)	Viyellatex has a co-generation boiler, a hot-water chiller and a condensed steam and drier exhaust reuse facility.	Viyellatex has a co-generation boiler, a hot-water chiller and a condensed steam and drier exhaust reuse facility. Viyellatex sources organically certified cotton.	Viyellatex has a co-generation boiler, a hot-water chiller and a condensed steam and drier exhaust reuse facility. Viyellatex sources organically certified cotton. Waste from garments is used as fertilizer.

Appendix 56

SSCM Indicator		2010
Risk awareness (3)	1	Viyellatex identifies critical suppliers.
Risk exposure (1)	0	Viyellatex does not have a formalized sustainability risk identification system.
Risk management (12)	9	Viyellatex' compliance team ensures that suppliers adhere to its policies concerning human rights. The firm has environmental standards for suppliers, since it sources only certified organic cotton. Viyellatex has standards for working conditions, health & safety and business ethics. The firm obtained ISO14001 in 2012 and reports on environmental impact and social metrics. The firm does not publicly report on: a) guidance regarding sub-contracting, b) collaborative initiatives, c) contract clauses containing ESG factors.
Monitoring (7)	7	Viyellatex allows third-party auditors to monitor suppliers with (un)announced visits and interviews with management and workers. Based on findings, the firm develops corrective action plans.
Capacity building & incentives (2)	2	Viyellatex provides training to suppliers on environmental and social matters, also there is an award system in place.
ESG integration in SCM strategy (6)	2	Viyellatex wants to become carbon-neutral by 2016. Part of cotton import selection is compliance on labour issues (child labour). The firm does not publicly report on: a) incentives for ESG in procurement staff, b) access to ESG supplier database, c) training on ESG issues in procurement, d) ESG-related KPIs.
Opportunities (2)	2	Viyellatex is building two carbon-neutral factories to attract international buyers. The firm tends towards product life cycle considerations, by recycling waste and garments.
Measurement (9 --> 8) Supplier contracts ended is not applicable.	6	In 2011, Viyellatex audits all its three suppliers, they all have contracts including ESG factors and ISO 14001 standards. 100% of procurement is spent with preferred suppliers. Data on water usage by suppliers is collected by the firm and training was provided to workers. The firm does not publicly report on: a) % of prime contact procurement staff trained on ESG issues, b) GHG emissions.

Transparency (6)	5	Viyellatex conducts audits to raise awareness about standards at suppliers (e.g. child labour) and trains employees on health & safety and business ethics. From 2010 onwards, the firm adopted the GRI guidelines for reporting and in 2011 reports according to B-level. The firm publishes a list of customers and suppliers. Also, suppliers are scored on sustainability KPIs. The firm does not publicly report on: a) risk awareness.
Collaboration (1)	1	In 2009, Viyellatex joined the UNGC through which it engages with multiple stakeholders. Also, the firm collaborates with customers and NGOs to set up two pre-primary schools.

Table 27 SSCM indicators – Viyellatex Group

Case study Walmart

WAL★MART®
ALWAYS LOW PRICES.
Always.

Walmart
Save money. Live better.
SM

Firm

Wal-Mart Stores, Inc. (Walmart) was founded by Sam Walton under the slogan 'The Lowest Prices Anytime, Anywhere'. He opened the first retail store in 1962 in Rogers, Arkansas. After a decade, Walmart expanded its retail network throughout the US, also opening the first Sam's Club stores targeting small businesses. Success led the firm to expand internationally in 1991 through a joint venture with a Mexican retailer, later entering the UK by acquiring Asda and Japan by investing in Seiyu. Throughout time several other countries followed, so that nowadays, the firm is present in 27 countries with a total of 10,000 stores, employing over 2 million employees, responsible for net sales of $444 billion in 2012, see Appendix 57. That same year, Walmart was nominated the third largest public company in the world by the Fortune Global 500 list. With such size Walmart can have a significant effect on the economy whenever it adopts new management systems.

As a retailer Walmart knows a low degree of vertical integration, since it fully relies on suppliers for its products. The firm works with five types of suppliers, that amount to a total of 100,000 different businesses. The majority of Walmart's suppliers are situated in China, however, suppliers still cover over 70 countries. Therewith Walmart has a high degree of internationalization.

The firm is publicly owned, however, the Walton family owns almost a majority of shares (48%) (Clifford, 2011). Walmart consists of three different business segments: Walmart US, Walmart International and Asda (UK), through which it offers 11 different types of products, ranging from softgoods to grocery to electronics. Thus, horizontal diversification is relatively low, whilst horizontal differentiation is high.

Walmart positions itself as a cost leader and targets the mass market, by offering affordable goods. This means that its cost structure is highly cost-driven and that it sources from suppliers that can offer good prices. Being one of the largest firms in the world it can enjoy the benefits of economies of scale in terms of operations.

Sustainability

Around 2000 Walmart adopts an inactive approach to sustainability by being a good corporate citizen that makes donations to community. This attitude changes when in 2005, the firm sets three sustainability goals with respect to renewable energy, waste and sustainable products. Changing its slogan to 'Save Money, Live Better' also symbolizes a shift in Walmart's attitude. It starts to welcome interaction with numerous stakeholders groups, including NGOs and business partners. In 2012, Walmart wants to become a leader in sustainability. By adopting Sustainability 360 the firm engages with 100,000 suppliers, 2.2 million employees, millions of customers and thousands communities. This strategy makes sustainability an integral part of all business processes. As stated by president and CEO Mike Duke: "There will be no part of this company, anywhere in the world, that doesn't contribute to making Walmart more sustainable." (Walmart, 2012).

Stakeholders

Walmart knows a long history of labour rights violations covering issues such as wage, overtime, healthcare benefits, the right to freedom of association and discrimination. Numerous employees in cooperation with NGOs and other associations have brought cases to court related to these issues. Slowly, Walmart seems to adjust policies in reaction to the calls presented in these cases, for example by providing access to healthcare benefits to all employees. Still, however, the firm is found to undertake management processes that enable violation of many labour rights.

Although Walmart introduced its Standards for Suppliers in the beginning of the 1990s, suppliers are mainly selected on low cost. Consequently, purchasing policies do not allow suppliers to adopt adequate labour standards. Additionally, Walmart's monitoring system was found inadequate, as research by independent NGOs revealed many cases of suppliers that violated the Standards. The most recent version of the Standards contains more elaborate clauses on working conditions and environmental standards. Moreover, the firm has implemented training programs for suppliers to improve compliance.

Customers are seen as cost-conscious people, who shop at Walmart to obtain goods at the lowest prices possible. Despite its value proposition of ‘Every Day Low Cost’, Walmart engages customers to adopt more sustainable behaviours. ''The environment,'' Scott said, ''is begging for the Wal-Mart business model.'' With this he referred to the fact that Walmart is the largest American company, which has now decided to encourage consumers to save energy by buying more sustainable light bulbs (Barbaro, 2007). Also, now, the firm starts to realize that the younger generation of consumers care about sustainability (Rosenbloom, 2009).

Walmart is a publicly owned company and depends on its investors for its success. The firm has adequate communication channels targeting shareholders with information about financial performance. In 2001, a coalition of shareholders representing 3 million shares requested Walmart to eliminate sweatshop conditions at suppliers producing goods for the company. That same year the firm was delisted from the Domini 400 Social index due to human rights violations (Schilling, 2001). In 2005 a Norway pension fund sold its Walmart shares, due to the fact that the firm was found to engage in gender discrimination, violate workers’ right to freedom of association and hiring illegal immigrants (Landler, 2007).

Industry collaboration is sought after in order to avoid audit fatigue. Moreover, Walmart is part of the Sustainability Consortium, which is a group of companies addressing sustainability in their global supply chains. The firm was a founding member of the Global Social Compliance Program, which deals with the promotion of social standards in retailing.

Around 2000 Walmart reports a number of lawsuits in which it is accused of violations with respect to environmental regulations. Throughout the years, the firm does not seem to interact with the government on many issues and takes a compliance approach. More recently, the firm has adopted somewhat proactive standards for suppliers in terms of dormitory conditions and chemical handling, which go beyond what is legally required. Also, the firm was active on several public policy issues, including several environmentally related.

NGOs have long been Walmart’s enemy, accusing the company of violations concerning labour rights and environmental regulations. In 2005, the Stakeholder Engagement team was set up in recognition of possible lessons that could be learned from the critique delivered by NGOs. Several partnerships arise, which target working conditions in factories and women empowerment. However, NGOs continue to accuse the firm of sourcing products from suppliers that violate its Standards. Nowadays, Walmart collaborates with NGOs on issues in its supply chain. For example, in the Sustainable Consortium to develop the Sustainability Index, or a partnership with CARE to promote women empowerment.

Walmart is an active corporate citizen and has extensive philanthropic programs in employee and customer communities. However, many communities are dissatisfied with the presence of Walmart, since the firm often takes over the local economy, leading to job losses and bankruptcies of smaller businesses. Also, dissatisfaction arises from inadequate pay and other labour rights. In 2005, the firm extends philanthropic efforts to an international level and thus to supplier countries. Through its International Giving Program it funds training for Chinese supply chain managers and sets up community centers in India where women can improve their craftsmanship.

Socio-economic issues

The below Figure 4 by Gereffi & Christian (2009) shows various opposing socio-economic issues Walmart engages in.

Positive	Negative
Lowers prices	Exploits labor
Supports diversity	Practices gender/racial discrimination
Increases business efficiency	Pushes down wages
Provides jobs	Increases unemployment
Employs nontraditional workers	Increases poverty, welfare allocations
Industry leader	Erodes downtown business centers
Promotes environmental sustainability	Increases environmental

Figure 4 Polarized themes in Wal-Mart debates *(adopted from* (Gereffi & Christian, 2009)).

Bonded labour
As stipulated in Walmart's Standards for Suppliers, it is prohibited to use forced labour for the production of goods. The International Labour Rights Forum (ILRF) has found several instances at factories where workers were forced into shifts of 16 or 18 hours (ILRF, 2012). In the latest version of Walmart's code of conduct, the firm has integrated more stringent requirements with respect to human trafficking. Requiring supplier to have measures in place with which they reduce the risk on human trafficking. Also, together with several other firms, Walmart has urged Indian suppliers to stop sourcing from mills that engage in Sumangali practices.

Child labour
Walmart's Standards for Suppliers prohibits child labour. Despite this, the firm's supplier are still found to work with children. Throughout the years the approach to child labour has changed. Starting with a zero tolerance approach, Walmart adjusted its policy in 2003, so that if one or two children were found to work at a factory, a warning would be issued and if appropriate measures would be taken after 30 days, Walmart would continue business with the supplier. Recently, the firm was also active in the ban against cotton sourced from Uzbekistan and joined organizations to pressure the Uzbekistan government to address the situation. Additionally, Walmart participated in the Strategic Mills and Spinners Initiative by the Responsible Sourcing Network to enhance communication with suppliers.

Migrant / women / home workers
When auditing suppliers, Walmart has several methods to detect whether workers are illegal and whether women are discriminated against. In 2005, Walmart introduced a clause in its Supplier Code of Conduct to address foreign contract workers. The firm has a tradition in support of diversity. As highlighted by campaigns from NGOs, however, women are still victim of discrimination and exploitation. They trace this situation back to retailer's business model and purchasing practices. Explaining how women face lower wages than men, have to work longer hours and are not provided maternity benefits (Hearson, 2009). In 2012, Walmart launched a Women Economic Empowerment program to address the unequal position of women by teaching them vocational and leadership skills. At the same time, the firm supports NGOs such as CARE and the BCI, which also have projects to help women become more literate, so that they for example can keep track of the hours they work.

Wages
Suppliers are required to pay workers at least a minimum wage in compliance with the law and encouraged to pay workers an amount that covers their basic needs and supports their families. Still, the ILRF has found numerous instances of factories where workers receive wages below the poverty line (30% less than the minimum wage) and do not receive sufficient overtime compensation. Audits by Walmart have shown inadequate, as they do not detect these practices. Moreover, the firm's purchasing practices cause suppliers to have double bookkeeping and other systems to hide code of conduct violations. Therefore, several NGOs have called for more independent audits by third parties and workers at a Cambodian factory have asked the firm to pressure their owner into negotiations with the labour union for fair wages (Sweatfree Communities, 2008). Nowadays, Walmart has a more elaborate clause on wages in its Standards for Suppliers, where it also includes local industry standards with respect to wages. Moreover, the firm has adjusted the maximum hours of work per week from 72 to 60 hours.

Freedom of Association
For a long time, Walmart employees were not allowed to organize into unions. In 2005, Walmart introduced a clause in its Standards for Suppliers, which reads that workers should be respected for their right to collectively bargain in accordance with the law and suppliers are not allowed to obstruct this. Interestingly, almost 80% of Walmart's suppliers are Chinese, where the right to freedom of association is prohibited by law and workers are only allowed to become a member of the state-regulated union. In the most recent version of Walmart's Standards for Suppliers, the firm also accepts worker organization in parallel means in case freedom of association is not allowed by a certain country's law.

Health & Safety
Walmart has always required suppliers to ensure a healthy and safe working environment. Recently, the firm also asks suppliers to take proactive measures to prevent workplace hazards. With regards to sandblasting, various NGOs called Asda George (the garment brand of business division Asda) to ban the practice from its

supply chain. In 2011 the firm stated to be in the process of phasing out sandblasting. Additionally, Walmart has taken steps to address the fire safety issue in Bangladesh factories.

Environmental issues

In 2000, Walmart requires suppliers merely to avoid excess packaging and use recycled or nontoxic materials. Five years later, the firm embraces environmental sustainability and in its newest code of conduct, suppliers are asked to take a leadership position and proactive stance to environmental impact reduction. The firm updated its standards for chemicals and suppliers are required to monitor and measure chemicals, energy and water use. Also, wastewater management systems must be in place as well as systems to prevent groundwater pollution. By participating in BCI, Walmart also helps suppliers reduce water consumption.

Sustainable supply chain management

Although it is assumed that Walmart has risk awareness and risk management systems to detect critical suppliers. No publicly available reports contain information on these indicators, until in recent years the firm publishes general statements in which it states to assess suppliers on their volume and strategic importance and to identify global issues that can affect its supply chain (Walmart, 2012). Walmart was early with introducing Standards for Suppliers which contain environmental and social standards, which all suppliers are expected to uphold (Walmart, 2005). In 1992, the firm implemented a factory certification program, under which it started auditing suppliers. From 2005 onwards, suppliers are encouraged to share best practices or common violations of the firm's code of conduct in the Five Factory Program. More recently, Walmart has extended reporting on social and environmental performance of suppliers (Walmart, 2012).

From the implementation of the Standards for Suppliers onwards, Walmart started monitoring suppliers. In a critique to the firm's Ethical Sourcing Report of 2006, NGO International Labor Rights Forum points out that the firm sets the goal to increase the number of unannounced visits to 25% only, which is lower than the initial 30% it set before. Moreover, this percentage is low compared to industry peers. Another point of criticism relates to Walmart's reporting on its Model Factory Program and Five Factory Program, where the firm describes the programs without setting concrete goals. Lastly, violations of the Standards for Suppliers are reported, however, the firm does not formulate strategies to solve these issues in the short- or long-term (ILRF, 2007).

Throughout the years, however, the firm has extended the clauses contained in the standards and has moved from a policing to a more capacity-building approach. Where suppliers scoring 'orange' on their assessment have access to the Orange School program for information and guidance on improving the situation. Also, the firm started to increase awareness amongst suppliers by providing compliance trainings. In 2010, the Supplier Development Program is an example of an initiative through which Walmart engages in capacity building of suppliers. In this program, suppliers are supported in their attempt to improve working conditions, by an internal consulting team which looks at measures that suit the supplier's business model. Moreover, the firm is in the process of developing incentives for suppliers based on their scoring on sustainability performance.

Around 2000 Walmart does not seem to have integrated sustainability into its supply chain strategy and no publicly available information was found on the items that belong to this indicator. Five years later, the firm launched the Ethical Sourcing Program, which signifies a shift towards supplier collaboration on improving working conditions. Currently, the firm has formulated goals concerning supply chain management, for example by 2012 Walmart wants 95% of its direct-import suppliers to obtain one of the highest two audit ratings on environmental and social standards. Also, the firm sets the goal to enroll 100 suppliers in its Supplier Development Program annually. Suppliers are now pre-audited, meaning they have to comply with certain ethical and environmental standards before they can enter into a contractual relationship with Walmart. Besides, from a buyer point of view, procurement staff is trained on the effects their decision have on suppliers' ability to meet orders and productivity (Walmart, 2012).

Walmart becomes a member of the BCI in 2012 only and starts sourcing organic cotton from then onwards. Also, the firm is in the process of developing category scorecards on sustainability. Suppliers receive surveys on the impact of their production on social and environmental issues of a product lifecycle. This is results in information for buyers, who can assess the effect of a supplier's sustainability performance on their decision.

With the start of its Ethical Sourcing Program, Walmart starts to publish data on supplier audits and outcomes. In some cases, violations are not improved and the firm is in no other position than to stop relations with the respective supplier.

On the indicator of communication and transparency, Walmart scores relatively low, since it only reports to provide training to (new) suppliers once a year on its Ethical Standards. More recently, suppliers received a guidebook explaining what is required from them in terms of social and environmental standards, besides, they are required to hang up posters of the ethical guidelines in factories. The firm uses the GRI guidelines when reporting on sustainability efforts, its latest sustainability report was scored at the B-level. Also, Walmart tracks supplier's performance with respect to the violations of its Standards for Suppliers, where scores determine the level of orders and cooperation suppliers will receive. Walmart collaborates with various stakeholders to address common issues, such as working conditions in factories.

Business case for SSCM

Walmart's sustainable supply chain management was assessed to have undergone a transition from inactive to reactive to a nowadays highly active approach. The below description highlights the firm's triple bottom line performance so as to detect which business case for SSCM Walmart supports. Note that the performance relates to almost all business segments.

Economic
Walmart shows a healthy financial performance over the past ten years, with net sales and profits increasing annually.

Social
The firm has adopted a Supplier Diversity Program since 1994 to make minority- and women-owned suppliers part of its procurement policy. In 2011, Walmart sourced products worth $ 11 billion from this group of suppliers. For this program, collaboration is sought with local business associations such as National Minority Supplier Development Council (NMSDC), Women's Business Enterprise National Council (WBENC), and USLBN Disability Supplier Diversity Program. Additionally, through the Women Economic Empowerment Initiative, Walmart attempts to strengthen the position of women in its supply chain. By partnering with the NGO CARE, the firm provides vocational and literacy training to women working in the garment sector in Bangladesh. This allows them to track overtime hours and production units, which improves productivity. Moreover, they learn important health skills, such as boiling drinking water. In 2012, Walmart launched the Women in Factories Training Program with which it will reach 60,000 workers in 150 factories located in Bangladesh, India, China and Latin-America (Walmart, 2012).

The firm also reports that its Supplier Development Program has allowed suppliers to reduce worker turnover and incidents. Combined with open communication this highly contributes to employee satisfaction, which brings about positive social change (Walmart, 2012).

Environmental
Walmart promises a reduction of 20 million metric tons of greenhouse gas emissions from its global supply chain by the end of 2015. Collaborating suppliers adopt measures to reduce their energy and water use. Examples were found of green energy initiatives in other product categories than garments.

While it is not possible to assess to what extent the firm contributes to its triple bottom line performance with activities in the garment sector, overall, Walmart seems to adopt the first business case, where sustainability is a way to achieve efficiency. By ridding off waste and making business profitable, the firm invests in systems that will facilitate the flow of goods. Although Walmart states to recognize the pressure it puts on suppliers to adopt more sustainable processes and products, it formulates this request in a way that makes suppliers see the potential cost savings it can bring them in the long-run. As CEO Lee Scott stated: "We are convinced that this endeavour (becoming sustainable) is consistent with our business model, that we can make the earth a better place for all of us and that we can be an efficient, profitable enterprise." (Walmart, 2005).

However, when looking at Walmart's performance from an outside perspective it is difficult to assess whether there is a business case for SSCM. That is, there is a large contradiction in Walmart's intentions to encourage sustainable sourcing and the working conditions still found in the majority of the factories from which it sources products. As emphasized by NGO Walmart Watch, Walmart has used sustainability mainly as a PR tool. It has published numerous press releases and blogs on the topic, whilst achieving only little actual improvements. For example, greenhouse gas emissions at Walmart USA have increased with 7% between 2005 and 2009. Also, progress on the Sustainability Index has been slow in the first three years of the program, now only covering 23 products out of a total 120,000 products (Walmart Watch, 2012). Thus, in reality, the firm seems to take a relatively inactive approach to sustainability in general and sustainable sourcing in particular.

Appendix 57

	2000	2005	2010
Size	$36.353[8]	$46.864[9]	$31.070[10]
Ownership	Publicly held		
Internationalization			
# of suppliers	30000	68000[11]	100000
# of countries	-	70	-
# of production offices	-	23	-
Strategy	Cost leadership		
Customer segment	Low, mass market		
Value proposition	Low price		
Horizontal differentiation	11	11	11
Horizontal diversification	3	3	3
Channels			
# of stores	4189	-	10000
# of countries	10	11	28
DVI	0,14	0,14	0,22
Customer relationship	Self service		
Revenue streams	Asset sale		
Key resources	Physical		
Key activities	Distribution, sale of products, marketing and promotion.		
Partnerships	Acquisition of particular resources/activities Reduction of risk and uncertainty Economies of scale		
Cost structure	Cost-driven Fixed and variable costs Economies of scale		

Table 28 Firm characteristics Walmart

Appendix 58

	2000	2005	2010
Primary stakeholders			

8 $191,329*19% (Total net sales * percentage of softgoods merchandise)
9 $312,427*15% (Total net sales * percentage of softgoods merchandise)
10 $443,854*7% (Total net sales * percentage of apparel merchandise)
11 US suppliers

Employees	Walmart's employees (associates) take part in volunteering initiatives. The firm does not allow unionization. Employees have brought cases to the firm related to wage and hour violations.	Walmart states to provide employees competitive wages, however, a study showed that its labour practices actually lead to payments below the poverty line. Employees in China are allowed to unionize after years of pressure from the All China Federation of Trade Unions. Employees have brought cases to the firm related to wage and hour violations.	Walmart uses several channels to communicate to its employees, provides health care benefits and has a non-discrimination policy. Employees in nine international markets are covered by collective bargaining agreements (12% of its global workforce.), employees volunteer and with My Sustainability Plan awareness was raised among employees. Walmart was accused of inadequate health care benefits, so in 2011, the firm provided better coverage. Also, in 2011, employees not allowed to unionize were supported by an organization to pressure for better pay. Lastly, the firm has been involved in a year long class-action sex discrimination lawsuit, which was blocked in 2011 by the Supreme Court, due to inadequate reference to company-wide policies causing bias in pay.
Suppliers	Walmart shares POS data with suppliers through its RetaiLink system. This allows suppliers to track inventory and improve efficiency regarding out-of-stock and inventory. Walmart suppliers are found in violation of its Standards, stakeholders ask the firm to engage with independent auditors to assess factory working conditions.	Walmart starts to pay more attention to supplier adherence to labour conditions with the launch of its Ethical Sourcing Program. Also, the firm cooperates with several suppliers in the Five Factory Model to improve working conditions. At the same time the documentary 'Is Wal-Mart Good for America?' show that the firm puts pressure on suppliers to cut costs and improve quality, which arguably leads to lower working conditions in factories.	Walmart engages with suppliers in its strategy for sustainability, through: Sustainability Index, Supply Chain GHG program and Sustainable Agriculture. Also, the firm cooperates with suppliers to design more environmentally friendly packaging and to invest in green energy projects. At the same time it uses its bargaining power to induce suppliers to adopt more sustainable production methods. In 2008 it held a supplier conference on sustainability.
Customers	Walmart provides quality products at 'Every day, Low prices'.		Walmart communicates with customers through its website. It has a sustainability blog and gathers feedback through its customer survey. The firm is in the process of developing a sustainability index, that will provide customers with sustainability information on products, to allow them to save money and 'help their families, and the world, live better.'
Investors	Investors are vital for the success of Walmart. In 2001, a coalition of 38 shareholders, representing 3 million shares, requests Walmart to abolish sweatshop conditions used in factories producing its products. The firm is delisted from the Domini 400 Social index.		Walmart communicates with investors through financial reporting, AGM, periodic individualized mailings and conference calls between senior management, investors and/ or analysts and rating firms, and interactive meetings to discuss strategies.

Competitors		Walmart actively engages with industry peers to define a common code of conduct, so as to avoid duplication and audit fatigue.	Walmart is part of The Sustainability Consortium, Retail Industry Leaders Association and Consumer Goods Forum, these are industry initiatives geared to improving sustainability in global supply chains. Also, the firm was one of the founders of the Global Social Compliance Program (GSCP) to promote social values in retailing.
Secondary stakeholders			
Government	Walmart was sued by the Pennsylvania Department of Environmental Protection (PDEP), for a subcontractors neglect concerning the construction of a Supercenter in Honesdale, which led to excess erosion at a nearby creek. The firm settled by paying a fine and funding an environmental community project. Also, the The United States Environmental Protection Agency claims that Walmart together with five other firms has violated a storm water permit, requesting a panelty of $5,6 million.		Walmart introduced additional standards for dormitories and canteens in terms of health and safety, and protection of workers handling high-risk chemicals or machinery, thereby going beyond what is legally required. The firm engaged in several public policy acts concerning: tax code, federal nutrition programs, alliance for mainstreet fairness (tax laws), U.S. Conference of Mayors' Climate Protection Awards (US), WWF Warm Homes Amendment, Carbon Trust "Green Growth" (UK). The firm also engages with government authorities in the development of its Sustainability Index.
NGOs	Employees volunteer at local non-profit organizations under the Volunteerism Always Pays program. Walmart is subject to numerous NGOs worldwide, accusing the firm of labour rights violations, negatively impacting local communities and economies.	Walmart set up a Stakeholder Engagement team to reach out to NGOs e.g. BSR, ICCR and ETI. The firm became a member of the Better Factories Cambodia program. 2005 marked the first year for Walmart to engage in international philanthropy. The firm invests in HOPE Worldwide programs in Kenya and India to educate and train factory workers and their children. Walmart partners with the Apparel Lesotho Alliance to Fight AIDS (ALAFA) to provide HIV and AIDS prevention and treatment to workers in the textile and apparel industries. Also, the firm joins the Continuous Improvement in the Central American Workplace (CIMCAW)project, to improve standards in the textile and garment sector in the Dominican Republic, El Salvador, Guatemala, Honduras and Nicaragua. Still Walmart is accused of labour rights violations.	Walmart has meetings with NGOs to discover solutions to improve its supply chain.
Community	Walmart engages in philanthropic activities in the communities of customers and employees. Many communities started site fights against Walmart focusing on living wages and other labour conditions.	Walmart established the International Giving Program to support people working in its supply chain. The firm engages in programs to train supply chain managers in China and to set up community centres in Uttar Pradesh, India where women can improve their craftswork.	Walmart's international philanthropy focuses on: women's economic empowerment, hunger and nutrition, environmental sustainability. Stores are also encouraged to give to local initiatives and Walmart donates to communities in its supply chain.

Table 29 Stakeholders Walmart

Appendix 59

	2000	2005	2010
Socio-economic issues			
Bonded labour	Walmart prohibits forced labour.	ILRF found workers are regularly forced to work overtime, sometimes 16-18 hours.	All labor must be voluntary. Slave, child, underage, forced, bonded, or indentured labor will not be tolerated. Suppliers must have measures in place to prove that they address risks related to human trafficking. Together with other brands, Walmart has requested Indian suppliers to stop sourcing raw material from mills engaged in Sumangali practices.
Child labour	Walmart has a zero tolerance policy towards child labour (minimum age 15), if detected, contracts are terminated. Child labour was found at one Walmart supplier in Bangladesh.	Walmart adjusted its policy regarding child labour, if 1 or 2 children are found working at a factory, a warning is issued to address the situation in 30 days. If more than 2 children are found, supplier relations will end.	In 2008 Walmart banned cotton sourced from Uzbekistan. The firm partnered with international organizations to pressure the Uzbekistan government to stop using child labour. Also the firm joined the Strategic Mills and Spinners Initiative organized by Reponsible Sourcing Network to effectively communicate its position to suppliers.
Migrant / women / home workers	Walmart recognizes that foreign contract workers may not understand their rights. This is taken up in the Standards for Suppliers and auditors pay attention to their special situation when reviewing documents.	In 2006, the International Giving Program gave its first fund to a project in China to educate migrant women. Auditors check whether maternity benefits are paid.	The Better Bargain campaign of CCC shows how purchasing practices of discount retailers like Walmart exploit women's vulnerable position; they are discriminated against in wage, working hours and other matters. Walmart establishes the Women's Economic Empowerment initiative, to provide basic life skills and leadership training to female factory workers. Also, the firm supported the WHEEL program, which set up 100 learning centers where women receive vocational, health and literacy training. Through the BCI Walmart also supports women who represent the bulk of workers in the garment sector.

Wages	Suppliers should provide at least legal minimum wages and benefits. They are encouraged to pay whatever amount is sufficient to make a living and support families.	Suppliers shall provide fair wages in compliance with international and local laws. Working hours may not exceed 72 hours per 6 days, suppliers should work towards a 60-hour work week. Although recently wages have increased in several producing countries, auditors will focus on documents to detect whether suppliers are not keeping two administrations to cover for underpayment of wages. In 2005, Walmart was the target of a class-action lawsuit filed by the International Labor Rights Fund, holding the firm responsible for inadequately enforcing its code of conduct in producing countries like Bangladesh and China, for example regarding overtime pay. In 2009, the lawsuit was dimissed .	Wages must meet or exceed legal standards or collective agreements. Suppliers are encouraged to provide wages that meet local industry standards and are sufficient to meet basic needs and provide discretionary income for workers and their families. Suppliers shall not allow work hours to exceed 60 per week, with a maximum of 48 regular hours. The ILRF finds many workers in factories producing for Walmart are paid 30% below the minimum wage. The CCC Better Bargain campaign uncovers that workers are not paid a living wage, have little job security and work overtime without being paid for it as a result of pressure put on suppliers to produce low cost goods. Workers in Cambodian factories asked Walmart to pressure the factory owner King's Island to negotiate with worker unions, respect Cambodian law and provide at least minimum wages to workers.
Freedom of association	-	Suppliers will respect the rights of employees regarding their decision of whether to associate or not to associate with any group, as long as such groups are legal in their own country. Suppliers must not interfere with, obstruct or prevent such legitimate activities.	Suppliers must respect the right of workers to choose whether to lawfully and peacefully form or join trade unions of their choosing and to bargain collectively. Approximately 80% of products Walmart sources comes from China, where freedom of association is limited to the state regulated representative body.
Health & safety (sandblasting)	Factories producing merchandise to be sold by Wal-Mart shall provide adequate medical facilities and ensure that all production and manufacturing processes are carried out in conditions that have proper and adequate considerations for the health and safety of those involved. Wal-Mart will not do business with any supplier that provides an unhealthy or hazardous work environment or which utilizes mental or	-	Suppliers must provide workers with a safe and healthy work environment. Suppliers must take proactive measures to prevent workplace hazards. After various calls to stop using sandblasting, Asda in 2011 states to be in the process of phasing out the technique from its supply chain.

	physical disciplinary practices.		
Environmental issues			
Chemicals	We encourage suppliers to reduce excess packaging and to use recycled and nontoxic materials.	-	Walmart introduced new standards regarding chemicals. Suppliers must have an inventory of all chemicals used, a spill system, a chemical safety card, appropriate storage and containers.
Water	-	-	Suppliers are required to go beyond legal compliance and become leaders in reducing their environmental impact. Environmental training should be provided to workers and management. With the BCI Walmart promotes organic cotton production, which uses significantly less water than conventional methods.
Climate change (cotton / energy)	-	-	Suppliers must obtain permits for energy use, measure and monitor energy use, maintain a GHG inventory.

Table 30 Issues Walmart

Appendix 60

SSCM Indicator		**2000**		**2005**		**2010**
Risk awareness (3)	0	The firm does not publicly report on: a) spend analysis, b) the percentage of spend covered by its spend analysis, c) critical suppliers.	0	The firm does not publicly report on: a) spend analysis, b) the percentage of spend covered by its spend analysis, c) critical suppliers.	2	Walmart identifies critical suppliers based on volume and strategic priority. The firm does not publicly report on: a) the percentage of spend covered by its spend analysis.
Risk exposure (1)	0	The firm does not publicly report on: a) formalized sustainability risk identification analysis.	0	The firm does not publicly report on: a) formalized sustainability risk identification analysis.	1	Walmart identifies issues that can affect the workings of its global supply chain.

Risk management (12)	7	In 1992 Walmart introduced its Factory Certification Program, including the implementation of the Standards for Suppliers, which contains clauses on: human rights, working conditions, health & safety, business ethics and environmental standards. All suppliers have to uphold these standards. The firm does not publicly report on: a) EMS certification 14001 b) environmental performance data, c) social performance data and d) guidance concerning subcontracting, e) collaborative initiatives.	10	In 1992 Walmart introduced its Factory Certification Program, including the implementation of the Standards for Suppliers, which contains clauses on: human rights, working conditions, health & safety, business ethics and environmental standards and an EMS. All suppliers have to uphold these standards. The firm reports on social performance data. Walmart set up the Factory Five Program, where suppliers work together to discuss common violations of the firm's ethical standards. The firm does not publicly report on: a) environmental performance data, b) guidance concerning subcontracting.	11	In 1992 Walmart introduced its Factory Certification Program, including the implementation of the Standards for Suppliers, which contains clauses on: human rights, working conditions, health & safety, business ethics, environmental standards and an EMS. All suppliers have to uphold these standards. The firm reports on social and environmental performance data. Walmart set up the Factory Five Program, where suppliers work together to discuss common violations of the firm's ethical standards. The firm does not publicly report on: a) guidance concerning subcontracting.
Monitoring (7)	7	Walmart uses external parties to monitor partner factories. These make (un)announced visits, interview management and employees, both on- and off-site. In case of infringements corrective action plans are formulated.	7	Walmart uses external parties to monitor partner factories. These make (un)announced visits, interview management and employees, both on- and off-site. In case of infringements corrective action plans are formulated.	7	Walmart uses external parties to monitor partner factories. These make (un)announced visits, interview management and employees, both on- and off-site. In case of infringements corrective action plans are formulated and suppliers can take part in the Orange School Program where they receive advice on how to adjust their management systems.
Capacity building & incentives (2)	0	The firm does not publicly report on: a) capacity building initiatives, b) incentives for suppliers.	1	Walmart organizes training for suppliers to increase awareness of compliance standards. The firm does not publicly report on: a) incentives for suppliers.	2	In 2010, Walmart introduced the Supplier Development Program to support suppliers to improve working conditions. Also, the firm is developing incentives to track the sustainability performance of suppliers and buyers.
ESG integration in SCM strategy (6)	0	The firm does not publicly report on a) ESG objectives for SCM, b) ESG factors in supplier selection, c) incentives for ESG for procurement staff, d) access to ESG supplier database, e) training on ESG factors in procurement, f) ESG-related KPIs.	1	Walmart launched the Ethical Sourcing Program to collaborate with suppliers to improve factory conditions. The firm does not publicly report on a) ESG factors in supplier selection (Walmart is starting with pre-qualification of suppliers), b) incentives for ESG for procurement staff, c) access to ESG supplier database, d) training on ESG factors in procurement, e) ESG-related KPIs.	3	Walmart formulates various ambitious goals regarding SCM. Suppliers must pass an ethical sourcing audit to be eligible to produce for Walmart. The firm's merchandise and buying departments receive training on the effect of buying decisions on suppliers. The firm does not publicly report on a) incentives for ESG for procurement staff (in development), b) access to ESG supplier database, c) ESG-related KPIs.
Opportunities (2)	0	The firm does not publicly report on: a) leveraging opportunities in the SCM, b) C2C or lifecycle assessments.	0	The firm does not publicly report on: a) leveraging opportunities in the SCM, b) C2C or lifecycle assessments.	2	Walmart buys merchandise made from organic cotton. The firm requested suppliers to fill out a survey and uses this as input to ask specific questions across product's lifecycles.

Measurement (9)	0	The firm does not publicly report on: a) % of suppliers audited, b) % of 'prime contact' procurement staff trained on ESG issues, c) % of supplier contracts including ESG factors, d) % of suppliers with EMS certification, e) % of suppliers' contracts terminated, f) % of procurement spent with preferred suppliers, g) GHG emissions from transportation, h) supplier water usage, i) outcome of capacity building activities.	3	In 2006, 16,700 audits were conducted in 8,873 factories, 0.2% of supplier contracts were permanently terminated. All suppliers must accept the Supplier Standards upon contracting. The firm does not publicly report on: a) % of 'prime contact' procurement staff trained on ESG issues, b) % of suppliers with EMS certification, c) % of procurement spent with preferred suppliers, d) GHG emissions from transportation, e) supplier water usage, f) outcome of capacity building activities.	4	In 2011, 9,737 audits on 8,713 factories were conducted. Suppliers were required to stop production in 155 factories. All suppliers must accept the Supplier Standards upon contracting. The Supplier Development Program has helped 258 suppliers improve their standards. The firm does not publicly report on: a) % of 'prime contact' procurement staff trained on ESG issues, b) % of suppliers with EMS certification, c) % of procurement spent with preferred suppliers, d) GHG emissions from transportation, e) supplier water usage.
Transparency (6)	0	The firm does not publicly report on: a) standards for suppliers, b) communication of risk awareness, c) communication of risk management measures, d) GRI standard adoption, e) factory list, f) sustainability performance KPIs of suppliers.	2	Suppliers are provided training on ethical standards. The firm does not publicly report on: a) communication of risk awareness, b) GRI standard adoption, c) factory list, d) sustainability performance KPIs of suppliers.	4	Walmart developed a guidebook for suppliers explaining what is expected from the Standards for Suppliers, also they must hang up a poster in their factories. Walmart organized an internal awareness program about antislavery in the supply chain. The firm's CSR report was assessed at GRI B-level. Suppliers are ranked according to the number of violations, based on their score auditors will help them. The firm does not publicly report on: a) communication of risk awareness, b) factory list.
Collaboration (1)	0	The firm does not publicly report on a) stakeholder collaboration.	1	In response to audit fatigue, Walmart is collaborating with NGOs and industry peers to harmonize monitoring practices.	1	Walmart strives to increase stakeholder collaboration to further its ethical sourcing program and improve the lives of the people in its supply chain.

Table 31 SSCM indicators Walmart

Appendix 61

Year	**Event**
1992	Factory certification program and standards for suppliers.
1993	Begin audits of factories.
1994	Supplier diversity program.
2002	Global Procurement organization established.
2003	Walmart sharpens its Standard for Suppliers concerning minimum working age and working hours violations.
2005	The Standards for Suppliers expands to address freedom of association and collective bargaining as well as compliance with immigration laws and regulations for foreign contract workers. Better Factories Cambodia program. Contract with BSR.

2006	Environmental and sustainability criteria are added to the Standards for Suppliers.
2007	Walmart partners with CDP to measure its energy consumption throughout its supply chain. Walmart's International Giving Program joins HOPE to educate factory workers and their children, Apparel Lesotho Alliance to Fight Aids to provide aids prevention and treatment to garment workers and, Continuous Improvement in the Central American Workplace to improve standards in the textile and garment sector.
2008	In October over 1,000 Wal-Mart suppliers gathered in Beijing to attend the Wal-Mart Global Sustainable Development Summit and discuss about establishing a social and environmentally responsible global supply chain. Founding member of Global Social Compliance Program.
2009	Shift from supplier auditing to supplier development. Introduction of the Sustainability Index. Orange School Program: to help supplier with an orange rating better comply with Standards for Suppliers. Walmart together with other firms joins the Better Work Program.
2010	Supplier Development Program. Asda/George member of BCI. In September, the Clean by Design project in collaboration with Natural Resources Defense Council, Wal-Mart committed to working with their Chinese textile suppliers to reduce water, energy, and chemical use in their supply chains. Funding for CARE in Bangladesh to set up 100 learning centers for women.
2011	Women's Economic Empowerment Program. Additional standards for dormitories and canteens in terms of health and safety, and protection of workers handling high-risk chemicals or machinery, thereby going beyond what is legally required. Work to address fire safety issue in Bangladesh.
2012	Walmart member of BCI.

Table 32 Timeline Walmart