

Sustainability in the clothing sector

Combining social and environmental goals

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Introduction

The apparel industry is a complex, fragmented global system fraught with social and environmental problems. Never before has this industry been so large with its current estimated value being at over 3 trillion dollars, accounting for 2 percent of the world's Gross Domestic Product, and employing over 24 million people worldwide (Fashionunited.com, n.d.). In the Netherlands alone more than 330 million pieces of clothing are sold annually, coming down to more than 20 pieces of clothing bought per Dutch person each year (Oneworld.nl, 2016). This number is increasing steadily, while at the same time the price of clothing drops. These developments are the effects of the rise of fast fashion. A contemporary way of production which combines two factors: short production and lead times, as well as trendy product design (Cachon & Swinney, 2011).

Consumers are faster to buy pieces of clothing than ever before, but at the same time, these pieces of clothing run out of style within weeks. Currently, it only takes weeks for clothes to be designed after a style has been shown on the catwalk (Joy et. al., 2012). These changed dynamics in the apparel industry have increased pressure for manufacturers to keep the prices low, be extremely flexible and responsive to the market (Bhardwaj & Fairhurst, 2009). The apparel industry has partially moved from developed countries and moved to developing countries where labour costs are low and rules and regulations are not as strictly lived by (Kozlowski et. al., 2012). This in turn has its implications both socially as environmentally. Unfair and unsafe working conditions, tremendous pollution and ever-growing landfills due to the quick disposal of clothing, the apparel industry is proving to have detrimental effects on the world we live in. Added to this, is the fact that most of the implications resulting from fast fashion are pushed onto the developing world. In other words, the fashion consumption of people in developed countries is degrading the environment and providing poor working conditions for people in developing countries.

However, while on the one hand the fast fashion model has grown into the most prevailing production system in the industry, increased awareness and concern of stakeholders other than solely economic is leading to a gradual response from the apparel industry to improve social and environmental sustainability in its manufacturing processes (Chen & Burns, 2006). A number of pioneers is aiming to change the way that apparel is made by producing sustainable clothing (Joergens, 2006). With consumption of clothing skyrocketing, altering the way that apparel is produced for it to be more sustainable could have a huge impact. These companies bring clothing to the market that is produced in a more

environmentally friendly and socially just manner. Yet, the apparel industry sparks a wide variety of sustainability problems as it operates at a crossroads of environmental and social vulnerability. Making clothing with little harm to the environment and people as such is a complicated task, and to what extent is it really possible for sustainable pioneers in the clothing industry to tackle all of these problems all at once? And how does the way companies look upon sustainability, relate to the way they incorporate all aspects of it or only parts into their business?

In the current research I want to find out whether it is possible to produce clothing with respect for both people and planet, and what combining these two aspects of sustainability means for the way clothing companies build businesses. Through interviews with representatives from Dutch clothing companies which identify as sustainable, I have looked into the possibilities for fully sustainable clothing. The main research question I address in this report is:

To what extent are social and environmental sustainability compatible in the production of clothing by Dutch sustainable clothing companies?

This research question, as well as sub questions are elaborated on more extensively in the methodological chapter. Next, a theoretical chapter will provide a background to this study.

Theoretical background

This chapter presents relevant literature to provide a theoretical context in which the current research is placed. It reflects on the fast fashion industry, sustainable clothing, apparel value chains, sustainable entrepreneurship and sustainable business models. This chapter will also be of relevance in the discussion, where the findings of this study will be linked and compared to the literature mentioned below.

The apparel industry

Fast Fashion and its business model

The prevailing system in the apparel industry is currently that of fast fashion, of which the main purpose is to serve customers to their demands so to maximally increase sales. In other words, fast fashion produces what the market demands in times as short as possible. To this end, three factors are combined in the business model (Caro & Albinez, 2014): quick response, fashionable design at inexpensive prices, and recurrent assortment changes. These components make that fast fashion is cheap and flexible, making it possible for consumers to acquire a large variety of clothing. Vital to fast fashion is time-management: clothing needs to be able to go from research and design to in-store within very short times. The clothing that is produced with these characteristics ends up in the mass market price segment, also because of the fact that fast fashion is centred around cheap production (Barners & Lea-Greenwood, 2006).

In her thesis, Smit (2016) refers to three fast fashion strategies : Demand Driven Fashion, Flow Fashion, and Quick Time-to-Market. The first one explains the way that fast fashion companies nowadays know what to produce. Rather than basing designs on forecasted trends through months of research, companies are now able to produce on-demand. This, because it has become a lot easier to monitor sales and use real market data to know what customers want (Te Lindert, 2015). For example, the use of barcodes and point-of-sale scanning are two of the information technologies used by fashion companies to be daily updated on what customers want. The second, flow fashion, refers to the new system of collections. Whereas before fashion companies used to have two collections per year, one summer and one winter collection, now new designs are dispersed over multiple collections. That way buying cycles have to become shorter and design-to-market times are accelerated. Rather than specific buying times, buying in the apparel industry now takes place all year

long. Lastly, Quick Time-to-Market is the way that retailing now takes place in which there is very little time between design and sales. This type of agile retailing responds quickly and uses the above described strategies and to be flexible (Smit, 2016).

Ethical implications of the clothing industry

The clothing industry and the fast fashion model has drastic implications for society on many levels. First, I will discuss the social implications. Pederson and Gwozdz (2014) deliberate the social impacts of fashion resulting from the fact that a lot of clothing production takes place in developing regions like Asia and Africa. The global textile industry has always been one that employs many workers, and is especially suitable to the early stages of industrial development. This, due to the low capital investment, and simple techniques and skills needed. Traditional craft skills provided the bases for upscaling to industrial settings, and because cotton and other textile materials alike were easily transportable, materials were not a threshold. Countries like Britain and Germany in Europe and the United States in North America thrived on the textile industry. Yet, during the “global shift” in the 90’s textile and clothing production gradually moved to developing countries in search of cheap labour to ensure more profit (Dicken, 1992).

Especially Asia developed as a region where a lot of apparel is exported, mostly to Europe and the United States but gradually also to neighbouring countries (Gereffi & Frederick, 2010). After the Multi-Fibre Agreement expired in 2005, European and US manufacturers no longer enjoyed protection from Asian producers and as such even more production moved to Asia. As a result, the price of clothing dropped immensely in the 2000s. Clearly, the huge growth of the apparel industry has brought many jobs to the region. According to Bernhardt (2013) apparel employment expanded with 227 per cent in Vietnam, 108 per cent in China, and 94 per cent in Bangladesh between 2000 and 2009. A report by the World Trade Organization from 2015 states that top exporters are China, European Union, Bangladesh, Vietnam, Hong Kong, India, Turkey, Cambodia and the United States (WTO, 2015). Consequently, the apparel industry is a large contributor to economic development for countries in the global south.

However today, it is regarded one of the most exploitative industries in the world (ILRF Industries, 2012). Production is now taking place mostly delocalized and in developing countries, where the costs of labour are cheap and standards and regulations are less stern. This results into a myriad of social problems. Especially at the bottom of the supply chain workers are subject to poor and unsafe working conditions, long working hours and low

salaries. The industry is under public scrutiny due to factories in developing countries employing people by means of little social responsibility (Allwood et. al, 2006). Many young, marginalized women end up working in these factories as not much skill is needed. Because they mostly work on one task all day, these women also do not get the chance to develop skills. Furthermore, jobs are very often outsourced. Much of the clothing produced in the apparel industry, especially fast fashion, is made in sweatshops. Oftentimes salaries do not even comprise a living wage, meaning not enough to buy basic needs such as food and housing from. The apparel industry is also one of the industries where child labour is still found on a large scale, and health and safety issues are still regular problems in this sector (Madsen et. al., 2007). Even if producers want to tackle labour issues, supply chains are very opaque and involve a multitude of suppliers. This makes it extraordinarily difficult for them to trace back the origin of their clothes and exert control over the social conditions under which they have been produced (Pedersen & Gwozdz, 2014).

From an environmental perspective the apparel industry is highly polluting. The life cycle of apparel is long and complicated, including its supply chain and the processes that influence its environmental impact after production. Some of these phases are: resource production and extraction, fibre yarn manufacturing, textile manufacturing, clothing manufacturing, packaging, transportation and distribution, consumer use (e.g. washing), recycling and disposal. All these phases can have environmental impacts because of water usage and waste water disposal, waste-production, use of unrenewable and renewable resources causing depletion and biodiversity distortion (Allwood et. al. 2006; Fletcher, 2008). For example, to make a cotton dress a lot of land, pesticides and water are needed to cultivate cotton-crops. In order for the fabric to be altered to the desired colour, style, or finish, chemicals are used which end up in local water reserves. Energy is used to drive these processes. Additionally, a transport is needed to go from raw material to a dress in a store or, with current online sales rising steeply, to be brought to someone's house per individual placed order. Then, after the clothing has been worn it often ends up in landfill, thereby emitting an increasing amount of greenhouse gases (Claudio, 2007; Kozlowski et. al., 2012).

To summarize, clothing production in the traditional model is polluting because of:

- The fact that natural resources are exploited, including soil, water and fossil fuels.
- It requires hazardous chemicals like pesticides for crop production and toxic dyes to dye and dry the clothing.

- Clothing production is very resource intensive. Cotton farms need lots of water and often use lots of pesticides. Polyester, another much used fabric is made from petrol (Laursen et. al., 2007). Much energy is needed for transport.
- Clothing production emits waste, waste-water and greenhouse gases. Waste-management systems are not always in place.
- Use after manufacturing: washing and drying
- After-use: landfills emitting greenhouse gases

These social and environmental factors contributing to the unsustainability of the clothing sector are reinforced by the fast fashion system (Pedersen & Andersen, 2013). Drops in clothing prices, low quality and short trend cycles make that clothing nowadays is being consumed at a high rate (Fletcher, 2008). Yet, not only does clothing satisfy a basic human need of coverage and warmth, it is also a symbolic good. One's clothing consumption is influenced by their income, age, social status, gender, etcetera. It is a self-affirming good highly demanded in today's world where people increasingly desire to express themselves (Dicken, 2010). Pedersen and Anderson speak of overconsumption, saying clothing is being consumed at a rate which "far exceeds human needs and planetary boundaries" (2013, p. 8). As a result of this, demand for cheap, fashionable clothing keeps growing and clothing companies feel pressured to lower prices, resulting in more pressure on suppliers and consequentially worse working conditions. The clothing industry and the fast fashion model are a vicious cycle which need to be challenged for it to become healthier for people and planet.

Growth in awareness

Notwithstanding the detrimental effects of the fast fashion model, in recent times we see a change in public perception of the apparel industry. As sustainability is increasingly valued, awareness of the existence of ethical issues related to clothing is increasing. A demand for ethical products is growing, as consumers more and more realize the impact of personal consumption patterns (Doane, 2001). Especially after the Rana Plaza disaster in 2013, where an eight-story building collapsed in which factories supplying well-known brands were housed, more attention is being given to the conditions in which the people that make our clothing work. News about unsafe working conditions in many offshore manufacturing facilities has led to mass protests in some countries (North, 2013). Besides the socially responsible business aspect, the recent Paris Agreements and noticeable changes in climate

have sparked a wave of attention for environmental issues. Sustainability is a trend and a momentum exists that sustainable retailers are using to their advantage.

Governments of developed countries are taking action too. In the Netherlands, the Ministry of Infrastructure and Environment in 2013 initiated research into consumer behaviour in the clothing sector and the ways this behaviour can be steered towards being more sustainable (Drijver & Broer, 2014; Cohen & van der Wijst, 2015). Furthermore, a covenant was signed in 2016 by a broad coalition of organisations: 55 Dutch companies, sector organizations, NGO's and the Dutch government, guiding the clothing and textile sector into operating sustainably. Together they will work on sustainability in the supply chain of their products, amongst others on protection against discrimination, diminishing child labour, realising a living wage, safe working conditions, and pushing back the use of chemicals, energy and water (www.ser.nl, 2016).

Sustainability in clothing

Sustainable clothing: eco, organic, fair, or slow?

A result of the higher awareness by customers of the way their clothes are made, a growth in sales of ethically sourced clothing exists (Perry et. al., 2009). As the ethical implications of the fashion industry are diverse, ranging from social to environmental harm, different types of reactions to these implications occur. Within the apparel industry companies are trying to build sustainable brands. Brands aiming to produce more ethically choose which facet of sustainability to focus on. For example whereas brand A wishes to minimize the environmental footprint of its products, another brand B puts far more effort into ensuring fair trade and living wages for its contractors and workers. Shen (2014) named two strands of ethical clothing production; ERB (environmentally responsible business) and SRB (socially responsible business). ERB refers to business that works on improving practices related to environmental issues, whereas SRB is focused on improving practices on the social level.

These alternative production methods as initiated by Western companies have an impact on the lives of people in developing countries, as well as the environment and climate. As Zoomers and van Westen (2011) argue, “local development opportunities are very much determined by what is happening in other places – sometimes directly, as a result of flows of capital, goods, people, and information”. The same is true in the case of clothing. When Western companies decide to alter production methods to more sustainable ones, this influences the livelihoods of people in developing countries where production takes place.

As Caniato et. al. (2011) say, some of the ways that companies are adopting more environmentally friendly production means are: using organic fibres, using other types of fibres such as bamboo, hemp or eucalyptus, reusing or recycling materials, using cleaner and water-saving technologies, as well as green product and process design (Scaturro, 2008). Traditionally, cotton is an often used fibre for textile and clothing, more than 50 per cent of textiles is made of cotton. However, its production methods are environmentally unsustainable: cotton production adds greatly to water scarcity, induces soil erosion and degradation, and conventional production involve application of a large amount of fertilizers and pesticides. The latter seriously damages soil and water quality, plus damages biodiversity and very often human health (Worldwildlife.org, n.d.). For that reason, experiments with different types of resources for textile have increased. Mainly bamboo, eucalyptus and hemp are thought to be sufficient alternatives, but organic cotton is also increasingly grown.

- Bamboo

Little irrigation, nutrients and pesticides are needed to grow bamboo. The plant grows extremely quick and can be harvested every year of its life once it matures. Also: it can easily break down in a landfill.

- Eucalyptus - Tencel

Trees grow quickly on low-grade land, and can be manufactures with a closed-loop process. That means nearly 100 per cent of its solvent goes back into the system, rather than it being deemed waste. It needs little irrigation, but a little more energy for it to become Tencel.

- Hemp

Needs little irrigation half as much land as cotton.

- Organic cotton

No pesticides are used growing this cotton; resulting into less water contamination and health issues. Though, it only makes up 1% of global cotton production.

On the social level, several companies are aiming to make their products more fair by providing workers with a living wage, raising the minimum wages, banning child labour or making sure working hours are shorter and working conditions better. But clothing companies can be of larger value when they are inclusive businesses. An inclusive business is “a private sector approach to providing goods, services, and livelihoods on a commercially viable business, to people at the base of the pyramid by making them part of the value chain of companies’ core business as suppliers, distributors, retailers, or customers” (Hahn, 2011).

Furthermore, the Dutch ministry of Infrastructure & Environment released 8 factsheets which guide retailers on the most urgent sustainability themes in the retail sector. In the table below a representation of the different operationalisations of sustainability in clothing found in academia is given.

<i>Table 1 - Sustainability in clothing (Caniato et.al., 2011; Kozlowski et. al.; 2012; Plan van Aanpak, 2013; Shen, 2014; Scaturro, 2008)</i>	
Social level	Environmental level
Reducing child labour	Use of organic fibres + Using certified materials
Fair trade including with farmers	Use of greener fibres such as bamboo or Tencel
Workers receive a living wage	Use of recycled materials
Better and safer working conditions	Cleaner technologies for dyeing or application of other style characteristics
Reducing modern slavery	Water-saving technologies
Developing social dialogue between employers and employees	Measures to save fabric
	Energy saving technologies
	Greener distribution and logistics
	Waste reduction or use of waste

As a result of this multitude of different possible ways to work on sustainability within the apparel sector, apparel that is created in an ethical manner has sparked many different terms such as eco apparel, green fashion, fair fashion or sustainable fashion. These concepts are used interchangeably and may mean different things. This results into conflicting messages about sustainability in the apparel industry. Which in turn it difficult for consumers to distinguish between what is really sustainable and what is not, therefore causing misconceptions and scepticism (Hill & Lee, 2013; Hassen et. al., 2013).

In the current writing, I will use the term sustainable clothing, fashion or apparel, thereby adopting the definition by Joergens (2006) who states “sustainable clothing is the type of clothing that is designed and manufactured to maximize benefits to people and society,

while minimizing adverse environmental impact”. By using this definition, both the social and environmental level of sustainability are taken into account.

Standards and Certificates in the textile industry

In the textile industry, of which the clothing industry is part, many standards and certificates apply. These are designed to standardize procedures and practices by the textile industry and making them more sustainable. Oftentimes, audits are carried out in order to check compliance. The International Organization for Standardization refers to them as “a document that provides requirements, specifications, guidelines, or characteristics that can be used consistently to ensure that materials, products, processes, and services are fit to their purpose”. Below, some of the most important standards in the apparel industry are introduced.

- *Global Organic Textile Standard (GOTS)*. This standard applies to the processing of organic fibres through the whole supply chain. This starts at the cultivation of the crop until a piece of clothing is sold to the consumer. It entails social and environmental compliance, and involves the application of waste water treatment, as well as toxilogical criteria for dyestuffs, chemicals and reagents. A division is made between products which receive Label 1 and Label 2, reffering to it being made with only organic cotton, or an X percent organic cotton (always more than 70%).

- *OEKO-TEX*. The OEKO-TEX organisation has more than 15 research institutes in Europe and Japan. It tests products for harmful ingredients. Made in Green by OEKO-TEX is a label which also tests for social responsible production manners.

- *ISO 14001*. This standard applies to environmental management systems; the management of waste, resources and energy, and reducing environmental impact.

- *ILO Decent Work Framework*. The framework by the International Labour Organization is internationally renowned and includes 10 elements that indicate decent work. They are: employment opportunities, adequate earnings and productive work, decent working time, combining work, family and personal life, work that should be abolished, stability and security of work, equal opportunity and treatment in employment, safe work environment, social security, social dialogue, employers’ and workers’ representation. In SA80000, a social certification system applicable to the clothing industry too, the ILO standards are also taken up.

The importance of suppliers

The literature on sustainable clothing provides us with some case studies on clothing companies with ambitions to create a more sustainable value chain (Vermeulen & Ras, 2008; Turker & Altuntas, 2014; Kogg, 2003). Mostly, they show how engaging in sustainability practices requires a lot of motivation and expertise. Not only by the lead-firm who decides when, where and how products are made, but also by its suppliers. To develop alternatives to business-as-usual is costly and requires a high level of control, as well as expertise on innovative and more sustainable techniques (Vermeulen & Ras). Because sustainable entrepreneurs often are small they are dealing with smaller volumes than their fast-fashion counterparts. Because of that, they have little power to change a supply chain and are for a large part dependent on the willingness of others. By anticipating growth and promising large future orders, the Swedish company Bergman made collaborating with them more interesting. Furthermore, they made the decision to hire a consultant who guided their suppliers through the process of greening the production (Kogg, 2003). This example, but that of the other case studies too highlights the importance of engaging in good relationships with suppliers. Turker and Altuntas (2008), who analyses sustainability reports by fashion brands add to this the need to set sustainability criteria for suppliers, but more importantly the need to keep communicating about these criteria.

The apparel supply value chain

In development studies, the value chain rather than the supply chain is an often used framework for the analysis of labour, industry benefits and quality of employment for workers. The value chain itself is the sequence of events through which value is added to a product or service. Within the value chain there are different actors participating. Lead-firms are those actors which have the most significant influence. Rather than producer-driven, value chains in the apparel industry are thus mostly buyer-driven, and as such the power relations in this industry can be described as asymmetrical (Gereffi & Frederick, 2010). Three types of lead-firms are apparent in the fashion industry, namely retailers, brand marketers, and brand manufacturers. Their suppliers need to be able to deliver them short lead times, flexibility and responsiveness, as well as high quality. The lead firms hold strong power over their suppliers. This, because “they decide when and how specific parts of the production process will take place”, and themselves execute the activities which add the most value (Fernandez-Stark et al., 2011). As argued by Gereffi and Memedovic (2003) the difference between lead firms and non-lead firms is that lead-firms are always connected to those activities or resources which generate the most profitable returns. Besides, the authors argue that lead firms can be situated

up- or downstream in the value chain. Those companies performing the actual manufacturing and logistics are the ones which gain the least value, according to Frederick and Gereffi (2010). In their words: “Actual assembly operations (primarily stitching and embellishment) and logistics costs have been squeezed, and the main actors have had little positional or negotiation power vis-à-vis the lead firms”.

The apparel industry is a huge, globally interconnected system. Like most supply chains nowadays, those of apparel often cross borders (Vermeulen & Ras, 2005). Clothing products sold in Europe are oftentimes made in developing countries, since labour costs there are cheaper. In the literature, the apparel industry is often seen as a ‘springboard’ for national development because of its low thresholds. This includes the low fixed costs and the fact that apparel production is labour-intensive (Gereffi, 2009; Gereffi & Frederick, 2010; Adhikari & Weeratunge, 2006). Retailers and brands outsource the manufacturing of their products, because little profit is to be made from investing in overseas production locations. This is due to the fact that the production of clothing requires low-skilled labour, which simply adds little value to the product (Gereffi, 1991). Because of this, brands and retailers are key actors in the value chain. They decide which products are made and where.

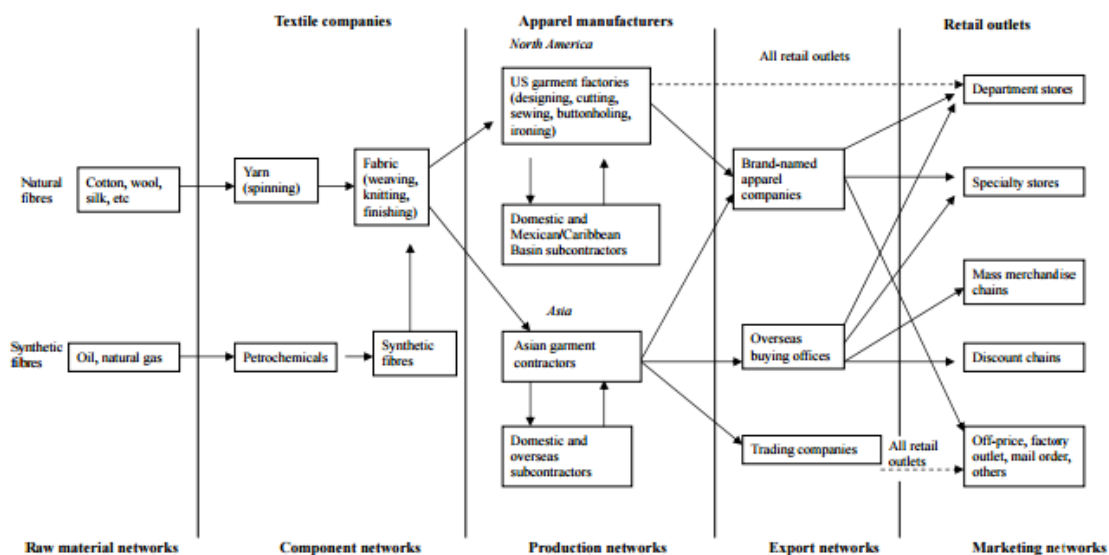


Figure 1 – The apparel value chain (Gereffi & Memedovic, 2003)

In order for one piece of clothing to be made from crop to consumer, it passes a long list of people and companies working on it. From farmers yielding the crops for fibres, yarn manufacturers, factories where fabrics are made, factories where –pieces of- the garment are manufactured and put together, to retailers and finally customers. Oftentimes in the apparel

value chain, it takes multiple subcontractors to produce a piece of clothing. As a result, it is difficult for retailers to track the exact details of the supply chain, while in order to improve sustainability within a supply chain a lot of data on where materials come from is needed, as well as a lot of input from suppliers. Consequently, clothing companies producing in developing countries often face difficulties and unwillingness to make the value chain more sustainable (Faisal, 2010). Sometimes, this means that companies which seek high environmental sustainability choose to produce closer to home, where environmental legislation is more strict (Caniato, 2011)

A more systematic overview of the value chain in the apparel industry is given by Rossi et. al. (2014), who organise this in five clusters, being: 1) raw material supply, 2) input supply, 3) manufacturers, 4) export channels, 5) logistics companies, marketing and retail. The same division is used by Gereffi and Memedovic (2003), who add to that the fact that the many differences between these clusters in geography, labour skill and conditions, technology and scale of enterprises, have an effect on the power in the market and the distribution of profits.

Doing business sustainably

In the following section, I will take a step back from the apparel industry and provide some literature on sustainability in businesses in general. More specifically, this section will go into sustainable business models, and how these add to sustainability in business. It will however start with a paragraph on shared value.

Business Model Innovation

Business models are conceptual tools which help understand how a firm makes money, by explaining how a company design a products or service and offers it to a market, charges for it, or differentiates itself from other forms by the value proposition (Österwalder and Pigneur, 2005; Rasmussen, 2007). In other words: how a business creates value. Innovation of business models is increasingly seen as a way to pursue sustainability in society. Whereas before, value was often seen only in terms of economic value, the growth in awareness of sustainability has incurred a shift in thinking.

In Schaltegger, Leudeke-Freund and Boon (2012) it is even argued that business model innovations are a need in supporting a systematic ongoing creation of business cases for sustainability. Rather than keep producing event-driven business cases for sustainability,

the authors say it is more worthwhile to reproduce these business cases on a regular basis. They propose three requirements of business cases for sustainability: 1) the company has to actively realise voluntary activity to contribute to a solution to societal and/or environmental problems, 2) this must create a positive business effect or a positive economic contribution, and 3) a clear and convincing argumentation must exist reasoning that a certain management activity has led to or will lead to both effects. Important here is that the positive effects are created through and not along with the business' activities (Schaltegger et. al., 2012).

Also Porter and Kramer (2011) agree that business model innovation can lead to companies successfully incorporating sustainability into business models, thereby creating both economic and societal value. Porter and Kramer in 2011 coined the term Shared Value. In their line of reasoning, the capitalist system has been under pressure. Business is increasingly blamed for societal pressures, and even though at the same time it is increasingly incorporating social responsibility into its practices, this does not solve the problem. The authors therefore propose the concept of Shared Value: a business strategy in which companies find business opportunities in social problems. Porter and Kramer (2011, p. 9): "The concept of shared value can be defined as policies and operating practices that enhance the competitiveness of a company while simultaneously advancing the economic and social conditions in the communities in which it operates. Shared value creation focuses on identifying and expanding the connections between societal and economic progress". According to them, striving for such business models require new skills and knowledge, as well as a change in mind-set. But it also is the way to go in solving the problems that society is facing, while at the same time creating better, more meaningful businesses. As they argue, connecting the success of companies to societal improvement paves the way for efficiency, differentiation, and market-expansion.

The authors describe three ways in which companies can create Shared Value. Firstly, by reconceiving products and markets, through reconsidering whether a company's products or services are needed by society. Second, by redefining productivity in the value chain by gaining a deeper understanding of what productivity actually entails and being aware of the possible fallacies that come with short-term cost reductions. Third, by enabling local cluster development through the identification of deficits in logistics, supply, distribution channels, and market organization. As identified by Porter and Kramer (2011) it is often those entrepreneurs with the smallest size and limited resources, such as sustainable entrepreneurs, who are able to work successfully with the concept of Shared Value.

Sustainable Entrepreneurship

By focusing on sustainable entrepreneurship, authors like Cohen and Winn (2007), Hockert (2008) and Hockert and Wüstenhagen (2010) go beyond the research on “corporate greening initiatives”. In line of reasoning by Hockert (2008), such articles focus merely on incremental innovation, whereas sustainable entrepreneurship goes further than that. A definition of sustainable entrepreneurship given by Crals and Vereeck in 2005 is the following:

“Sustainable entrepreneurship is a spin-off concept from sustainable development that can be defined as the continuing commitment by business to behave ethically and contribute to economic development, while improving the quality of life of the workforce, their families, local communities, society and the world at large, as well as the future generations”. Although this definition seems somewhat heavy, as it almost says sustainable entrepreneurs aim at positively influencing everyone and everything around them, it does touch upon the notion that sustainable entrepreneurship goes further than just finding ways to produce more efficiently. It encompasses more than that, sustainable entrepreneurs see the company as something that is not only responsible towards its shareholders, but towards society, nature and future generations too. All of these stakeholders have a part in the decision-making process.

However, Crals and Vereeck (2005) also argue that sustainable entrepreneurship is mostly limited to larger companies, due to the more restricted access of resources which smaller and medium-sized companies (SME's) have access to. In their line of reasoning, small and medium sized sustainable entrepreneurs are not able to afford the management systems which they argue are necessary to reach environmental and social goals. A large variety of different codes, management systems, audits and labels serving as an instrument to guide firms to social and environmental sustainability. Crals and Vereeck (2005) pose that even though they advise SME's not to do so, due to a lack of knowledge and resources, “SME's are reluctant to engage in sustainability”. This is in contrast to Hockert and Wüstenhagen, who relate sustainable entrepreneurship to all firm sizes.

In their writing, Hockert (2008) identifies two types of companies addressing sustainability within the products they make or services they offer. On the one hand the “Greening Goliath”, referring to large multinationals aiming to improve sustainability through taking small steps. On the other hand, the term “Emerging David” refers to small, sustainable companies which venture into niche markets. In table 2, the characteristics of Davids and Goliaths are laid out. Both Davids and Goliaths add to the transformation of an industry towards sustainability. However, the specific ways in which different types of companies

have influence on this transformation is something which in the literature is being examined (Hockert, 2008). Damanpour (1992) found a positive relationship between size of a firm and its ability to innovate, but mostly in manufacturing and less in services. Greis and Fischer (2002) on the other hand, argue that flexibility is easier for small firms, since they do not have to deal with the “organizational inertia” that large firms suffer from. As a result: they argue a negative correlation between firm size and innovation.

Criteria	Dauids	Goliaths
Age	Rather new	Old, incumbent
Size	Small	Large
Objective function	Social and/or environmental objectives at least as important as economic objectives	Economic objectives dominating, social/environmental objectives complementary

Table 2 – Characteristics of Dauids and Goliaths (Hockert & Wüstenhagen, 2009: p. 9)

Concerning the competition between corporate sustainable entrepreneurs and sustainable entrepreneur start-ups, Hockert (2008) points out that start-ups are a lot more prone to be innovative, as they do not have the fear of losing market share. Yet, the competition from Emerging David’s may inspire corporates to go beyond the usual small steps (Villiger et. al., 2000). Besides that, incumbents often have more resources to develop advanced sustainability systems, making it easier to track environmental and social performances. However, when sustainability within the market evolves so-called third-fase sustainability start-ups start developing. These start-ups are more evolved on the business front, and oftentimes are helped by professional investors. Rather than the first batch of sustainable start-ups who Hockert (2008) refers to as bioneers, these new firms “do not share the implicit motto that to stay small is beautiful”. These start-ups want to grow larger as a company and defend their market shares against corporate giants.

The literature on sustainable entrepreneurship provides us with some characteristics on such companies. Firstly, sustainable entrepreneurs often combine an ‘energetic entrepreneurial attitude’ with strong environmental and social morals (Schaltegger, 2002). In many cases, this person is driving the companies activities and considers this his or her personal goal. Sustainable entrepreneurs can thus very much shape the face of their firm. Such people are

very focussed on their mission, and in doing so can create a drawback by focusing too much on one single issue. “They invest all their resources and attention in optimizing one particular environmental or social issue at which they try to excel” (Hockert, 2008, p. 22). This can lead to a neglecting of other issues which are vital to business, or failing to address other sustainability issues. A common pitfall is that sustainable entrepreneurs are so sure of their own value for society, that keeping track of sustainability performances are not deemed necessary. Connected to this is the possible pitfall that it can be difficult for Emerging Davids to attract a large number of customers. Such companies communicate about their high environmental, social or sustainability performances. Hereby, consumers who already are concerned with sustainability are appealed to, rather than attracting new customers who are less inclined to choose products or services with a highly sustainable profile.

Such drawbacks stand in contrast to the ambitions of sustainable entrepreneurs to change the world. Schaltegger and Wagner (2008) propose that a defining element of sustainable entrepreneurship is the wish to transform an industry: “As a distinction to many views of conventional entrepreneurship, sustainable entrepreneurship furthermore extends the goal of corporate influence beyond market success to initiating societal change and changing market conditions and regulations”. Others even propose that firms aim for “mass market transformation beyond the eco-niche”, next to putting sustainability at the core of what they do themselves. According to Hockert (2008), especially Emerging David’s are always looking for ways to beat the evil giant corporations. In doing so, they are prepared to breakthrough disciplines to reach their goals (Fussler, 1996).

Lastly, Hockert and Wüstenhagen (2009) note, that even though the term “Greening” is used in their metaphors, this is done so because it stands as a synonym for sustainable development. They want to highlight that sustainable development should not be restricted to the environment: rather it should include a social and economic dimension too. “While social and environmental aspects of sustainable development are inextricably linked, a large part of the academic literature on sustainability entrepreneurship deals with either one or the other” (Hocker & Wüstenhagen, 2009: p. 14; Wüstenhagen et. al., 2008). Hockert and Wüstenhagen go on to review the path that has been taken in scholarly literature, first by authors who put innovation for the environment central in their work, leaning towards eco-innovation and clean-technology venturing. Only later, a second wave of literature on sustainable entrepreneurship came about, this time about social innovations and products which carried a

social purpose (Kanter, 1999).

Sustainable Business Models

In finding ways to combine the triple bottom line of social, environmental and economic sustainability companies these days need to adopt sustainable business thinking. In doing so, the business model can serve as a concept to innovate for sustainability on a system level, as it conceptually links sustainability to firm activities. Schaltegger et. al. (2016) reason that business models are an interesting way to look at sustainability since it highlights the value creation logic which is essential to businesses, as well as calls for new forms of governance such as cooperatives, social enterprises and public-private partnerships. As such, innovating business models are possibly an effective way to reach sustainability. This, in other words, is called Sustainable Business Model Innovation. According to Bocken et. al. (2015) this concept holds “innovating the way business is done by creating competitive advantage through superior customer value, while contributing positively to the company, society, and environmental all the while minimizing harm”. As they argue, other tools that can guide in improving a company’s environmental performances such as life-cycle analyses, eco-design and eco-ideation, are less holistic especially when it comes to the social dimensions of sustainability (Bocken et. al., 2015).

This view is supported by Schaltegger et. al. (2016) who claim that while historically research on sustainable business models has been rooted in ecological sustainability, business models are now more often used as a tool to address social needs. Furthermore, it is often argued that in order to make business models work for sustainability, the wide range of stakeholders should be considered (Bocken et. al., 2015; Short et. al., 2012; Stubbs, 2008). What is interesting from Schaltegger et. al. (2012) is the notion that sustainability potentials are often overseen. This is due to a lack of integration between sustainability goals and process of strategy formulation, as well as the lock-in effects which come with established company’s business models setting boundaries to variations of corporate behaviour. Thus, incorporating sustainability into the business case is a matter of finding out how profit can be increased through societal activities, and how these can be integrated with the core business approach of a company (Schaltegger et. al., 2012).

The Sustainable Business Model framework

Bocken et. al. (2014) agree with Porter and Kramer (2011) in arguing that sustainability

practices like corporate social responsibility and eco-innovations often are not sufficient to achieve long-term sustainability. As she argues, what is needed are sustainable business models, incorporating a triple bottom line approach and including the stakeholder interests of environment and society too. Their existence is important in driving corporate innovation for sustainability. Bocken et. al. (2014) in their study analyse the different factors and mechanisms contributing to sustainable business models and identified categories that together built the Sustainable Business Model Archetypes. This framework (found below) holds different categories and archetypes of sustainable business models which help in categorising and understanding the mechanisms that deliver sustainability. It is based on ideal types, meaning they are models of situations. As such, real life situation do not necessarily completely reflect these models.

Groupings	Technological			Social			Organisational	
	Archetypes			Archetypes			Archetypes	
Examples	Maximise material and energy efficiency	Create value from waste	Substitute with renewables and natural processes	Deliver functionality rather than ownership	Adopt a stewardship role	Encourage sufficiency	Repurpose for society/ environment	Develop scale up solutions
	Low carbon manufacturing/ solutions Lean manufacturing Additive manufacturing De-materialisation (of products/ packaging) Increased functionality (to reduce total number of products required)	Circular economy, closed loop Cradle-2-Cradle Industrial symbiosis Reuse, recycle, re-manufacture Take back management Use excess capacity Sharing assets (shared ownership and collaborative consumption) Extended producer responsibility	Move from non-renewable to renewable energy sources Solar and wind-power based energy innovations Zero emissions initiative Blue Economy Biomimicry The Natural Step Slow manufacturing Green chemistry	Product-oriented PSS - maintenance, extended warranty Use oriented PSS- Rental, lease, shared Result-oriented PSS- Pay per use Private Finance Initiative (PFI) Design, Build, Finance, Operate (DBFO) Chemical Management Services (CMS)	Biodiversity protection Consumer care - promote consumer health and well-being Ethical trade (fair trade) Choice editing by retailers Radical transparency about environmental/ societal impacts Resource stewardship	Consumer Education (models); communication and awareness Demand management (including cap & trade) Slow fashion Product longevity Premium branding/ limited availability Frugal business Responsible product distribution/ promotion	Not for profit Hybrid businesses, Social enterprise (for profit) Alternative ownership: cooperative, mutual, (farmers) collectives Social and biodiversity regeneration initiatives ('net positive') Base of pyramid solutions Localisation Home based, flexible working	Collaborative approaches (sourcing, production, lobbying) Incubators and Entrepreneur support models Licensing, Franchising Open innovation (platforms) Crowd sourcing/ funding "Patient/ slow capital" collaborations

Figure 2 The sustainable business model archetypes (Bocken et. al., 2014)

The framework includes technological, social and organisational archetypes, indicative of the dominant areas of innovation as defined by Bocken et. al. (2013). Technological includes manufacturing processes and product redesign; social consist of archetypes such as innovations in consumer offering and changing consumer behaviour; organisational have a dominant organisational innovation change component. The archetypes are applicable to a

large range of industries, including the fashion industry. Many, of the ways that clothing companies are adopting more sustainable business methods are to be found in the Sustainable Business Model framework above. As such, the framework will be a useful tool throughout this thesis.

Conceptualization of research

Even though literature suggest that to make business models work for sustainability, the wide range of stakeholders should be considered (Bocken et. al., 2015; Short et. al., 2012; Stubbs, 2008), this is quite clearly not the case for the majority of clothing companies in the sector. Consequently, the current apparel sector leads to a variety of environmental and social problems for society. Apparel companies wanting to counter this have a variety of options to operate more sustainably, innovate their business models, and add to a more sustainable and fair value chain, all the while paying attention to a variety of stakeholders. A new wave of sustainable entrepreneurs are operating clothing businesses which are far more sustainable than their fast-fashion competitors. However, there are some factors possibly influencing their choices in establishing sustainable clothing companies. More specifically, these factors may have an influence on the extent to which these companies are combining both environmental and social sustainability in their value chain. Below, a list of the factors influencing their decisions is given. This list is based on the above theory as well as own observations.

Facilitating factors for broad sustainability in fashion companies

- Personal motivation by entrepreneurs
- Pressure by consumers
- Pressure by NGO's and government
- Pressure by financial stakeholders like insurance companies and banks
- Pressure from within the value chain, for example when suppliers want to make changes
- Press coverage of bad circumstances in the clothing industry

Impeding factors against broad sustainability in fashion companies

- Complexity and opaqueness of apparel value chain
- Cost of innovating production processes
- Limited personal interest in either social or ecological sustainability
- Limited size of company

- Difficulties to find producers willing and capable to produce in innovative and more sustainable ways

I expect these factors to have an influence on the extent to which sustainable entrepreneurs are able to produce clothing sustainably, whilst combining environmental and social goals. In the methodological framework hereafter, I will explain how the research has been carried out.

Methodological framework

In the current chapter I will lay out in what ways this thesis research has been carried out. It will go into the research questions and specific methods used to perform qualitative research.

Research questions

Scholars in recent years have studied the implications of the fast fashion model, fashion value chains and sustainable business models. Sustainable clothing has received some attention in scholarly literature, but only few studies look at sustainable clothing from the retailers' perspective and how they incorporate sustainability into their businesses. There too is a lack of studies that focus on those ethical retailers which qualify as Emerging David's, specifically research that covers both social and environmental sustainability in this market (Hockerts & Wüstenhagen, 2010). More often, studies are done either from an environmental or from a social perspective. Is it the case that clothing brands choose to focus on either environmentally responsible business, or socially responsible business (Shen, 2014)? The literature on sustainable business models often suggests that a business model is sustainable once it takes into consideration the Triple Bottom Line, meaning social, environmental and economic performance (Porter & Kramer, 2011; Stubbs & Cocklin, 2008). In this thesis, I have explored the possibilities for clothing companies to combine environmental and social sustainability goals, and create businesses which operate sustainably in the broadest sense. The following research question has guided me in my research:

1. To what extent are social and environmental sustainability compatible in the production of clothing by Dutch sustainable fashion companies?

This question has sought to find to what extent both social and environmental sustainability are taken into account in sustainable fashion, an industry where both facets of sustainability are highly vulnerable. Answering it required looking into the drivers behind certain sustainability choices, perceptions of sustainability and what they have accomplished with regards to social and environmental sustainability. Also, it requires looking into the challenges and opportunities these companies are experiencing in operating sustainably. Furthermore, the tension between social and environmental sustainability is looked into. Is there a tension, and if so, how come? In answering this question, the Sustainable Business Model Framework by Bocken et. al. (2014) is used as a guiding tool for analysis. This framework systematises different approaches that companies can combine in their business

models. I expect these brands to have different takes on sustainability in clothing, and consequently to have built their sustainable business model differently. In the section hereafter I elaborate on this framework and how it is used in this thesis.

The following sub questions were constructed to help in answering the main research question.

1.1 - What are the characteristics of Dutch sustainable apparel companies what are their perceptions' of sustainability?

1.2 - How is social sustainability incorporated into these companies' business models?

1.3 – How is environmental sustainability incorporated into these companies' business models?

1.4 - To what extent are different approaches to sustainability coupled with different sustainable business models?

1.5 – How do North-South relations play a role in sustainable apparel production?

1.6 – What challenges and opportunities arise in combining social and environmental sustainability in clothing?

Theory and concepts

Furthermore, as a means to analyse the sustainable companies' business models, I have made of the Sustainable Business Model Framework by Bocken et. al. (2014). The authors have studied the different factors and mechanisms contributing to sustainable business models and gathered these in the framework. It holds 8 different archetypes categorized into Technological, Social and Organisational groups. Even though they are categorized, it is recognized that innovations are often combined within one business model (Bocken et. al., 2014). Also, it must be noted that this framework has a larger emphasis on environmental sustainability than on social sustainability. This is recognized and taken into account during the analyses. Furthermore, the terms Technological and Social in the framework do not correspond with my interpretations of environmental and social sustainability. Rather, Technological, Social and Organisation refer to the way that sustainability came about. Consequently, it must be noted that this framework was used as a tool of analysis and not only as a checklist for sustainable business models in the apparel sector. Below, an explanation of the different archetypes and how they work within business models is given, along with an example of how this could work in the apparel sector:

Technological

- Maximize material and energy efficiency.

This archetype, often used in manufacturing sectors of which the apparel sector is one, looks to minimize the harmful effects of production on the environment. This is done through reductions in the demand for energy and resource, by adopting efficiency in energy and materials. In producing clothing an example of this archetype is designing clothing in such a way that material can efficiently be used. Or designing pieces of clothing that have multiple functions.

- Create value from waste

Spinning streams of waste to valuable material or input for other production. This way, waste is minimised and less new material needs to be tapped. In the apparel sector, value could be created from waste by using excess material from one production line to make other goods with, rather than throwing material away. In Bocken et. al. (2014, p.8) this process is defined as Industrial symbiosis.

- Substitute with renewables and natural processes.

This refers to a change in use of materials or energy-sources from ones that are finite, to renewable ones. In the clothing industry this could mean the use of wind-power rather than coal to generate electricity for machines, or the use of organic dyes rather than chemical ones.

Social

- Deliver functionality rather than ownership.

Instead of selling products to users, providing a service which lets them use products rather than own them. This way, traditional consumption patterns are broken and the overall level of consumption can decrease. An example of this in the clothing sector is LENA the clothing library, where one can borrow clothing.

- Adopt a stewardship role.

This refers to a characteristic of companies which has them engage in conversations with the public and customers, in order to ensure well-being of all customers and other stakeholders including society and environment. In fashion, this could be ethical or fair trade with suppliers, or being transparent about the way something is produced and environmental impacts.

- Encourage sufficiency.

The encouraging sufficiency archetype entail that companies adopt solutions which are

directed at reducing consumption and production, as the high levels of consumption in Western economic models are argued to be a big contributor to unsustainable practices. In the case of clothing an example of a brand is Patagonia. Their products in itself are highly sustainable, but they also root against consumerism with their “don’t buy this jacket” campaign. Thereby Patagonia asks consumers to consider the effects of buying on the environment, and purchasing only the necessary.

Organisational

- Repurpose for society/environment

The 8th archetype entails a prioritization of social and environmental benefits over the economic benefits or shareholder value, in other words. This archetype alters the essence of businesses, and thereby drives global change in business. An example of this in the clothing industry would be a social enterprise like Granny’s Finest, which sells knitted products made by lonely, elderly people. The profit they make is valued below the social benefits for the elderly, who enjoy working together and are regularly taken on trips.

- Develop scale up solutions.

Essentially, the last archetype refers to using the sustainability mechanisms mentioned before and scaling these up so that they attract mainstream investors. To exemplify, a big company such as H&M is more fit to implement sustainable solutions at a large scale, but will be inspired by smaller businesses.

In their discussion, Bocken et. al. (2014) also discuss some limitations of the framework. The first one being that it is based on current examples of innovations, and its incapability to predict future innovations. The current research therefore add to the archetypes in the case of discovery of new, undocumented innovations in sustainable business models. Second, the archetypes are more strongly focused on environmental innovations. Here again, the current research may play a role in adding social innovations. Furthermore, the framework is used to construct interview questions, leading to data about the interviewed companies’ business models. This data can eventually be analysed and compared with the data on sustainability orientations, to find out any correlations between sustainability orientations and sustainable business models.

Methods

The main data for answering the research questions was derived from qualitative interviews.

The research questions and method are inductive and descriptive as they seek to build theory about sustainability in apparel from observation.

- *Desk research.* Reviewing on- and offline texts on eco-fashion was valuable in exploring sustainable companies and brands in the Netherlands, which was vital to constructing a sample of sustainable fashion brands in the Netherlands. By means of desk research I have made a list of eco-fashion brands and retailers, their sustainable characteristics and their availability in the Netherlands.

Furthermore, through a review of their websites I gathered their statements on sustainability and its engraining in the business model. This served as a basis for many of the questions raised during the interviews.

- *Qualitative interviews.* I have conducted 11 interviews with sustainable clothing brands. The interviews were semi-structured, which meant that I composed a list of questions but allowed for the interview flow in different direction. This, because there were quite a number of topics that needed to be addressed in order to answer my research questions, but at the same time space to be off-track has provided me with interesting data in different areas. By keeping it semi-structured I was able to discuss emerging findings with my interviewees. I tried to conduct all interviews face-to-face so that rapport could be built. Rapport was necessary because in an ideal case the interviewee would provide me with many details about the company which may possibly be sensitive. However, in some cases a phone interview was conducted due to limited availability of time.

Furthermore, I have engaged in two conversations with experts on sustainable fashion: Maartje Maas from Voordewereldvanmorgen.nl and Marcella and Noor from ProjectCeCe.nl. Both conversations were very constructive in the first phases of this research.

Sample

Purposive sampling was used to pick companies that from their establishment have chosen to produce in a sustainable manner, either environmentally, socially, or both. That way the sample comprised of ‘Emerging David’s’, small, sustainable companies which have not long ago ventured into the market. These companies are either be manufacturing brands or retailer’s brands, as for the purpose of this study it is necessary they are the lead firm, deciding how, when and where the clothing is manufactured.

Together with Maartje Maas, an expert in sustainable fashion and social

entrepreneurship, I comprised a list of 23 companies that I could approach. During the research through the interviews and research on social media, more brands were added to the list. In the appendix a list can be found of all the companies I have found and contacted. In the end a total of 13 representatives from 11 different companies was interviewed by me. This provided me with enough data to explore the differences between the companies and their sustainable business models. The units of analysis thus are:

- MUD Jeans
- Brightloops
- Miss Green Fashion
- Zazu Amsterdam
- Noeser
- Pine3 Clothing
- Merunisha Moonilal
- Unrobe
- Afriek
- Pangaea Clothing
- Saint Basics

Analysis

The data brought about through the qualitative interviews was analysed through open coding and axial coding. To this end I have used Excel, as I find it the most straightforward to use for coding. A list of codes used will be added to my final thesis.

Credibility of the research

Whereas the quality of quantitative research can more easily be evaluated on the basis of concepts like reliability and validity, this is more difficult when it comes to qualitative research methods. The inductive research method I have used throughout this thesis, where I have made broad generalizations about Dutch sustainable apparel companies by interviewing a sample, asks for different ways of evaluation. Some of the methods I have applied to increase credibility of this research are:

- Investing in a representative sample. I have aimed to interview as many representatives from

Dutch sustainable fashion brands as possible. The bigger the sample, the more voices, the more can be learnt. Desk research and informal conversations with experts in sustainable fashion has helped in creating a list that covers most Dutch sustainable clothing companies.

- Throughout the analysis, I have actively sought for similarities and differences to ensure different perspective are represented. Transcribing the interviews has allowed for rich descriptions of the participants accounts to support my findings.

- Furthermore, I made use of respondent validation. This started with the expert interviews, whose accounts has provide the basis for the interviews with sustainable clothing companies. Throughout the interviews, I have invited participants to reply to narratives brought about by previous interviews. That way, something that was said could be confirmed or opposed, enabling a rich variety of ideas to be found.

Scientific relevance

This thesis research adds to a body of research on the apparel industry. Where now most literature focuses on the fast fashion model and its implications, sustainable fashion is not yet seen as a significant challenger of the fast fashion model and as such not much literature can be found on this type of apparel. As such this thesis adds to a much needed body of research on those companies which are able to operate sustainably within the prevailing fast fashion model.

Furthermore, not enough research has been done on sustainable business models and this study fills a part of this gap, specifically by providing insight through a case study where both social and environmental sustainability in business models is tested.

Societal relevance

The purpose of this paper is to explore the possibilities and downfalls for sustainable apparel in the Netherlands. Outcomes of this research may be helpful for other clothing companies wishing to operate more ethically. If businesses start operating more ethically, this eventually has a positive outcome on society.

Ethics

Clearly this research touches upon ethical issues, since the interviews could possibly highlight sensitive details about business models, and the extent to which companies are sustainable, or not, and how companies are dealing with this. Therefore, I have taken into account the

following in doing research:

- *Consent*. Prior to the study I have gained full oral consent from the interviewees. They all agreed that they are contributing to the research voluntarily, that the interview will be recorded and transcribed and that the data brought up by the interview may be used for my thesis. Furthermore, I have made clear that they could stop the interview or the collaboration at any time, also after the interview.
- *Confidentiality*. The research data will be kept confidential. This means that the transcripts of the interviews will not be fully shared with others but the researcher and the thesis coordinator, rather quotes will be used to support the results. Also in executing respondent validation, I have not shared the names of interviewees or companies, or any information which could signify the interviewee or company.
- *Possibilities for anonymity*. All the interviewees have been asked whether they themselves and their companies want to be anonymous. All of the interviewees agreed that I could use their name and the name of the company. However, in the thesis I will not share the names of the interviewees.

Results

In the section hereafter, I will summarize the data gathered per sub research question. Therefore, there are five following chapters which will start with the general descriptive results, after which I will go into how they answer the sub questions more deeply. Quotes from the interviews will be used to give context to the text. Furthermore, I will link some of the results to the theory discussed in the earlier sections of this thesis.

Chapter 1 - Dutch sustainable apparel companies and their perceptions of sustainability

At the onset of this research, an enquiry was done into Dutch sustainable apparel companies. This resulted into a list which can be found in Appendix A, accompanied by more information on what ways I have been in contact with them. For the sake of credibility, these chapters will only be concerned with the companies that I have spoken to, of which a table with characteristics can be found below.

Brand	Est.	Type of clothing	Nr. of employees	Country of production
Unrobe	2017	T-shirts and sweaters	3	Portugal
Merunisha Moonlight	2006	Beach clothing	1	India
Pine3	2016	Socks and T-shirts	3	Portugal and Turkey
Zazu Amsterdam	2015	Knitted wear	1	Ecuador
Afrik	2013	Various	2	Rwanda
Noeser	2012	Children's clothing	11	Portugal and Turkey
Saint Basics	2009	Underwear and T-shirts	4	Portugal and Turkey
MUD Jeans	1999	Various		Spain, Italy, Tunesia, Turkey, Egypt
Brightloops	2016	Knitted wear	4	Netherlands and France
Pangaea	2017	Sweaters	4	China
Miss Green	2008	Various	9	Portugal, Turkey, India

Table 3 – Characteristics of Dutch sustainable apparel companies in this research

All of these companies were established after 1999. Most of them were established after 2010. The number of employees ranges between 1 and 11, with an average of 4. Consequently, these are mostly rather new, small companies, with the exception of MUD Jeans which was started in 1999. That said, MUD Jeans went through a restart and a complete renewal of the business model in 2014 – from leasing jeans only to selling jeans too. With this in mind, MUD Jeans too is only 3 years old. So, all of them qualify as Emerging David's, being "new entrants engaging in sustainable entrepreneurship" (Hockerts & Wüstenhagen, 2010).

Products and locations

The products these clothing companies make range from underwear and socks, to dresses, blazers and knitwear for men, women and children. All in all, a varied bunch with different value chains throughout different countries. Their different production locations are the result of a few reasons, one of them being expertise. As the participant from Unrobe mentioned:

"You have to check per product, okay, what do I need, and where can I get the best quality for the best price. And with those factors you make a choice." (Unrobe)

The process he refers to has led to Unrobe's sweater and T-shirts' production taking place in Portugal, where in total 5 out of 11 companies produce. In Turkey too, 5 out of these 11 companies are present.. Other European production locations are Italy, Spain, France and the Netherlands. Amongst locations in the global south are India, Ecuador, Rwanda and China. Of all these countries, Rwanda, France and Ecuador are a-typical locations for apparel production and have been chosen for different reasons.

"My husband is Peruvian and on one of our trips there I spotted alpaca-wool, a fabric which is endemic for the Andes region. I felt it and wondered, why do we not have this fabric in the Netherlands?" (Zazu Amsterdam)

"I was doing an internship at the Rwandan embassy at the time, and my partner was doing research. We connected in thinking that Africa is seen in a wrong and generalised light in the Western world, one which does not do right to its beautiful sides. On the other hand I was convinced that traditional ways of development aid were not working, and that trade was a much better base for development. Out of these ideas, Afriek was born" (Afriek)

From the above quotes can be learnt that not only quality and expertise in the clothing industry, but also the location itself or the availability of resources can be reason to choose for

a certain production location. Another influencing factor here are sustainability goals, which will be discussed more elaborately in chapter 4.

Establishment: when and why

Looking into when these companies were established and for what reasons provides insight into these companies' motivations. As can be seen from table 3, most of these companies were established from 2007 onwards. One of the companies established before the year 2007, has stopped existing. Consequently, only one of the companies under analysis is older than 10 years. With a wave of companies having been established around 2016, many of these sustainable fashion companies are rather new and were started after the Rana Plaza disaster. For the interviewees representing Brightloops and Zazu Amsterdam, media coverage of these and other events specifically had an impact on her decision to start the company.

“After the Rana Plaza disaster I figured I would think of something that would make the textile industry more sustainable.” (Brightloops)

“I felt like I could no longer buy anything, without being absolutely sure that it was made in a responsible way. Not by people working 24 hour shifts, or by children, or with angora wool. Those are all factors which made me start Zazu.” (Zazu Amsterdam)

Similarly, Saint Basics brought their first line of clothing to the market in 2010. The establishment of Saint Basics was largely to do with stories about the growing impact of fast fashion on people and planet. As such, establishing a brand that was produced in a sustainable and ethical manner was a reaction to this.

“Around that time, there was a lot of negativity about the clothing industry too. So when I was asked to join Saint Basics, I said that producing ethically was a prerequisite.” (Saint Basics)

However, operating a sustainable clothing company was still difficult in a time where unethical practices in the clothing industry was not getting a steady stream of attention yet. Those companies which started earliest, experienced that the market for sustainable clothing was simply much smaller. About their establishment before this wave of attention for sustainability in fashion, some say they were too early. Merunisha Moonilal, for example, argues that the fact she started her sustainable fashion company in 2006 was one of the reasons it did not survive.

“When I started, only hippies in socks made of goat wool cared about sustainability. It was not so mainstream then, and it is much more mainstream now.” (Merunisha Moonilal)

In this same line of reasoning, those companies established around a later time sometimes experience a push in the sense that consumers are getting more aware of circumstances in the clothing industry. As a result, consumers are more inclined to look for brands that produce sustainably, plus they are more willing to pay extra.

“We had a lot of people laughing at us before, and now we have copycats. So, I think we are in this wave where everybody starts to think differently, especially with Generation Y who wants to know exactly what they are buying. People are starting to understand, and I can feel a big movement.” (Mud Jeans)

Not all of the interviewees felt this way. Others were more sceptical about consumers’ demands for sustainability, something which will be discussed as a difficulty in a later chapter. With regards to establishment, for Unrobe especially this was the result of a spotted gap in the market. They found that there were not yet sustainable, fashionable brands, which sold products for low prices. This gap they reckon, is filled with the establishment of Unrobe.

“We noticed brand awareness has dropped in our generation, status is becoming less and less important. As a result, we saw a gap in the market: if we no longer need to sell to a retailer, we could save a lot of money. That money could be spent on quality, sustainability, etcetera. So we do not have to watch every dime we spend. So we started the company, wanting to offer our customers full transparency” (Unrobe)

To summarize, starting sustainable clothing companies in these cases was often motivated by becoming aware of the unethical practices in the apparel industry as it is. A big motivational factor here too, is really wanting to change the world or at least the apparel industry. The next section will go deeper into this topic.

Motivation to affect change

Correspondent with the literature on sustainable entrepreneurs, the participants of this study too show that their personal motivations have influenced their decision to start sustainable clothing companies a lot (Schaltegger & Wagner, 2008; Fussler, 1996). They have started from bad experiences in the fast fashion industry or a background in sustainability, motivated to do it better than the incumbent. In the case of Afriek, they dream of affecting the views people have of Africa. Many of them have a dream of changing the world, or affecting change in the clothing industry. Merunisha for example, who now works as a sustainability consultant for large fashion brands, says the following:

“Personally, I cannot work in this sector any longer without working hard, every day, to change it.” (Merunisha Moonilal)

This quote very clearly highlights how the experiences people have with the fashion industry makes them want to change it. Interestingly, those entrepreneurs with a background in retail¹ have had similar opinions, thereby expressing how they feel sustainability should be the norm in the apparel industry.

“We think sustainable should be the new standard. Everybody is more aware of everything nowadays, and we want the same for clothing.” (Unrobe)

“In the supermarket everybody is buying organic food and stuff, but in retail it seems irrelevant. Even though, we think, if you love nature you should make your footprint as small as possible. That is why we want to be a hundred per cent sustainable.” (Pine3)

Both of them, alike with some of the others are hoping to inspire other clothing companies to become more sustainable, by being an example. Pangaea clothing was started by Future Planet Studies-students, from the idea that clothing is a way to communicate, and by making a fully sustainable product, it would communicate about positively sustainability.

“We read about the massive destructiveness of the cotton industry. About the amount of pesticides used, the amount of water. And we thought: there must be ways to do it differently. So we wanted to find out.” (Pangaea Clothing)

Changing the clothing industry is a theme that came up many times during the interviews. Most of the entrepreneurs in this study think negatively of the way the fast-fashion industry works, large companies selling cheap clothing, and consumers attitudes towards clothing. They have either experienced it in their own work, or seen the impacts through the media. With their companies, some hope to challenge large fast-fashion brands and make consumers more aware, and they’re willing to work together in an effort to achieve more sustainability in the fashion industry.

“We really want our transparent concept to be rebelling against the incumbent. If we all begin start-ups which work sustainably, we can actually change something. That to us, is sort of the higher goal.” (Unrobe)

¹¹ See table 4 - Sustainable brands, their mission and the entrepreneur’s background

In this higher goal, the sustainable entrepreneurs in this study are not so much focused on competition, but rather on collaboration.

“I even tell my competitors where to go for the best recycled yarn for jeans. Only because I want there to be more jeans like ours on the market. I find it ridiculous that we are the only ones offering circular jeans.” (Mud Jeans)

With their slogan *Changing the world bottom-up*², Saint Basics particularly states that they want to change the world by going against the grain. Next to it being a funny reference to their underwear products, it also entails a reference to Saint Basics being small, yet good enough to inspire others. All in all, all interviewees highlighted their motivation to affect change with their brands. Whether they are in it to make money or not, they want to change something about the conditions in the clothing industry or the world at large. This urge which goes further than just the urge of being entrepreneurial, is something Merunisha Moonilal summarized well in the following quote:

“People that do this are pioneers. They are just at the beginning. It’s a new business formula in a way. It’s not about making money, it’s about affecting lives. About affecting change. It’s very important to seek that these people don’t go straight to the money. They go for collaboration. To make something beautiful. But in a responsible manner.” (Merunisha Moonilal)

Backgrounds and visions on sustainability

In the table below one can find all the interviewed brands, the missions stated on their website and the background of the entrepreneur who started the company. Later on in this writing, the actual sustainability practices carried out by these companies are discussed. These mission statements naturally do not reflect what these companies fulfil in reality, but it gives a glimpse into what they want to do, possibly in the future. Changing the world, full transparency, those are big claims. The interviews brought forward somewhat more realistic visions.

“Since a child I have found that trashing the planet you live on is not very logical. So my striving towards sustainability is not necessarily from an idealistic viewpoint, but more from being smart. Why not be smart about the resources we have at hand?” (Saint Basics)

² See Table 4 – Sustainable brands, their mission and the entrepreneur’s background

Table 4 – Sustainable brands, their mission and the entrepreneur's background

Brand	Mission on website	Background entrepreneur
Unrobe	Full transparency in pricing and sourcing.	Clothing (retail)
Merunisha Moonlight	<i>No longer existent</i>	Clothing (textile engineering)
Pine3	Clean in every way	Clothing (retail)
Zazu Amsterdam	We care about people, animals and the environment, and that is reflected in our production process	Sustainability (law)
Afrik	To change perspective by delivering this personal hand tailored quality from Africa, directly to your wardrobe	International studies
Noeser	Be nutty, ben nice, be Noeser	Finance
Saint Basics	Changing the world bottom up	Marketing
MUD Jeans	Circular economy and fair clothing	Clothing (fast fashion)
Brightloops	Making truly circular the new style	Sustainability (NGO's)
Pangaea	Sustainability without concessions	Sustainability (student)
Miss Green	Beautiful and sustainable: it is possible	Politics

“I think sustainability is about things that generate value in many different ways. Not just for the consumers, but also for the people working on it. It's about quality, respect for nature, animals and people.” (Zazu Amsterdam)

“We really want to keep our footprint on nature to a minimum.” (Pine3).

Furthermore, it shows that 4 out of 11 have a background in the fashion industry, 3 out of 11 have a background in sustainability, and others came from business (marketing and finance), politics or international studies. As emphasized above, those with a background in clothing, either retail, fast fashion or textile engineering, have similar outlooks on how the industry should be in the future. Perhaps because their experiences with the clothing industry are deeper than those of the others, who started with less knowledge of clothing supply and value chains. This seems to make them more aware of the possibilities with regards to clothing. Although one may have expected that those with a sustainability background are more thorough in creating sustainable production processes, this is not the case. In both groups a lot of knowledge and especially eagerness to learn more exists.

“This has really been a process for us. We thought, let’s do it this way, but we keep learning along the way. And we start liking it more and more, doing research in what ways we can save CO2 and costs..” (Unrobe)

“We want to make clothing that is sustainable without concessions. Even though it is taking us so incredibly long to find the right fabric, with the least environmental impact, we will not settle for less like some others do.” (Pangaea Clothing)

Most of the interviewees agree that sustainability, both social and environmental, should be the norm in the fashion industry. Just like the food industry, where awareness of the impacts and production processes of certain foods has grown, the clothing sector should according to them be one where people can get insights into the way products have been made. Where most of the companies specifically state their sustainable qualities and missions on their website, Afriek choose not to.

“We do not want to make it too obvious, as we believe that taking care of your employees should be a matter of course. Companies should not even have to say it..” (Afriek)

Although quality is an important factor for most of the brands, there seems to be a division between those brands with the aim to make high quality, basic or timeless pieces and those brands aiming to make fashionable pieces. The apparel industry for a large part is as destructive as it is because of the transience of fashion, causing clothing to be seasonal only. Opting to making timeless or basic pieces thus is another way to combat the destructiveness of fast fashion:

“As you can see, the pieces we make are not per se basic. But they also will not go out of style. They are timeless, so you do not have to buy a new vest every year.” (Brightloops)

On the other hand, sustainable fashionable pieces are serving as an alternative to high-street cheap, unsustainable brands.

“Yeah, it’s not like people will ever stop wanting to be able to buy a full bag of clothing for 50 euros. So why not offer them an alternative that is sustainable and still reasonably priced? In the end the biggest impact is created by the consumer, through their use and washing of our products” (Unrobe)

As some argue, this focus on fashionable, but also quality pieces is necessary if companies are looking to target a market that is bigger than only responsible consumers.

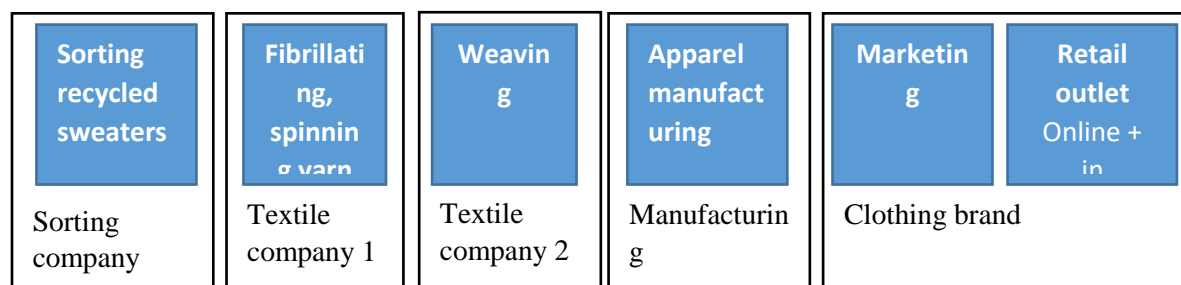
“If you position yourself as a sustainable company only, that’s a very small pond to fish in. Most people are just not occupied with sustainability. They just want a nice product. So yeah, you do need to have a good collection.” (Saint Basics)

Value chains Dutch sustainable clothing companies

Now that I have elaborated on the characteristics of these companies and before I discussing their actual sustainability efforts, it is important to look at the different value chains these companies are part of. Since many of these companies are similar, I have resorted to visualizing 3.

Value chain 1. Recycled fabric

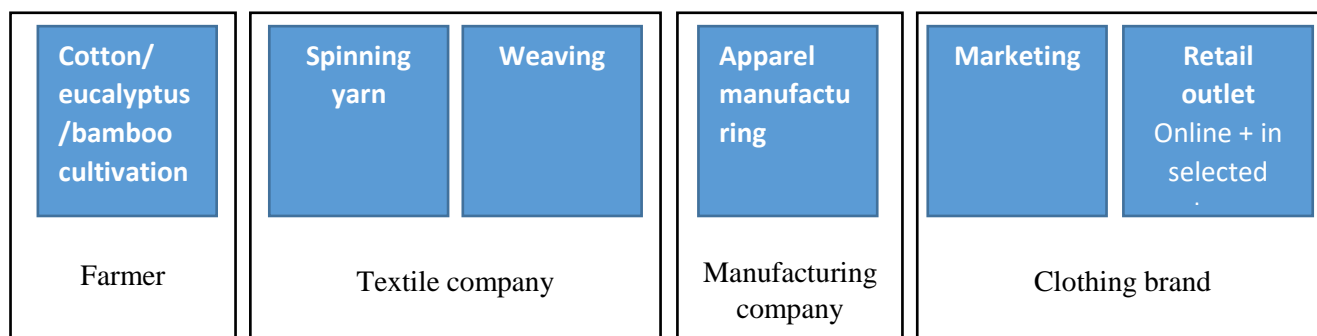
Companies that make clothing of recycled fabric have a value chain that looks like the one below. I will explain the value chain by using Brightloops as an example. In the case of MUD Jeans there is an extra phase of dyeing and washing. Firstly, a sorting company takes care of picking clothing that is suitable for recycling. Naturally, no farmer is involved since the clothing is made of old clothing. In the case of Brightloops, there is a Dutch company that does this for them, one where people with a distance to the labour market are employed. Then, a textile company takes care of fibrillating the old sweaters to very small pieces, and eventually spin it to make yarn. Another textile company weaves the yarn to big pieces of knitted fabric. Following, the knitted fabric is put together by a special manufacturing company. Brightloops, the brand itself, takes care of marketing and selling clothing online. Actually, this value chain is circular because in the after-use phase, clothing ends up in the sorting phase again. Although the added value does not go on top of the value at the end of the last chain, it is interesting to note that the same piece of resource is valued again.



Value chain 2. Organic fabric cultivation

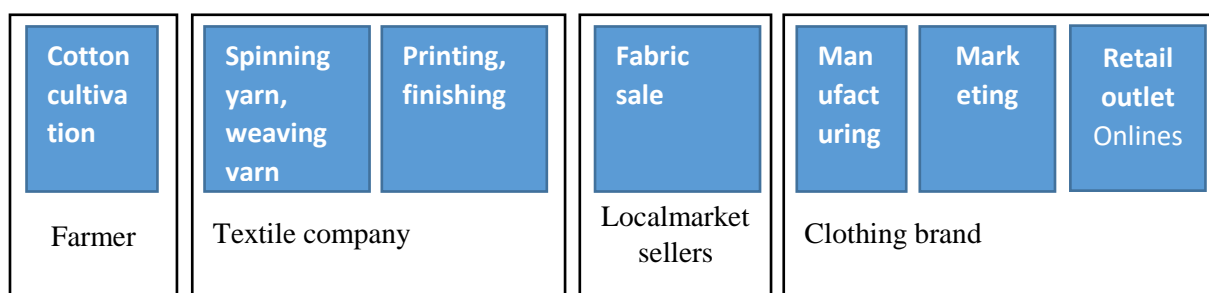
The value chain below is applicable to all companies that rely on raw material to make

clothing. Those are companies like Miss Green, Unrobe and Noeser, which use organic cotton, but also Pine3 and Saint Basics, which make clothing from other crops like bamboo and eucalyptus. In some cases however, the textile company is also the manufacturer, meaning there is only 1 company between the clothing brand and the farmer. In all such cases though, the textile is bought directly from the company making it.



Value chain 3. Buying fabric from local markets.

In some cases, like that of Afriek and previously also that of Merunisha Moonilal, fabrics are bought from local markets. This means that extra value is added in the local economy. Furthermore, in the case of Afriek but also that of Zazu, it is the same company manufacturing as well as marketing and retailing clothing. That way more control can be exerted over labour conditions and the like.



In all of these cases, the clothing brands are lead-firms. They are the clothing brands which are responsible for the activities adding most value (Gereffi & Memedovic, 2003).

Chapter 2 – Social sustainability within Dutch sustainable clothing

Social problems in the apparel industry are often a result of it being complex and opaque. Consequently, social sustainability is easier to reach when companies are able to keep track of where their products are made or control can be kept (Ras & Vermeulen, 2008). This can be done in a few ways. Either by owning or controlling production locations, keeping close relations with ones suppliers through contracts and frequent visits, or by making use of certified materials or factories. The aforementioned practices range in order from a lot of control to little control. Below, a table with a short description of the ways that the interviewed companies are incorporating social sustainability into their production is given.

Brand	Social sustainability characteristics
<i>Unrobe</i>	GOTS certified factories
<i>Merunisha Moonlight</i>	Sustaining handicraft
<i>Pine3</i>	GOTS certified (T-shirts)
<i>Zazu Amsterdam</i>	Private atelier, social enterprise characteristics, fair trade
<i>Afrik</i>	Private atelier, fair trade, facilitating development of skills
<i>Noeser</i>	GOTS certified factories
<i>Saint Basics</i>	GOTS certified cotton, OEKO-TEX
<i>MUD Jeans</i>	GOTS certified, fair trade
<i>Brightloops</i>	Social enterprise characteristics
<i>Pangaea</i>	None yet
<i>Miss Green</i>	GOTS and SA8000 based code of conduct

Table 5 – Brands and their social sustainability efforts

Pangaea Clothing is the only company which has not yet invested in specific efforts to improve social sustainability. Admittedly, they are still in the process of setting up a business model, but are also more focused on reaching true environmental sustainability. Although some of these companies invest more time and money in social circumstances than others, most of them do put effort into finding out how, where and by whom their products are made.

Owning production locations

As can be seen from the table, only Afriek and Zazu have their own production locations in subsequently Rwanda and Ecuador. That means they are the only companies which have full control over how manufacturing is done and under what conditions. In all other cases the production is influenced by the supplier, its other customers, and possibly middle-men. Even though Afriek's volume is not the largest, because of their determination to pay workers a fair price they needed their own production plant.

“In the beginning when we did not have our own atelier we constantly had to negotiate how many hours people were working for us, how much money they would make. To us its logical to pay workers a fair price, but we forgot that not everyone thinks the same way. We took for granted that if we would pay a good price, our sewers would automatically also receive a fair wage. It took us months before finding out that the owner of the atelier was keeping way more to himself than we anticipated. He was in it for the money, so wanted a bigger slice of the pie.” (Afriek)

Afriek now has its own atelier, where a local production manager keeps track of who has done what and how things are going. A biweekly meeting secures that all employees feel happy. Employees are asked about their experiences and are welcome to put forward ideas and propose changes. According to Afriek's representative, there is hierarchy, but at the same time social transparency. Furthermore, workers are paid more than they would receive in other Rwandan ateliers. The same counts for the women working for Zazu Amsterdam, although where Afriek claims to pay not too much more, Zazu pays around 5 times the price workers would get elsewhere in the country.

“Sometimes I think I pay too much. But then again, I also ask a lot more. The quality needs to be spot-on. I also think that paying 5 euro's for a hand knitted piece is just plain exploitation. And I don't want to contribute to that.” (Zazu Amsterdam)

This view is shared by Afriek:

“It's not a bad thing, I believe, that we pay more. Because we also ask more. The quality needs to be great, there's simply a lot more work going into our blazers. It's only logical to pay more. The biggest win for them I believe is that by working for us they make more money, but also acquire more skills and become better tailors. Those last forever.” (Afriek)

Similar to Afriek's situation, the group of marginalized women knitting for Zazu is also led by a local person, however on a voluntary basis. Having an own production location is an ambition by some of the other interviewees too. It seems to be an easy way to ensure social sustainability. Merunisha Moonilal on Studio Jux, a company which I have not been able to speak to, but she has worked with, who set up their own production plant in Nepal.

“It really works for those people in Nepal that they're working with, and it really works for them. These people, these workers, have kind of become their family. You take care of each other. That's what I find so beautiful, still they have been able to commercialize it. It's a fantastic example of how things can be done in this industry.” (Merunisha Moonilal)

Certified factories

Another way in which sustainable clothing companies in this research like to ensure social sustainability is by choosing factories which have certain certifications. The ones referred to in relation to social sustainability by the interviewees are SA8000, OEKO-Tex Standard 100 and GOTS (Global Organic Textile Standard). The SA8000 certificate is based on ILO standards and is applicable to factories, not products. Likewise, the GOTS standard is also based on ILO standards and applicable to fabrics, not factories.

“We knew the factory in India was GOTS and SA8000 certified, but still wanted to see it with our own eyes. When we went there, we saw that the top floor was not in use, it was way too hot up there. In some factories that doesn't make any difference. But in this factory workers can for example also file complaints. It's a good factory.” (Miss Green)

“I know that our Portuguese supplier is a family business, and I'm not sure how the circumstances are but I suppose they are good. We have not been able to visit yet. But I do know we have a certification to ensure there aren't any children involved and stuff. It's called OEKO-Tex.” (Pine3)

However, what is interesting is that both of these certifications are mostly about the absence of toxic and chemical substances throughout the production process, and about being organic. OEKO-Tex does not consider social circumstances at all, but they partially play a role in the GOTS certificate. In the latter, the certification applies to all stages of the textile processing and manufacturing stages and seems to include a whole range of social facets: freedom of employment, absence of child labour, provision of living wages, non-excessive working hours, regular employment and absence of inhumane treatment, freedom of association and

lastly safe and hygienic working conditions. All of these are in line with the criteria by the International Labour Organisation (Global-Standard.org, n.d.). Although the Decent Work Framework by the International Labour Organization is a renowned international standard for labour, it was not mentioned during the interviews nor on many of the websites of these brands.

Although not mentioned during the interview, shirts made by Pine3 are also GOTS certified. So are Noeser products for a large part:

“We have our own certificate, which means the producer is GOTS and so are we. We are 75% GOTS. Our other producer, who is not certified with GOTS, we visited, and saw with our own eyes that working conditions were good.” (Noeser)

What exactly good working conditions entails for Noeser, was not specified. Further inspection of their website also does not give any more information, it also states that the important thing here was to have seen with own eyes that working conditions in their Portuguese and Turkish factories is good. Remarks like these, which are also made by other interviewees, signify that social sustainability is a concept difficult to standardize for sustainable brands. Rather, they rely on personal evaluations when it comes to working conditions.

Furthermore, GOTS sounds like a fair certificate and is respected by most of the interviewees, yet not everyone agrees that it works. Merunisha Moonilal for example argues that GOTS certified clothing does not necessarily mean the circumstances in which it was manufactured were up to ILO standards, rather the production of the fabric itself is GOTS certified. Although the Global Standard itself argues the certificate applies to all stages of the textile processing and manufacturing, it unfortunately is difficult to be very certain about that.

Visiting and building relations with suppliers

What is striking from the interviews, but also from what these companies share online, is that in line with literature on sustainable clothing production, they are investing in good relationships with suppliers (Kogg, 2008). Finding good suppliers is a process which takes time,

“We have to know our suppliers very well, we meet them many times in the year. All these people have the same feeling about that things have to change. Of course it’s also an economic interest, but they need to want to do things differently.” (Mud Jeans)

Although owning a production location is the most efficient way to control social sustainability standards Dutch sustainable clothing companies have set for themselves, most of them have supplying companies whom they visit, frequently or not. Even though the factories are sometimes already in use, companies still want to pay a visit to check if everything is the way they want it to be.

“We say we’re GOTS certified all the time, but we want to walk the talk. We visit production locations for a quality check anyway, so we can check up on working conditions too.”

(Noeser)

Certified materials

Next to making use of certified factories, others argue that making use of certified materials is also adding to social sustainability.

“What I think is really cool is this GOTS certificate, which also shows that they take really good care of the farmers. They do not have to deal with chemicals, so the ground keeps solid and they can still grow food-crops. This in my eyes is also about social sustainability.”

(Unrobe)

Although farmers also play a crucial role in the process of making clothing, and should therefore probably also be considered in striving towards social sustainability, this subject was not brought up very often. It seems that brand owners are more concerned with the workers manufacturing their clothes, perhaps because that is where most media attention has been concentrated on. Or perhaps, because that is what these companies can have the largest impact on.

Producing in Europe

Strikingly, only 2 out of 11 companies produce in Asian countries, namely China and India. Out of 11, 10 choose at least one production location in Europe. It was found that some of them believe producing in Europe will automatically result into fair trade, good wages and healthy, safe working conditions.

“We are socially sustainable because we produce in Europe, where there is legislation. That’s how we overcome social issues.” (Brightloops)

However, not everyone agrees that producing in Europe is the only requirement to good conditions.

“If you go to Bulgaria, or Poland.. Sometimes it’s even worse than India. I was astonished. I thought what the hell is this, it’s Europe, so it’s good, they say. But you know what, producing in Europe is legally safe. But that does not mean nothing is going on under the covers. But at least you’re never going to be asked if your company is sustainable.” (Merunisha Moonilal)

This notion that social sustainability is for a large part covered by it taking place in Europe, is one of the reasons so many of these companies are not producing in Asian or African countries where labour is cheap, but rather in peripheral European countries. In chapter 5 the impacts of this on the global south will be discussed in more detail.

Social enterprises

Besides providing a more responsible alternative to the social circumstances in the fast fashion industry, there are other ways that clothing companies are adding to social sustainability. One of them is by including characteristics of a social enterprise. Zazu Amsterdam and Brightloops both do so by creating employment for marginalized people. In the factories where the recycled fabric for Brightloops is prepared, people with a distance to the labour market find new opportunities to join the workforce.

“Mostly people who have been ill for a long time, or who have been detained. We are a social enterprise in a way.” (Brightloops)

Zazu Amsterdam’s atelier is a place where women between the ages of 25 and 80 work for more money, sometimes next to other jobs.

“Every single one of them does it because they want to. Not because they are forced to, even though they all really need the money. It’s different from those factories in China, where they do not have the choice. Some of them are ill, some are single mothers, and some are just really poor. I’m glad to be able to give them a better life, they are all amazing.” (Zazu Amsterdam)

These companies are both not full social enterprises, as the definition of a social enterprise is “an operator in the social economy whose main objective is to have a social impact rather than to make a profit for their owners or shareholders” (Social-Enterprise.nl, n.d). Zazu Amsterdam and Brightloops, however, conduct a business where both profit and social impact are strived for.

Sustaining or facilitating skills

Little skill is needed to work in the clothing industry, as the process can easily be taken apart into little pieces. However, the higher one moves up in the cycle from basics to couture pieces, skill build-up can prove to be a very convenient trait. For example in the case of Afriek, the employees of which also need to be able to tailor to private clients. Or in other cases where workers make pieces with more complexity than T-Shirts. Once skills are improved, a worker can earn more or work for better employers.

On the other hand, the clothing sector has traditionally always been one to which local handicrafts and skills are applied.

“I really gave people the chance to maintain a skill, which is something not many companies these days do. That to me is also social development when you’re working in a developing country.” (Merunisha Moonilal)

By facilitating people’s skill expansion, sustaining traditional skills, or providing marginalized people with a chance to work, sustainable fashion companies can foster personal development and add to social sustainability. Other practices held by these companies to improve social sustainability are to invest in private production locations and invest in good relations with their suppliers in order to keep (more) control of social circumstances. Others rely on certifications and global regulations to ensure social sustainability.

Living wage

Living wage, the amount of salary which covers basic needs such as housing, food and clothing, was never mentioned by any of the interviewees. That even though the concept has received much attention recently. That is not to say that none of these companies pay their workers a living wage, but it was never referred to. The question that arises here is whether some of the companies who pay the workers making their products a higher salary than other similar companies, have looked deeply into what salary that should be. The fact that the Zazu Amsterdam representative is not sure whether she is paying too much, signifies the little amount of thought that may have gone into decision-making on salaries.

On the other side of the spectrum, there are those companies whose representatives acknowledge that they do not know exactly how much workers are paid. They count on either European legislation or certifications for it to comprise a liveable wage. Because of this, it is not certain which of the companies interviewed in this research actually makes sure its

workers get paid a living wage. However, after some inspection online, I found that MudJeans strives towards providing workers with a living wage: “We want to work towards a situation in which we can guarantee our workers at least a living wage in the factories that we work with” (MudJeans.eu, 2016).

Chapter 3 – Environmental sustainability within Dutch sustainable clothing

All interviewed brands have made efforts to produce their clothing more environmentally sustainable. Most efforts take place in the material and manufacturing phase of a clothing products’ lifecycle. In the table below a representation of what they do in those two phases has been given.

<i>Brand</i>	<i>Environmental sustainability characteristics</i>	
	Fabric	Manufacturing
Unrobe	Organic cotton (GOTS)	GOTS standards on water and chemicals
Merunisha Moonlight	Recycled (traditional Indian)	
Pine3	Bamboo lyocell (OEKO-Tex) and organic cotton (GOTS)	
Zazu Amsterdam	Organic alpaca wool, non-toxic dyes, sundried	Hand-made (less energy)
Afriek		use of leftover fabric for accessories
Noeser	Organic cotton (GOTS)	GOTS standards on water and chemicals
Mud Jeans	Recycled (jeans)	Suppliers use renewable energy, recycle water, and use no chemicals for dyeing
Saint Basics	Tencel (eucalyptus)	
Brightloops	Recycled (wool yarn)	Efficient design (less waste), no water usage
Pangaea Clothing	Eucalyptus lyocell, hemp and recycled polyester	

Miss Green	Tencell, organic cotton and wool (GOTS)	GOTS standards on water and chemicals
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Table 6 – Brands and their environmental efforts

Organic, certified cotton

In order to ensure environmental sustainability, many companies make use of certified materials or factories. Except for Afriek, all used cotton is organic. This holds that in the process of growing the cotton crop to production of the fabric, to dyeing it and manufacturing, no chemicals like pesticides and chemical dyes are used. Most of the organic cotton used by these companies, is GOTS certified. With regards to environmental standards this certification signifies the use of organic cotton, little use of chemicals and toxic substances, the use of a closed water-loop in every part of the production process, and that factories report on chemical, energy, water consumption and waste water. Therefore, if these products are organic cotton with a GOTS certification it not only means that the fabric is organic, but that many other environmental factors should theoretically be taken care of too. Although those who do not make use of certifications do so because they are sceptical, GOTS seems to be respected certificate.

“GOTS is a good one. It’s also quite difficult to get, you know.” (Brightloops)

However, despite its advantages, companies are aware that organic cotton is not necessarily the most sustainable fabric out there.

“We know cotton still is not the most sustainable fabric and in the future we definitely want to seek other options, but for now we’re happy, organic cotton uses up to 91% less water than regular cotton.” (Unrobe)

Other fibres: eucalyptus, bamboo and hemp

Although organic cotton is a lot more environment-friendly than regular cotton, companies can get a lot more innovative fabric-wise. More and more, sustainable clothing companies are going beyond cotton in search for sustainable fabrics, and in this research 4 out of 11 interviewees utilize innovative, non-cotton fabrics. Lyocell, a natural type of viscose, can be made of bamboo, eucalyptus and hemp. All of these are more environment-friendly due to the plants using less water and the process of creating yarn from bamboo or eucalyptus fibres uses little to no toxics. Next to that, lyocell fabric is very smooth, but also very strong. Its characteristics make it perfect for clothing.

“Our underwear is supersoft and non-toxic. You’d think that’s normal right? Well, it’s not”
(Saint Basics)

Notwithstanding the advantages of lyocell as opposed to cotton, the interviewee from Pangaea clothing rightly points out that lyocell is regularly finished through using chemicals, in order to make them easier to spin or dye. As a result, some lyocell clothing is not necessarily more sustainable than other fabrics, while it is always marketed as sustainable. Pangaea clothing purposely does not use such processes, and has even chosen to use bamboo-lyocell, hemp and recycled polyester in its fabric, a combination which has to their knowledge not ever been used before.

“We wanted to use bamboo because of its fantastic characteristics: it grows superfast and needs only a minimum amount of water. However, there we were with this super sustainable fabric, but it was way too soft. We needed something in there to make it stronger. We started experimenting with combinations and in the end asked our supplier to send us all test pieces they had. And there it was: the perfect combination of soft bamboo lyocell, sturdy hemp and stretchy polyester.” (Pangaea Clothing)

A reoccurring theme when discussing alternative, sustainable fabrics is the need to find good suppliers and the right combination of yarn. It takes time to establish a well-functioning production process, simply because alterations need to be made.

“The first sample of socks we received was down-right ugly. The most terrible pair of socks I had ever seen. But now I think they’re great. It takes time.” (Pine3 Clothing)

Recycled fabrics

Even more sustainable than attracting new material to make new clothing, is using old material to make new clothing. In this study, 3 out of 11 companies do or did so, namely Merunisha Moonlight, Mud Jeans and Brightloops. Pangaea clothing also uses recycled Polyester, but since they themselves are not in charge of its production process (yet) I will not go into that. Mud Jeans is known for what they call ‘Circular Jeans’. Hundred per cent of the cotton used for their jeans stems from recycled jeans. Similarly, Brightloops’ knitted pieces are made of old wool sweaters and vests. These jeans and knitted clothes would normally end up in landfills or be burnt, but Brightloops and Mud Jeans have found a way to make new material out of waste.

“Sustainability to us means being truly circular and zero waste. There is no waste, not in our own production, but also a lot less in the community. Because we make things from waste.”
(Brightloops)

Here again, it is stressed that what is most difficult about using recycled yarns is to find producers which are capable of working with these, and also willing to make alterations to processes. Recycled fabric simply needs different care than new fabric.

Natural and non-toxic dying

An additional benefit of using recycled yarns in the case of Brightloops, is that they can do without using dyes.

“We simply sort textile waste according to colour before shredding and fibrillating. That way we do not need to use toxic dyes.” (Brightloops)

Moreover, it is possible to use non-toxic or natural dyes.

“I feel like natural dyes lose colour quickly. But the dyes I use are non-toxic. And the factory where my alpaca wool is made into yarn has a very good wastewater recycling system. Where normally waste water directly ends up in the sewerage, the water from this factory does not.” (Zazu Amsterdam)

Transport

A large contributing factor to the greenhouse gas emissions resulting from clothing production, is of course transport between crops, factories, stores and consumers.

Interestingly, none of the interviewed companies make use of electric cars or other clean modes of transportation. Unrobe, however, mentioned it to be on their wish list.

“Right now, it’s not possible to transport our shirts with an electric truck, simply because the distance is too long. But who knows? Maybe it will become possible within 2 years.” (Unrobe)

MissGreen and Brightloops do explicitly state that staying as local as possible was a strategic choice to avoid GHG-emission.

“Sustainability to us also means producing as locally as possible, so that little transport is needed. We produce everything within Europe, it’s impossible to be more local.” (MissGreen)

Sustainability in the consumer and after-use phase

A large part of environmental impacts from clothing are made in the consumer phase, after

the piece of clothing is bought. Clothing brands and retailers undertake downstream stewardship by implementing extended responsibility even after selling away the product. Ways to promote sustainable consumer use the interviewees use, are for example by promoting sustainable washing and drying through communication channels like social media, but also in tags.

Furthermore, some companies try to inspire consumers to buy less clothing. This is for example done by offering extensive services for fixing. But also, like mentioned before, by creating timeless or basic clothing.

Once the consumer is done with a piece of clothing, it is discarded in special clothing containers or in the trash. However MudJeans, tackles this issue with their Lease-a-Jeans service. This allows consumers to attain a new pair of jeans after a year, sending the old ones back for recycling.

“After all, why own a pair of jeans for life when you are just interested in the performance of those jeans?” (Mud Jeans)

Chapter 4 – Sustainable business models and approaches to sustainability

All companies under analysis in this study have a rather straightforward way of making money: they drive the production of products, which then are sold mostly online, but also in stores. A share of this price is their revenue. But because they have decided to limit their impact on the world, or rather make positive impact, their business models all include archetypes from Bocken's Sustainable Business Model Framework. Unexpectedly, all archetypes are found in these companies' business models. Below, one will find tables in which each company's inclusion of Technological, Organisational and Social archetypes is given.

<i>Brand</i>	<i>Technological</i>			
	Orientation	Maximize Material and Energy Efficiency	Create value from waste	Substitute with renewables and natural processes
<i>Unrobe</i>	Soc + Env			Organic Cotton
<i>Merunisha</i>	Env + Soc		Using recycled fabric from India	
<i>Moon</i>				
<i>Pine3</i>	Env + Soc			Bamboo
<i>Zazu</i>	Soc + Env			Organic wool, sun-dried dieing
<i>Amsterdam</i>				
<i>Afrik</i>	Social	Fabric left-overs are used to make new things		
<i>Noeser</i>	Env + Soc			Organic Cotton
<i>Saint Basics</i>	Env + Soc			Tencell
<i>MUD Jeans</i>	Env + Soc	Suppliers use renewable energy	Using recycled cotton	Renewable energy in factories
<i>Brightloops</i>	Env + Soc	Smart Design	Using recycled wool	
<i>Pangaea</i>	Environmental		Using recycled polyester	Using bamboo lyocell
<i>Miss Green</i>	Env + Soc			Organic cotton & tencell

Table 7 – Brands and the Sustainable Business Model Framework pt. 1

I have also included a column on each brand's sustainability orientation. These result from their sustainability efforts, but also from their missions and vision, which were discussed in the interviews. Whenever these companies made efforts to improve both sides of sustainability but are significantly more directed toward one, I have made this visible by making the facet receiving the most focus **bold**. As can be seen, most of these companies have both an environmental as well as a social orientation. Only 2 companies, Afrik and Pangaea make an exception. That is not to say that they do not care about both, it only means that they have not made efforts to improve both sides of sustainability looked into during this

research. Because is something has become clear during these interviews, it is that to the sustainable entrepreneurs in this study, sustainability is a broad concept. Also, it is a concept which is evolving and which generates long-term goals, which perhaps are not and cannot be reached currently, but will be in the future. The underlying reason for this is the fact that all the interviewees make sense of sustainability through moral factors. Instead of thinking of it as something that pays off, they perceive their practices mostly as the right thing to do. This leads to them adopting a mix of practices, thereby reducing the negative impact of their clothes. The only case in which sustainability was made sense of through business factors, is that of Unrobe, who spotted a gap in the market. However, their sense making is coupled with moral factors and alike the other companies show that they want to further improve sustainable practices in the future. Nevertheless, there seems to be little relationship between differences in business models and sustainability orientation, but other factors which may be interesting are discussed hereafter.

<i>Brand</i>	<i>Social</i>			<i>Organizational</i>	
	Deliver functionality rather than ownership	Adopt a stewardship role	Encourage sufficiency	Repurpose for society/environment	Develop scale-up solutions
<i>Unrobe</i>		Being transparent	Focus on quality		Fashionable design
<i>Merunisha Moon Pine3</i>			Focus on quality		Good design for low prices
<i>Zazu Amsterdam Afriek</i>		Communicating less is more	Focus on quality	Creating jobs for marginalized women	
<i>Noeser Saint Basics MUD Jeans Brightloops</i>	<i>Free fixes</i> <i>Lease-a-jeans</i>				
		Bringing local production back	Focus on timeless design	Creating jobs for marginalized people	
<i>Pangaea Miss Green</i>					

Table 8 – Brands and the Sustainable Business Model Framework pt. 2

Sustainability as all-encompassing

What seems to be, is that companies more often start with one outlook: social or environmental. For example, they want to work with very sustainable fabric because they heard about the effect of cotton-production on climate change. However, these practices in

some way link to a mind-set of not wanting to harm the world around, including people, but also planet. Moral reasoning reaches further than only planet, or people. Therefore, despite the initial outlook, companies tend to move further in sustainability and keep improving.

Nonetheless, looking at the tables and the previous chapters, slightly more effort seems to have been done on the environmental front. The Technological archetypes in practice relate mostly to environmental sustainability, and this part of the table is full. A lot of these companies were established from a “green” mind-set, and as such are prone to be slightly more involved with the environment. Yet, no relationship was found between these companies orientation and their relation to the different groupings of archetypes. As one can see, the table is filled in a scattered manner. To a certain extent the fact that these companies almost all include both social and environmental sustainability in their business model, makes analysis by means of business model less valuable. When comparing the two companies with an opposite orientation: Afriek and Pangaea, we can see that Pangaea’s business model includes two of the Technical archetypes. Afriek on the other hand includes two of the Social archetypes. One could thus argue that Afriek because of its orientation on social sustainability also seeks sustainability through social processes, whereas Pangaea with its focus on environmental sustainability rather seeks it through technological processes.

Difference in background

It was hypothesised that differences in personal motivations could lead to different sustainable business models. Naturally, personal motivations are for a large part created through what people have done in the past and as such people’s academic and work-related backgrounds influence this. However, there is hardly any relation to be found between interviewees’ backgrounds and the way that they employ sustainability in their business model. To exemplify, the two companies which strive towards circularity, Brightloops and Mud Jeans were started by two people with completely different backgrounds: in the fast fashion sector and in the sustainability sector. Similarly, for those two companies with the archetype Repurpose for society/environment, Zazu Amsterdam and Brightloops. However, all those people with a background in the clothing sector decided not to produce in developing countries. They have seen what factories in for example Bangladesh and China are like, and because of that choose not to go there.

Proactive versus passive/compliant

Although sustainability efforts among these sustainable clothing companies are directed at

both social and environmental sustainability, differences do exist in the amount of effort that is put into these. No value judgment is related to this observation, because both proactive as well as passive strategies can lead to sustainable business models. But some remarks are to be made when considering this issue. Firstly, although all these companies to some extent employ environmentally sustainable practices, to be found above in the first table, there is by no means attention for the entire broad scale of changes that could be made to harmful practices. For example, doing research into and choosing a more sustainable fabric is an often conducted practice. But environmental sustainability also requires companies to reduce water-usage, waste and energy. These are themes only few of the interviewees could tell me more about.

Second, a way for sustainable clothing companies to confront such issues, is by relying on already existing structures. Existing structures that came up during the interviews are: certifications, guidelines by NGO's, and rules and regulations in European countries. Making use of such existing structures to ensure sustainability in my eyes is the passive way, with only few companies taking a more pro-active approach. Examples are Pangaea Clothing who rather than ordering T-shirts made of bamboo to decorate and sell, went and created a new fabric which had never been used for clothing before. Their reason being to make a product as environmentally-friendly as possible. The same counts for labour conditions. Europe provides structures in the form of labour regulations that ensure better labour conditions than other countries, and thus for a company which wants to make sure its labour conditions are good, choosing for Europe is easy. Yet the more pro-active way is to create new, fair employment for people in countries where the standards are lower.

Therefore, I believe the largest differences between companies are the way that they approach social and environmental sustainability differently effort-wise. Companies may combine social and environmental sustainability, but choose to rely on existing structures for the one, and go about it more creatively and pro-actively for the other.

Chapter 5 – The role of the global south in sustainable apparel production

As previously established, much of fast-fashion's polluting and exploitative industry takes place in developing countries, mainly in Asia. Production of fast-fashion's sustainable counterpart, however, does to a large extent not. In this chapter I will go into why so many Dutch sustainable clothing entrepreneurs decided to produce in Europe and how this has an impact on the global south. Additionally, I will go into the way that Western ideals on sustainability in clothing are looked upon in non-Western developing countries.

Sustainable companies produce in Europe

Out of the 11 companies interviewed in this research, only 4 do or did not produce in Europe. Additionally, only 3 produce in Asia. Even though, Asia has since the global shift in the 90's been the epicentre of textile and clothing production (Dicken, 2010). A fair amount of the interviewees in this study however see producing in Asia as the source of evil in the clothing industry.

"I don't think we would ever produce in Asia. The system there is designed in a way that just doesn't work. Bangladesh, that's where everything started. The whole Rana Plaza fast fashion industry misery, is reflected in the piles of waste we have here." (Brightloops)

Not everyone is so outspokenly negative about production in Asia, but Bangladesh seems to be a definite no-go area.

"I'm not necessarily against manufacturing in Asia, there are some really good factories there which I have seen myself. But Bangladesh... No. They have thousands of factories there, and once you go by to visit they only show you the really good ones. It's corrupt." (Unrobe)

Additionally, the people whose companies' produces in Europe, are predominantly positive about this fact. Rules and legislations enforcing sustainable behaviour of companies are experienced as facilitative for sustainability goals, and are therefore reasons not to desire cheaper labour in developing countries.

"I wanted production to be fair and under good circumstances, it was very important to me that everyone was paid a normal wage. But that's just very difficult to find in the far east. That for me was the reason to do it in Europe, in countries like Poland or Bulgaria those things are just much easier to explain." (Merunisha Moonilal)

The result is that, rather than sustainable fashion entrepreneurs making an impact in the non-sustainable fashion industry, and thereby perhaps facilitating sustainable development, sustainable clothing production exists more or less in an enclosed atmosphere where conditions and structure are facilitative of sustainability.

On the other hand, one could argue that the effect of sustainable clothing production that does take place in developing countries, does not have a large impact either. At least Merunisha Moonilal thinks this is the case when it comes to fashion that is produced in a socially sustainable manner, where employees are paid a living wage.

“It’s a bubble of course. As a company you can’t think of the entire country, no. Sustainable companies become like some sort of family business. These entrepreneurs think about the environment surrounding them, and the people they work with, but it just does not have any real force and does not change any legislation. At the end of the day, they’re still Western companies working in a poor country.” (Merunisha Moonilal)

“I don’t even think other clothing producers in Ecuador are aware of what I do and how sustainably Zazu clothing is produced. They’re just not very occupied with sustainability. So I think Zazu’s impact on the fashion industry in the country is limited.” (Zazu Amsterdam)

Although all of the interviewees are very motivated to affect change, they can come across as sceptical towards the actual change their companies can make in the industry. What they are more positive of, is that they can be an example for others, that the possibility of establishing a fair and sustainable clothing company is within reach. How that has an impact on the already existing fast-fashion industry with its many ethical implications, is of lesser concern to them.

This notion is interesting from a development perspective. If the result of introducing sustainability to the clothing industry is that production is moved from developing countries back to more developed ones, that means a vital part of such country’s development will be lost. A country like Bangladesh needs the clothing industry for development, since around 80 per cent of its exports are now ready-made garments (Financial Times, 2017). And at the moment, this research shows that it is ignored by responsible entrepreneurs as a production location. Although so many of the interviewees want really to change the clothing industry, by choosing to stay in Europe they are not doing so. The above quote by Zazu signifies a scepticism towards Southern people’s awareness of and occupation with sustainability. The next section will go deeper into this.

Sustainability: a Northern ideal?

Despite most production taking place in, or really close to, Europe, clothing production almost always happens in Europe's periphery; for example Portugal, Turkey, and Tunisia. Typically since the global shift, the global south is where most production takes place. It is also the part of the world where countries are poorest and disadvantaged by power-relations, and furthermore, the part of the world where the effects of climate change are most felt. As such, it is interesting to look at how social and environmental sustainability is looked upon in Southern countries, and to what extent it is a topic which receives attention, like it does here in the Netherlands. It must be noted however, that the data on this topic all comes from conversations with people who are not from, or living in, the Global South. It therefore only provides an idea of how social and environmental sustainability is possibly looked upon in the developing world.

Those interviewees whose companies produce(d) in Ecuador, Rwanda and India are pessimistic on to what extent countries are concerned with sustainability.

"It's a shame, sustainability is not very popular in Ecuador. I also don't think the women working in our atelier are very concerned with it. But who can blame them, what they're concerned of is the pay check which helps them through the month." (Zazu Amsterdam)

This line of reasoning is agreed on by both interviewees from Afriek and Merunisha Moonilal, who add that they often feel sustainability is again something imposed by the North on the South. During the global production shift, European and North-American clothing industry moved to developing countries because it allowed for cheap production. Labour costs are the most significant production factor in the clothing industries, and differences in costs between countries differ greatly (Dickens, 2010). The growth in demand for cheap clothing and quick production times have formed the unsustainable production processes in developing countries. The clothing industry is very much buyer-driver, and thus factory owners fulfilled buyers' wishes, they had to produce quickly so to be able to respond to consumer demand. Even if that led to unsafe and unfair working conditions and polluting practices. But now that sustainability is on the rise and consumer awareness leads to public concern and scrutiny, the tables have turned. Suppliers of Northern companies are pressured to ban child-labour, eliminate sweatshop conditions, and pay workers a higher wage, while at the same time they are still expected to produce for very low prices. The question arises whether it is fair to ask suppliers in the Global South to change conditions, the minute the North changes its morals, when it was Northern demand creating these issues in the first place?

“The only reason a Rwandan company would start making organic cotton instead of regular cotton, is if we would ask them to do so. Once you’re an established producer you’re not going to bowl over your business model completely for a better world. You’re just not.” (Afriek)

However, little was said about what Southern partners do want with regards to sustainability. From the interviews it seems that only the Dutch entrepreneurs themselves were concerned with producing sustainably, and that suppliers should be carefully picked because most of them do not care about the effects of clothing production on people and planet. However, judging from the ways that production impacts these people’s lives and environment, it is hard to believe that people in the developing world are not willing to make changes. But one needs to keep in mind that other factors play a role in this too.

Because, despite the negative effects of the clothing production on people and planet, the clothing industry does provide a lot of people worldwide with a salary. It has stimulated and is stimulating development in countries where industries are growing fast. Factory employment is often preferred over un-employment or life in a rural environment, and the wages are crucial to the family’s income. Jobs in clothing factories provide an otherwise unattainable income due to the long working hours, which in turn make for some individual freedom. Respected organizations like for example the Fair Wear foundation, disseminate labour standards which affiliated clothing brands should adhere to: like a maximum of 48 working-hours per week for workers in the fashion industry. Northern ideas about working hours however sometimes do not stroke with perceptions by workers and factory-owners themselves.

“When I tried to tell my workers that they could work no more than 48 hours – I was almost laughed at. It’s just totally different over there. Working in the atelier is sort of like a social happening, friends come by, and so the productivity per hour is way lower than here. If we were to draw the line at 48 hours because we read it in some NGO’s policy guidelines, our workers would just get a lot less done.” (Afriek)

Afriek produces in Rwanda, which raised the question whether NGO’s are perhaps too much focused on the Asian clothing industry, and different standards should be created fitting to regional cultures. But Merunisha Moonilal proved that argument wrong. Whereas in Rwanda it is cultural preferences that lead to longer working hours, in Bangladesh long working hours are solving financial instability.

“We think it’s nice to work 48 hours a week, so we think people in the Asian clothing industry should too. With over-hours, they shouldn’t work more than 60 hours, we say. But the problem is, these people have to feed their children. And to make a lot of money, they need to make many hours. So it doesn’t work that way. It’s not like here, where we have many things to do after work: working out, meeting your boyfriend. No, in Bangladesh people live in a dormitory, days travelling from their family. All to make money to send back home. So they want to work many hours. They are not there for fun.” (Merunisha Moonilal)

The above quotes furthermore add to the reasoning that sustainability is a dominantly Northern idea. During several interviews, it was called elitist and the basis for modern paternalism. Especially Merunisha Moonilal, who currently works as a sustainability consultant for large fashion firms was able to clearly point out her ethical concerns.

“Thirty years ago we in the North wanted everything to be produced within a whim, and for the cheapest price. Now we want sustainability, and the manufacturer has to follow. We cannot expect that from them. Sustainability is elitist, and I have thought that for a long time.” (Merunisha Moonilal)

Chapter 6 – Challenges and opportunities in reaching for broad sustainability

Contrasting to my beliefs upon starting this research, I found that many sustainable entrepreneurs in the clothing industry are trying to combine social and environmental goals. This is largely due to their personal views on sustainability, which refrain them from taking a more narrow approach. Also, I found that challenges and opportunities in this sector do not ascend per se in the aim to combine social and environmental sustainability. More so, difficulties arise because of other reasons which this section will elaborate on. Because some opportunities are at the same challenges and reversed, I will discuss them by theme.

Experience

Successful sustainable entrepreneurship in the clothing industry is facilitated by knowledge of and experience with the clothing sector, as well as with sustainability. Those interviewees with a background in the clothing sector experienced less struggle in finding suppliers or setting up a successful business. Similarly, those with a background in sustainability are more aware of the myriad of sustainability issues producing clothing relates to.

Conversely, a lack of experience with or knowledge in either one can prove to be difficult for business. Or can result into sheer sustainability; when production seems sustainable, but due to a lack of knowledge is only sustainable on the surface.

“Producing authentically sustainable is just not easy. And when it’s easy, that probably means you’re not doing it right.” (Brightloops)

“When some of these sustainable firms say they are green, they maybe use vegetable or non-toxic dyes, or refrain from using stonewashing, but being sustainable goes so much deeper than that. You really need a lot of scientific knowledge to be able to do it right. There’s so many things to look after. And that’s a very difficult thing for those who are not experienced, and you can’t blame them.” (Merunisha Moonilal)

Civil society and NGO’s

Tons of non-governmental organizations and institutions are occupied with changing the clothing industry. Consequently, a ton of guidelines and attainable certificates exist. While the interviewees agreed that these initiatives are working for a good cause and are making it easier for consumers to separate right from wrong, the extent to which they are in creating sustainable clothing businesses, is questionable. For example, because guidelines are not

always fit to different regions and cultures. As came forward in chapter 5, the Fair Wear Foundation's guidelines are not attractive to workers, they want or need to work more hours than FWF prescribes. Furthermore, acquiring certificates is a long and costly process.

“Getting and upholding sustainability certificates could be enough work for another person on top of my employees now. It’s so much work, and so expensive.” (Brightloops)

Certificates are a way to signify potential customers that your company produces under ethical circumstances. Yet, for many starting companies, the price of attaining such certificates is too high. Consequentially, they do not acquire those, meaning they are less easy to find for ethically aware consumers. Whereas other, less sustainable brands with more capital, are able to acquire the certificates. It could essentially be an easy route to greenwashing.

On the other hand, they also provide an easier route to actual sustainability. If certificates do what they say they do; namely safeguarding the sustainability of certain companies and products/resources, that means producing sustainably has gotten a whole lot easier because of them. Interviews with these sustainable clothing companies really brought forward that most of them to an extent rely on certificates to trust that either fabric, or factories are responsible ones. If it was not for these certifying organizations, sustainable companies would perhaps have a lot more work.

Technological advances in fabric

Granted, technological advances with regards to new fabrics but also recycling are found to be great advantages in the environmental sense. The process of creating fabric out of bamboo, eucalyptus and recycled cotton emits a lot less greenhouse gases and requires much less water and land-use. Therefore, making use of these fabrics offers great opportunities for entrepreneurs wanting to making an environmentally friendly product.

However, once the decision is made to go for one of these innovative fabrics, a suitable factory needs to be found.

“It’s difficult enough to find a factory who can make exactly what you want, the way you want it, these days. For example when we ordered our first batch of bamboo socks, the factory claimed it was really no big deal, but judging from their quality and our communications, it definitely was. Even though they are a huge factory which produces like a million socks a month.” (Pine3 Clothing)

And Pine3 is not the only who has experienced this. All of the companies using innovative fabrics have highlighted the challenges related to finding good suppliers, or creating the best production process with existing suppliers.

Transparency

The most impeding factor to creating sustainable business models in the (existing) clothing industry, is it being extremely opaque.

“Transparency is the main difficulty. You can’t keep track of everything, or spy on your suppliers with cameras or something.” (Zazu, Amsterdam)

Probably, that is also the reason why sustainable clothing companies resort either to producing in Europe, or creating a separate value chain. While on the one hand transparency it is a very difficult characteristic to acquire, it is also something which many of these companies realize is helpful in attracting customers. For that reason, they oftentimes try to give potential customers insights into the way that their products are produced. Many of these brands have videos and interviews on their websites, showing the world what their suppliers are like. *“It’s one of the most important things for us, transparency. We have nothing to hide and there should be no questions about what we are doing and how.” (Mud Jeans)*

Unrobe went so far as to make transparency their key strategy. As they argue, by being honest about their production, price build-up, but also about things that could be improved, companies come across as honest and are therefore liked more.

Being a pioneer: the perks and losses

All of these companies could be considered small in size, and most of them are also young. They are bound to have less resources; both in the capital as well as relational sense, to instigate sustainability in value chains. That results into some challenges for these Emerging Davids. Firstly, the cost of sustainability are still quite high. So, it is challenging for starting sustainable entrepreneurs to do everything right, because it simply is too costly. That again can lead to less connection to valuable networks.

“The standards are so high sometimes. If I would want my products to be sold at Charly +

Mary³, literally everything would have to be sustainable. From the yarn to the zippers. Well, I just can't do that, not financially anyway. Sometimes I feel like they are overdoing it. It's not like consumers care about the zipper. What consumers care about is the possibility to buy products better than what they find at H&M.” (Zazu Amsterdam)

Furthermore, even if organisationally or technically it would be possible to make sustainable alterations, oftentimes these companies' order volumes are not large enough to find producers willing to do so. Many suppliers have a volume threshold, and making large orders is risky or just not possible. As a result, they are often dependent on suppliers who are willing to provide them with small orders. That makes the options limited, which can be problematic.

“We would really like to have organic cotton, but the threshold to buy fabric is normally around 1200m². Right now we have a supplier who is willing to give us smaller quantities, but if we we're to find an organic suppliers, that's no longer possible.” (Afriek)

Contrastingly, Merunisha righteously pointed out that like buyers, suppliers come in all sizes. Often, small brands can find small suppliers that are willing to adhere to their wishes.

Size market for sustainable clothing

Not only have these companies been established not too long ago, because of which they are often small in size. Also, correspondent to the literature I found that the market for sustainable clothing is not very large (Hockert & Wüstenhagen, 2008). For a large part, that is the result of sustainable clothing largely being more expensive than fast fashion, but also because of the image sustainable clothing has. Opportunities to counter this challenge, are found to be the growing attention for sustainable clothing on the one hand, but also creating products which are less typically 'sustainable'.

“We purposely challenge the idea of sustainable clothing being dull. During an interview we had recently it was so clear that people have difficulty letting go of that image. Don't think it can be cool. We want to show them it can be sexy.” (Unrobe)

³ Charly + Mary is a fashion retailer with sustainable products only

Futhermore, sustainable brands target a different, more selected than fast-fashion brands.

“When you make a sustainable products, it’s ought to cost more. In the end you have to charge the consumer for it. So yes, we do target a more wealthy public.” (Brightloops)

Conclusions

The question this thesis revolved around has been:

To what extent are social and ecological sustainability compatible in the production of clothing by Dutch sustainable clothing companies?

To answer this research question, I have looked into the Dutch sustainable clothing companies that are existent, and interviewed 13 representatives of 11 of these companies. I took their business models and value chains as a starting point for exploring their sustainable practices, both social and environmental. That has resulted into data which has helped in answering the 5 sub questions throughout the previous result chapters. I will give a short summary of these chapters followed by an answer to the main research question.

The companies in this sample are all Emerging David's, sustainable entrepreneurs who have ventured into the clothing market not too long ago. Their mission is to affect change in the clothing industry or the world at large, and they do so by making a variety of clothing products in a more ethical manner than their fast-fashion counterparts. These companies are started by a small group of people and still employ a limited amount of people, since all the work until the manufacturing or marketing/retail phase is done by suppliers. Consequently, there are other companies involved that need to get working on the lead-firms' social and environmental sustainability goals for these to succeed.

Chapter 2 and chapter 3 gave insight into the actual efforts done by these clothing companies to reach social and environmental sustainability subsequently. It was found that most companies aim to combine social and environmental efforts. Although subcontracting leads to lack of transparency on sustainability practices, only some companies react to this by integrating their value chain by operating a private production location. It is those companies that have the largest say of labour conditions for the workers making their products. The most often used method to limit environmental impacts is by choosing for greener textile. Most of the other environmental impact generators, relevant to the clothing sector, like water-use, waste and energy, are either not focussed on or tackled through the use of certified factories or fabrics. When analysing these companies through the Sustainable Business Model Framework, little relationship was found between differences in business model archetypes and sustainability orientation. Rather, sustainability was found to be an inclusive concept to the interviewees in this study. The largest differences between these companies lie in whether they go about social and environmental sustainability in a pro-active or passive/compliant

manner.

Furthermore, although the fast-fashion industry for a large part takes place in the Global South and specifically the Asian region, sustainable clothing production mainly does not. Most sustainable clothing firms in this research produce in the periphery of Europe, either because of it being closer and thus less environmental impact is generated through transport and travel, or because of the idea that Europe automatically leads to greater sustainability because of its legal environment and a great focus on sustainability. Despite the development that the clothing industry brings to countries like Bangladesh, the responsible entrepreneurs in this study largely ignore it as a possible location. They are bound to Europe (and close surrounding) and as such have little or no positive impact on the polluting and exploitative industry in the developing world. Moreover, sustainability is brought forward as a Northern ideal, which people in developing countries are not welcoming yet. Standards and certificates created by non-governmental organizations were found to not always be applicable to certain cultural contexts, nor are they found to be found to be exclusively facilitative of sustainable clothing entrepreneurs. Furthermore, chapter 6 discusses the challenges and opportunities with regards to combining social and environmental sustainability. Interestingly, most of the mentioned challenges exist on the business side of these companies, whereas if you flipped the coin and looked at the sustainability side, those challenges prove to be opportunities.

All in all, it is found that many sustainable entrepreneurs in the Dutch clothing sector are indeed trying to combine social and environmental sustainability in the production of their products. It is also found that they are succeeding to so to some extent, but that the extent to which both ideals are reached, is influenced by a lot of factors. The combination of environmental and social sustainability seems to come forward out of a mind-set which strives towards as little negative impact as possible on the world at large: including people and planet. Interestingly, many of the participants of this study appear to see social and ecological sustainability as intrinsically coupled. As if by choosing for the one, automatically you also need to choose for the other. However, these thoughts are not grounded. They are indeed compatible, but carrying out true sustainability both environmentally and socially may prove to be difficult in reality. That is highlighted through the observation that social sustainability efforts sometimes seemed less deep and diversified than the efforts performed to achieve environmental sustainability. This may be due to a few reasons.

Firstly, improvement on the environmental sustainability front offers more possibilities. The environment is possibly impact in all phases of a clothing piece's lifecycle,

whereas people are not. As such, there are many more ways to improve environmental sustainability. Whether this argument applies to the current research is questionable, since most of the “Greening” has taken place in the materials and fabric phase. Yet although not every box is ticked on this front, companies seem to be more aware of the things that can still be done to improve environmental sustainability. Whereas on the social front, some indicators of the Decent Work Framework were never even mentioned; such as social dialogue between workers and employers, or social security and equal opportunity. Second, environmental performances may be more measurable. Social performances are bound by cultural differences, as can be seen from chapter 5, as well as personal experiences. An example of this is living wage, most of these companies claim their workers are getting a fair wage, but how does one actually measure this? Environmental impact measurement is based on exact science, and as such perhaps more tangible.

On the other hand, there are many initiatives and guidelines which could guide entrepreneurs in the clothing industry into building a socially sustainable business. But these are only minimally used. Frameworks like that of the International Labour Organization are hardly of use, and are by some criticized because of their inapplicability to situations that these sustainable entrepreneurs have created. These guidelines, as well as certificates like GOTS, SA8000 and OEKO-Tex are found to be restricting and expensive to follow. That, despite its Decent Work Framework being fairly broadly interpretable. Rather, these companies rely on their own gut feeling for social sustainability, of which production in Europe is a large part. Not applying for certificates or following the guidelines of well-known organizations need not be an obstacle for sustainability, but in reality not every person starting a sustainable clothing company has all the expertise. Correspondent with Hockert’s (2008) view on sustainable entrepreneurs, some of these entrepreneurs could experience a pitfall in believing too much in their own value for society, that they believe keeping track of sustainability performances or improving other issues is not necessary. Therefore, for every entrepreneur to follow its gut feeling and innovating its supply chain where they think it is needed rather than taking an integrated approach, leads to a fragmented landscape, which in turn could prove not so useful to the systematic and general introduction of improvements to an otherwise exploitative and polluting industry.

Discussion

In this section I will first go into the limitations of this study, after which I will discuss some my findings in a theoretical context. Lastly, I will give some recommendations for policy.

Limitations

This study revolves was built around sustainability in the clothing sector. Sustainability already is a very broad concept, especially as I choose to include social and environmental sustainability. Likewise, the clothing sector is broad. Even though this research was limited to Dutch sustainable companies with characteristics of Emerging Davids, it meant a lot of different types of companies with different resources and products, all resulting in different sustainability efforts that could be undertaken. Consequently, I could not go into all the different ways in which sustainability could be improved. So, in the end this study was more about the challenges these companies experience, but also about how their practices relate to the rest of the clothing industry.

Also, at the start of this study I had not expected so many of these companies to produce within Europe. This is a limitation in the sense that it gives little insight into how sustainable entrepreneurs make an impact or not in developing countries. The latter of course is essential to a thesis written for my Master's in Development Studies. However, the very fact that these companies chose not to produce in the Global South is interesting and paradoxal too: why would they choose not to produce in the Global South if impact is what they are after?

Furthermore, the interviews themselves are a point of critique. Out of the 11 interviews, 4 were conducted by telephone. Although eventually enough interesting data was gathered, the face-to-face interviews generally took longer and generated deeper data. Opting for telephone interviews was done because of limited time by the interviewees. This also made that I was not able to interview more companies, as some simply did not have time or did not respond.

Also, the chapter on the role of the Global South in sustainable clothing production would have been more valid if I had been able to include voices from the Global South. The interviews brought forward that in developing countries there is little concern for sustainability, but I expect this view to have been contested would I have included interviews with suppliers in developing countries. Interviews with suppliers in any case would have been valuable to this research. Due to time-constrictions however, this was not possible.

Theoretical implications

Central to this research were both Sustainable Business Models, value chains and the concepts of Emerging Davids and sustainable entrepreneurs in general. This research corresponds with much of the literature, with the exception of a few contributions which are interesting to mention here. Firstly, the results of this study correspond to the literature on fashion value chains by Gereffi and Memedovic (2015); in this study too it is the lead-firms that are connected to those activities which generate the most profitable returns. However, contrasting to what is true for most fashion companies, sustainable clothing companies need more than capital only to get what they demand. This, because sustainability goes a step further than money and products, it looks into the way things are made and with what impacts. That said, one could argue that sustainable clothing companies hold less power over the companies down-stream in the value chain. They depend on those companies in order to build sustainable business models. This however does correspond with the case-studies referred to, in which it was found that developing alternatives to business-as-usual is costly and requires a high level of control (Vermeulen & Ras, 2008; Kogg, 2003).

Also, with this research I have added to a needed research on sustainable clothing. I believe this is necessary, since much of the research is consumer-focused. Especially the combination of environmental and social factors is something too often forgotten, even in the literature by Hockert and Wüstenhagen whose concept of Emerging David I have so often referred to (2009). Yet, the notion that sustainable entrepreneurs invest all their resources and attention in optimizing one particular environmental or social issue, is not affirmed the findings of this study. My results show that actually, most companies are trying to combine both environmental, social, and economic sustainability, in an aim to pursue the triple bottom line (Porter & Kramer, 2011).

Furthermore, in using the Bocken et. al. framework on sustainable business models I found it fails to include enough means to analyse social sustainability. Here again, it must be noted that the terms technological, social and organisation in the framework do not correspond in any way to social and technological sustainability, but to the way that sustainability is ensured; by social, technological or organisational. However, the archetypes do not correspond well with the efforts done to improve social sustainability. Therefore, I propose a new archetype in the organisational namely: Transparency in the value chain. I found that much of the social sustainability issues are easier ensured once transparency increases. By organising businesses in such a way that transparency is increased through regular communication, check-ups, controls and audits, or by integrating a supply chain, lead-

firms are keeping track of social, but also environmental sustainability. However, adding this archetype does not cover all of the ways that companies can build more socially sustainable business models. Therefore I propose for new research to be done in order to design an inclusive Sustainable Business Model Framework.

Recommendations

Firstly, it was found that sustainable clothing is often more expensive than non-sustainable clothing. This makes it a more exclusive good, which is not very desirable if you want to promote sustainable consumption for everyone. Cheap sustainable clothing would be much more accessible. Part of the reason why sustainable clothing is more expensive, is because of the certificates that sustainable factories, fabrics products need to uphold. Applying to and upholding such certificates is expensive, which is reflected into the price of the end-products. My recommendation is to lower the price of such certifications and audits. On the one hand, that will decrease the price of some sustainable products, which will make sustainable clothing a more accessible good. On the other hand, it will be an incentive for sustainable entrepreneurs who are now not able to use certified materials, factories, or certify their own products, to apply for certifications. This makes it easier to signify to customers in what sense products are more sustainable than others. Plus, it makes the sustainable clothing landscape less fragmented as it

Second, one reoccurring theme throughout the interviews was that most companies' volumes are not large enough to 1) acquire capital to make sustainable improvements and 2) to be able to ask suppliers to make sustainable changes. However, some of these companies share the exact same challenges. I therefore recommend for more connection to be sought between sustainable clothing companies. When companies work together, their combined volume could make for more impact and collective power to ask suppliers to make production process greener or improve labour standards.

Last, a large emphasis is now put on making policy that will transform large companies into being more sustainable. Such companies often do not operate sustainably at all, and sometimes they are rewarded for only minimal effort such as communicating the desire to become more sustainable. An example of this is the agreement on sustainability in the supply chain signed in 2016, referred to earlier in this thesis. However, it could prove to be effective when policies are designed that on the one hand reward sustainable entrepreneurs, and on the other hand promote collaboration between the incumbents and Emerging Davids.

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Appendixes

Appendix A. Dutch sustainable apparel companies

Company	Status
Kings of Indigo	No response
Circle of Trust	No response
MUD Jeans	Skype interview
Brightloops	Interview
Geitenwollenwinkel	No response
Kuyichi	No time
Studio Jux	No response
Miss Green Fashion	Interview
People's Avenue	No time
Re-5	No response
Zazu	Interview
Inti Knitwear	No response
Noeser	Skype interview
Better Clothing	No response
Pine3Clothing	Skype interview
Afriek	Interview
Pangeae Clothing	Interview
Merunisha	Interview
Nou Menon	No response
Hoodlamb	No response
Unrobe	Interview
Roeli van Vliet	Email interview
Moluccan islands	No time
Dweezilsfriend	No response

Appendix B. Topic list used in interviews with sustainable apparel companies

THEME	SUBJECT	CODE
BOCKEN	<i>Technological</i>	<i>Max mat & energ effici</i>
SUSTAINABLE BUSINESS		<i>Value fr waste</i>
MODELS	<i>Social</i>	<i>Renew. + nat proc</i>
		<i>Funct. Over Own.</i>
		<i>Stewardship</i>
		<i>Enc. Sufficiency</i>
	<i>Organisational</i>	<i>Repurpose</i>
		<i>Scale up solutions</i>
CERTIFICERINGEN & REGELS	<i>GOTS</i>	<i>Sufficient enough</i>
		<i>Not enough</i>
	<i>Opinions on certifications</i>	
	<i>Difficulties</i>	
	<i>Opinions on rules by NGOs</i>	
SUSTAINABILITY	<i>Visions</i>	
	<i>Background</i>	
	<i>Definitions</i>	
	<i>Quality</i>	
VISIONS	<i>Why start?</i>	
	<i>Background</i>	
	<i>Future of company/future of sustainable fashion</i>	
CHANGE THE INDUSTRY	<i>Make sustainability cool/mainstream</i>	
	<i>Change conditions</i>	
	<i>Changing it yourself</i>	
	<i>Challenge the incumbent</i>	
CHALLENGES	<i>It is difficult</i>	
	<i>Not so difficult</i>	
	<i>Size of company</i>	
		<i>Small orders</i>
		<i>Little impact</i>
		<i>Easy to adapt</i>
		<i>Not enough resources for sustainability</i>

	<i>Lack of experience/knowledge</i>	<i>In sustainability</i>
		<i>In the industry</i>
	<i>Producers</i>	
	<i>Culture & religion</i>	
	<i>North/South relations</i>	<i>Elitist</i>
	<i>Expensive to be sustainable</i>	
OPPORTUNITIES		
		<i>Experience</i>
		<i>Being a pioneer</i>
		<i>You dont need to be pioneer</i>
COLLABORATION WITH OTHER COMPANIES		
COMPETITION FROM OTHER COMPANIES		
PRODUCTION	<i>Environmental sustainability</i>	<i>Accomplished</i>
		<i>Unaccomplished</i>
	<i>Social sustainability</i>	<i>Accomplished</i>
		<i>Unaccomplished</i>
NOT SUSTAINABLE		
	<i>Greenwashing</i>	
	<i>Checking</i>	
COMMUNICATION WITH CUSTOMERS		
PRODUCTION LOCATION	<i>Where are you?</i>	
	<i>Producing in developing countries</i>	
	<i>Impact of sust. Prod. On developing countries</i>	
	<i>Challenges in Europe</i>	
SOCIAL VERSUS ENVIRONMENTAL		
CONSUMER UNAWARENESS		
FAST FASHION		