To what degree could Swiss Millennials' conflicting desire for fashion, brand meaningfulness and sustainability be solved by the fashion-on-demand business model

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by

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Declaration

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Executive Summary

This research in sustainability in the fashion and clothing industry first looks at the different aspects that shape business models and sustainable business models.

The literature shows the variety of horizons on the matter and how traditional models can be transformed in order to achieve sustainability. In regards to the fashion and clothing industry, three logics for sustainable business models were drawn: the narrowing logic, the slowing logic and the closing logic.

An overview of the textile, clothing and fashion industry both globally and in Switzerland was done in order to gain knowledge about the complexity of the industry.

A part of the literature review was designated to the different factors that shape the way consumers purchase and wear clothes. Three different categories of motives were identified: practical motive, emotional motives and social motives. These motives will be used in order to identify how Swiss Millennials purchase and consume clothing items.

The objective of the thesis was to gain insights in regards to Swiss millennials' purchasing and consumption patterns in order to be able to identify which motives have the greatest influence on their purchasing decision. The results of the research will then be used in order to draw conclusion about the potential of sustainable business models for the fashion and clothing industry.

The research was done by sending online surveys to Swiss Millennials aged between 22 and 36 year old from different regions of Switzerland. The survey focuses on three different aspect: Millennials purchasing habits in terms of frequency, types of stores and types of closing items, Millennials purchasing and consumption motives in terms of clothes, including practical, emotional and social motives and lastly, the survey concludes with questions related to Millennials perception about sustainability in the fashion and clothing industry.

Findings show a predominant place for practical motives, encouraged by conscious or logic thinking, both in Millennials purchasing and consumption decisions while they desire clothes to be comfortable, bringing them confidence and allowing them to express their identity and their values. Affordability, fashionability and quality appeared to be the most important attributes Millennials take into consideration while purchasing clothes.

The last part of the thesis draws conclusions in regards to Millennials' consumption and purchase patterns while discussing the potential of the different sustainable business models discussed in the literature review, especially the fashion-on-demand model which aims at reducing the resources used and waste generated by overproduction by proving consumer clothing items made-on-demand and customizable.

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Introduction

1.1 Presentation of the subject

A link between the textiles, clothing and fashion industry and sustainability has been identified as early as from the year 1600 (Welters, "The Fashion Sustainability", 2008), yet, our way of consuming goods, especially fashion and clothing items has moved to a system in which the production of clothes is driven by the need to maximize sales, increase economic profits and grow market shares.

Globally, the textile and clothing industry represents about 1.3 trillion dollars of revenue each year and employs around 300 million workers along the entire fashion value chain[1]. Worldwide, the clothing and fashion division of the entire clothing industry remains the largest application, representing 60% of the total textiles used.

In the last 15 years, the production of clothing has doubled due to a growing middle class population across the globe as well as increased per capita sales in mature economies[1] (McArthur, 2017).

These economics trends have led to the escalation of "fast fashion" or "ready-made" (Brismar, Green Strategy, 2016) models which provides quicker turnaround of new styles, increased number of collections every year and pressure for lower prices.

This approach of doing business and consuming clothing and fashion items isn't a choice for society and the industry in the long run as clothes consumption is expected to keep on increasing (WWF, Changing Fashion, 2017), the natural resources available decrease and the negative impacts of the industry on the environment keep on increasing. Conventional fashion and clothing supply chain model lead to one third of produced goods unsold (Pal, 2014).

Several actors and companies in the fashion and clothing industry have already started to take steps towards a more sustainable industry and help changing practices that aren't viable in the long term.

A lot remains to be made by companies all along the supply chain and the value chain of clothing items in order to move toward sustainability. Ellen McArthur Foundation's

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[1] Ellen McArthur Foundation, 2017. A new textiles economy: Redesigning Fashion's future. [Viewed on 25th July 18 2018]. Available from: http://www.ellenmacarthurfoundation.org/publications

report on how to redesign fashion's future addresses the prevailing need to rethinking and transforming the global textiles and clothing system.

Consumers have an important role to play in the role towards sustainable fashion. The "fast-fashion" and "ready-made" clothing industry have made available products which aren't at the core designed and manufactured to meet consumer's real demand but to supply inexhaustible desires and consumption. Fashion cycles and trends have left consumers with the pressure of constantly reformulating their identity and left them shop for clothes addictively (Fletcher, 2008).

Individuals born between the year 1980 and the year 1997 form the generation referred to as the Millennials or Generation Y, one of the largest generation of our society and studied to be one of the most sustainability conscious, caring about the environement and climate change (Credit Suisse, 2017) as well as the most inclined to pay more for products and services which are sustainable or that meet environmental, social and governance standards (Credit Suisse, 2017).

The Millennials have also been studied to be concerned about the future of the environment and feel responsible for their impact. C02 emissions are considered a key concern for millennials (Credit Suisse, 2017). The clothing, fashion and textile industry emits 1.7 billion tonnes of C02 annually (WWF, Changing Fashion, 2017).

There is a need for change in the fashion and clothing industry, not only on the supply side and production side but also on the way clothing and fashion items are consumed and the quantity which is produced. Careful business model redesign has been identified as a key element to delivering greater sustainability in the global industrial system (Lüdeke-Freund,2010) and therefore requires a shift in the purpose of doing business as well as in the way business is conducted (Bocken et Al., 2014). In the

One way of moving in this direction is through sustainable business models innovations which focus on creating significant positive or reduce negative impacts for the environment and/ or society through business operations.

1.2 *Purpose of the study*

The purpose of this study is too better understand what creates sustainable business models from a theoretical background as well as understanding how these models can be applied to the fashion and clothing industry in order to be able to move towards a more sustainable industry.

The second aim of this thesis is to be able to gain insights on how Swiss millennials make purchasing and consumption decisions when it comes to clothes and fashion in order then to be able to apply the results gathered to potential sustainable business model such as the fashion-on-demand business mode; a sustainable business models which by design aims at both reducing the consumption of clothes and reducing the waste generated by the production, non-consumption and over consumption of clothes.

This thesis aims at looking at how Swiss millennials purchase clothes and discussing the potential of the fashion-on-demand model as well as other models in Switzerland.

1.3 *Organisation of the report*

The following of this thesis will be composed of, firstly, a theoretical and empirical review of the concept of sustainability and how the concepts translate into the clothing and fashion industry. Conceptual business model frameworks such as Osterwalder and Pigneur's model will also be reviewed and analysed in order to capture how sustainability can be implemented through new or innovative business models. In addition, a few other pertinent frameworks and theoretical points will be addressed.

Findings about sustainable business models logics for the clothing and fashion industry and the feasibility and scalability of each mode will be discussed. This section will also present a background of the fashion and clothing industry in the examined country, Switzerland as well as a review of the factors that shape the demand and consumption of fashion and clothing items.

The following section will introduce the research methodology and clarify the scope and limitation of the study. Results from the research will be share and analysed in order to better understand the findings. The research part of this thesis aims at gaining insight from Swiss Millenials when it comes to consuming clothing and fashion items as well as sustainability in order to evaluate the prospective success of new business models such as the fashion-on-demand business model.

The next section will be dedicated to a discussion in regards to the summary of the findings as well as the previous literature review in order to draw recommendations. This thesis ends with the overall results and a conclusion. A general conclusion completes the thesis.

1.4 *Theoretical and Empirical literature review*

1.4.1 Concept of Sustainability

According to *the World Commission on Environement and Development,* Sustainability can be defined as

"*[…] the economic and social development that meets the needs of current generations without undermining the ability of future generations to meet their own needs.*"

(WCED, 1987)

The concept of sustainability bases itself around the interconnection of three pillars: social development, economic development and environmental development.

These three pillars of sustainable development, also referenced as *Triple Bottom Line,* take inspiration from Elkington's *(Elkington, 1994)* first use of the term triple bottom line to emphasize the need for companies to take into account the full cost involved in their business activities, meaning their profit and loss account (economic), their "people" account or their social responsibility throughout their operations (social) as well as their "planet" account or their environmental responsibility through their activities. The triple bottom line measures the financial, social and environmental performance of a company over a period of time. (Elkington, 1994)

In the scope of sustainability or sustainable development, the triple bottom line translates into **environmental sustainability** or the need to consume natural resources at a bearable rate while taking into account resources scarcity, environment damages linked to the extraction of the resources as well as trying to keep the resources within circular economy principles. **Economic sustainability** translates into using resources efficiently and operating in a sustainable manner while remaining economically viable. **Social sustainability** involves identifying and managing business impacts on people with fair means.

Figure 1 – Sustainability Triple bottom line Venn diagram
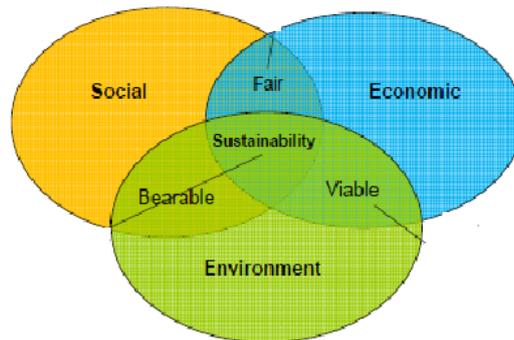
Source: Adapted from Maeder Eric, 2018. Sustainable development: Triple bottom line [PDF doc].Couse Material: Course "Sustainable Management", Haute école de Gestion de Genève, International Business Management degree program, academic year 2017-2018

1.4.2 Business model, Sustainable business models and innovations

Although eco-innovation, eco-efficiency and corporate societal responsibility practices have already been put in place by many businesses in many different sectors and industries such as the energy production sector, chemical industry or furniture production, in order to move towards a more sustainable way of doing business, a gap exists in society in order to achieve long term social and environmental sustainability. (Bocken, Short, Rana, Evans, 2014)

Bocken (Bocken, a literature and practice review to develop sustainable model archetypes, 2014) states the requirement of a holistic approach to tackle the challenges of a long term sustainable future and the need for environmental responses to be aligned with economic and social changes.

The concept of business model gained popularity in the 1990's and has since then been the focus of a considerable range of literature reviews. A business Model has been described by Timmers as

"[…] architecture of the product, service and information flows, including a description of the various business actors and their roles, a description of the potential benefits for the different business actors, a description of the sources of revenues."

(Timmers 1998, p.4)

Richardson describes a business model as

"*A conceptual framework that helps to link the firm's strategy or theory on how to compete to its activities or to the execution of its strategy. […] A framework that helps to think strategically about the details of the way the firm does business […].*

(Richardson 2008, p.135)

Osterwalder, Pigneur and Teece have defined a business as a framework which

"[…] describes the rational of how an organization creates, deliver and capture values. […] A business model articulates the logic, data, and other evidence that support a value proposition for the customer and a viable structure of revenue and costs for the company delivering the value."

(Osterwalder, Pigneur 2010, p.14, Teece 2010, p.179)

More simply, a business model can be defined as

"A simplified representation of the value proposition, value creation and delivery, and value capture elements and the interaction between these elements within an organizational unit." (Geissdoerter, Evans, Vladimirova 2018, p.403)

In the scope of sustainable business models (SBMs), the most dominant framework referenced in regards to business model is the value proposition, value creation and delivery and value capture structure of Richardson (Richarson,2008).

Figure 2: Conceptual Business Model framework

Fig. 1. Conceptual business model framework. Adapted from Richardson (2008); Osterwalder and Pigneur (2005).

Source: (*Geissdoerter, Evans, Vladimirova 2018, p.403*)

The framework is composed of

- A **value proposition**, indicating the product or service offered to generate economic profits.

- A **value creation and value delivery**, representing how the company or business captures value through its activities, resources, business opportunities, channels and markets as well as its available technologies.

- A **value capture,** representing how the company will earn revenues in exchange of products and services.

When the concept of sustainable business models (SBMs) was first studied and presented, its main purpose was to put companies into the service of the transformation to a more sustainable economic system (Geissdoerter et Al, 2018).

Today, the notion of sustainable business model is multifaceted and often seen as source of competitive advantage. Sustainable business models can be seen a modification of the traditional business model concept and therefore incorporate concepts, principles and goals that aim at sustainability, integrate sustainability into their value proposition, value creation and delivery and or their value capture mechanisms (Geissdoerter et Al. 2018, p.404).

Boons and Lüdeke-Freund have defined Sustainable business models as different from the traditional business model framework through four different propositions (Boons, Lüdeke-Freund, 2013) (Geissdoerter et Al 2018, p.405)

- The value proposition of the company provides measurable ecological or social value together with an economic value

- The supply chain involves suppliers who take responsibility towards their own as well the company's stakeholders

- The customer's interface motivates customers to take responsibility for their consumptions as well as for the company's stakeholders

- The financial model reflects an appropriate distribution of economic costs and benefits among actors involved in the business model and accounts for the company's ecological and social impact.

Careful business model redesign has been identified as a key element to delivering greater social and environmental sustainability in the industrial system (Lüdeke-Freund,2010) while bringing a shift in the purpose of doing business as well as in the way it is conducted (Bocken et Al., 2014).

In this direction, Geissdoerter defines sustainable business model innovations (Figure 3) as models that have the characteristics of sustainable business models but adopt sustainable development and positive/respectively reduced negative impacts for the environment, society and the long term prosperity of the company and its stakeholders. Such models adopt solutions or characteristics that foster sustainability in its value proposition, value creation and capture and/or in its value network.

Figure 3: Sustainable Business models innovations
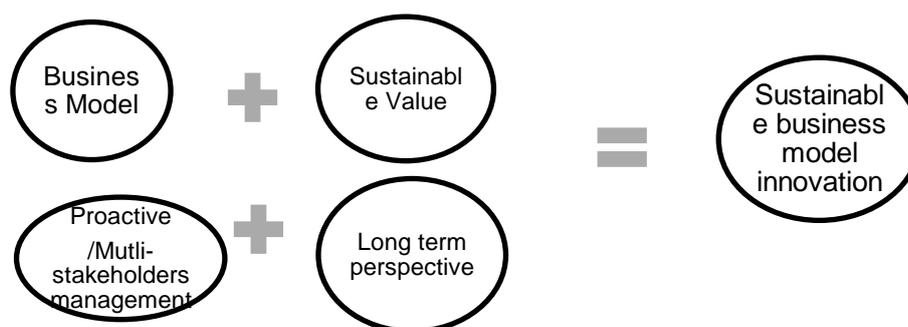
Source: Adapted from Geissdoerter et Al. 2018. Sustainable and circular business models.

Figure 4: Sustainable Business Model Archetypes

Sustainable Business Model innovation	**Sustainable start-ups** A new organisation with a sustainable business model created
	Sustainable Business model transformation The current business model is changed, resulting in a sustainable business model.
	Sustainable Business model diversification No major changes in the existing business model, an additonal business model is established
	Sustainable Business Model acquisition An additional sustainable business model is identified, acquired and integrated into the company

Source: adapted from Geissdoerfer et al.2018. [PDF Doc]. Journal of cleaner production 198. Overview of sustainable business model innovation types, business model types and strategies. p. 408

Figure 5: Sustainable Business model types

Sustainable Business Model Types	**Circular Business models** Business models which are closing, slowing, intensifying, dematerialising or narrowing resource loops
	Social Enterprises Business models that aim at social impact by generating profits from economic activity or reinvesting them entirely
	Bottom of the Pyramid solutions Business models that aim at customers at the bottom of the income pyramid
	Product-Service systems Business model that integrate products and services into customer offerings that provide a functionality or a result

Source: adapted from Geissdoerfer et al.2018. [PDF Doc]. Journal of cleaner production 198. Overview of sustainable business model innovation types, business model types and strategies. p. 408

Figure 6: Sustainable Business model archetypes and strategies

Sustainable Business Model strategies and Archetypes	**Maximise material and energy efficiency** Aims at less material and energy input through more efficient processes
	Closing resource loops Aims at closing resource loops through reuse, remanufacturing and recycling
	Substitute with renewables and natural processes Aims at replacing non-renewable resources with renewable ones and artifical processes with ones that mimic or process in nature
	Deliver functionality rather than ownership Aims at providing the user with the functionality she/he requires without her/him owning the product that delivers the service
	Adopt a stewardship role Aims at protecting natural systems by introducing a gatekeeper that control access or incentivises certain behaviours
	Encourage efficiency Aims at providing information and incentives that encourage less consumption
	Repurpose for society or the environment Aims at utilising organisational resources and capabilities to create societal or environemental benefits
	Inclusive value creation Aims at delivering value to formerly unattended stakeholders or including them into the value creation process
	Develop sustainable scale up solutions Aims at scaling sustainable solutions and technologies

Source: adapted from Geissdoerfer et al.2018. [PDF Doc]. Journal of cleaner production 198. Overview of sustainable business model innovation types, business model types and strategies. p. 408

1.4.3 The textile, clothing and fashion Industry

The European Commission defines the textile and clothing industry as an industry which covers a large range of activities from the transformation of fibres to yarns to clothes, either fashion or non-fashion clothing items (European Commission, 2012). Fashion, on the other hand, is defined by Fletcher as the way in which clothing items reflect and communicate consumer's vision within society, linking them to time and space (Fletcher 2008, Gardetti et al. 2013 p.6).

The World Trade Organization considers textiles and apparel/clothing items as one of the major product cluster in the global trade of manufactured goods (WTO, 2017). In 2017, the trade of manufactures goods represented 70% of the world's merchandise exports; clothing and textiles represented 6% of the world's exports of manufactures goods.

Until the industrial revolution, fabrics and clothing pieces were mostly made for personal use or for resale on small scales. The textile industry was born following technical innovations in the mid 17's such as cotton gin and sewing machines. Fabrics then began to be produced on larger scales/massed produced (Heddles, 2018).

Traditionally, over the years, fashion and clothing shows were introduced seasonally, presenting ahead-of-season collections six months prior retailing, in order to leave enough time for brands to manufacture the commercial lines according to buyers' interest (Gardetti et al. 2013, p.4).

Nowadays, the textiles and clothing/fashion industry has come to be more global and, is a complex, labor intensive, but also very dynamic and innovative sector (Kyvik-Nordås 2005, p.7). The increasing demand for fast-fashion has led retailers changing the designs on display every week rather than a few times per year (Gardetti, et al. 2013, p.4) and therefore speeding-up production. This change to the fast-fashion model has led to a concentration in the industry with fewer larger suppliers and simplified relationships maintained by retailers. The industry is led by companies that are able to supply quick time delivery orders to major retailers (Gardetti et al. 2013, p.4).

The textile and clothing industry (Figure 7) is significant to many economies but the fast fashion model, characterized by ephemeral, short life cycles and designed to capture the consumer's mood of the moment (Gardetti et al. 2013, p.4) has led the sector to be highly competitive and therefore increase the frequency at which the entire clothing

items within a store is updated, everything at the expense of environmental and social factors. (Gardetti et al. 2013, p.5).

The textile and clothing industry offers an important number of skilled and unskilled labor in developed as well as in developing countries, especially for women in developing economies who previously had no income opportunities. Modern technologies within the clothing is moderately easy to adopt and at a moderately low investment cost making it possible for poor countries to industrialize and increase their output growth (Nordås, 2004).

The textile, clothing and fashion industry (Figure 7), as mentionned earlier, is composed of different activities.

- The **textile sector** is mainly concerned with the farming and processing of raw materials for the preparation and production of textile fibres, yarns, fabrics (Gardetti et al. 2013, p.5, Fashion apparel, 2107). The market in textiles is composed of natural fibres such as raw cotton, wool, silk and flax, manufactured fibres from the transformation of natural polymers such as viscose, modal and lyocell and synthetic polymers such as polyester, nylon, acrylic and polypropylene. (Boone 2009, Fletcher 2008, Earthscan 2008, p.271-274). Furthermore, the textile sector also includes finishing activities such as bleaching, printing, dyeing and coating for the clothing sector.

- The **clothing sector** is mainly composed of the design and transformation of textiles into fashion or non-fashion garments as well as the distribution of the garments to the consumers.

- The **fashion sector** includes activities aiming at designing pieces which can reflect and communicate different visions and expressions within society. (Gardetti et al. 2013, p.6).

Figure 7: The textile, clothing and fashion Industry

Figure 1 Textile, clothing and fashion industry
Source: authors
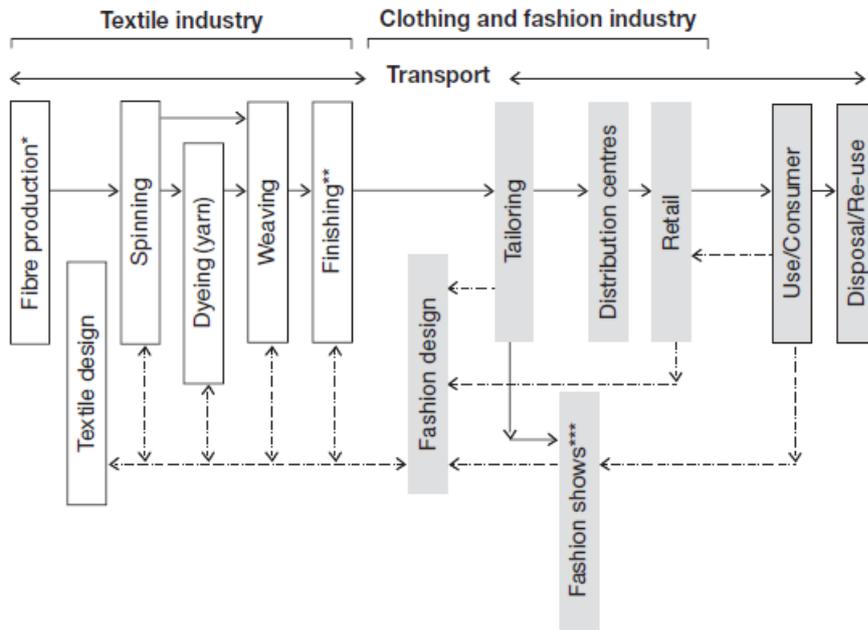
Source: Gardetti et al, 2013. Sustainability in the Fashion and textiles: Value, Design, Production and Consumption

1.4.3.1 *The fashion and clothing industry in Switzerland*

The origins of Switzerland as a textile nation go back to the home production of fabrics and clothes in rural areas (House of Switzerland, 2018).

In 2015, the total sales of the Swiss wholesales amounted to 15'386'000 Swiss francs, 7'052'000 Swiss francs for the textiles sector and 8'334'000 Swiss francs for the clothing sector. A total of 7652 people were employed in the wholesale sector related both to the textile and clothing sector. In 2015, 1297 companies were active in the textile and clothing wholesale sector, 1137 of them being micro companies with less than 10 employees (Swiss textiles 2017, p.9).

In regards to the textile and clothing manufacturing sector, the total sales amounted to 1'649'000 Swiss francs for textiles and 1'375'000 Swiss francs for clothing. 2576 companies were active in the textile and clothing sector (Swiss textiles 2017, p.9).

Figure 8: Swiss textiles exports (2017)

EXPORTS BY PRODUCT GROUP
In thousand Swiss francs, 2017

Spinning materials +13.9%	44,443
Yarns −16.5%	138,671
Woven and knitted fabrics/knitwear −2.3%	354,094
Technical textiles +5.8%	578,484
Special textile fabrics −4.0%	54,639
Home textiles +0.1%	139,841

In thousand Swiss francs, 2017

Value of all exported textiles 1,310,172 −0.1%
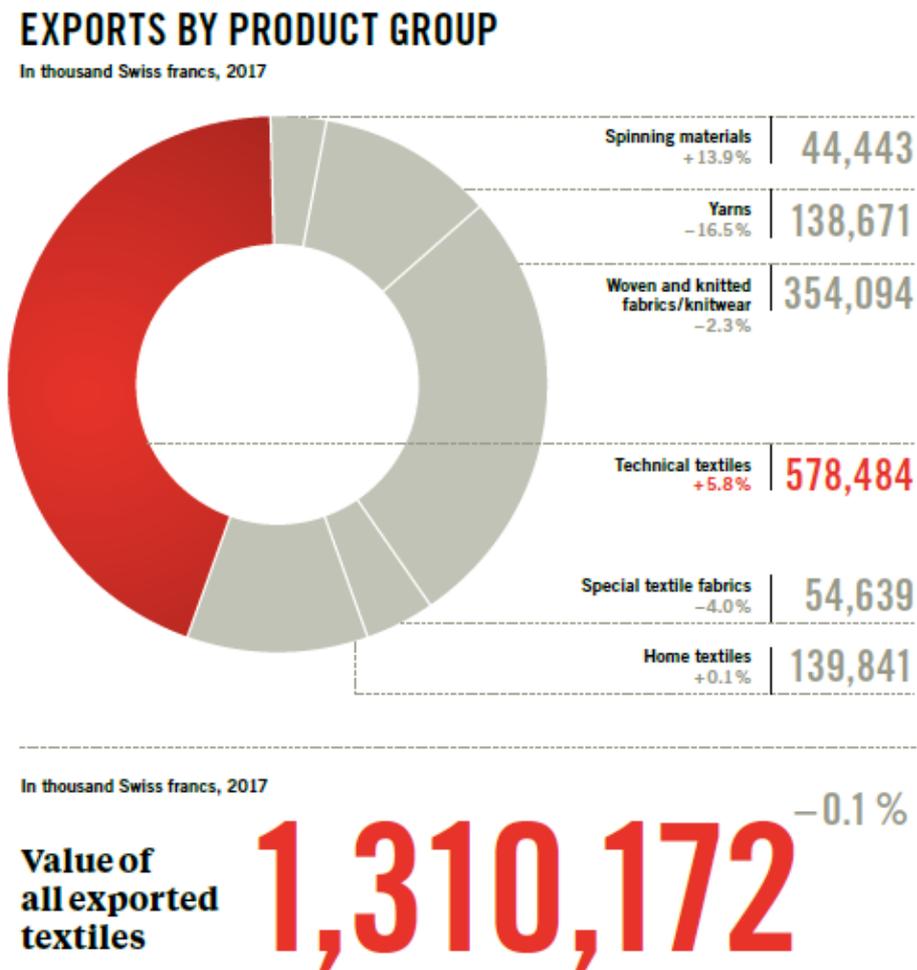
Source: Source: Swiss Textiles, 2017. Annual report 2017, p.9

Switzerland's total textiles exports for the year 2017 amounted to 1'310'000'000 Swiss francs (Figure 8). Technical textiles were the largest product group with a total of 578'484'000 Swiss francs. Exports of woven and knitted fabrics were relatively important for Hungary and Romania which are important processing location for the Swiss clothing industry (Swiss textiles 2017, p11).

The total imports of textiles for the year 2017 (Figure 9) were of 1'954'2014'000 Swiss francs. Technical textiles represented the largest part of the textiles imported and mostly coming from Germany.

Figure 9: Swiss textiles imports (2017)

TEXTILES / IMPORTS

IMPORTS BY PRODUCT GROUP
In thousand Swiss francs, 2017

Spinning materials −16.9%	50,447
Yarns +1.1%	159,160
Woven and knitted fabrics/knitwear −4.4%	351,885
Technical textiles +3.7%	842,943
Special textile fabrics +3.8%	95,098
Home textiles +0.1%	454,672
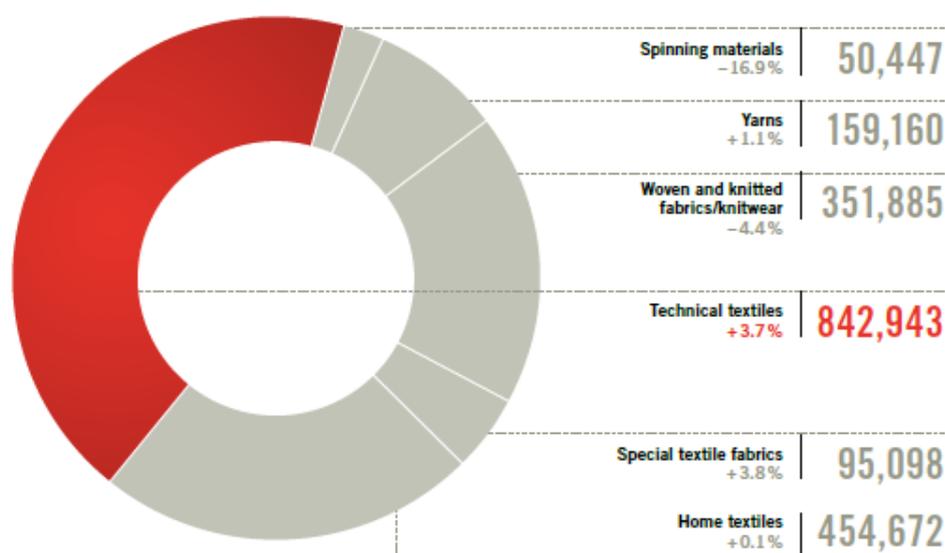
In thousand Swiss francs, 2017   +0.5%

Value of all imported textiles   1,954,204

Source: Swiss Textiles, 2017. Annual report 2017, p.10

Figure 10: Swiss clothing exports (2017)

CLOTHING / EXPORTS

EXPORTS BY PRODUCT GROUP
In thousand Swiss francs, 2017

Product Group	Value
Woven outerwear +4.6%	345,699
Outerwear made of leather, animal hides, plastic materials +18.7%	48,159
Knitted underwear +6.5%	106,832
Woven underwear +19.2%	8,301
Clothing accessories (ties, handkerchiefs, etc.) +3.5%	164,746
Knitted outerwear +27.2%	116,895

Clothing exports have been adjusted by re-exports with customs tariff chapters 61 and 62. Re-exports are returns of imported goods.
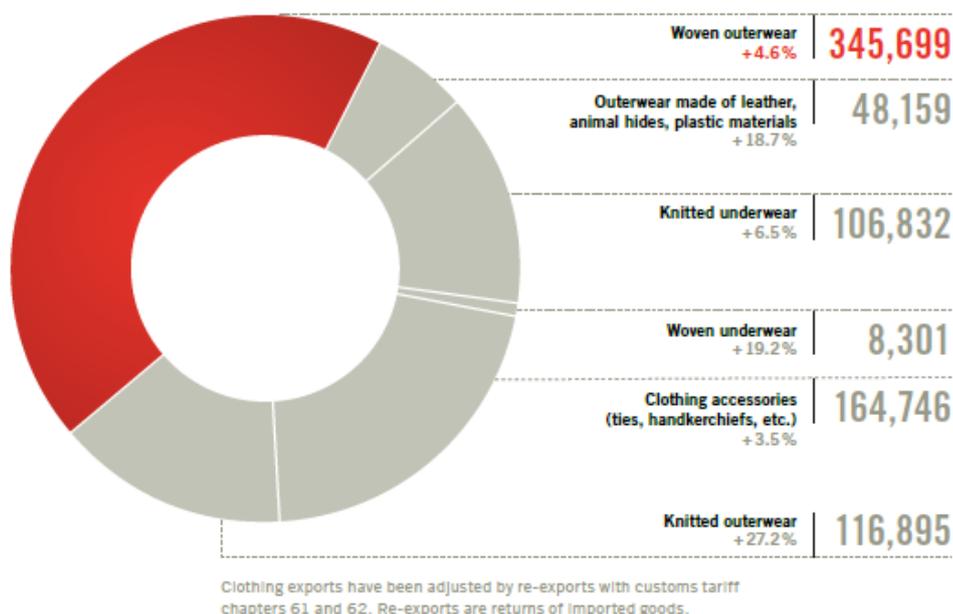
In thousand Swiss francs, 2017

Value of all exported clothing 790,631 +8.4%

Source: Swiss Textiles, 2017. Annual report 2017, p.10

The total of exports for Swiss clothing (Figure 10) amounted to 790'631'000 Swiss francs, with Germany representing the most important destination for Swiss clothing.

In regards to clothing imports (Figure 11), a total worth of 5'032'394'000 Swiss francs were imported in 2017. The majority of the imports were coming from China. European imports, mostly from Germany and Italy, amounted for 36.2% of the total imports (Swiss textiles 2017, p.16).

Figure 11: Swiss clothing import (2017)

CLOTHING / IMPORTS

IMPORTS BY PRODUCT GROUP
In thousand Swiss francs, 2017

Product group	Value
Woven outerwear +5.7%	2,439,854
Outerwear made of leather, animal hides, plastic materials +1.8%	135,464
Knitted underwear +6.9%	649,356
Woven underwear −0.4%	126,396
Clothing accessories (ties, handkerchiefs, etc.) +5.4%	481,524
Knitted outerwear +6.3%	1,469,800
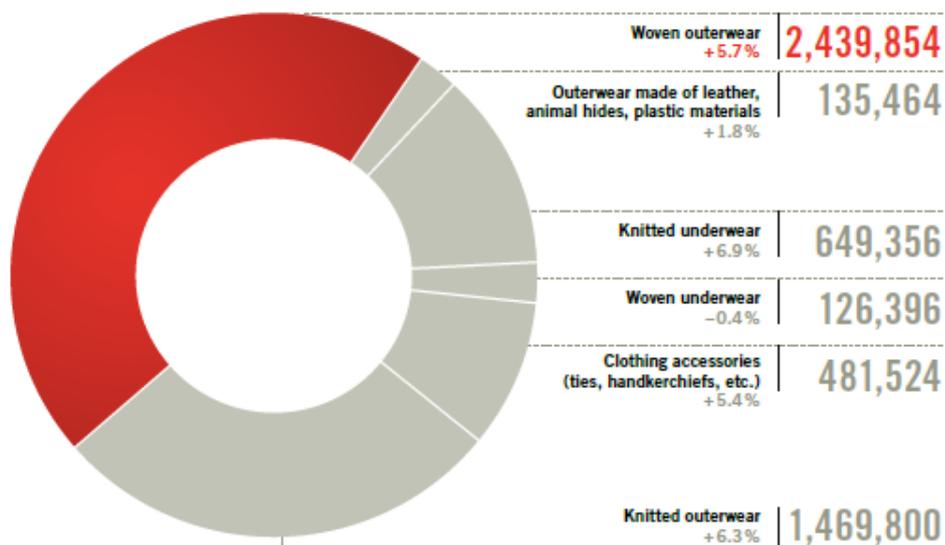
Clothing imports have been adjusted by re-exports with customs tariff chapters 61 and 62. Re-exports are returns of imported goods.

In thousand Swiss francs, 2017   + 5.7 %

Value of all imported clothing   **5,302,394**

Source: Source: Swiss Textiles, 2017. Annual report 2017, p.9

Switzerland's textiles and clothing industry develops and produces high-quality textile materials for an extremely broad range of applications, and markets them throughout the world.

The Swiss fashion industry is recognised as providing outstanding quality, exclusivity and sustainability (House of Switzerland, 2018). Switzerland has a rich industrial tradition and some textiles and fabrics manufactured in the country have gained worldwide renown such as St-Gallen embroidery contributing to the positive image that the Swiss textile industry enjoys all over the world (House of Switzerland, 2018).

In recent years, the Swiss fashion industry has gained in innovative capacity and has been able to develop innovative fabrics such as upholstery fabrics which decompose in an environmentally friendly manner.

The Swiss textiles industry is also actively present in the sportswear segment as well as the work wear segment where it provides innovative technical textiles such as luminous textile sensors which measure heart frequency or blood circulation through the skin as well as lightweight textiles used for seat covers in aircrafts (Swiss Textiles 2017, p. 11).

Overall, the Swiss textile, clothing and fashion industry is well-known for its high quality materials, traditional techniques and designs and orientation towards local sourcing but is also very innovative especially in regards to the technical textiles, sportswear and work wear segments by providing ground breaking technologies and being concerned with high level of comfort.

1.4.4 Sustainability in the fashion and clothing industry

Sustainable fashion is considered a rather complex and wide topic and, although more and more discussed, hasn't been undoubtedly defined. Anna Brismar[2] defines a more sustainable fashion as clothing items, shoes and accessories which are produced, marketed and used in a sustainable manner and therefore taking into consideration the environmental, economic and social aspects of sustainability (Brismar, Green strategy, 2016).

Sustainability isn't a single frame approach and, in the clothing and fashion industry, suggests the improvement along the entire value chain of a product, including the design phase, the raw material sourcing, manufacturing, transport, storage, marketing, use, reuse, repair, remake and recycling of a product and its components. It also suggests a move toward a more sustainable pattern of consumption and use of products and services.

There are various ways with which the fashion industry and clothing companies have been moving towards a more sustainable fashion industry in the recent years.

 Some companies, for instance choose to minimize the environmental footprint of their products by, among others, using organic fibres such as organic wool coming from sheep reared on organically grown feed and grazing on land not treated with pesticides (Fletcher, 2008) or other types of fibres such as bamboo, hemp, eucalyptus which have a lesser negative impact on the environment.

Other companies choose to design their products using recycled fibres or materials. Recycled materials offer low impact alternatives to other fibre sources through reduced energy consumption, resources consumption and chemical consumption.

From an environmental perspective, sustainable fashion would aim at minimizing any undesirable environmental effects of the product's lifecycle (green strategy, 2014) as well as ensuring an efficient and careful use of the natural resources such as water, energy, land, soil, animals, plants, biodiversity, ecosystems.

Materials and fibres have an unequivocal role in the path to a more sustainable industry and key commodities for many actors such as famers, manufacturers and designers (Fletcher, 2008). Two types of fibres can be identified in the industry: natural

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[2] http://www.greenstrategy.se/sustainable-fashion/what-is-sustainable-fashion/

fibres and manufactured fibres. Although sustainable challenges are different for each fibre, their impact involves the **resources consumed** such as water, energy and land as well as the **waste and emission** produced to the air, water and land (Fletcher, 2008). Natural fibres come either from plants such as cotton, linen, hemp, jute, ramie, banana, pineapple or bamboo or from animals such as wool, silk, cashmere or mohair. Manufactured fibres come either from natural polymers such as viscose, lyocell, and natural polyester or from synthetic polymers such as polyester, nylon, acrylic and polypropylene. Figure 12 shows the energy and water consumption by fibres type. In the last eighty years the production of cotton has tripled. This increase in production is for the major part attributed to the use of large quantities of pesticides and fertilizers which account for around 50% of the total cost of cotton production and led to the reduced soil fertility, loss of biodiversity, water pollution and health problems (Fletcher, 2008). The quantity of water used for the irrigation of cotton equalling to 1kg of production varies between 7'000 litres and 29'000 litres although most cultivations are rain-fed. The cultivation of cotton also include between 0.3 and 1kg of oil per kilogram of cotton to run the machinery and the planes spreading the fertilizers. Acrylic polymers fibres are made from mineral oil and produced by many chemical processes including acid baths. The production of acrylic polymers is very energy intensive and the chemical used in the production have a high potential of creating environmental damage.

Figure 12: Energy and water consumption by fibre types
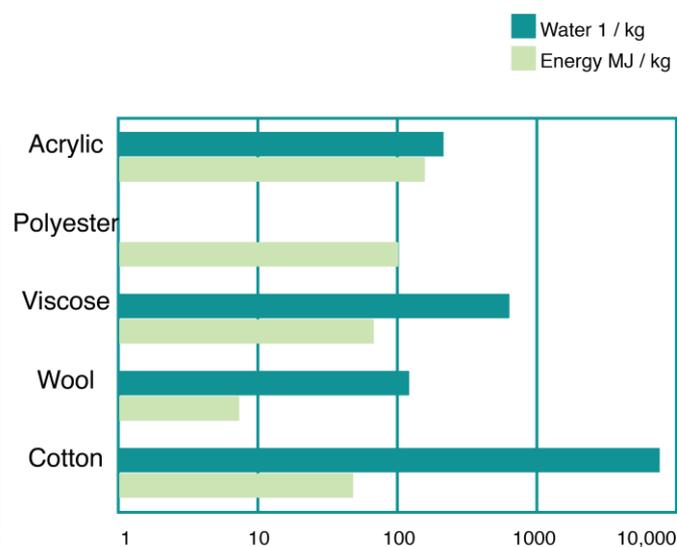
Source: Fletcher Kate, 2008. Sustainable fashion and textile: design journeys. Energy and Water consumption in the production of selected fibre types, p.16.

More sustainable alternatives could translate in using certified, organic natural fibres, low water use fibres, low chemical use fibres or more renewable fibres such as bamboo or soy as well as using low impact synthetic or recycled fibres. For cotton, for instance, the greatest sustainable challenge is linked to the use of pesticides, fertilizers and water, organic cotton avoids the use of fertilizers and replaces them by natural methods consequently leading to a reduction in the toxicity of the fibre. Organic cotton is however much less productive than conventional cotton and riskier and often more costly for farmers (Fletcher, 2008). Low-chemical cotton or low water use cotton could also be more sustainable solutions as it aims at reducing the use of chemicals and water usage in the production.

Hemp is also considered as a more sustainable alternative as it is rapidly cultivated, helps controlling pests and improves the quality of the soils. Hemp fibres could reduce the ecological footprint of the production by half if chosen over conventional cotton (Fletcher, 2008), the production of hemp if however much higher in terms of labour costs.

The production of clothes and fashion involves one of the longest and most complicated industrial chains in the manufacturing industry (Fletcher, 2008). The most important environmental impact of the industry production comes from the energy, water and toxic chemical use. The de-sizing of cotton, meaning the removal of the size material from the warp yarns, involves different processes using chemical and therefore is a process of high pollution index. Dying and printing are also production processes that have an important impact. The dying process requires an important use of water, energy and chemicals and is an important source for metal pollutants. For instance, around 30% of cotton dye can end-up being non-fixed dye which may be discharged and are very difficult to biodegrade (Fletcher, 2008). The printing process is one of the most chemically complex steps of the textile production and involves the application of a colour paste made from pigments and chemicals to a fabric. Conventional printing techniques require around 250kg of water for each kilogram of printed fabric (Fletcher, 2008). More sustainable solution involves using water-based print formulations and substituting conventional dyes with biodegradable dyes.

Many social and health issues are linked to the fashion and clothing industry, the production of cotton being an area known for poor worker rights and hazardous working conditions. The "cut-make-trim" phase of the production refers to the step where cloths are cut and sewn into garments or other product, a manual operation which is often operated in low-wage countries. The competition between manufacturers

has led to labour abuses where workers are asked to work 80 hours per week for only 5 cents per hour (Fletcher 2008, p.58). The violation of worker right isn't a novel topic and pressure has been put on the industry for many years to improve working conditions. A more sustainable fashion will imply stakeholders working to improve present working conditions for all workforces on fields, factories, transportation and stores as well as putting in place good ethics, best practices and codes of conducts (Green strategy, 2014).

The consumption and use of clothes and garments has also an important impact of the environment. A study has shown that most of a garment's environmental impact comes from its care and laundering and not necessarily from its growing, processing or production (Fletcher 2008, p.75). Each piece of clothing or textile item has a different lifecycle and therefore impact on the environment. For instance, clothing and workwear have a large impact in the use phase of their lifecycle. A blouse uses six times more energy in its useful life than when it was first produced. Furnishing and carpets have on the other hand have a lesser impact during their useful life has they aren't changed and washed as often as clothes, most of the environmental impact comes from the production of the item.

More sustainable alternatives imply improving processes, products or consumption patterns. More efficient laundering patterns and improved washing machines and drying techniques might help reduce the energy, water and detergent used during the product's lifecycle. Washing machines working at low temperatures would help reducing energy consumption by 10% for each 10 degree reduction (Fletcher 2008, p.81), concentrated detergents which use fewer chemicals and less packaging would help reduce water pollution and the waste generated. Clothes and garments which are designed to reduce the impact in the washing process, or fibres which are adapted to low temperature and dry quickly would also help reducing the impact that the use of clothes has on the environment.

The waste generated by the clothing and fashion industry amounts to around 2.35 million tonnes each year, both from industry and domestic sources (Fletcher 2008, p.98). Small proportions of the waste generated end-up being reclaimed, recovered or recycled; still most of the waste goes to the landfill, creating environmental damages. The environmental impact of clothes and textile waste can be treated by implementing waste management strategies aiming at re-using products for the same purpose by redistributing it or re-selling it, repairing and reconditioning it either whole or partly to maintain their useful life for longer and recycling materials in order to manufacture

other goods. The re-use of clothes allows to reduce the energy used to produce a new item, the energy used for second-hand clothes are 20% lesser than for the production of a brand new item (Fletcher 2008, p.100).

Figure 13: Environmental perspective for sustainable fashion
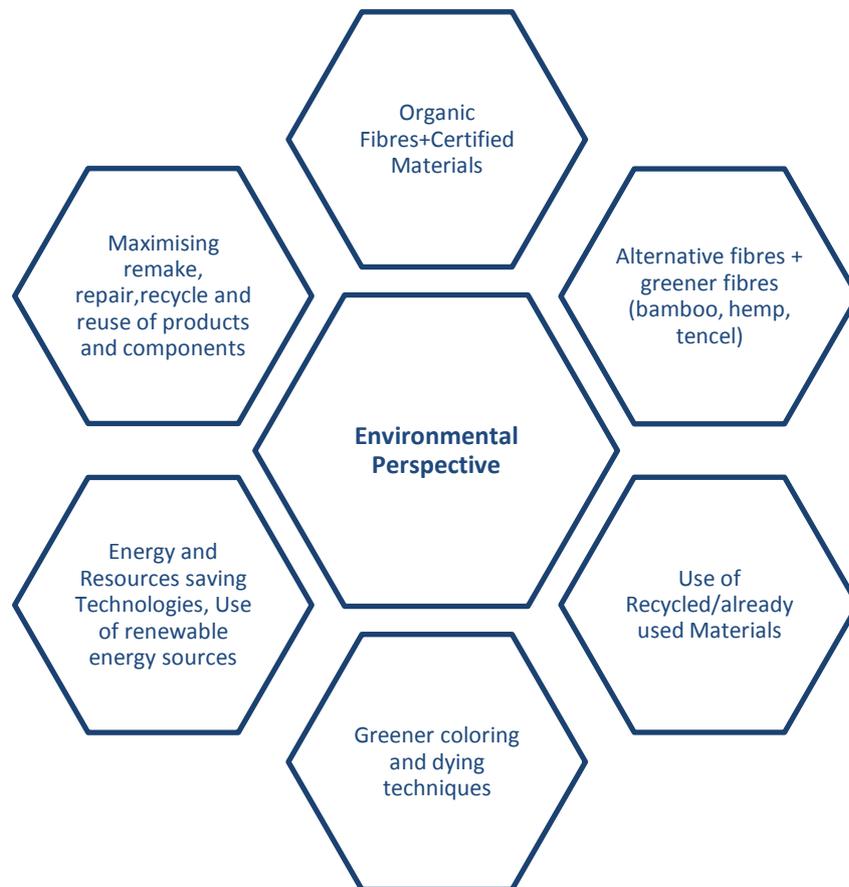
Figure 14: Social and economic perspective for sustainable fashion

1.4.5 Sustainable business models in the fashion and clothing industry

As discussed earlier in regards to sustainable business models, various strategies exist for new and existing companies to implement sustainability in their business model. In a research on the opportunities and challenges for sustainable business models in the fashion industry, Todeschini et al., have identified different trends and drivers which have pushed forward innovative sustainable business models in the clothing industry (Todeschini et.Al, 2017).

Consumer Awareness, defined as the understanding by an individual of their rights as a consumer concerning available products and services (Business dictionary, no date), has been studied to have increased about sustainability leading to an growing interest in "green products", being products which have less of an environmental impact or is less detrimental to human health than the traditional product, and a rising idea of experience over ownership.

In regards to the fashion and clothing industry, increased consumer awareness towards sustainability has pushed forwards new business models concepts such as **capsule wardrobes and lowsumerism** (Todeschini et.Al, 2017) which depend fundamentally on the consumer's behavior and attitude. The consumers are committed in owning and using only a limited amount of clothes for a certain period of time as well as in adopting a critical approach to consumption that prioritize conscious and reasonable acquisition of new goods. The aim of capsule wardrobes and lowsumerism based companies is to oppose consumers to compulsive consumption and opting for a minimalist conscience.

Circular economy which is defined by the McArthur foundation as an economy which is restorative and regenerative by intension or by design and aims at keeping products, components and materials at their highest utility and value at all times […] as well as at eliminating waste through the superior design of materials, products and systems (McArthur,2013, 2015).

In terms of fashion and clothing items, the concept of circular economy highlights new innovations in regards to business models propositions such as **upcycling** (Todeschini et.Al, 2017) which aims at using wasting materials to create and produce new products at an equal or higher perceived value, utility or quality than the waste/input material or **vegan** models which refrain from using raw materials from animal origins and therefore reduce the overall energy consumption within the whole production system.

Sharing economy and collaborative consumption is considered as a cultural and economic shift from an ownership attitude to approaches such as collaborative and access-based consumption (Todeschini et.Al, 2017). In the fashion and clothing industry, collaborative models can be **Second hand** models in which consumers sell or donate clothing items they no longer use to other consumers and therefore reduce the demand for new manufactured clothes as well as the associated natural resources and energy that are needed for the production of the first-hand product. **Fashion Library or clothing library** (Todeschini et.Al, 2017) refers to a subscription business model in which the consumer, through his/her subscription has access to fashion items for a period of time without owning the items. This innovation aims at increasing the number of times a piece of clothing is shared and therefore used ultimately leading to a decrease of the demand for newly produced items.

Technological innovations have an important part to play for an improved sustainability in the fashion and clothing industry. Technological innovations in the clothing industry include business models based on the value proposition of a product

made of **sustainable raw materials** such as organic cotton, hemp, bamboo, lyocell and recycled fibres. Some companies use technological innovations to produce new sustainable raw materials or fibres that can be used in the production of clothing such as new textiles made of fibres discarded from the pressing and processing of oranges (Todeschini et.Al, 2017, Orange Fiber, no date). Technological innovations improve the clothing durability, reduce waste from the cleaning processes and reduce the use of scarce resources.

Corporate social responsibility is defined by the European Commission as a concept whereby companies incorporate social and environmental concerns in their business operations and their interactions with their stakeholders on a voluntary basis (European Commission, 2011). In the fashion and clothing industry, corporate social responsibility practices manifest mostly in the supply chain management and have led to the creation of **Sweatshop free** initiatives which involve the transparency about the working conditions of employees along the supply chain as well as **Fair trade** movements that aim at providing fair wages and working conditions in the upstream supply chain (Todeschini et.Al 2017, p.3). CSR measures also include sustainability reporting, voluntary reporting in multi-stakeholders monitoring and the development and adoption of supplier disclosure and transparency practices along the supply chain. Corporate social responsibility aims at promoting locally sourced production and consumption of clothing items and therefore reduces the costs and environmental impact linked to the transportation.

Pal and Gander, while doing an examination research of sustainable business models within the fashion industry, have identified three different sustainable business model logics: the narrowing logic, the slowing logic and the closing logic. (Pal and Gander 2018, p.256)

1.4.5.1 Narrowing logic

According to Pal and Gander, the narrowing logic aims at managing the environment and resources used along the supply chain through modular production systems, demand driven production or low impact energy production systems (Pal and Gander 2018, p.257).

- **Narrow-efficiency** aims at reducing the resources used through low energy production processes which include specialised machinery, computerized systems and new solution technologies such as product-lifecycle management or through the use of recycled energy. The environmental or sustainable value is gained through the

reduction of the impact of production on the environment and the reduction of use of fossil fuel and energies.

Narrow efficiency includes lean manufacturing production, clean technology for low carbon and low effluents as well as integrated pollution prevention (Pal, Gander 2018, p.254).

- **Narrow accuracy** aims at a greater effectiveness of matching production to demand (Pal, Gander 2018, p.257) through demand driven, purchase lead or modular production techniques. The environmental or sustainable value is gained through higher proportions of goods sold and lesser waste from unsold stocks.

Narrowing accuracy includes demand-driven product development and production such as 3D visualisation and prototyping and made to-measure models (Pal, Gander 2018, p.254).

Table 1: Narrowing Logic

Logic	Categories Sustainable Business Model	Environmental Value	Element of BM
Narrow- efficiency	- Low energy production systems, optimal use of material and limited waste -Clean technology for low carbon -Energy efficiency and Recycled energy sources	- Reduction of the impact of the production process on the environment -Reduction of the use of fossil fuels and energies	Value creation
Narrowing accuracy	-Demand driven/purchase lead/ modular production - 3D visualisation + prototyping -Made-to-measure	- Reduction of the materials used and the waste from unsold stocks.	Value creation Value proposition

1.4.5.2   Slowing logic

The slowing logic refers to an approach which aims at slowing fashion consumption through the use of durable and of quality materials and processes. Sharing fashion business models or service system based fashion are also types of slowing approaches in which the ownership of the clothing item is replaced by rental systems or sharing systems (Pal, Gander 2018, p.255).

Design led approaches for extending the useful life or longevity of the garment are achieved through evolving relationship between the consumer and the clothing item as well as by implementing multifunctional or incremental garment construction which allow the product to evolve and transform through time leading to a longer usage. Tailoring services to re-fit and re-fashion old piece of clothing are also considered as slowing approaches.

Premium quality and services are also slowing approaches through sufficiency. By providing consumers products made of high or premium quality materials and providing great service allow the consumer to be more attached to their product and therefore taking greater care of it and using it for longer (Pal, Gander 2018, p.255).

Social branding and responsible promotion are also oriented toward slow fashion by promoting ethical sourcing and creating ethical or sustainable consumption campaigns.

Slowing logics aim at slowing and reducing production and consumption and therefore create less excess and less waste.

Table 2: Slowing logic

Logic	Categories Sustainable Business Model	Environmental Value	Element of BM
Slowing	- Slow fashion: Durable quality of materials and processes. Encourage efficiency Sharing fashion + service based. -Longevity approach: design, modularity, functionality. Tailor-made services -Sufficiency: Premium quality + services, social branding - Responsible promotion , Stewardship role: consumer education and sustainable consumption campaigns	-Reduce production and consumption - less excess - less waste	Value proposition Value creation

Source: Based on literature. Pal and Gander. 2018. Modelling environmental value: An examination of business models within the fashion industry. P. 254-259.

1.4.5.3 Closing logic

The closing logic refers to the concept of circular economy in which production and consumption are connected to form a loop where resources, components and materials are kept at their highest utility and value.

Technologies such as chemical textile to textile recycling technology, cellulose dissolution technology and technologies for the separation of blended fibres can be classified as part of the closing logic as they allow the materials or industrial wastes to

be recycled, re-fibered , re-spun into yarns and re-used to produce clothes. Mechanical recycling tears fabrics apart in order to produce shortened lengths which are then spun to make yarn.

Fashion re-manufacturing of dead- stock into commercial items, up-cycling and re-fashioning are also considered as closing approaches.

Second hand retailing, take back systems, shared and collaborative forms of fashion consumption which substitute ownership with access such as subscription or renting models are also closing logics (Pal, Gander 2018, p.255).

The closing logic aims at moving away from the linear systems of production and move toward a closed loop system in which resources are used more efficiently through rescuing, re-using, recycling and re-introducing into the consumption and production system and therefore the sustainable value is gained though reduced consumption of raw resources.

Table 3: Closing logic

Logic	Categories Sustainable Business Model	Environmental Value	Element of BM
Closing	-Technologies : textile-to-textile recycling, cellulose technology, separation of blends technology -Re-manufacturing of industrial dead-stocks, upcycling using wastes, refashion dead stocks. -Collaborative consumption: Second hand, Take-back systems, shared, collaborative and rental models.	- Reduce resources use through circular production and consumption	Value proposition Value creation Value capture

Source: Based on literature. Pal and Gander. 2018. Modelling environmental value: An examination of business models within the fashion industry. P. 254-259.

When it comes to the value generated by a business model, Pal and Gander have come to the assumption that the total value of a business model (denoted *bm*) is composed of a surplus or net gain (V_{bm}) which is the sum of a consumer value (C_V) and a firm value (F_v).

Business model net gain (V_{bm}) = Consumer value (C_v) + Firm value (F_v).

What makes a sustainable business model has mostly been theorized as a business model which provides measurable ecological or social value together with an economic value (Boons, Lüdeke-Freund, 2013, Geissdoerter et Al 2018, p.405).

Therefore, sustainable business model net gain (V_{ssbm}) is composed of an environmental or sustainable value (E_v) which is equal to the difference between the sustainable or environmental benefit and the marginal sustainable or environmental cost as well as a consumer value (C_V) and a firm value (F_v).

Sustainable business model net gain ($_{Vsbm}$) = Environmental/Sustainable value (E_V) $_+$ Consumer value (C_v) + Firm value (F_v)

1.4.6 Consumption of clothing and fashion items

Fletcher defines fashion as the way in which clothes reflect and communicate individuals' vision within society, linking them to time and space (Fletcher 2008, Gardetti et al. 2013, p.7). Fashion is also seen as a process which is expressed and worn by individual as material objects (Hethorn and Ulasewicz, 2008).

Clothing is seen as the material item that give fashion a vision in society (Cataldi et al. 2010, Gardetti et al. 2013 p.7), in other words fashion is a way for individuals to express themselves in society and clothing is the material structure which is used to express a vision. Fashion is something that always changes (Cataldi et al. 2010, Gardetti et al. 2013 p.7).

The global average consumption of new clothes was estimated at 5kg per person each year, equaling to 16 new t-shirts or 5 new pair of jeans. The average is already exceeded by many countries and estimated to increase to 11-16 kg per person by 2013.

Individuals' cultural and emotional connection with fashion and clothes is a complex subject. Consumers have different motives, or driving forces for purchasing and

wearing clothing items. Motives often refer to thoughts, urges, feelings, emotions or drives. The current linear model of consumption, based on traditional sales, answers to the wide range of motives linked to the purchase and wear of clothing items by selling new clothes leading to lower clothing utilization and overconsumption (McArthur 2017, p.74).)

In "A new textiles economy: redesigning fashion's future", Ellen McArthur foundation describes three main types of motives for purchasing and wearing clothing items: practical motives, emotional motives and social motives. (McArthur 2017, p.74).

Table 4: Practical motives

Practical or rational motives are conscious, factual or logical reasons for purchasing or wearing clothes. Purchases made based on practical motives are generally the result of objective reviews about the potential profits, quality or needs of/ for the good(Singh, no date).

For Purchasing
Bargain/sales: Some people might choose to purchase clothing items due to the advantageous offers that they are faced with or due to discounted prices that allow them to access to items that they couldn't afford or to get more value for their money.
Convenience: the convenience the product offers to the buyers. Products are bought because they are more easy to take or more pleasant to the consumer. In terms of clothing items, convenience can be translated for instance in a fabric or textile that require less maintenance such as fabric that doesn't require to be ironed after being machine washed or fabrics that can be tumble dried. Convenience can also refer to the convenient location of a shop or the convenient working hours of a shop.
Clothes replacement: Some people choose to purchase clothing because they need to replace an item that has been altered, lost or doesn't fit anymore.

For Wearing
Adapted to weather: Throughout years, one and maybe one of the most important reason for wearing clothing items has been to protect the human body from weather conditions such as heat, cold, wind, rain and snow (Textile school, 2018). People chose their clothes to be adapted to the weather and seasons they are facing.
Protection: Since humans' skin is bare and uncovered, clothing protects and covers the skin from external elements (Textile school, 2018). People might also choose clothes to protect themselves in certain situation or while facing certain conditions. People chose their clothes for protection from external elements or certain conditions.
Function: Some clothing items have been specifically engineered to deliver pre-defined performance or functionality (Gupta 2011, p.321). Some people chose their clothes in regards to the functionality or performance they require. This can be clothes designed for protection in hazardous environment, for facilitation of movement in sport activities or for aesthetic function such as enhancing body shapes. (Gupta 2011, p.321)
Comfort: Comfort is defined as the absence of perceived pain or discomfort (Hes et al., 2011) and is dependent on external factors such as environmental temperatures, moisture, wind, cultural and social influences as well as on internal factors such as individual's metabolism, level of activity, psychological situations (Fibre2fashion, no date). People chose their clothes in regards to the level of personal comfort they wish to have.

Table 5: Emotional motives

Emotional motives are motives which arise from impulses and psychological needs rather than rational thoughts and analysis. Emotional motives are often feelings experienced by consumers through association with purchasing or wearing clothes.

For Purchasing
Retail therapy: first used as a term in the 1980s', retail therapy, or "comfort buys" refers to using purchase of clothing items or other goods as a mean to improve one's mood, disposition or to make oneself feel better. Retail therapy is often considered as a short-lived habit (Cambridge dictionary, no date).
Reward: Reward as an emotional motive refers to purchases that are made in recognition of oneself efforts or achievements. People chose to purchase clothes for themselves or others in return for something they have achieved or done.
Uniqueness: The uniqueness of a clothing item or a brand might influence consumers effectuate a purchase. People choose to purchase the clothing item due to the fact that it is unlike anything else, very special or connected to one particular thing, place or person (Meriam-Webster, 2018)
Brand loyalty: Some consumers choose to purchase their clothing items from the same brand or retailer. Brand loyalty can be based on altruistic motives such as the sense of purpose connected to the brand or purchase, rational motives in regards to the quality of the product offered by the brand or simply out of habits because they like the brand or the product. (Smith, 2017).

For Wearing
Express identity: clothes are identified as very important as they provide a first impression and in relation to emotional motives, some people choose their clothes in order to create their own style and therefore communicate who they are and express their individualities. (Csáktornyai, 2014).
Look fantastic: independently from the circumstances, clothes already provide information about the wearer. Some people choose their clothes to present the image they desire and in some case to feel a certain way about themselves such as fantastic. (Csáktornyai, 2014).
Confidence: some people may choose the clothes they are wearing as a device of success and when wearing them expect to adopt some of the characteristics associated with them such as for instance confidence.
Joy: clothing significantly influences how other perceive the consumer and how they respond to him or her. Some people choose the clothes they wear based on the emotions they evoke such as joy (Ferguson, 2016).
Meaning: be the color or the style of the garment some people choose the clothes they wear based on the meaning they or others give to the item. The meaning of the clothes can be personal or influenced by society (Meriam Webster, 2018).
Values: either through the brand or the style of the clothing item, some people choose their clothes based on the principles or things that they hold dear or consider being of worth.

.Source: Based on literature

Table 6: Social Motives

Social motives are motives that arise from cultural norms or accepted behaviours and are often based on what is socially acceptable. The weight of society's opinion greatly influences how people make decisions. Social motives are often learnt in social groups.

For Purchasing
Leisure shopping: Some people purchase their clothing items as part of their free time or as a social occasion.
Experience: Some people might favor the purchasing experience that is provided while buying a clothing item. Other people might choose the clothes they purchase based on the experience they have gained themselves or based on the experience of others part of their social circle.
Social pressure: Some people might decide which clothing item to purchase based on what society as whole or other social groups is considering acceptable or in trend.
Gift giving: some people purchase clothes to gift them to others afterwards. Gifts can be voluntary or obligatory.

Source: Based on literature

For Wearing
Demonstrate values: some people choose to wear clothes according to the values or culture they have or are part of. Wearing clothes according to their values allow them to maintain and improve their social relationship.
Demonstrate status: some people may choose the clothes they are wearing to clarify their rank in the society or to signify their social achievements.
Fashionability: fashion motivation is related to the need for authenticity and originality. Some people choose their clothing items in order to follow specific fashion trends or to create for themselves a personal or unique fashion style.
Fitting-in: Some people choose the clothes they are wearing in order to associate themselves with other members of a group.
Be adored: Some people choose to wear clothes in order to gain approval or praise from social groups or others.

Source: Based on literature

In addition, Shaw and Koumbis have in their book "Fashion buying: from trend forecasting to shop floor" (SHAW, KOUMBIS 2013, p. 126) identified various consumer types and the different needs they might require from their clothes (McArthur Foundation 2017, p.75).

Bargain consumer: The bargain type consumer is seeking out bargains, sales and is attracted by promotional offers. He or She buys second hand, goes to designer outlets, warehouse sales and deals on the internet (McArthur Foundation 2017, p.75).

Avoid consumer: The avoid type consumer tries to avoid clothes shopping or shops infrequently mainly for replacement items. He or She shops online and goes straight for the required items and leaves the shop if the queue (McArthur Foundation 2017, p.75).

Stand-out consumer: The stand-out consumer desires to stand-out from the crowd, he or she buys from independent stores and boutiques and makes effort to seek new trends and ideas. He or she makes their own clothes or shops in street markets McArthur Foundation 2017, p.75).

Celebrity consumer: The celebrity consumer aims to look like a celebrity, is attracted to stores and websites that features celebrity fashion trends and would queue to purchase special collections (McArthur Foundation 2017, p.75).

Fitting-in consumer: The fitting in consumer wishes to fit-in and belong to a group, he or she buys similar styles to peers or friends and fits their personal style with their chosen social group (McArthur Foundation 2017, p.75).

 Environment consumer: The environment consumer cares about the environment, tries to purchase clothes from ethical fashion brands and tries to find uses for their unwanted items. He or She doesn't buy fast fashion and likes smaller fashion labels and brands (McArthur Foundation 2017, p.75).

1.4.7 The Millenials Generation

The term "Millennials" has been introduced in 1991 by Neil Howe and William Strauss (Howe, Strauss, Generations, 1991). Often defined differently, the millennials generation represent the group of individuals born between the year 1979 and 1994 (CDE, 2007), or the group of individuals born between the year 1982 and the year 1996 (Manpower, 2018). Therefore, the age range which will be the focus of the research work is individuals aged between twenty two years old and thirty six years old in 2018.

The Millennials, also called by researchers the Generation Y or Net Generation represent around 2 billion individuals or 30% of the global population and have been studied to be raised during the age or Earth Day (Hartman Group, 2008) as well as a generation which is community oriented, supports socially conscious and small local businesses. They also acknowledge that the largest challenge for the future is decreasing environmental pollution, improving health and respecting human rights (McGregor, 2002).

According to Credit Suisse, climate change and global warming are among millennials most important concerns (World Economic Forum, 2017, Credit Suisse, 2017). Millennials have been studied to be the generation the most attentive to sustainability and willing to spend more on products and services if the production is sustainable and consequently have an important impact on the success of companies based on the products they purchase.

The millennials generation has however been studied to be fairly price-conscious as fewer resources are available to them in comparaison to previous generations (Credit Suisse, 2017). Financial commitments are estimated by Millennials as a large burden in their lives although fulfilling their wishes, making lifestyle decisions and having experiences are fundamentally important to them (Credit Suisse, 2017).

1.4.8 The Fashion-on-Demand business model

The Fashion-on-demand business model hasn't been clearly defined in literature and according to Helen McArthur foundation; the fashion-on-demand can be used in various forms.

In regards to Geissdoerter et Al. sustainable business models types, the fashion-on-demand can be considered as being part of Circular business models (Geissdoerter et Al., 2018), as the sustainable aim of the fashion-on-demand model is to slow and narrow the resources which are used in the production of clothes.

One of the central features of the fashion-on-demand model is the ability for the customer to influence the final product design through participation in the design process. The consumer participation can be simple such as the choice of the fabric colour among a number of alternatives or it can be more complex such as the choice of the fabrics, models and details such as buttons and threads. (McArthur Foundation 2017, p.85).

Another feature of the fashion-on-demand model is that the production process is often demand driven, through for instance pre-order systems (Company Two third, no date), meaning that the production is based on how many pieces of a product are going to be sold. The production is equal to what is sold and therefore leads to higher resource efficiency.

In regards to the sustainable business model logics discussed earlier, the fashion-on-demand could be seen as either a **narrow accuracy approach** as it aims at better matching production to demand by using on demand manufacturing processes or technologies such as 3D visualisation, 3D printing and 3D body scanning (McArthur Foundation 2017, p.85) and therefore leading to a higher proportion of products sold as well as a reduction of resources used and waste from unsold stocks or a **slowing approach** as the fashion on demand model provides higher durability through the use of quality design and material. A higher durability of the clothing item is most efficient if the consumer actually wears the items. Personalization and on-measure manufacturing of clothes can lead to an increase in utilisation as well as creating emotional durability (McArthur Foundation 2017, p.85). Involving consumers in the making of their garment has the potential to foster a more connected and active connection with the item and therefore leading to a greater care initiatives from the consumer and in the long run a longer usage of the clothes.

The fashion-on-demand business model approach is summarised in Table 7.

Table 7: Fashion on Demand

Logic	Categories Sustainable Business Model	Environmental Value	Element of BM
Narrow Accuracy	On-demand manufacturing, Pre-order system 3D Visualisation, 3D Printing, 3D body scanning	- Reduction of the materials used and the waste from unsold stocks.	Value creation
Slowing	Longevity approach through tailoring, personalisation, consumer participation in production process	-Creating less excess -Creating less waste	Value proposition Value creation

Source: Based on literature. Pal and Gander. 2018. Modelling environmental value: An examination of business models within the fashion industry. P. 254-259.

2. Analysis

2.1 <u>*Research methodology*</u>

The first aim of this research was to evaluate and analyze how Swiss millennials purchase and consume clothing items. Consumer behaviours and consumer buying behaviours are complex subjects and often vary from country to country and even region to region. Being able to have a clear perception of how Swiss Millenials make decisions when it comes to clothing and fashion would have required conducting surveys in each region of as well as perhaps focus groups to really obtain a clear understanding of Swiss millennials clothes consumption and purchasing habits. Therefore, the aim of this exploratory research is to acquire information from Swiss Millenials when it comes to the fashion and clothing industry and to explain the results with what is known in literature to provide a discussion about the potential of new sustainable business models in the fashion and clothing industry, particularly the Fashion-on-Demand model, among Swiss millennials.

2.1.1.1 *Design of the survey*

The aim of the survey was to gain information and knowledge on how Swiss millennials purchase and consume clothing items. The first part of the survey was therefore attributed to questions in regards to the frequency and type of clothing purchased and consumed. Another part of the survey focuses on the factors or motives that might influence consumers when they are purchasing or wearing clothes. The survey questions were based on literature discussed in the literature part of this thesis such as practical, emotional or social motives.

The latter segment of the survey was destined for questions in relation to the concept of sustainability and sustainability in the fashion and clothing industry. These questions were also based on the literature of sustainable business models discussed earlier in the thesis such as Todeschini et al.' review on sustainable business models trends and drivers. The question were asked with

Regarding the demographic data, not too many questions were asked in order to keep the survey relatively short. The only demographic questions asked were gender, age, canton of residence. Age and gender were asked to have a better idea of the population surveyed and see if the answers correspond to the population studied.

2.1.1.2 Data collection

The survey, firstly written in English, was then translated in German and in French in order to receive answers from a broader diversity of regions of Switzerland. The links of the survey were shared on social media platforms such as Facebook and through emails. The surveys were sent personally to contacts corresponding to the population studied as well as shared through contacts to other potential profiles. The surveys can be found as appendix 1, 2 and 3

2.2 *Scope and limitation*

An important limitation of this study is that it treats Millennials clothes consumption at country-level. Many different factors shape the way people purchase and consume clothing items. Cultural habits have an important role in consumer behavior and often vary from Regions and even Cantons in Switzerland. Therefore, the conclusions about Swiss Millenials behaviours when it comes to fashion and clothes consumption must be considered as a foundation in addition of existing literatures and further researches need to be done to really understand what shapes Swiss Millenials decisions when it comes to clothes and fashion. Although the surveys have been shared in the optic to capture as many regions of Switzerland as possible, the results may not be a fair representation of the country level but a good base for discussion.

The concepts of sustainability and sustainable business models are relatively recent matters at least as popular subjects. Therefore the questions of the survey were formulated in a manner to make the concepts questioned the most understandable by the population interviewed. The data collected from the different surveys were summarised using the format of the English survey for the easing the analysis of the data. Therefore further limitations are linked to the popular knowledge about the concept of sustainability as well as the interpretation of the questions asked in the survey.

2.3 *Results*

In regards to the survey, a total of 94 answers were collected from the English, French and German surveys. The sample on which the analysis focuses are Swiss consumers aged between 22 years old and 36 years old representing according to the literature the millennials, therefore, according to these criteria, a total of **85** answers were kept for the analysis.

The sample characteristics are summarised in Table 1. In regards to gender, more women responded (65%) against (35%) men.

Table 8: Sample Characteristics

Switzerland	n=85
Gender	
Male	30
Female	55
Other	0
Age (Sample=22-36 years old)	
Below	1
22-23	**32**
24-27	**47**
28-36	**6**
Above	8

In regards to the age, 9 respondents were outside of the range studied. The mean age for the sample is 26.98.

Figure 15: Canton of Residence

Canton of Residence

Legend:
- Geneva
- Vaud
- Neuchâtel
- Bern
- Zurich
- Luzern
- Valis
- Fribourg
- Graubunden
- Basel

Slices labelled: 0%, 0%, 0%, 0%, 0%, 1%, 0%, 2%, 1%, 0%, 17%, 69%, 10%
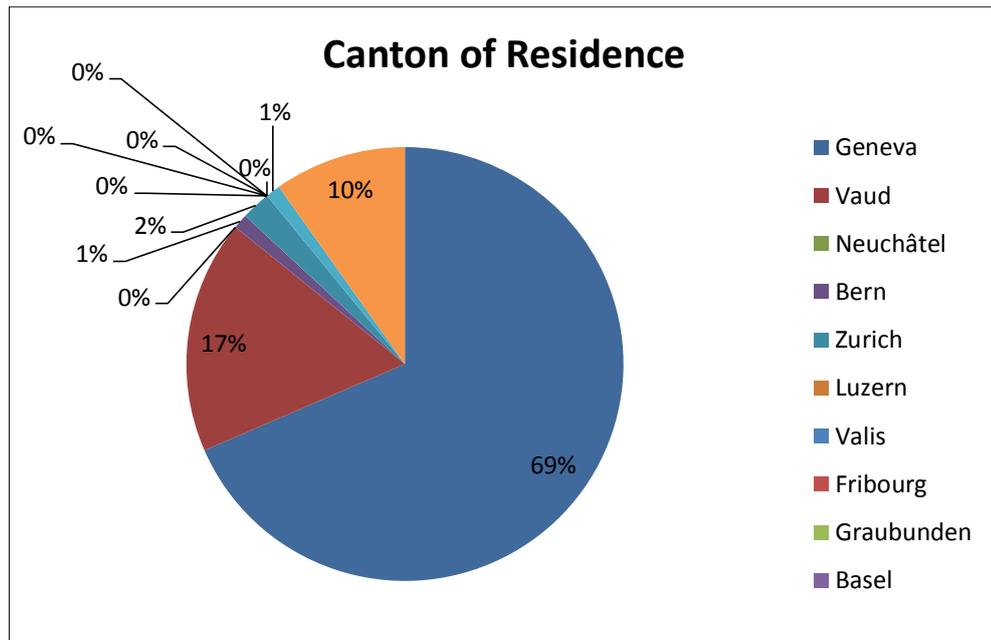
In terms of geographic location, 69% of the respondents were located in Geneva, 17% in Vaud and the remaining 14% were divided between Zurich, Bern, Valis, Fribourg and other cantons.

The collected data were standardized and digitalized in Excel worksheets. Simple statistical analyses were carried out in order to assess respondent's purchasing behaviours. The analysis executed consisted of descriptive statistical analysis. The analysis of variance (ANOVA) test and T-test were used to asses if Gender played a significant role in regards to respondent's clothing items purchasing decisions.

The survey aimed at gathering data in regards to three different aspects:

- Respondents' consuming and purchasing habits

- Respondents' insights about purchasing motives and attributes

- Respondent's awareness regarding sustainability in the clothing and fashion industry.

Each of these aspects will be analysed separately before discussing the overall results of the survey data

<u>Consuming and purchasing habits</u>

A total of four multiple choice questions were related to the respondents' purchasing behavior (Appendix1)

- "At which frequency do you usually purchase new clothing items?" (Frequency)

- "Were do you most often purchase your clothing items?" (Type of stores)

- "Where do you most usually purchase your clothing items? (Type of retailers/boutiques)

- "Which clothing item do you purchase the most frequently?" (Clothes category)

The data collected were standardized in Excel in order to be able to run statistic tests. Appendix 4 shows the logic which was applied for the standardization of the data.

<u>Purchasing + consumption motives and attributes</u>

For the purchasing and consumption motives, respondents were asked to use Likert scale to rate sentences related to practical, emotional and social motives. The motives reffered to in the sentences are discussed in the literature review (p.20.24).

H1: While purchasing clothing items, respondents give different importance to practical, emotional and social motives.

H2: While wearing clothing items, respondents give different importance to practical emotional and social motives.

H3: While purchasing clothing items, respondents give different emphasis on clothing items attributes

H4: Wile purchasing clothing items, fashionability and brand meaningfulness are important attributes for Swiss Millenials

H5: Gender profile of the respondent significantly influences the way/importance given to purchasing motives.

In regards to **purchasing** motives, respondents were asked to complete the sentence "I purchase clothes…" with the statements while using a scale of 1=never, 2=rarely, 3=sometimes, 4=often and 5=always.

- When I find advantageous offers or sales (Bargain) (QP1)

- When the items are suitable for my comfort, purpose or need (Convenience) (QP2)

- When I need to replace a piece of my wardrobe (Clothes replacement) (QP3)

- When I need or want to improve my mood or feel better (Retail therapy) (QP4)

- When I want to reward or indulge myself (reward) (QP5)

- When I find a unique piece of clothing/brand (uniqueness) (QP6)

-When the items are from a brand I know and appreciate (brand loyalty) (QP7)

- When I free time or I am in a social setting (leisure shopping) (QP8)

- When I feel like I need to keep up with the trend and society (social pressure) (QP9)

- When I need to purchase a gift (gift giving) (QP10)

In regards to **dressing** motives, respondents were asked to complete the sentence "The clothes I wear need to…" with the statements while using a scale of 1=not at all important, 2= slightly important, 3= moderately important, 4=Very important and 5= extremely important.

- Be adapted to the weather (QW1)

- Provide me protection (QW2)

- Provide me Comfort (QW3)

- Bring me confidence (QW4)

- Make me be adored (QW9)

- Demonstrate my values (QW5)

- Represent my identity; express my identity (QW6)

- Demonstrate my status (QW7)

- Make me fit in with my environment (QW8)

Respondents were also asked

- Which factor/attribute would you consider the most important to you when purchasing a new clothing item? (Affordability, Availability, Quality, Fashionability, Brand meaningfulness)

Awareness about Sustainability in the clothing and fashion industry

As this thesis aims to some extent at evaluating the potential of sustainable business models within the clothing industry, the last part of the survey aimed at gaining insights in regards to what was Swiss millennials' perception of sustainability in the clothing sector.

The questions asked for this last part of the survey were

- Do you consider sustainability important to the production and consumption of textiles, fashion and clothing items? (SUSYES, SUSNO)

- Is Sustainability something you take into consideration while purchasing clothing items? (SUSYES2,SUSNO2)

- Have you already purchased clothing items from clothing/fashion brands or companies focused on sustainability/providing sustainable alternatives? (SUSYES3, SUSNO3)

- If yes, from which brand? (open question)

- If no, for which reason?

- Have you already purchased clothing items from SWISS clothing/fashion brands or companies focusing on sustainability/providing sustainable alternatives?

- From the list below, which innovative sustainable business model do you know/have you heard of

- If you had to change the way you purchase/consume clothing items which of the following alternatives would you be the most interested in?

2.4 *Analysis of the findings*

Consuming and purchasing habits

The data were digitalized in excel, transforming text answers in numerical value. For each frequency the answers were translated as Yes=1 and No=0.

Table 9 shows a summary of the results in regards to respondents' purchasing habits. The results show that most respondents answered purchasing new clothes items either **once every few months** with a mean value 0.341176 or **a few times a year** with a mean value of 0.2994118. This result was not expected. In a survey effected by Green peace in 2017 among European and East Asians consumers (Green peace, 2017) a clear trend for clothing overconsumption was drawn. In the survey report, Green peace indicates that out the surveyed population, more than half admitted buying more clothes than they needed and used. Furthermore, 40% of the Green Peace survey's respondents were identified as excessive shoppers and purchasing clothes more than once a week. The Swiss millennials interviewed however seem to show a much more stable purchasing behaviour. This can be due to the fact that Millennials and Swiss Millennials are becoming more informed about the impact of the clothing industry on the environment and are more conscious about the impact that their purchases have on the environement (Credit Suisse, 2017). Another explanation could be that Millennials have also been studied to value experience over ownership (Morgan, 2015). The Millennials is a generation considered to not calculate happiness on physical possessions but on experience. Three in four Millennials have been studied to choose to spend their money on an experience rather than buying something desirable (Morgan, 2015).

In regards to the type of stores from which respondents purchase their clothing items, we can clearly see that the majority of sample answered purchasing clothing items from physical stores with a mean of 0.8 and a Mode value of 1. This result can come as quite a surprise as Millennials are very technology –oriented and are digital natives who grew up in an internet culture. However, many studies have shown that even though being really tech-savvy and using their smartphones to do almost everything, when it comes to purchasing clothing items a majority of millennials do it offline (Kestenbaum, 2017).

When asked about which type of retailers or stores respondents were shopping at, an important majority responded purchasing clothes from fashion retailers such as Zara,

H&M, with a mean value of 0.811765 and a Mode value of 1. This is not a surprise as the

From the other retail options, online fashion retailers such as Asos and Zalando had the second highest mean value of 0.235. Other options such as independent labels or boutiques both brick and mortar as well as brands physical and online stores remained marginal. Independent boutiques and labels and brands physical stores represented the largest shares of the other options, reinforcing the idea that most respondents were purchasing their clothes in physical stores rather than through internet.

Concerning the type of clothes purchased the most frequently, t-shirts, tops and shirts appeared to be the most frequently purchased with a mean value of 0.717 and a Mode value of 1. Trousers, shorts and jeans as well as knitwear and jumpers come both as second most frequently purchased item with mean value of 0.29418. On the other hand, jewelleries appeared to be the less frequently purchased category along with shoes with respective mean value of 0.0705 and 0.0352.

Table 9: Purchasing habits

Consumption Frequency	n	Mean	Mode	SD
Every week	85	0.011765	0	0.108465
Every month	85	0.2	0	0.402374
Twice a month	85	0.141176	0	0.35027
Once every few months	85	0.341176	0	0.476918
A few times a year	85	0.294118	0	0.458349
Very rarely	85	0.011765	0	0.108465

Type of Store/Platform				
Physical Stores	85	0.8	1	0.402374
Thrift stores	85	0.082353	0	0.276533
Online	85	0.294118	0	0.458349

Types of Retailers +				

stores				
Fashion retailer	85	0.811765	1	0.39322
Fashion retailer online	85	0.235294	0	0.4267
Independent Boutiques/Labels	85	0.164706	0	0.373116
Independent Boutiques/ Labels online	85	0.070588	0	0.257656
Brands physical stores	85	0.105882	0	0.309513
Brands online stores	85	0.058824	0	0.236691

Types of Clothes				
T-shirts/Shirts/Tops	85	0.717647	1	0.452816
Trousers/Shorts/Jeans	85	0.294118	0	0.458349
Knitwear/jumpers	85	0.294118	0	0.324102
Outwear/Jackets	85	0.105882	0	0.309513
Dresses/Skirts	85	0.152941	0	0.362067
Underwear/socks		0.152941	0	0.362067
Jewelries	85	0.023529	0	0.152477
Accessories	85	0.070588	0	0.257656
Shoes	85	0.070588	0	0.257656
Other	85	0.035294	0	0.185617

Note: Answered Yes=1; Answered No=0

<u>Purchasing + consumption motives and attributes</u>

Before starting making analysis and assumptions in regards to respondents' motives for purchasing and wearing clothing items, **Cronbach's Alpha tests** were made to assess the consistency of the different scales used. To run these tests, ANOVA "Two-factor without replication" with level of significance of 0.05 analyses were performed using Excel's Data Analysis Toolpak Add-in. The table below is the ANOVA test which was run for the purchasing motives scale

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Rows	270.7294	84	3.222969	2.73446	6.39E-13	1.286755
Columns	353.7412	9	39.30458	33.34713	1.51E-49	1.892248
Error	891.0588	756	1.178649			
Total	1515.529	849				

Cronbach Alpha (α) is calculated through the formula: $1-(MS_{Error}/MS_{Rows})$ (Zaiontz, no date).

Cronbach α = $1 - (1.178649/3.22969) = 0.634297$

When it comes to Cronbach's Alpha value, a general rule of thumb is that an alpha of 0.7 or 0.6 is considered acceptable reliability, whereas alphas of 0.8 or higher represent good reliability (Zaiontz, no date). For the purchasing motive scale, the alpha is of 0.634297, showing that the scale enters the acceptable reliability range. The alpha for consumption motives or motives when choosing clothes to wear is of 0.798026 which is also within the range of acceptable reliability. Cronbach's alpha doesn't measure the soundness of the data but is an indicator of consistency between the items of scale (Holmberg, 2017).

Purchasing Motives	Consumption Motives
0.634297	0.798026

Table 10: Purchasing motives

Purchasing Motives	n	Mean	Mode	SD
Bargain/Sales	85	3.8	4	0.948683
Convenience	85	3.564706	4	1.106766
Clothes replacement	85	3.364706	4	1.242569
Retail Therapy	85	2.011905	1	1.113921
Reward	85	2.541176	2	1.220392
Uniqueness	85	2.941176	2	1.374538
Brand Loyalty	86	2.752941	2	1.396474
Leisure Shopping	87	2.611765	1	1.301045
Social Pressure	88	1.6	1	0.928388
Gift Giving	89	2.6	2	1.002378

Note: 1=Never; 2=Rarely; 3=Sometimes; 4=Often; 5=Always

Table 10 shows respondents' perception on different motives when deciding to purchase clothes. The three first motives (in green) are practical motives, meaning motives which are conscious or following logical reasoning. The next four motives (in red) are emotional motives which arise from impulses or psychological needs rather than rational needs. The last three motives (in blue) are social motives, motives which come from cultural norms or accepted behaviors.

Looking at the overall results we can see that practical motives have the higher Mode values, meaning that respondents answered purchasing the most often clothes based on practical aspects such as advantageous offers, personal preferences in terms of clothes purpose, location or simply to replace a piece of their wardrobes. Bargains and sales, with a mean value of 3.8 often influenced when respondents decide to purchase new clothes. Respondent also answered to purchase clothes when they needed to replace an existing piece but from the three practical motives it is the one with the lowest value.

When it comes to emotional motives, the mode values range from 1 to 2, meaning that most respondent answered never or rarely buying clothes based on emotional impulses. From the four emotional motives, uniqueness is the motive with the highest mean of 2.94. Although the respondents rarely purchase clothes based on their emotional state, the uniqueness of the clothes or the brand seem to be something that influence their purchasing decision. With a mean of 2.752, brand loyalty isn't necessarily a motive that appears to be the most relevant for respondent in terms of purchasing decision. However, a study shows that even though half of the surveyed millennials admitted being extremely loyal or quite loyal to their favorite brands, one third will switch brands if they are offered a discount of 30% or more (Kestenbaum, 2017).

Social motives don't seem to have an important influence on when respondents decide to purchase clothes. Most surveyed answered never buying clothes based on what society or a social group is considered acceptable. Social motives seem to rarely influence when the surveyed consumers choose to purchase clothes, although with a mean of 2.611, leisure shopping seem to be the most frequent social motive for purchasing a garment.

We can see that practical, emotional and social motives have different level of importance for respondents when buying clothes, therefore *H1: While purchasing clothing items, respondents give different importance to practical, emotional and social motives"* is, based on the motives surveyed, validated. Most respondents answered purchasing clothes the most often when faced with practical motivations such as bargains or sales.

Table 11: Motives for wearing

Motives for Wearing	n	Mean	Mode	SD
Adapted to weather	85	4.270588	5	0.891604
Protection	85	3.670588	4	1.062211
Comfort	85	4.164706	5	0.89771
Confidence	85	3.705882	4	1.223028
Demonstrate values	85	3.247059	4	1.404973
Express identity	85	3.188235	4	1.349551
Demonstrate status	85	2.835294	2	1.462606
Fitting-in	85	2.576471	2	1.450587
Be adored	85	2.105882	1	1.224974

Note: 1=Not at all important; 2=slightly important; 3=moderately important; 4=Very important; 5=extremely important.

Table 11 shows the results in regards to the different motives for wearing clothes. The three first motives (green) are practical motives for wearing clothes, the following three motives (red) are emotional motives and the last three motives (blue) are social motives.

As for the purchasing motives, we can visibly see that practical motives have higher Mode values than the other motives types. Most respondents answered considering practical motives such as the protection provided or the comfort of the clothing as being very to extremely important. With a mean value of 4.27, most interviewed acknowledged very important the fact that the clothes they are choosing to wear are adapted to the weather. Comfort, with a mean value of 4.164 has also been mentionned as very important. These results don't come as a surprise as clothes, for thousands of years, have been worn mostly as a mean to protect and cover the human body from external conditions and elements such as heat, cold, rain or snow. Furthermore, being comfortable in its clothes has been studied to be an enabler for

improving confidence. Practical motives can therefore be seen as needed for emotional motives to occur.

Emotional motives have Mode values of 4, meaning that they also have an important role for how respondent choose the clothes they wear. Among the three motives, Confidence is the motive with the highest mean value of 3.705. In an article in regards to how clothing affects the mind, Katherine Bernard wrote

"[..] Assembling an outfit is like selecting social armour […] If you have a strong cultural association with a garment, wearing it can affect your cognitive processes […] you're likely to take on the attributes of the garment you wear."

BERNARD, Katherine, 2017

Even though confidence can be interpreted differently by each individual and doesn't depend entirely on a piece of textile, clothes are an important protagonist. In 2014, the car manufacturer KIA conducted a survey in regards to the things that made people feel confident; women answered heels and a black dress in the top ten and men a suit (Ferguson, 2017).

From the emotional motives, demonstrate value was also evaluated very important with a mean value of 3.24. This can maybe be explained by millennials being studied has having different set of values on social and economics topics from previous generations; almost 50% of millennials worldwide don't identify with political parties and one third don't belong to an organised religion(Calvas, 2017). Through the clothes they wear, Millenials want to broadcast the set of values they consider important to their life. For instance, some consumer wish to show that they value a healthy lifestyle and therefore will choose the clothes and brands they wear based on what a healthy lifestyle embodies.

Although scoring a lower mean value of 3.188, respondents seem to believe that wearing or choosing clothes that represent their identity is also very important. This result can be explained by the fact that one individual's identity is a form of social representation that arbitrates the relationship between the individual and the social world (Fergusson, 2016). In an article about how clothing affect and reflect ou self-image, Jill Fergusson wrote

"[..] Clothes can either confirm or disrupt one individual's identity and consequently transmit culturally coded visual messages about themselves either positively or negatively […]"

Social motives such as demonstrating status or fitting in with society appeared to be slightly important to respondents while choosing which clothes to wear.

As for purchasing motives, respondents seem to give different importance to practical, emotional and social motives. *H2: While wearing clothing items, respondents give different importance to practical emotional and social motives* is therefore validated. Respondents appear to give greater importance to practical motives while still finding emotional motives such as reflecting confidence being very important to their choice of clothes.

Table 12: Purchase Attributes

Attributes	n	Mean	Mode	SD
Availability	85	0.047059	0	0.213021
Affordability	85	0.635294	1	0.484204
Quality	85	0.682353	1	0.468324
Fashionability	85	0.529412	1	0.502096
Brand meaningfulness	85	0.082353	0	0.276533

Note: Answered Yes =1; Answered No=0

Table 12 shows the results for purchasing attributes. We can see that Quality has been identified has the most important attributes for respondents while purchasing clothing items with a mean value of 0.6823 and a Mode value of 1. For this question, respondents were allowed to choose multiple answers, but even in this light, Quality seem to come as a very important attribute. This can be explained by the fact that quality clothes are expected to last longer for the money spent on the item. Respondents had evaluated comfort has being one of the most important motive when choosing which clothing item to wear, quality clothes are often identified as being of greater comfort.

Affordability, with a mean value of 0.635 and a Mode value of 1 and fashionability with a mean value of 0.52942 are also considered important attributes.

Many studies have revealed that Millennials are a very price conscious generation due to fewer resources available to them in comparaison to previous generations (Credit Suisse, 2017). Millenials had to adapt their expenses to their monetary dispositions but this doesn't stop them from wanting to live according to their desired lifestyle. Millennials have also been studied to be oriented towards bargains and money saving and would rather spend their money on experiences rather than on goods.

Fashionability can be related to the need for authenticity and originality in regards to a certain period of time and trends. The surveyed millennials seem to find that the style and the aesthetic of the clothes they purchase quite important.

One surprising attribute result is brand meaningfulness with a mean value of 0.0823. One of the assumption which has made before even starting this thesis was that Millenials were attached to brands. But the results of the survey show that very few surveyed have answered Brand meaningfulness as being the most important attribute while purchasing clothes. This can be explained by the fact that millennials are interested in the quality of the clothes they are purchasing but aren't as concerned in showing off the name of a high end or well-known brands anymore. They will certainly wear clothes from less known brands if they can gain something in terms of price, quality, uniqueness or originality.

In regards to the results of the different attributes, *H3: While purchasing clothing items, respondents give different emphasis on clothing items attributes* can be partially validated. The respondents have answered Quality has being the attribute the most important while purchasing clothes. However affordability and fashionability have also been revealed as significant attributes.

H4: Wile purchasing clothing items, fashionability and brand meaningfulness are important attributes for Swiss Millenials can also only be partly validated. Respondents have answered fashion as being an important attribute but brand meaningfulness didn't appear as the most regarded attribute as affordability and quality scored higher values.

Figure 16: Importance of sustainability

	n	Count	Mean	Mode	SD
Answered Yes	85	76	0.894118	0	0.309513
Answered No	85	9	0.105882	0	0.309513

Do you consider sustainability important to the production and consumption of clothing items?

■ Yes ■ No

11%

89%
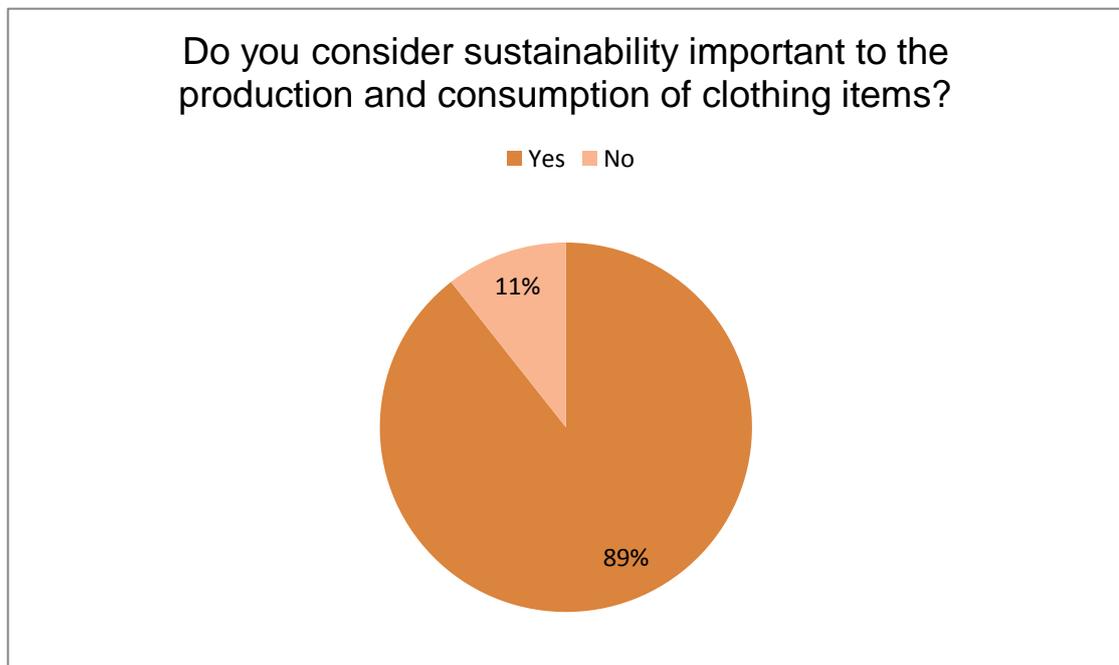
89% of the Millennials surveyed consider the concept of sustainability important to the consumption of production of clothing items. This result is aligned with the literature as Millennials are a generation considered to be oriented towards sustainability and increasingly aware of some of the social or environmental harms that the fashion industry generates.

Figure 17: Consideration of sustainability

	n	Count	Mean	Mode	SD
Answered Yes	85	45	0.529412	1	0.05446
Answered No	85	40	0.470588	0	0.05446
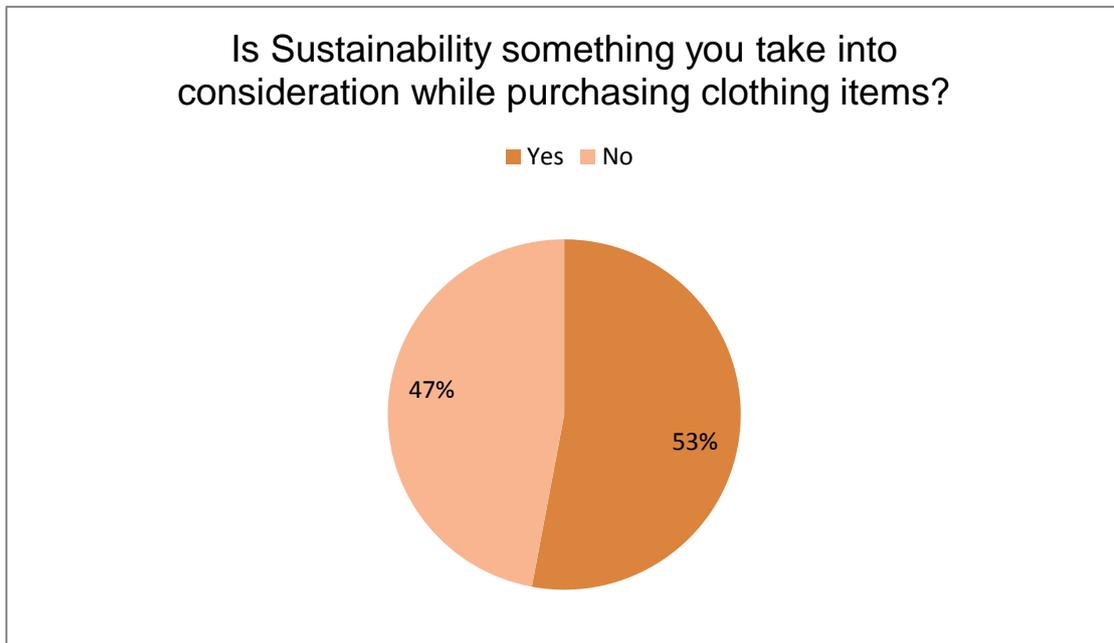
Respondents were also asked if they were taking sustainability into consideration while purchasing clothes. Even though 53% of the Millennials have answered positively, a gap exists between the number of Millennials who consider sustainability important to the consumption and production of clothes and the ones that actually adapt their consumption accordingly. Figure 17 illustrates the difference between the answers of the two questions.
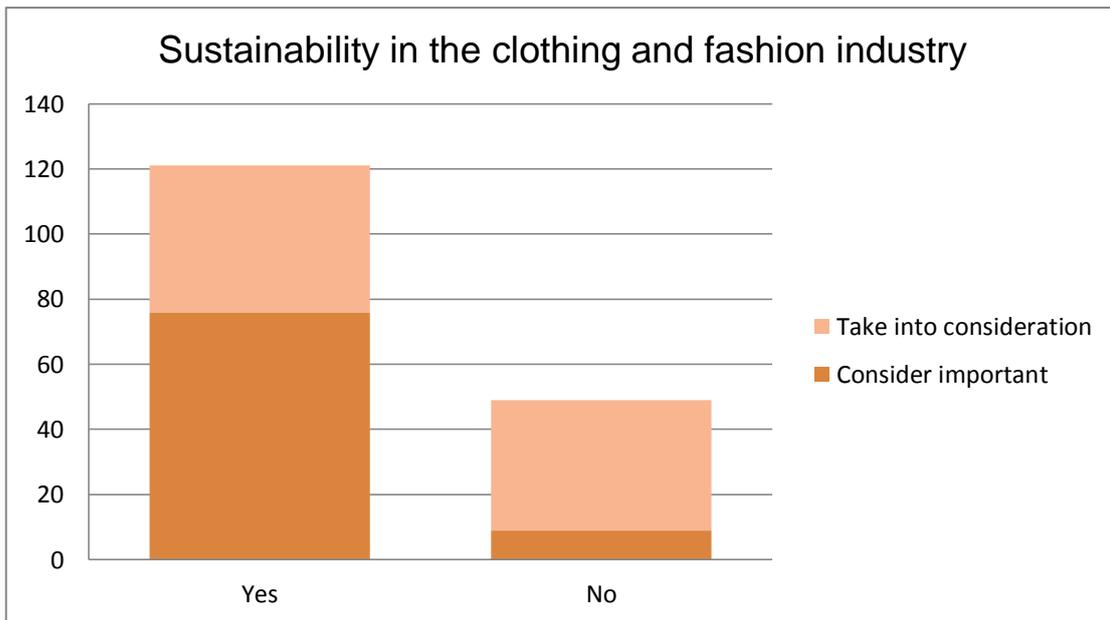
Figure 18: Purchase from sustainable brands
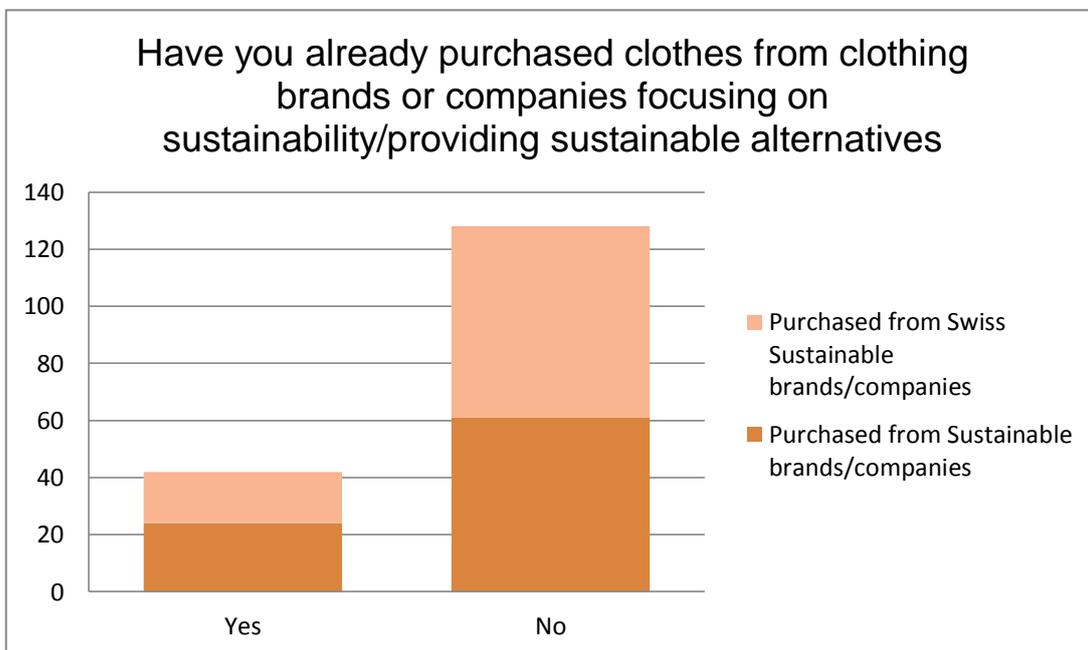
72% of the interviewed sample responded not having previously purchased clothes from brands or companies focusing on sustainability or providing sustainable alternatives; 79% answered not having purchased from Swiss brands focusing on sustainability. When asked about the potential reasons for not purchasing from more sustainable brands or companies, the most prevalent reason with a mean value of 0.52 was the lack of awareness in regards to potential more sustainable alternatives. 28%

answered finding sustainable alternatives being either too expensive or not in their budget. Other reasons that emerged from the respondent were that the style of sustainable alternatives wasn't suitable for themselves or that sustainable alternatives were hard to find and that the availability was very low.

Table 13: Reasons for not purchasing sustainably

Reasons	n	Count	Mean	Mode	SD
Not interested	85	6	0.070588	0	0.257656
Not aware of other alternatives	85	44	0.52381	1	0.502432
Too expensive/not in budget	85	24	0.282353	0	0.452816
Offerings don't correspond to my needs	85	7	0.082353	0	0.276533
Not satisfied with alternatives	85	3	0.035294	0	0.185617
Other	85	3	0.035294	0	0.185617

Those who answered positively to having purchased clothes from sustainable brands or companies were asked to mention if possible some of the companies or brands they had purchased clothes from. The answers will be analysed in the discussion part of the thesis (p.75).

Table 14: Sustainable consumption models

| Sustainable Business Model	n	Mean	Mode	SD
Second hand	85	0.729412	1	0.048473
Fashion library	85	0.070588	0	0.027947
Capsule wardrobe	85	0.082353	0	0.029994
Fashion-on-demand	85	0.176471	0	0.041595
Clothes swap	85	0.294118	0	0.049715
None	85	0.188235	0	0.042651

When questioned about alternative fashion and clothes consumption models, most millenials answered being aware of the second hand model. This outcome can be explained by the increase in popularity of second hand clothes in the past few years . In a survey conducted by the market research company Ipso in 2014 targeting women fashion shoppers in the UK, Germany, France and the USA, 3 out 10 women surveyed answered being more interested in fashion that 5 years ealier (Fitzgerald, no date). In general, the second hand model has seen a significant shift in attitude from consumers over the years. An increasing number of consumer being aware of second hand models means also an increasing number of consuer bringing items to be sold in second hand shops, leading to a greater quantity of choice.

In regards to the Millennials, the results shown earlier that when it comes to purchasing clothes, quality and affordability are important clothes attributes. The Swiss millennials answered being mostly motivated by practical motives such as bargains and convenience when purchasing clothes but in regards to emotional motives, uniqueness was valued has an important one. Some of the current second hand models offer affordable, of quality and one-off piece of clothings whithout producing new items and therefore creating additional pollution and waste.

Clothes swap obtained the second highest value with a mean of 0.294. Clothes swapping has also gained in attention recently; people bring clothes from their wardrobe that they don't wear anymore and exchange them with other people . The fact that this model is known and appreciated by Millennials could also be linked to the fact that Millennials are price conscious while also being on the hunt for new experiences. As discussed earlier, Millennials have been studied to be more involved in the experience than in the end product itself. Clothes swapping combines affordability, uniqueness and experience at the same time while limiting the waste generated in the production of clothes. 12% of the respondents answered not knowing any of these model while 12% answered being aware of the fashion-on-demand or made-on-demand business model.

The fact that Swiss millennials are less aware of the fashion-on-demand model can be explained by the fact that the concept of bespoke clothes, made-to-measure or on-demand clothes have other the years often been related to specific piece of garments, most often purchased for special occasion and relatively more expensive due to the costs of producing smaller quantities or using distinctive techniques

Figure 19: Sustainable consumption models

Sustainable Consumption models

Second hand   Fashion library   Capsule wardrobe
Fashion-on-demand   Clothes swap   None

12%
19%
12%
5% 5%
47%
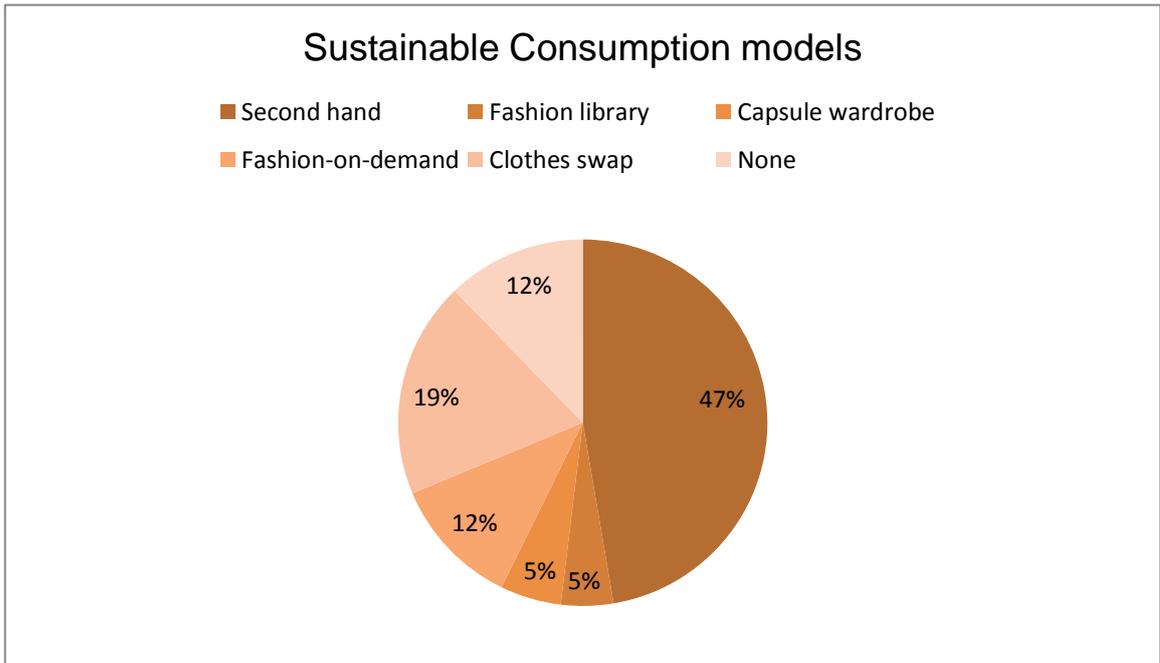
To conclude the survey, Millennials were asked to choose which sustainable alternative they would be the most interested in to for the industry to be more sustainable. Figure x illustrates the results.

Figure 20: Sustainable alternatives

Sustainable alternatives

Technology   CSR   Consumption   Circular Economy   ALL

17%
10%
12%
21%
40%
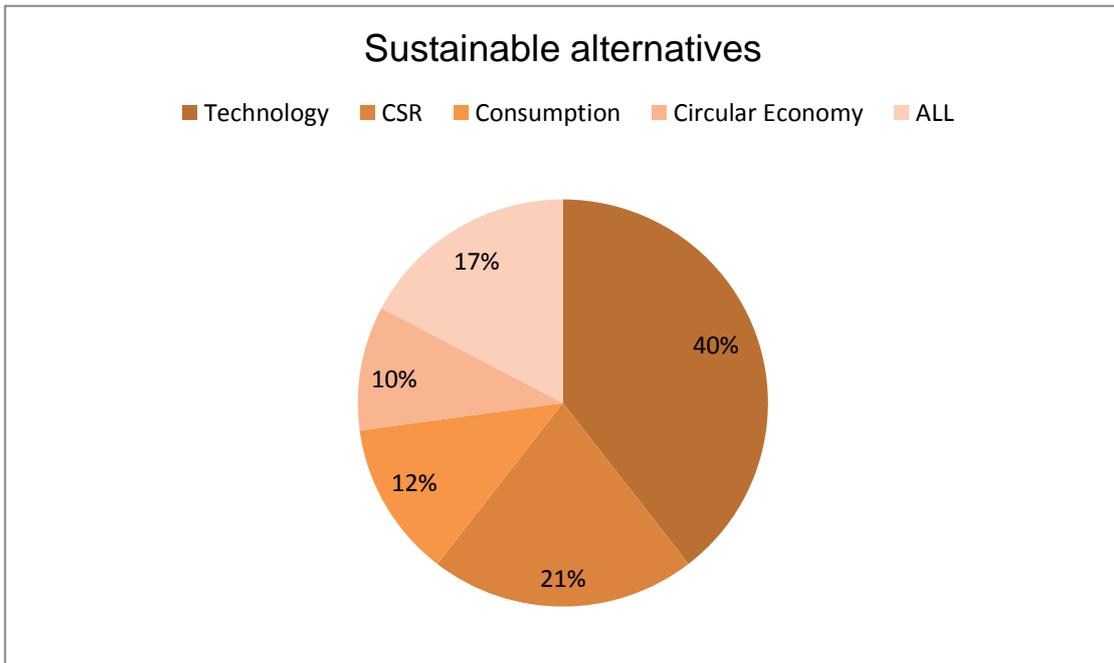
40% of the respondents answered being interested in technological innovation such as companies using technology to develop new sustainable fibres, more efficient production processes as well as zero waste production. This result doesn't come as a surprise as millenials are known to be oriented towards technology. According to Credit Suisse, one of Millennials' main concern is related to climate change and global warming mostly caused by greenhouse gas emissions which are linked to the use of fossile energies and industrial processes (Credit Suisse, 2017). Milennials have been studied to be attracted to clean tech, defined as processes, products or services that reduce waste and require few non- renewable resources through energy efficiency (Rouse, no date), in many different industries such as the car industry and building construction, therefore there is not much surprise in the fact that they are interested in innovative processes for the fashion and clothing industry.

21% answered being interested in alternatives promoting corporate social responsibility principles and having social impact such as transparency and traceability along the supply chain, fair trade and sweatshop practices as well as local sourcing.

17% answered being interested in all the different alternatives and therefore reinforcing the need for different alternatives but mostly for sustainability in the entire clothing and fashion industry.

Circular economy concepts such as upcylcling, re-fashionned clothes, clothes repair represented 10% of the results and alternative consumption models such as slow fashion, second hand or rental models represented 12%.

<u>Influence of gender</u>

An assumption which was made before starting analysing the results were that women and men don't necessarily have the same purchasing habits and don't necessarily place the same importance on clothes attributes and purchasing motives.

Other tests were conducted to verify if socio-demographic variables such as gender had an influence on the results. The question which were tested were in regards to the frequency of purchase, types of stores, purchase attributes as well as the questions in regards to sustainability.

The aim of the test is to see if men and women scored different means for the different question. The statistical test which was used to perform this phase of the research is t-tests: two-sample assuming unequal variances" with a significance level of α=0.05 using Excel. T-tests are useful as they can be performed on small samples without knowing the standard deviation of the entire population, which is the case for this research as only focusing on Swiss Millennials (Holmberg, 2017).

T-test checks the hypothesis: are all the means significantly different, denoted H0: $\mu1$ - $\mu2$ = 0, where H_0 is the null hypothesis that the two samples tested μ_1 and μ_2 will be cancelling each other if equal. If the hypothesis is rejected then it will mean that the two means are different, H1: $\mu1$ - $\mu2$ ≠ 0. The tests were two-tailed tests because no assumptions were made on which sample will have the higher means.

Table 15: example for t-test computing

	Variable 1	*Variable 2*
Mean	1.727273	1.366667
Variance	1.053872	0.447126
Observations	55	30
Hypothesized Mean Difference	0	
df	80	
t Stat	1.953779	
P(T<=t) one-tail	0.027111	
t Critical one-tail	1.664125	
P(T<=t) two-tail	0.054222	
t Critical two-tail	1.990063	

Table 16: Gender difference for purchase frequency

| Frequency	Mean Men	Mean Women	p-value	t-stat	t-critical two tailed
	N=55	N=30			
Weekly	0	0.018181818	0.321770638	1	2.004879
Monthly	0.1	0.254545455	0.061152329	1.899824	1.990847
Twice a month	0.1	0.163636364	0.399596742	0.847515	1.994437
Once every few months	0.3	0.363636364	0.555520626	0.592726	1.998972
A few times a year	0.466666667	0.2	0.016549522	-2.48179	2.009575
Very rarely	0.033333333	0	0.325581988	-1	2.04523

Table 16 is a summary of the t-tests made for the frequency of purchase. For the hypothesis H1: $\mu_1 - \mu_2 = 0$ to be rejected and therefore validating that the means are different, the p-value must be below 0.05, the significance level of the test, and the t-stat value must me out of the range of the t-critical two tailed value.

Every week: We can see that the mean value for the women sample is higher than for the men. However, the p-value is greater than the significance level of the test of 0.05 0.0321 > 0.05 and the t-stat value is within the t-critical two tailed range -2<1<2. Therefore the hypothesis H1: $\mu_1 - \mu_2 = 0$ is not rejected as the difference between isn't significant enough to assume that one gender purchase weekly more frequently than another.

From figure 20, we can see that man seem to have answered shopping a few times a year more than woman**.**

A few times a year: the mean value for men is higher than for women. The p-value is below the significance level of the test 0.016<0.05 and the t-stat value is out the t-critical two tailed range as -2.48 is greater than the lower tail value of -2.0085. H1: $\mu_1 - \mu_2 = 0$ is therefore rejected and the means are significantly different. We can therefore say that men answered purchasing clothes a few times a year more often than women.

Figure 21: Gender difference for purchase frequency
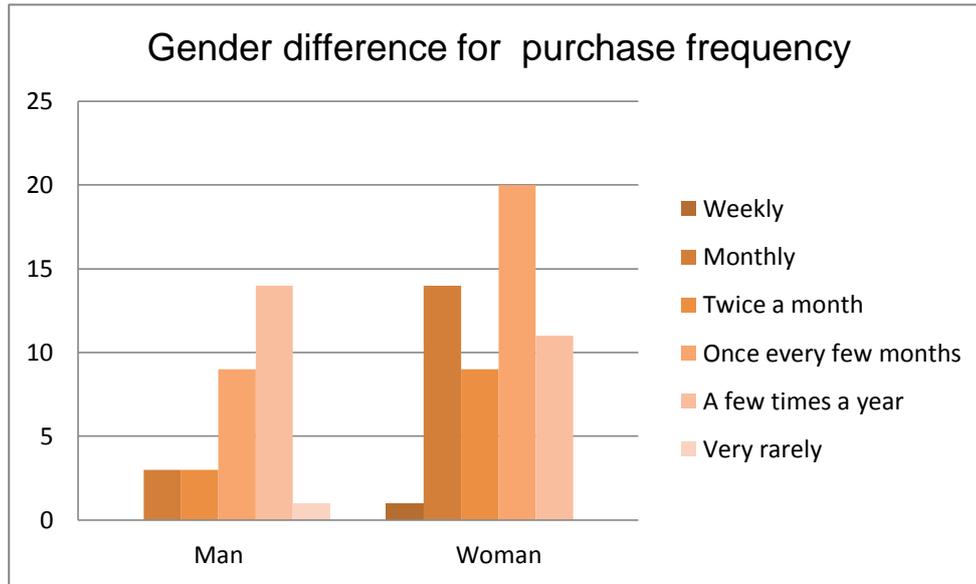
The same way, figure 20 shows that women seem to have answered purchasing clothes once every few months more often than men.

Once every few months: the mean value is greater for women with a value of 0.36. However the p-value is above 0.05 with 0.55>0.05 and the t-stat value is within the t-critical two tailed value -1.99<0.59<1.99. Therefore the difference among men and women means isn't significantly different and we cannot assume that women answered once every few months more than men.

Monthly: the mean value is higher for women with a value of 0.254, but the p-value of 0.061 is above the significance level of 0.05 and the t-stat value falls within the t-critical two tailed range-199<1.89<1.99. Therefore the difference between men and women means isn't significant enough to claim that women responded purchasing clothes every month more often than men.

From the t-test for purchase frequency we can see that the only difference in means which is significantly important is regarding purchase made a few times a year. Therefore we can say that men tend to purchase their clothes a few times a year. Women on the other hand, seem to shop most often once every few months even though men do it as well.

Table 17: Gender difference for types of stores

Types of stores	Mean Men	Mean Women	p-value	t-stat	t-critical two tailed
	N=55	N=30			
Physical stores	0.766666667	0.814815	0.614121	0.507087	2.004045
Thrift stores	0.1	0.072727	0.681014	-0.4134	2.006647
Online stores	0.266666667	0.309091	0.683096	0.410169	1.998972

Figure 22: Gender difference for types of stores
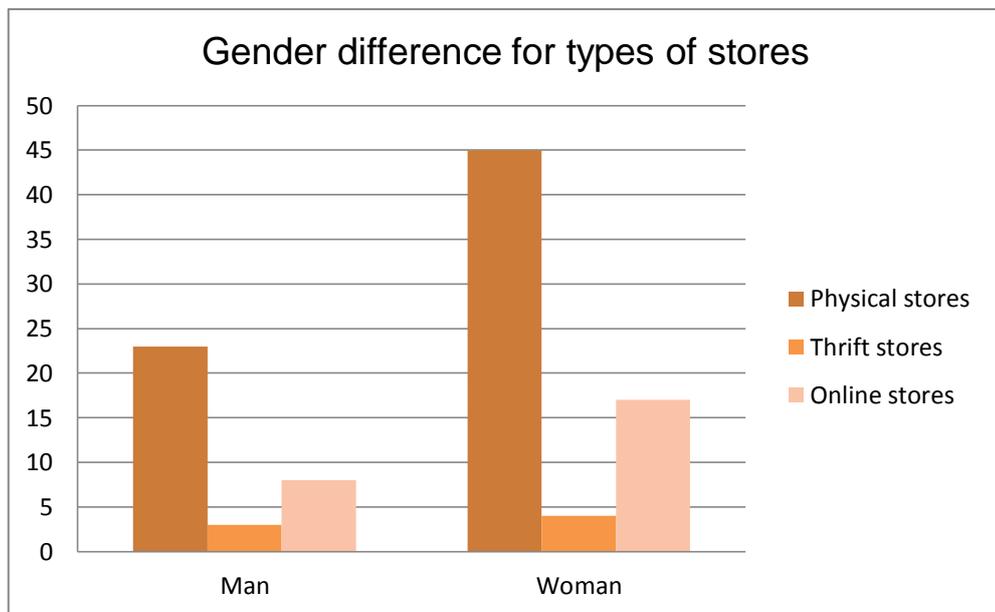
In regards to the types of stores, none of the p-value is below the significance level value of the test of 0.05. This means that none of the differences of means between men and women are significantly different to be able to say that one gender has answered suggestively differently from the other. ¨For the types of stores we can however see that both men and women have answered purchasing their clothes mostly from physical stores.

When it comes to the purchase motive we can see from the p-values that Shopping therapy, reward and leisure shopping are showing values below 0.05 and t-values which are outside of the t-critical two tail values. Looking at the mean values we see that women have higher values than men. These differences seem to be mostly related to emotional motives. From these results we can determine that women, although

having responded rarely purchasing clothes when needing to feel better or based on their psychological state are more disposed than men at doing so. The same goes for purchasing clothes to reward or indulge oneself as well as purchasing clothes as a free time activity. Both men and women millennials seem to be much more focused on practical motives than on social or emotional motives. The clothing or brand uniqueness seem to be more looked at by men than by women even though both consider this motive as only influencing their purchasing decisions occasionally.

Table 18: Gender difference for types of stores

Purchase motives	Mean Men	Mean Women	p-value	t-stat	t-critical two tailed
	N=55	N=30			
Bargain/sales	3.7333333	3.836363636	0.60756	0.515759	1.992543
Convenience	3.5454545	3.6	0.816909	-0.23236	1.992997
Clothes replacement	3.1818182	3.7	0.065435	-1.87605	1.999624
Shopping therapy	1.6	2.2	0.013322	2.540545	1.994945
Reward	2	2.836364	0.002201	3.197103	1.999624
uniqueness	3	2.833333333	0.591891	0.538892	1.998972
Brand loyalty	2.7636364	2.733333333	0.928699	0.089925	2.007584
Leisure shopping	2	2.9454545	0.001405	3.354917	2.001717
Social pressure	1.7272727	1.366666667	0.054222	1.953779	1.990063
Gift giving	2.5	2.654545455	0.514507	0.656082	2.004045

Note: 1=Never; 2=Rarely; 3=Sometimes; 4=Often; 5=Always

No significant differences are noticeable among men and women's answers in regards to which sustainable alternative would interest them the most. Both gender seem to be the most interested in technological innovations and corporate social responsibility practices and most importantly both gender seem to bring the same interest in an industry in which all the different alternatives are implemented.

Effecting different tests to evaluate the differences between men and women answers allow *H5: Gender profile of the respondent significantly influences the way/importance given to purchasing motives* to be considered. Although some significant differences have been observed between men and women in regards to purchase frequency and purchase motives, the differences remain marginal and both men and women Millenials seem to share relatively similar purchasing habits and purchasing motives.

Therefore, H5*: Gender profile of the respondent significantly influences the way/importance given to purchasing motives* isn't validated.

Figure 23: Gender difference for purchase motive
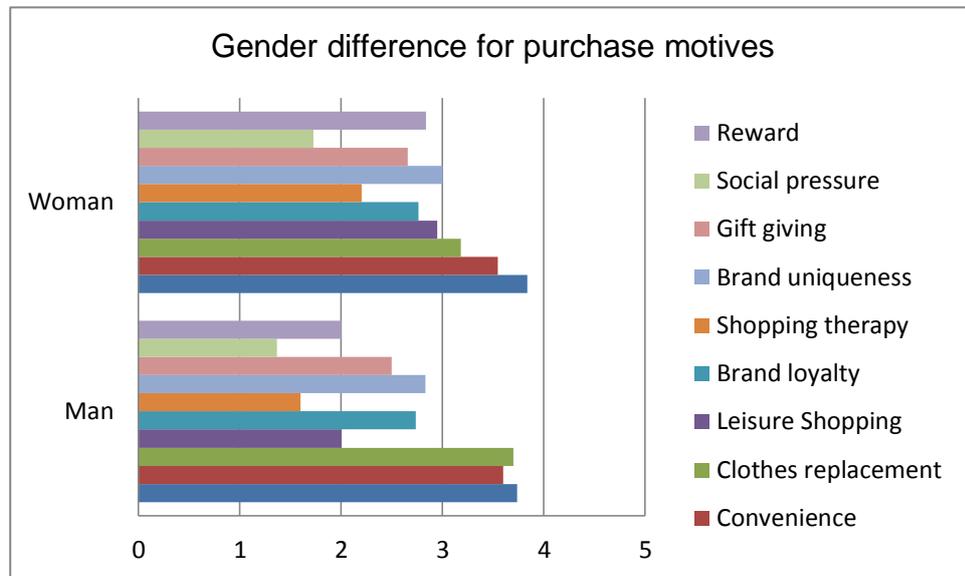
Table 19: Gender difference for sustainable alternatives

Purchase motives	Mean Men	Mean Women	p-value	t-stat	t-critical two tailed
	N=55	N=30			
Technological	0.366666667	0.381818182	0.892133	-0.13618	2.000298
CSR	0.166666667	0.218181818	0.565373	-0.57783	1.997138
Consumption	0.133333333	0.109090909	0.751127	0.318745	2.004045
Circular economy	0.1	0.090909091	0.894231	0.133547	2.002465
All	0.1	0.2	0.20318	-1.28391	1.665707

3. Discussion

3.1 _Summary of the findings and literature review_

Even though the data collected in the surveys were only representing a very small portion of the population that is the Swiss Millenials, this research provides insights on consumer's preferences and purchasing habits when it comes to clothes and fashion.

When looking at the frequency of purchase, most Millennials interviewed answered buying clothes once every few months or a few times a year. This result seems to go against the widespread trend for clothing overconsumption which was drawn in many different countries (Green peace, 2018).

The data collected aren't sufficient enough to draw conclusion on whether Swiss millennials are consuming fewer clothes than other samples or populations but indicates a positive sign for sustainability in the clothing industry. When comparing means between men and women clothes purchase frequency, the results showed that men mostly answered purchasing clothes a few times a year a lot more than women.

The other purchase habits results show that most of the Millennials consumers are purchasing clothes in physical stores and most often from fashion retailers' brick and mortar stores or online fashion retailers.

In regards to the motives that influence when Millenials purchase clothing items, practical motives came out as the ones influencing purchase decisions the most frequently.

Bargains and sales are most likely to influence Millennials when it comes to buying a garment; this is mainly due to the fact that many Millennials either started their working career while economies weren't as stable as for previous generations such as the baby-boomers or are just starting their adulthood and therefore have only limited financial resources to spend on items (Dunkel, 2018). The affordability of the clothes also revealed to be an important attribute for choosing to purchase an item.

Millennials worry about their financial situation both in the short and long term (Saar. 2017) but the price isn't the only attribute that matters to them when purchasing clothing items.

The uniqueness of the piece of clothing or the brand seems to be a motive that has an influence on which piece of clothing millennials desire to spend their money on. When

wearing clothes, most of the Millenials interviewed expressed being mostly influenced by practical motives such as being protected from the weather but emphasised the need for clothes to be comfortable and bring them a feeling of confidence.

To find their place at work, Millennials will have to be confident in their abilities. Choosing clothes which reflect or affect one's mood and confidence is reffered as "Enclothed cognition" (Fashion Rogue, 2017) and often links the comfort of clothes with confidence. For this reason, both comfort and confidence scored high values in the survey.

A majority of the interviewed millennials answered that choosing clothes that express their identity was also important to them.

Millennials have grown up with different values from their parents or their grandparent's generations and while they are facing less economic freedom Millennials seem to compensate for it by creating new lifestyles for themselves which are less based on physical possessions and more on experiences. They also look very different from other generations in term of education, work experience, family orientation (Calvas, 2017). Wearing clothes that demonstrate their value appeared to be an important motive for the Swiss millennials interviewed, as through the clothes they are wearing they are able to demonstrate and express which lifestyle they live or wish to live.

Brand meaningfulness and brand loyalty scored lower average values in terms of purchase attributes and purchase motives. This can be explained by the fact that more Millennials favour spending money on experiences rather than on physical goods. Brands are still important to them but they don't feel as attached to the name of the brand if the quality, uniqueness of the item or comfort doesn't correspond to what they are expecting. The men millennials who answered to the survey seem to bring a slightly more important consideration to the clothing uniqueness and brand loyalty than women.

In regards to purchase attributes, quality and fashionability appeared to be the most important attribute while considering buying an item alongside affordability.

In terms of sustainability in the fashion industry, 89% of the Millennials answered finding the concept important to the production and consumption of clothing items. However, only 53% answered taking the concept of consideration while purchasing clothing items.

A majority of the surveyed Millennials answered to never having bought clothes from companies or brands being focused on sustainability or providing more sustainable options. In the same direction, most Millennials answered to not having purchased clothes from Swiss companies focusing on or providing more sustainable alternatives.

From the ones who have already purchased clothes from more sustainable companies, the Swiss company Switcher was mentionned. Switcher focused on providing simply designed clothes made from organic textiles and natural materials while providing total traceability and transparency along their supply chain from the raw material to the transportation of the finished products in Switzerland. Switcher also focused on improving the working conditions in the fashion industry through the Fair Wear foundation. Unfortunately the company isn't operational anymore.

Patagonia and Mammut were also mentionned, both providing innovative products designed for longevity and going against current trends of overconsumption through consumer education.

In regards to alternative consumption, most millennials answered being most aware of the second hand model as well as the clothes swap model. Both concepts have gained in awareness in the recent years.

Technological innovations oriented towards sustainability such as efficient production processes as well as zero waste production processes appeared to be the alternatives in which the interviewed Millennials were the most interested in. Both Corporate social responsibility and Circular economy concepts scored similar scores. Several Millennials have answered being interested not only in one concept or alternative but in all of them.

Overall, this research shows that the Swiss Millennials interviewed mostly shop once every few months or a few times a year, most frequently in fashion retailers physical stores or fashion retailers online stores.

Affordability, quality and fashionability are attributes which are considered very important for purchasing clothing items.

Practical motives such as bargains and sales as well the convenience of the products have an important influence on when Swiss millennials decide to purchase clothes. The Swiss Millennials interviewed will predominantly focus on practical motives when choosing which clothes to wear. However, Swiss millennials are likely to purchase clothes which allow them to demonstrate values which are important to them and

express their identity. The uniqueness of the clothes or the brands appeared to be considered important. Comfort and feeling of confidence have also been highlighted as considerable motives.

In terms of sustainability, most Millennials agreed on the importance of Sustainability in the clothing and fashion industry, although a smaller portion actually take into consideration sustainability while purchasing clothes. Most Millennials answered either not being aware of more sustainable alternatives or considering the more sustainable alternatives as too expensive or not being in their budget. This can be explained

Second-hand and clothes swaps appeared to be the two most known alternative consumption models and most intervied answered being the most interested in sustainable technology innovations to move towards a more sustainable fashion and clothing industry.

3.2 *Recommendations*

First and foremost, the clothing and fashion industry is undeniably an important sector both for the global economy and the Swiss economy.

 However, today's current liner way of consuming goods and, in the context of this thesis, clothes has led to important negative impacts both social and environmental.

 As discussed in the beginning of this thesis, sustainable development aims at meeting the needs of the current generations without damaging the ability of the future generations to meet their own needs. In this sense, the current textile, clothing and fashion industry is far from being sustainable, as past economic trends have led the industry being led by fast fashion companies going against many of sustainable development principles. Sustainable development requires companies to take into account the full cost of their business operations while using resources in a way wich is both efficient and economically viable, using natural resources at a bearable rate while taking into account resources scarcity and the damages caused as well as managing business activities with fair means.

The textile and fashion industry needs changes in order to move towards a more sustainable future. It is important to state that there isn't one solution which can solve all the problems which are linked with the current production and consumption of textiles and clothes. A more sustainable textile industry would require actions from all the stakeholders involved and along the entire value and supply chain (Helen McArthur

foundation, 2017). According to the McArthur foundation, a new textiles economy require a change in the use of substance of concerns, a transformation in the way clothes are designed, sold and used, an improvement in the recycling of clothes by transforming clothes design and collections and an adoption of effective resources use as well as renewable resources.

The following recommendations are based on both the information collected in the literature review as well as during the research phases of the thesis in regards to Millennials consumption habits and available sustainable business models in Switzerland.

<u>Sustainable business models following narrow efficiency logic</u>

The narrow efficiency logic aims at reducing the impact of production processes on the environement as well as reducing the use of fossil energies through low energy production systems and therefore being energy efficient. The millennials interviewed have answered being interested in sustainable technology innovations the most.

Narrow efficiency based business models aim at tackling sustainability issues at the production stage of the clothing items therefore aiming at changing the way clothes are produced. Low energy production systems however require investments to be implemented. The majority of clothes are still produced in developing economies, and although implementing such innovations could help economies to grow, it puts a restriction on the number of suppliers being able to provide low or renewable energy produced textiles. The scalability of companies focusing on narrow efficiency is therefore concerned. With fewer suppliers being able to provide low energy or clean production, the costs of production increase leading to an increase in prices and a reduction of customer's value (Pal and Gander 2018, p.255). With low market shares, the impact that companies using narrow efficient process have is limited as many other actors not using low impact production systems will still have the same impact.

In regards to consumers and Millennials, Narrow efficiency models are interesting but it requires consumers being more informed on the real impact that the traditional production of clothes has on the environment, otherwise few people will be ready to pay the price difference.

Sustainable business models following narrow Accuracy logic

The Narrow accuracy logic aims at better matching production to demand and therefore lessen resource usage and reduce the proportion of clothes which aren't sold and ends up as waste. Narrow accuracy models require smaller investments than narrow efficient models but also have a potential smaller environmental value. For instance, Zara is considered has having to some extent a narrow accuracy logic as it produces a smaller quantity of clothing for each production and therefore avoiding to have too much unsold stock. Zara's sustainability remains limited due to the fact that it proposes fast fashion, with many different collections and therefore accelerating the consumption of clothes. The sustainable value of narrow accuracy models is limited due to the fact that even though it reduces the amount or resources used for each clothing item, it doesn't necessarily reduce the overall consumption of clothes; the environmental value is outdone by the increase in consumption.

Narrow-accurate is much more scalable than narrow efficient models and could answer to Millennials' desire for affordable, of quality and fashionable clothes. However, there is a need for the sustainable benefit to be greater than the sustainable or environmental cost.

The Spanish company Twothird, for instance based its business model on narrow accuracy logic. The company is offering clothes which are produced locally or in in neighbouring countries. It bases its production on a pre-order system which allows them to estimate how many items are going to be sold and therefore having less waste of raw material and therefore being able to sell their products at relatively accurate prices. (Two third, no date)

If taking the environmental value well into consideration by the company, the narrow accuracy could be a model interesting for Swiss Millennials. The pre-order model however lead to longer order lead times but the Swiss Millennials responded prioritizing quality, affordability and fashionability over availability.

Sustainable business models following slowing logic

Sustainable business models following the slowing logic aim at slowing the consumption of clothes through the proposition of clothes made of high quality materials and from high quality processes.

 One of the approaches of the slowing logic is to extend the useful life of the garment through multifunctional or incremental garment construction. The environmental value

is created through reduced consumption and therefore reduced resource usage and waste generated. Business models following the slowing logic are, by designed in contradiction with the dynamic of fashion which aims at changing with time. Extending longevity aims are reducing the frequency at which consumers purchase new garments and therefore provide styles and designs which can last through time.

Another approach to the slowing logic is through business models providing tailoring services, on-demand clothes and re-fashion. The aim is to reduce the waste generated by clothes that are either not sold or not used anymore. For instance, the Swiss company Prêt-à-reporter provides tailoring services to transform consumers' old clothes into completely new garments. For instance, Prêt-à-reporter's designer Eva Waldmann is able to transform old shirts into skirts or completely different blouses.

The Swiss company Self-nation is providing fashion-on-demand, bespoke jeans which are made from durable materials sourced from neighbouring countries and locally produced. Consumers can choose the style of the jean or trouser they desire as well as the colour fabric and additional feature. The entire process can be made either in their physical store in Zurich or through their online store where advices are given for consumers to take their measures. 3D visualisation technology has been implemented on their website to allow customer to visualize what the jeans look like on them. Each jean is produced on demand of the consumer in the company's atelier in Zurich by passionate workers. Tailored-made is a model which often has been related to luxury or haute couture clothes, therefore addressing only small or niche markets. The sustainable value gained was then very small as most consumers couldn't afford it.

Although still limited to certain types of clothes tailor made or on-demand fashion are likely to be interesting models for Swiss millennials. In the survey, most have answered considering affordability as one of the most important attribute for purchasing clothes but quality was also very much dominant. Millennials in general have been studied to be more attracted by experiences than by solely physical goods. Fashion-on-demand or bespoke clothes models can combine Swiss Millennials desire for quality and indirectly for comfort. Proposing personalisation of clothes also is aligned with Swiss Millennials desire for their clothes to be unique and express their values and identity.

Premium quality clothes and brands as well as social branding are also of interest for Swiss Millennials due to the fact that they desire quality clothes. The research has shown that brand meaningfulness wasn't an attribute judged of high importance, however, Swiss Millennials have answered important the fact that clothes represent their values. For this reason, premium quality clothes might interest Swiss Millennials

but will depend on consumers to have the knowledge to be aware of the value of different fashion, techniques and technologies. Premium quality clothes are most likely to remain focused on niche segments such as sportswear, ethical fashion or luxury and therefore will have a limited scope for environmental value.

3.3 *Overall results and conclusion*

The research on Swiss millennials' purchasing and consumption behavior when it comes to fashion and clothes has revealed that Swiss Millennials appeared to be practical shoppers who will make decisions based on practical motives such as bargains, sales and convenience of the clothes ; the same goes for when they are choosing which clothes to wear. Millennials mainly choose the clothes they are wearing based on its adaptability to the weather, the protection and the comfort it's provide.

Affordability, quality and fashionability are attributes that have been considered as very important for Millennials while purchasing clothes.

The clothes they purchase or wear should provide them with comfort and confidence, being able to express their identity and their values.

In regards to sustainability, most Millennials have answered being aware of the importance of sustainability in the fashion and clothing industry although a lesser proportion have responded taking into consideration sustainability while purchasing clothes.

The two main reasons mentionned by Swiss Millennials for not purchasing more sustainably were a lack of knowledge in regards to possible more sustainable alternatives as well as the perception of sustainable alternative being too expensive or out of their budget.

In regards to the question of this thesis: "to what degree could Swiss Millennials' conflicting desire for fashion, brand meaningfulness and sustainability be answered by the fashion-on-demand?",

The answer to this question isn't definite as many variables influence the way people purchase and decide which clothes to wear even though being part of the same generation and the same country. This research has however showed that the Millennials interviewed shared common answers in regards to what they were considering before purchasing clothes.

The fashion-on-demand as discussed earlier in the thesis can be applied according to both the narrow accuracy logic and the slowing logic.

In terms of fashionability, the narrow accuracy model seem to be the most adapted as it focuses mostly on adjusting production to demand more accurately . It however can have a very limited sustainable value if nothing is made from the company to educate the consumers about importance of purchasing clothes in a more sustainable manner.

In terms of sustainability, models based on the slowing logic have probably a greater possibility to have more important environmental value as it aims at slowing the consumption of clothing items and therefore have a longer perspective. Fashion-on-demand models based on the slowing logic by providing bespoke or custom made clothes can also answer for consumers' desire for quality and unique piece of clothing.

When it comes to brand meaningfulness, the results indicated that it wasn't the most important attribute for Swiss millennials when considering purchasing clothes. Affordability has revealed to be of a greater importance. Business models based on either the logic of slowing or closing the resource flows but aiming at sharing clothes such as rental models, or clothes swaps as well as second-hand stores seem to be much adapted to provide affordable, unique and of quality clothes while creating environmental value. These models seem to be able to create experiences rather than just provide physical goods, something that has shown to be of interest for Millenials

All in all, the Swiss textile, clothing and fashion industry has revealed to be a very innovative industry (Appendix 5) with many small to medium companies moving towards more sustainable production of clothes as well as providing consumers with different experiences and alternatives in order to answers to the different needs of different customer while moving away from the linear consumption model.

Swiss millennials have appeared to be aware of the importance that sustainability has on the fashion and clothing industry yet a gap still remains between knowledge and action.

4. Conclusion

This paper fills a gap by trying to link Swiss Millennials' consumption in fashion and clothes with the existing literature that exist in regards to sustainable business models for the fashion and clothes industry

The thesis also aims at evaluating the potential of the fashion-on-demand model and other sustainable business models in Switzerland for Millennials.

This research first looked at the theory that shapes business models, sustainable business models as well as sustainable business models. The literature review showed the complexity of the topic which keeps on being explored and redefined on a regular basis. The literature review also presented the complexity of the fashion and retail industry as a whole and the need for the industry to move towards more sustainable practices along the entire supply chain. Literature also revealed the need for the businesses to change the way they operate businesses in order to be able to take into account environmental, social and economic aspects.

The research has revealed that practical motives are the motives which drive the most frequently Swiss millennials to purchase or wear clothes while social motives such as social pressure and fitting in with others revealed to be much the less important motives.

Affordability, fashionability and quality are the three attributes that stand out for Swiss millennials while making clothes purchasing decisions.

The clothing and fashion industry is an industry with a very complex supply chain having effects on both the environment and society. Sustainability cannot be conveyed by one business model or by one single-framed approach but by approaches addressing the impact of the clothes from the fibres cultivation, production, manufacturing, distribution, use, re-use and final discarding.

As discussed in the literature review of the thesis, not all clothing items or textile items have the same impact and therefore require different attitudes and actions. For instance, tops and t-shirts came about being the most regularly purchased item by the interviewed Swiss Millennials and therefore the items having the shortest useful life in the consumer wardrobe. These items as purchased the most frequently can be assumed being less influenced by practical motives such as protection and functionality and more by emotional motives such as expressing identity, reflecting confidence as well as fashionability. An approach toward sustainability could be focused on the fibres

used to produce the t-shirts and tops by taking into consideration the resources and energy used to cultivate and produce the fibres as well as the potential environmental damages linked to the disposal or discharging of the item or fiber. On the other hand, underwear is mostly purchased because of their practicality and affordability. An approach for sustainability would be to consider the energy, water and detergent used during their consumption.

As for now, the market is mostly composed of big retailers grounding their business models on fashionability and affordability. Sustainability is being increasingly taken into consideration by the industry leaders but still represent a small part of their activities or market shares. Most changes brought are based on technology innovations and therefore neglect the effect that behaviors have on determining clothes' overall impact.

The fashion-on-demand business model has the potential to answer to Swiss Millennials need for fashionability, quality and sustainability while bringing soft cultural changes needed to improve sustainability but the lack of awareness of alternatives and the perception of sustainable options being out of their budget means that most Millennials are still consuming clothes from fast-fashion retailers.

The Swiss fashion and clothing industry has revealed to be more and more made of smaller companies centering their business model on sustainability and answering to a variety of changes needed both for the industry, environment and the consumers. An increasing number of companies doing business in a sustainable manner and proposing consumers' alternative processes, products, and manner of purchasing will allow collective awareness and therefore move the industry in a direction which is necessary.

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Appendix 1: English Survey

1. You are
   - ☐ Man
   - ☐ Woman
   - ☐ Other

2. Your age is

   | |

3. In which Canton do you live

   - ☐ Geneva
   - ☐ Vaud
   - ☐ Neuchâtel
   - ☐ Bern
   - ☐ Luzern
   - ☐ Valis

   - ☐ Zurich
   - ☐ Friburg
   - ☐ Graubunden
   - ☐ Basel
   - ☐ Ticino
   - ☐ Other (please indicate)

   | |

4. Which factor is the most important for you when purchasing a new clothing item

   - ☐ Affordability
   - ☐ Availability
   - ☐ Quality
   - ☐ Fashionability
   - ☐ Brand meaningfulness

5. Using a scale of 0= never to 5=often, please rate the following factors as to their likelihood to influence the way you PURCHASE clothing items

	0	1	2	3	4	5
- Bargain/ sale	○	○	○	○	○	○
- Convenience						
- Clothes replacement						
- Retail therapy						
- Reward						
- Uniqueness of brand/clothing item						
- Leisure shopping						
- Social pressure						
- Gifts						

6. Using a scale of 0= never to 5 often, please rate the following factors as to their likelihood to influence the way you **wear** clothing items

	0	1	2	3	4	5
- Warmth	○	○	○	○	○	○
- Protection						
- Comfort						
- Confidence						
- Confidence						
- Joy						
- Meaning						
- Demonstrate values						

- Express identity
- Demonstrate status
- Fitting in
- Be adored

7. At which frequency do you usually purchause new clothing items

☐ Every week   ☐ once every few months
☐ Twice a month   ☐ A few times a year
☐ Once a month   ☐ very rarely

8. What clothing item do you purchase the most frequently

☐ T-shirts/ Tops/Shirts   ☐ Trousers/Jeans/Shorts
☐ Knitwear/Jumpers   ☐ Outwear/Jackets
☐ Dresses/Skirts   ☐ Underwear/socks
☐ Jewelries   ☐ Accessories (Scarves, hats, caps, gloves,…
☐ Shoes   ☐ Other (please indicate)

9. Where do you most often purchase your clothing items
☐ Physical stores   ☐ Thrift shops/ Second hand stores/Flea Market
☐ Online stores   ☐ other (please Indicate)

10. Where do you most usually purchase your clothing items

☐ Fashion retailers (H&M, Zara, Mango, Pull & Bear, C&A,…)
☐ Fashion online retailers (Asos, Zalando,…)
☐ Independent Labels/brands physical stores
☐ Independent Labels/ brands online stores
☐ Brand Physical stores
☐ Brand online stores
☐ Other (please indicate)

11. Do you consider sustainability important to the production and consumption of textiles, clothing and fashion items

☐ Yes
☐ No

12. Is Sustainability something you take into consideration while purchasing clothing items

☐ Yes
☐ No

13. . Have you already purchased clothing items from clothing/fashion brands or companies focused on sustainability/providing sustainable alternatives?

☐ Yes
☐ No

14. . If yes, from which companies/brands/retailers

15. If no, for which reason?
    Not interested
    Not aware of more sustainable options/brands/companies
    Too expensive/Not in my budget
    Offerings doesn't correspond to my needs
    Not satisfied with alternatives
    Other

16. Have you already purchased clothing items from SWISS clothing/fashion brands or companies focusing on sustainability/providing sustainable alternative?

17. From the list below, which innovative sustainable business model do you know/have you heard of?
    Second-hand
    Fashion-library/clothing library
    Capsule wardrobes/lowsumerism
    Fashion-on-demand/tailored made
    Clothes swap
    None

18. If you had to change the way you purchase/consume clothing items which of the following alternatives would you be the most interested in
    Technological innovation: companies that use sustainable raw materials and fibres, more efficient production processes, zero waste production
    Corporate Social Responsibility: Sweatshop free, transparency, fair trade practices, local sourcing and production
    Consumption: purchase from second hand, purchase slow fashion, reduce consumption of clothing items, experience rather than ownership
    Circular economy: purchase fashion made from waste/upcycled, purchase products which can be repaired/re-used/recycled
    All of the above
    None

Appendix 2: French Survey

1. Vous êtes

☐ Un homme
☐ Une femme
☐ Autre

2. Votre âge

3. Dans quel canton habitez-vous?

☐ Genève   ☐ Zurich
☐ Vaud   ☐ Fribourg
☐ Neuchâtel   ☐ Grisons
☐ Bern   ☐ Bâle
☐ Lucerne   ☐ Tessin
☐ Valais   ☐ Other (please indicate)

4. En utilisant une échelle de 0=jamais et 5= souvent, veuillez évaluer les facteurs suivant quant à leur probabilité d'influencer la façon dont vous ACHETEZ des vêtements

	0	1	2	3	4	5
	◯	◯	◯	◯	◯	◯

- Bonne affaires/soldes
- Convenance/opportunité
- Besoin de remplacé un vêtement
- Shopping thérapie
- Récompense
- Exclusivité/caractère unique de la marque/vêtement
- Fidélité à la marque
- Shopping de loisir
- Pression sociale
- Achat de cadeaux

5. En utilisant une échelle de 0=pas important à 5=très important, veuillez évaluer les facteurs suivants quant à leur probabilité d'influencer vos choix pour PORTER un vêtement

	1	2	3	4	5
	◯	◯	◯	◯	◯	◯

- Adapté aux conditions météorologiques
- Protection
- Confort
- Confiance en soi
- Joie
- Exprimer ses valeurs
- Exprimer son identité
- Démontrer son status
- S'accroder/Correspondre à un groupe
- Être adoré

6. A quelle fréquence achetez-vous habituellement de nouveaux vêtements ?

☐ Chaque semaine   ☐ Une fois tous les quelques mois
☐ Une fois par mois   ☐ Deux fois par mois
☐ Très rarement   ☐ Autre [   ]

7. Quels vêtements achetez-vous le plus fréquemment ?

☐ T-shirts/ Hauts/Chemises   ☐ Pantalons/Jeans/Shorts
☐ Tricots/Pulls/Gilets   ☐ Vestes
☐ Robes/Jupes   ☐ Sous-vêtements/Chaussettes
☐ Bijoux   ☐ Accessoires (Echarpes/Chapeaux/ casquettes/gants/…)
☐ Chaussures   ☐ Autre (please indicate)
                              [   ]

8. Où achetez-vous le plus souvent vos vêtements ?

☐ Magasin/boutiques   ☐ Friperies/Boutiques d'occasion/Marchés
☐ Boutiques en ligne   ☐ Autre (please Indicate)
                          [   ]

9. Où achetez-vous le plus souvent vos vêtements ?

☐ Détaillants de mode (H&M, Zara, Mango, Pull & Bear, C&A,…)
☐ Détaillants de mode en ligne (Asos, Zalando,…)
☐ Marques/boutiques/labels indépendentes/s
☐ Marques/boutiques/labels indépendentes/s en ligne
☐ Marques magasin/boutique physique
☐ Marques boutique en ligne
☐ Autre [   ]

10. Estimez-vous que le concept de durabilité (durabilité écologique, sociale et économique) soit important pour la production et consommation de textiles, vêtements et d'articles de mode ?

☐ Oui
☐ Non

11. Est-ce que le concept de durabilité (durabilité écologiques, sociale et économique) est quelque chose que vous prenez en considération lors de l'achat de vêtements ?

☐ Oui
☐ Non

12. Avez-vous déjà acheté des vêtements auprès de marques de vêtements / de mode ou de sociétés axées sur le développement durable / fournissant des alternatives durables

13. Si oui, de quelles marques, sociétés
14. Si non, pour quelles raisons

    Pas intéressé
    Pas informé sur d'options plus durables
    Trop cher/pas dans mon budget
    Les offres ne correspondent pas à mes besoins
    Pas satisfait des alternatives

15. Avez-vous déjà acheté des vêtements auprès de marques SUISSES de vêtements / de mode ou de sociétés spécialisées dans le développement durable / offrant des alternatives durables?

16. De la liste ci-dessous, quel modèle économique durable innovant connaissez-vous / avez-vous entendu

    Second hand
    Bibliothèque de mode / Fashion library
    Armoires capsules/minimalisme
    Mode à la demande / sur mesure
    Echange de Vêtements
    Aucun de ces choix

17. Si vous deviez changer la façon dont vous achetez / consommez des articles d'habillement, laquelle des alternatives suivantes vous intéresserait le plus?

    - Innovation technologique: Entreprises utilisant des matières premières et des fibres durables, ayant des procédés de production plus efficaces, des procédés de production sans émission de déchets
    - Responsabilité sociale d'entreprise: Sweatshop Free, transparence, pratiques commerciales équitables, approvisionnement et production locale
    - Consommation: achat de vêtements de seconde main, achat de slow-fashion, réduction de la consommation de vêtements, privilégier l' expérience plutôt que la propriété
    - Économie circulaire: achat de produits fabriqués à partir de déchets (upcycling), achat de produits pouvant être réparés / réutilisés / recyclés
    - Toutes les alternatives
    - Aucunes des alternatives

Appendix 3: German Survey

1. Sie sind
   ☐ Man
   ☐ Frau
   ☐ Andere

2. Wie alt sind Sie?

3. In welchem Kanton wohnen/leben Sie?

   ☐ Genf   ☐ Zürich
   ☐ Waadt   ☐ Freiburg
   ☐ Neuenburg   ☐ Graubunden
   ☐ Bern   ☐ Basel
   ☐ Luzern   ☐ Tessin
   ☐ Wallis   ☐ Andere (please indicate)

4. Welcher dieser Faktoren scheint am wichtisten zu sein, wenn Sie eines neuen Kleidungsstück/Modeartikel kaufen?

   ☐ Erschwinglichkeit   ☐ Qualität
   ☐ Verfügbarkeit   ☐ Eleganz/Modefähigkeit
   ☐ Markenaussagefähigkeit

5. Bitte bewerten Sie die folgenden Faktoren anhand einer Skala von 0 = nie und 5 = häufig, wie wahrscheinlich es ist, dass Sie die Art und Weise beeinflussen, wie Sie Kleidung KAUFEN.

   0   1   2   3   4   5
   ○   ○   ○   ○   ○   ○

- Schnäppchen/ Gelegensheitskeuf
- Bequemlichkeit
- Kleidungsstück ersetzen
- Kaufrausch
- Belohnung
- Einzigartigkeit der Marke/Kleidungsstück
- Freizeit Einkäufer
- Sozialer Druck
- Geschenke Einkäuker

Unter Verwendung einer Skala von 0 = nicht wichtig bis 5 = sehr wichtig, bewerten Sie bitte die folgenden Faktoren hinsichtlich ihrer Wahrscheinlichkeit, Ihre Wahlmöglichkeiten beim TRAGEN eines Kleidungsstücks/Modeartikel zu beeinflussen

0	1	2	3	4	5
◯	◯	◯	◯	◯	◯

- Wärme/ an Wetter/Temperatur angepasste
- Schutz
- Komfort
- Selbstbewusst fühlen
- Freude
- Werte demonstrieren
- Identität auszudrücken
- Um Status zu demonstrieren
- Zu einer Gruppe passen
- Verehrt werde

6. Wie oft kaufen Sie neue Kleider?
   ☐ Jede woche   ☐ Einmal im Monat
   ☐ Zweimal im Monat   ☐ Einmal alle paar Monat
   ☐ Sehr selten

7. Welches Kleidungsstück kaufen Sie am häufigsten?
   ☐ T-shirts/Oberteile/Hemden   ☐ Jacken
   ☐ Hosen/Jeans/Shorts   ☐ Kleider/Röcke
   ☐ Strickwaren/Pullover/Westen   ☐ Zubehör
                                     (Schals/Mützen/Caps/Handschuhe/...)
   ☐ Schmuck   ☐ Schuhe
   ☐ Andere

8. Wo kaufen Sie Kleidunsstück am häufigsten?
   ☐ Geschäfte
   ☐ Second-hand Läden/Märkte
   ☐ Online shops

9. Wo kaufen Sie Kleidungsttück am häufigsten
   ☐ Modehändler (Zara, H&M, Mango, Pull&Bear, C&A,..)
   ☐ Online Modehändler (Asos, Zalando)
   ☐ Unabhängige Marken/Boutiquen/Labels
   ☐ Unabhängige Marken/Boutiquen/Labels
   ☐ Marken physische Geschäfte

   ☐ Marken online shop
   ☐ Andere

10. Denken Sie dass das Konzept der Nachhaltigkeit (ökologische, soziale und ökonomische) für die Produktion und dem Konsum von Textilien, Bekleidung und Modeartikel wichtig ist?

☐ Ja
☐ Nein

11. Ist das Konzept der Nachhaltigkeit (ökologische, soziale und ökonomische)
etwas, das Sie beim Kauf von Kleidung berücksichtigen?

☐ Ja
☐ Nein

Appendix 4

No		Category	Validation
At which frequency do you usually purchase new clothing items			
Freq_weekly	Responded every week	Frequency	1=Yes; 0=No
Freq_monthly	Responded every month	Frequency	1=Yes; 0=No
Freq_twicemonth	Responded twice a month	Frequency	1=Yes; 0=No
Freq_Oncefewmonths	Responded once every few months	Frequency	1=Yes; 0=No
Freq_Fewtimesyear	Responded a few times per year	Frequency	1=Yes; 0=No
Freq_veryrarely	Responded very rarely	Frequency	1=Yes; 0=No
Where do you most often purchase your clothing items			
Loc_Physical	Responded Physical	Location	1=Yes; 0=No
Loc_Thrift	Responded Thrift shop	Location	1=Yes; 0=No
Loc_Online	Responded Online	Location	1=Yes; 0=No
Where do you most usually purchase your clothing items			
Place_fashion	Responded fashion retailer	Location	1=Yes; 0=No
Place_fashiononline	Responded fashion retailer online	Location	1=Yes; 0=No
Place_independent	Responded independent label or boutique	Location	1=Yes; 0=No
Place_Independentonline	Responded independent label or boutique online	Location	1=Yes; 0=No
Place_Brands	Responded brands	Location	1=Yes; 0=No
Place_Brandsonline	Responded brands online	Location	1=Yes; 0=No
Which clothing item do you purchase the most fequently			
Item_TS	Responded t-shirts-tops-shirts	Item	1=Yes; 0=No
Item_TR	Responded trousers-shorts-jeans	Item	1=Yes; 0=No
Item_KN	Responded Knitwear- jumpers	Item	1=Yes; 0=No
Item_OUT	Responded Outwear-jackets	Item	1=Yes; 0=No
Item_DR	Responded Dresses - skirts	Item	1=Yes; 0=No
Item_UN	Responded Underwear - socks	Item	1=Yes; 0=No
Item_JE	Responded Jewelries	Item	1=Yes; 0=No
Item_AC	Responded Accessories	Item	1=Yes; 0=No
Item_SH	Responded Shoes	Item	1=Yes; 0=No
Item_OT	Responded others	Item	1=Yes; 0=No

Company	Labels	Sustainable strategie	Adresse	Location	Phone number	Email	Website
Balseca Weber	Womenswear	Details	Balseca Weber	Zurich	41 78 805 28 04	contact@balsecaweber.com	https://www.balsecaweber.com/spring-summer-collection
	Accessories	Quality	Kasernenstrasse 77b				
		Material	8004 Zurich				
Beige Swiss Styling	Womenswear	Designed in Zurich	Beige Swiss styling	Zurich	41 44 272 74 22	mail@beige.ch	http://beige.ch/
		Traditional knitting techniques	Josefstrasse 10				
		Small swiss manufacturers	8005 Zurich				
	Knitwear	Flexibility + greater creative process					
		Natural yarns and natural fibers					
	Printed Textiles	Different types of fibers for collections					
		Aligned with seasonanility					
Claudia Nabholz	Womenswear	Authentic and individual fashion	Claudia Nabholz	Baden	41 79 695 29 58	contact@claudianabholz.c	http://www.claudianabholz.ch/uber-claudia-nabholz/
		High quality materials	Frau Meise Kaffee und Design Kultur GMBH				
		Timeless and sustainable design	Untere Halde 15				
	Accessories		5400 Baden				
De Marquet	Accessories	High quality materials	De Marquet	Bern	41 31 318 80 80	info@demarquet.ch	https://shop.demarquet.ch/
		Exclusive design + Italian handcraft	Marktgasse 55				
		Made in Italy by experts and passionate artisans with fine and exclusive materials	3011 Bern				
	Jewellies	Less fast fashion and more sustainability					
Joy + Grief	Womenswear	Fastbrics made in Switzerland + neighboring countries		Zurich			https://www.joyandgrief.com/
	Unisexwear	Slow fashion					
		Timeless and sustainable design					
	Accessories	No season collections					
Prêt-à-reporter	Womenswear	Clothe items made from existing piece of clothing	Eva Waldmann	Zurich	41 79 584 79 65	info@pretareporter.ch	https://pretareporter.ch/de/home
		Designed and processed in Zurich	Goldbrunnenstrasse 157				
		Material (existing piece of clothing) coming either from customers' wardrobe or	8055 Zurich				
		Collected from Caritas Switzerland					
	Menswear	"Shirts become skirts" - "pants become dresses" - "pants become blouses"					
Protsaah		Designed in Zurich	Circle Sustainable Shop	Zurich	41 43 243 69 21	info@protsaah.com	http://www.protsaah.com/stores/
	Jewellies	Handcrafted by artisans from communities affected by violence and instability in conflict zones	Brunngasse 3				
		Sterling silver jewellery	8001 Zurich				
		slow and sustainable fashion					
Sichtschicht	Reflective wear	Safety/reflective wear	Isabelle Wackernagel	Zurich	41 79 894 5893	info@sichtschicht.ch	http://sichtschicht.ch/en/products
	Accessories	Hi-tech material made of micro prisms made of glas from Switzerland	Grubenstrasse 37				
		Combines creativity, functionnality, safety and technology	80145 Zurich				
	Jewellies						
House of Aim	Women Sportfashion	Sustainable materials	Annette Kres	Oberrieden	41 77 416 22 2	m-annette@houseofaim.net	https://houseofaim.net
		Bio art	House of Aim				
			Bahnnofstrasse 26				
			8942 Oberrieden				

Company	Category	Description	Contact / Address	City	Phone	Email	Website
Social Fabric	Homewear	Materials that have a small ecological and social footprints	Heather Kirk	Zurich	41786841051	heather@socialfabric.ch	https://socialfabric.ch
	Unisexwear	Textiles from renewable materials such as agricultural byproducts	Social Fabric				
	Accessories	Textiles supply chain solution that promote environmental and ethical practices	Eichstrasse 29				
	Textiles		8045 Zurich				
ZRCL	Menswear	Transparent + traceability accross entire production chain (BioRe contro system)	We are ZRCL GMBH	Rickenbach		info@wearezrcl.com	https://www.wearezrcl.com/
	Womenswear	Certified organic materials	Kilian Wigel				
	Accessories	Natural dying of textiles	Spielhölli 31				
Mamma Tierra	Homewear	CO2 neutral production from cultivation through transportation and sewing	6432 Rickenbach				https://www.mama-tierra.com/d
	Accessories						
	Bags						
Chemiserie	Womenswear	Swapping Business Model	Chemiserie	Basel	41767461786	info@chemiserieplus.ch	https://www.chemiserieplus.ch
	Menswear	Second hand Business Model	Klybeckstrasse 50				
	Accessories	Inventory consisting of customer's clothing items	4057 Basel				
	shoes						
Carpasus	Menswear	Elegant + High quality dress shirt	Carpasus Showroom	Zurich	0800 553 086	contact@carpasus.com	https://www.carpasus.com
		Organic cotton	Albisriederstrasse 182				
	Accessories	Transparent supply chain	8047 Zurich				
		Designed in Switzerland					
Ettis	Womenswear	Slow fashion	FairKleid GMBH	Bern	41793432883	kontakt@ettis.ch	https://www.ettis.ch
	Menswear	High quality materials	Breitenrainstrasse 22				
	Accessories	Small series production	3013 Bern				
		Fashion on demand (creating garment on personal mass)					
Thank God its Fair Wear	Homewear	Clothes made with passion and pleasure	TGIFw GMBH	St Gallen		info@tgifw.com	https://www.tgifw.com
	Womenswear	Cooperation with small producers in Nepal	Sternackerstrasse 8				
	Accessories	Suply chain transparency	9000 St Gallen				
Exploar Wear	Womenswear	Cooperation to empower artisans from Baltic and Scandinavian countries	Exploar Wear	Zurich	41774365129	info@explorewear.ch	https://explorewear.ch
	Accessories	Slow fashion – Small series production	Stadelhoferstrasse 42				
	Jewelries	Locally designed and produced (Europe)	8001 Zurich				
Selfnation	Womenswear	Be spoke jeans and trousers					
		Locally produced and materials sourced and produced in neigboring countries					
	Menswear	Transparency					
		Designed in Switzerland					