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Segmenting sustainable fashion consumers based on sustainability attributes

Case: IVALO.COM

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ABSTRACT:

Ylikulutuksen ja pikamuodin aikakaudella muotialalle on noussut myös hidasta, eettistä ja ympäristöystävällistä muotia edustava vastuullinen muoti, jonka kuluttajakunta on kuitenkin vielä muotialan toimijoille hyvin tuntematonta. Ilmastonmuutoksen ja ympäristöhuolten lisääntyessä yhä suurempi osa kuluttajista pyrkii miettimään kulutuksensa taustalla vaikuttavia tekijöitä, ja myös muotialan kulutus on kuluvalle aikakaudella käymässä läpi muutosta.

Tämä tutkielma tutkii suomalaisia vastuullisen muodin kuluttajia perustuen heidän vastuullisen muodin ominaisuuksien priorisointijärjestykseen ja tärkeimpiin henkilökohtaisiin arvoihin. Tutkielma toteutettiin kvantitatiivisena kyselytutkimuksena, johon vastasi 255 kuluttajaa. Vastaajat tavoitettiin tutkimusyrittä IVALO.COMin uutiskirjeen ja Instagramin kautta. Tutkielman tavoitteena oli kartoittaa, mitkä vastuullisen muodin ominaisuudet ovat vastuullisen muodin kuluttajille tärkeimpiä, kun heidän täytyy valita kahden vastuullisen vaihtoehdon väliltä, ja minkälaisia vastuullisen muodin kuluttajien segmenttejä voidaan havaita, kun tutkitaan ainoastaan vastuullisen muodin kuluttajia. Tulosten pääasialliset analysointimenetelmät olivat faktorianalyysi ja klusterianalyysi.

Tutkielman tulosten perusteella vastuullisen muodin kuluttajien tärkeimmät henkilökohtaiset arvot olivat hyväntahtoisuus, universalismi, itseohjautuvuus, ja turvallisuus. Lisäksi vastuullisen muodin kuluttajat valitsivat vaatteen ostokriteereistä tärkeimmiksi laadukkaan materiaalin, vastuullisen materiaalin, vastuullisen tuotannon, ja eettiset työlöt. Tutkielman avulla tunnistettiin neljä vastuullisen muodin kuluttajaryhmää, jotka olivat Eettiset (the Ethicals), Käytännölliset (the Practicals), Valikoivat (the Refineds) ja Muotitietoiset (the Fashionables). Kuluttajaryhmät eroteltiin toisistaan perustuen etenkin vastuullisen muodin ominaisuuksien perusteella, joista osa ryhmistä priorisoi selvästi eettisiä tekijöitä, ja osa ryhmistä henkilökohtaisia preferenssejä tai ympäristötekijöitä.

Teoreettisesti tutkielma täydentää vastuullisen muodin tutkimusta luomalla vastuullisen muodin ominaisuuksien viitekehyksen, kehittämällä uuden mittariston vastuullisen muodin ominaisuuksista, ja vahvistamalla olemassa olevaa teoriaa vastuullisen muodin kuluttajista ja heidän arvoistaan. Tutkielma demonstroi, kuinka vastuullisen muodin kuluttajat eroavat sisäisesti toisistaan, ja tutkimalla aiheesta lisää tulevaisuudessa voitaisiin päästä tarkempiin lopputulemiin siitä, miten sekä yritykset, että kuluttajat voisivat edistää ja lisätä vastuullisen muodin kulutusta. Tutkielmassa löydetty vastuullisen muodin kuluttajasegmentit mahdollistavat muotialan yritysten tarkemman kohdennetun markkinoinnin erilaisille vastuullisen muodin kuluttajille, ja avavat mahdollisuuksia lisätutkimukselle.

KEYWORDS: sustainable fashion consumerism, sustainable values, value based segmentation

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1 Introduction

As the industry that is responsible for approximately 10% of global carbon emissions and the industry that also generates 20% of wastewater output (Niinimäki et al., 2020; Rao, 2019), the fashion industry is estimated to be environmentally the second most polluting industry only after the oil industry (Rao, 2019). Yet, the fashion industry has only recently become the elephant in the room when talking about the biggest environmental adversaries of the world. The environmental damage associated with fashion industry is further exacerbated by the ever-rising popularity of fast fashion (Muposhi & Chuchu, 2022, p. 739). Defined as mass produced clothing and apparel that replicates high fashion trends at a much lower quality and cost, fast fashion causes severe negative effects including everything from excessive waste, loss of natural resources, and air and water pollution to unfair salaries, subpar working conditions, and worker exploitation (Haines & Lee, 2022, p. 383). Furthermore, the short life cycle of fast fashion is perceived to feed into consumers materialistic tendencies and the overall overconsumption of fashion apparel, which further enhances the unsustainable nature of fashion (Muposhi & Chuchu, 2022, p. 741).

To tackle the issues and environmental damage caused by the fashion industry and the fast fashion phenomenon, sustainable fashion has surfaced as a more environmentally friendly substitute (Muposhi & Chuchu, 2022, p. 739). Sustainable fashion, also known as eco-fashion, re-fashion, or slow fashion, signifies apparel that is made, distributed, and worn in ways that are socially and environmentally responsible (Djossouvi et al., 2024, p. 650). Additionally, sustainable fashion is defined as the inclusive practices, goods, procedures, and actors (consumers, brands, and policymakers) that have the objective of creating a zero-carbon fashion industry founded on ecological integrity, social justice, equality, and animal welfare (Djossouvi et al., 2024, p. 650). Several studies show that consumers are in a key role in the movement towards sustainable fashion consumption (Gurova, 2024, p. 289), but more often than not sustainable values become less relevant to the overall purchase decision after factors such as price, trendiness, and high quality materials (Zalando, 2021). The exception to this is with consumers that display

broad environmental knowledge, high environmental awareness, and interests towards sustainable apparel solutions (Djossouvi et al., 2024, p. 653). Furthermore, positive attitudes, certain personal values and understanding of various environmental and sustainable aspects increase consumers' intention to buy sustainable fashion.

Thus, it can be said that consumers with already prominent sustainable values are more likely to also purchase sustainable apparel. Haines and Lee (2022, p. 385), state that sustainable fashion consumers have several reasons and values motivating them into buying sustainable clothing. These include valuing the country of origin, high quality pieces of clothing, natural materials, and long lasting design choices over more commonly seen factors such as low prices, specific brand names and trendiness. According to Niinimäki (2015) values, especially ethical and environmental values, create an essential base for sustainable design in fashion. Moreover, personal values significantly influence consumers purchasing behavior, especially when it comes to sustainable consumption (Jung & Jin, 2016, p. 411). Which is why it is worth a while to gain more understanding of the driving values of ethical and sustainable consumers in the fashion industry.

Consumer segmentation is broadly used as a guiding mechanism in various industries and companies' marketing efforts in order to gain a useful understanding of the relevant customer base and to target this group in their marketing (Qi et al., 2023, p. 4495). The goal of segmenting consumers is to split them into smaller coherent groupings based on their demographic and geographical factors as well as values, behaviors, attitudes, interests, and opinions, which is crucial in better comprehending the consumers (Gutman & Mills, 1982). According to Jaiswal et al. (2021) especially psychographic segmentation variables, which include values, attitudes, motives, and personality, are seen to be more effective in understanding sustainable consumer behavior and intention. Additionally, understanding consumers' personal values is essential for recognizing a particular consumer segment, as they create the foundation for attitudes and influence both purchase behavior and decision-making (Jung & Jin, 2016, p. 411). Thus, making it important to study sustainable fashion consumers through their personal and sustainable values.

1.1 Research problem

Sustainable fashion consumption has been in the interests of scholars in recent years, with studies that explore the attitude-behavior gap in sustainable fashion consumption (Zollo, 2024), the overall concept of sustainable fashion consumption (Gurova, 2024), and consumer attitudes towards slow fashion, ethical fashion or circular fashion (Vehmas et al., 2018; Bae & Yan, 2023). Researchers have also studied how brand, price and quality affect the overall decision making process when purchasing sustainable fashion, and how this translates into purchase behavior (Zalando, 2021). Even though sustainable fashion is not a new phenomenon, the literature and research still lack in discovering the values and motivations behind sustainable fashion consumption, and specifically behind the fashion consumption of sustainable consumers (Lundblad & Davies, 2016, p. 149).

Lundblad and Davies (2016) argue that, since there is such a small amount of research done on actual purchasing behavior of sustainable consumers, there is not enough understanding as to why active sustainable consumers decide to buy environmentally and ethically friendly fashion. This makes sustainable fashion consumption knowledge quite limited. An aspect of importance affecting sustainable fashion consumption is values, and how they are an indispensable part of sustainable design, making it important to study the value base of sustainable consumption in the fashion industry (Niinimäki, 2015). Additionally, because psychographic segmentation factors such as values and attitudes together with demographic segmentation factors such as age, gender and educational level are seen to explain consumers decision-making processes the best, this study will focus on segmenting sustainable fashion consumers based on these factors. Furthermore, this study will bring added value to sustainable fashion consumption research by examining and classifying the specific values behind sustainable fashion consumerism together with personal values.

Since Finland ranks as number one in sustainable efforts, scoring 86,35/100 in the Sustainable Development Report that ranks the holistic performance of 193 countries (SDG Transformation Center, 2024), it is an optimal region to study the sustainable consumer base, and research their driving values in sustainable fashion consumption. Furthermore, Finland has taken upon a leader role in circular economy, as well as being a leader in lessening textile waste, providing opportunities for recycling and regional collection for Finnish consumers (Ministry of the Environment, 2023; Europa, 2023). Finnish consumers are overall ecologically aware and taught about sustainable development from an early age at school, creating a good base for environmental and ethical values to form in their consumption habits (Gurova, 2024, p. 293). This makes the perspective of personal values and sustainable attributes affecting sustainable fashion consumption in Finnish consumers current and insightful issue to discover and gives further direction in studying sustainable fashion consumption.

1.2 Research purpose and objectives

This research aims to discover the affecting personal and sustainable values behind sustainable fashion purchase decisions within sustainable fashion consumers. The purpose of this research is to understand what sustainability as well as personal values drive sustainable fashion consumption. This research aims to fulfill this purpose with two objectives.

The first objective is to specify what sustainable values or attributes are related to sustainable fashion consumption and create a framework of these sustainable consumer values in sustainable fashion. The objective is achieved by reviewing current literature on sustainable fashion, values, and sustainable values.

The second objective is to understand the different values driving Finnish consumers who purchase sustainable fashion. This objective is achieved by quantitative cluster analysis done on IVALO.COM consumers. The data for the cluster analysis is gained from a

structured survey, which will be analyzed with a cluster analysis due to its suitability as a research method in marketing segmentation.

1.3 Structure of the study

This thesis consists of five main chapters that include Introduction, Literature review, Methodology, Results, and Discussions and conclusions. The first chapter of the thesis contains an introduction to the topic, defines the research purpose and objectives, and discusses the structure of the study and the key concepts for this research. The second chapter introduces the main themes of sustainability in fashion consumption and value based segmentation. Different aspects related to sustainable fashion consumption such as fast fashion, green washing as well as values behind sustainable fashion consumption are touched upon, while also giving theoretical background to consumer segmentation, consumer values and segmentation based on consumer values. The second chapter ends with the building of a theoretical framework about sustainable consumer values in sustainable fashion based on the previous theory and on the value-map made by Lundblad and Davies (2016). This framework will fulfill the first objective of discovering and categorizing the main driving sustainable values behind sustainable fashion consumers and gives a guideline for the later cluster analysis and the survey questions that will fulfill the second objective of the value based segmentation of sustainable consumers in Finland.

The third chapter is the methodology chapter where the case company IVALO.COM is properly introduced. The methodology section will also cover the bases on which the research is done, describe the survey's structure and questions, and the method of quantitative factor analysis and cluster analysis. The fourth chapter includes the results and findings from the research including the actual factor analysis and cluster analysis and finally introduces the found segments based on the study's results. Lastly, the fifth chapter will discuss further the results found based on the literature review and the study itself. The chapter will also give conclusions on the topics as well as talk about the limitations and possible future research areas on this matter.

1.4 Key concepts

Sustainable fashion

Sustainable fashion, also known as eco-fashion, re-fashion, eco-clothing, conscious fashion, slow fashion, and green clothing, considers all apparel and garments that are designed, manufactured, distributed, and worn in environmentally and ethically considerate ways (Djossouvi et al., 2024). Sustainable fashion aims to produce apparel with minimal social and environmental impact by considering the entire life cycle of a garment, from fiber and textile production to its final disposal (Haines & Lee, 2022, p. 383). In practice, sustainable fashion involves eco-friendly packaging, fair labor conditions, sustainable design principles—such as circularity and ecological dyeing techniques—and the use of environmentally responsible raw materials like organic cotton or recycled textiles, while also emphasizing longevity, reuse, and recyclability to extend the garment's lifecycle (Muposhi & Chuchu, 2022, p. 740).

Personal values

Personal values are abiding beliefs about right and wrong that serve as fundamental guides for moral behavior and remain stable throughout an individual's lifetime (Madi, 2016, p. 624). Personal values also serve as societal justifications for people's purchase intentions and decisions because of their guiding influence on human behavior (Margaça et al., 2024, p. 162).

Consumer segmentation based on values

Consumer segmentation is used to recognize different groups of consumers based on their common demographic, psychographic, geographical, and/or behavioral factors (Qi et al., 2023, p. 4498). Consumer segmentation based on values focuses especially on consumers' psychographic variables, which include personal values. Psychographic factors, such as values, are perceived to reveal consumers' underlying attitudes, behaviors, and intentions (Jaiswal et al., 2020, p. 794).

2 Theoretical background

This chapter will answer the first objective of the thesis by going through literature on sustainable fashion consumerism, personal values, and segmentation. The theoretical background will deepen especially into the current situation within the fashion industry, the fast fashion phenomenon, and the sustainable fashion industry, as well as the driving consumer values of sustainable fashion consumption. This chapter will also explain why segmentation based on consumer values is beneficial to sustainable fashion studies. Lastly, a theoretical framework about the main sustainable fashion consumption attributes that drive consumers decision-making will be built to better understand what consumers value when purchasing sustainable apparel.

2.1 Sustainable fashion consumerism

Sustainability is one of the major global goals on the road to solving the environmental problems that the world is currently facing (Gurova, 2024, p. 289). Environmental awareness, concern and values can be seen to affect consumers purchase behavior and intention in many industries (Hasan et al., 2024, p. 1198). The fashion industry is no different from this trend, where it seems that the decision to purchase sustainable fashion is more heavily impacted by consumers personal values, beliefs, and motivations than it is in other industries (Niinimäki, 2015).

Sustainable consumption encourages ethical and environmentally responsible consumer behavior that includes reducing waste, harm to human health and ecosystems, as well as endorsing clean energy and renewable materials (Carmona et al., 2024, pp. 45-46). Selecting eco-friendly products, buying fair trade goods from nearby markets, cutting back on or giving up consumption, and utilizing products free of animal testing are examples of sustainable consumption choices (Carmona et al., 2024, p. 46). According to Burke et al. (2014), the four major reasons preventing consumers from buying sustainably are expensiveness, availability issues, questioning of trust and the lack of education

on sustainable consumption. On the other hand, the authors state that consumers tend to select sustainable goods when they think that the production, consumption, and disposal of said goods reduces the negative impact on people, animals, or the environment. Another factor that positively impacts the consumer's sustainable purchase intention is the perceived high quality of sustainable goods (Burke et al., 2014, p. 2241).

Fashion consumption is seen to be quite the opposite of sustainable consumption due to their contradictory purposes (Lundblad & Davies, 2016). Fashion consumption is often driven by values such as hedonism and self-expression and described by the products' short life cycles and constantly switching trends to follow, while sustainable consumption is driven by values such as social justice and nature perseverance, and aim to consume products that are durable, reusable and made in ethically and environmentally friendly ways (Lundblad & Davies, 2016). Fashion consumers' perceptions have indeed been changing towards more sustainable options in their apparel consumption habits in recent years, and there can be seen some common personal values and characteristics behind so called sustainable fashion consumers (Djossouvi et al., 2024).

The fashion industry is one of the biggest environmental encumbers, producing 1.7 tons of carbon emissions globally (Muposhi & Chuchu, 2022, pp. 738-739). In addition, it is estimated that at least 8000 chemicals are needed to convert raw materials into apparel fabrics (Muposhi & Chuchu, 2022, pp. 739), and that every year approximately 460 billion clothing pieces end up in landfills globally (Djossouvi et al., 2024, p. 650). In order to diminish its negative environmental impact, the fashion industry is coming under more and more pressure to adopt proper sustainability standards (Muposhi & Chuchu, 2022, p. 740). Because of this, it is essential to switch the consumers and industry direction from fast fashion to sustainable fashion. Besides companies and organizations, consumers are also in a crucial position in the movement towards sustainable fashion consumption (Gurova, 2024, p.289). Even though consumers worry about the environmental issues is growing, their knowledge and awareness about the serious negative environmental effects of fashion production is very low (Ritch, 2015, p. 1165).

2.1.1 Fast fashion phenomenon

The rise in appeal of fast fashion exacerbates the environmental damage associated with the fashion industry (Muposhi & Chuchu, 2022, p. 739). Fast fashion has become quite a phenomenon in the past few years, making fast cycles of trendy and cheap clothing pieces the consumption norm in fashion (Muposhi & Chuchu, 2022, p. 740). The consumption of fast fashion has led to a myriad of widespread and harmful societal and environmental implications, and in spite of the awareness of these effects, fast fashion consumption is still increasing globally (Haines & Lee, 2022, p. 383). Human exploitation and mortality in nations that offer cheap labor to fashion companies around the world are only two examples of the significant social and environmental expenses associated with the fashion industry and the overconsumption trend (McNeill et al., 2024, p. 876). What is known about the negative effects of the current fast fashion system is in conflict with the ease with which customers, especially those in industrialized Western nations, continue to buy and discard clothing items on a growing basis (McNeill et al., 2024, p. 876). The rapid turnover, low durability, and affordability of fast fashion have significantly contributed to post-consumer textile waste (Haines & Lee, 2022, p.386). Consumers have various reasons for the ever quickening discarding of clothes they no longer use. These reasons include improper fit, indifference to the clothing piece, damage in the garment or unstylishness (Haines & Lee, 2022, p. 386).

The foundation of fast fashion consumption is the demand for immediate gratification through low priced fashion apparel without logical control (Gurova, 2024, p. 290). This type of consumer behavior includes impulsive buying, excessive purchases, short apparel lifespans, and the availability of discardable clothing. Another defining factor behind the success of fast fashion is the strategically planned supply chain that immediately answers to the new fashion trends and offers these trendy pieces for consumers at a low price (Watson & Yan, 2013, p. 144). An extreme form of this type of consumer purchasing behavior and quickly developed supply chain model is reflected in the even more recent

trend in the fast fashion business model, which is ultra-fast fashion (Dzhengiz et al., 2023). Ultra-fast fashion quickly fulfills consumers growing needs for trendy fashion inventions and immediacy by taking apparel design to sale in a matter of days (Dzhengiz et al., 2023). Players in ultra-fast fashion display a serious issue for the pro-sustainable causes and ethical improvements in the fashion industry that have been brought up in recent years (Dzhengiz et al., 2023).

The current fashion overconsumption and fast fashion purchasing behavior driven by impulsiveness and low effort have also impacted the way consumers view and value their clothes (Stringer et al., 2020, p. 99). Consumers have less mental commitment to the apparel they purchase, which makes them value their clothing pieces less (Stringer et al., 2020, p. 99). According to Haines and Lee (2022) after a year of being produced, over 50% of all garments wind up already in a landfill. Fast fashion has enabled the short lived lifecycle of garments and the supply chain model from production to market to be so quick that the clothes can be in stores from production in less than a week of their initial design, which further eases the overconsumption, materialism and wastefulness of current fashion consumption (McNeill et al., 2024, p. 876). This type of overconsumption harms both people and the environment and creates ethical questions as to what consumers value in this day and age (McNeill et al., 2024, p. 875).

A common erroneous impression that consumers have relates to the effects of their disposal habits, and their harmfulness to the environment, which also further keeps them from buying sustainable apparel, or rather keeps them still purchasing fast fashion (Haines & Lee, 2022, p. 386). Not only do consumers lack the proper understanding of their disposal habits, but several fashion companies fail to provide proper and transparent information about their actual environmental impact, and the ethical actors behind their production (Gurova, 2024). To better their sustainable efforts many fast fashion companies use eco-labels, build seemingly more ethically conscious product lines, and switch their packaging to be more environmentally friendly (Stringer et al., 2023; Niinimäki, 2015). This is done in an attempt to attract more environmentally and ethically

savvy consumers, who value sustainability and quality in their apparel. However, this is often done by misleading and falsely focused ways to greenwash consumers into believing that the fast fashion company's products are less of a burden to the world (Niinimäki, 2015).

Greenwashing in the fashion industry can be described as the practice of marketing fashion items with unsupported environmental and ethical claims (Muposhi & Chuchu, 2022, p. 741). According to Wang and Jung (2025) a Harvard Business Review shows that 42% of the sustainability claims made by firms were more or less misleading, untruthful, or exaggerated, and could be viewed as greenwashing. It is still quite easy to trick consumers into thinking they are living up to their environmental and sustainable values by purchasing from fast fashion companies "conscious" and "responsible" clothing lines, without actually helping the complex and holistic environmental and ethical issues in the fashion industry (Niinimäki, 2015). For example, fashion companies often claim their products in their labels as "recycled" when in fact less than 1% of all apparel is recycled into new clothing pieces (Wang & Jung, 2025). This is due to the lack in current technology in ways to recycle mixed yarn or fibers, into actual new garments. Another common way for fast fashion companies to appear more conscious is to offer recycling bins for their consumers to donate their used clothes, when in reality most of these garments are not recycled into new clothes and garments but instead wind up in landfills (Wang & Jung, 2025). What the recycling bins also end up causing is often inciting consumers into consuming even more in said store or brand due to their sense of guilt reducing from the appeared effort towards sustainable actions (Wang & Jung, 2025).

Greenwashing or green marketing strategies have also caused some consumers to be more doubtful and skeptical towards companies claiming to be sustainable (Sinha & Anamdevula, 2025), making it difficult to convince consumers to purchase actually sustainably made clothing and apparel. This creates a somewhat paradoxical situation where many consumers do in fact want to consider environmental and ethical aspects when purchasing their clothes but instead end up confused and unsure as to what

sustainability aspects they should consider, and which companies' claims and what information can be trusted in the first place (Zollo, 2024). Combining consumers' underlying values about sustainability and the consistency and longevity of sustainable consumption with the quickly changing trends of fast fashion is indeed a difficult task (Zollo, 2024), but there are still undiscovered aspects of sustainable fashion consumption and sustainable fashion consumers that could give better indications as to which factors relate to the decision to purchase sustainable fashion.

2.1.2 Sustainable fashion

Sustainable fashion has risen as an ethical and environmental opposer for the overconsumption and fast fashion trends (Muposhi & Chuchu, 2022, p. 739). The goal of sustainable fashion is to manufacture socially and environmentally less damaging apparel that takes into account the whole life cycle of a piece of clothing (Haines & Lee, 2022, p. 383). This covers everything from the manufacturing of fiber and textiles to its ultimate disposal in a landfill. Practically, producing sustainable fashion entails using eco-friendly packaging, fair working conditions, sustainable design (design for circularity and ecological dyeing techniques), and environmentally friendly sources of raw materials, such as organic cotton or recycled textiles (Muposhi & Chuchu, 2022, p. 740). The authors also state that sustainable fashion covers pieces of clothing that can be utilized for many years, and which can be put to reuse or recycled to make the lifecycle of the apparel longer overall. Longevity also helps to address the issue of fashion items,' especially fast fashion items,' hasty disposal, because it encourages long-term usage and reusability of clothing (Muposhi & Chuchu, 2022, p. 741).

Several studies suggest that even though consumers' environmental and ethical worry has risen in recent years, the same interest does not translate into their actual purchasing behavior towards sustainable fashion (Okur et al., 2022; Zalando, 2021; Perry & Chung, 2016). The research has not come to one conclusion as to what are the reasons behind this attitude-behavior gap in sustainable fashion consumption, but Perry and

Chung (2016) suggest that consumers feel that purchasing sustainable fashion requires more effort from them than purchasing just any apparel. This feeling partly stems from consumers' lack of proper understanding of all the different environmental and ethical aspects of what can be considered sustainable fashion, and how it truly differs from fast fashion (Ritch, 2015, p. 1172). Consumers also become confused with all the different information related to environmental and sustainability problems, because of their complexity, making it difficult to comprehend everything holistically (Niinimäki, 2015). This is further complicated by fashion companies using eco-labels and their own acclaimed sustainable lines to give consumers the illusion that they are in fact purchasing sustainable fashion, even from fast fashion brands (Stringer et al., 2023).

Furthermore, consumers' intention to be stylish or true to their own style affects their fashion purchase behavior more than making sustainable clothing choices, especially in younger consumers (Gurova, 2024, p. 290). According to McNeill et al., (2024) the integration of sustainable fashion into consumer markets is challenged by its potential misalignment with fashion-oriented identity formation, because it clashes with the desire to express oneself with trendy pieces of clothing. However, Lundblad and Davies (2016), found in their study that consumers that actually purchase sustainable fashion highlight their fashion identity and self-expression through sustainable apparel, especially with embodying their environmental and ethical values. This comes from the need to be confident in one's appearance, with the difference that consumers who mainly purchase sustainable fashion aim to appear stylish to their own eyes, where other fashion consumers are doing it to also appeal to others. This suggests that consumers who value the feelings of self-accomplishment, creativity and individuality do in fact buy sustainable clothing to express their fashion identity.

Consumers have various perceptions of sustainable fashion that affect their purchase intention of sustainable clothing, one of which is the image that sustainable fashion products are not as on trend, and not as easily available to answer consumers fast changing fashion needs (Burke et al., 2014; Muposhi & Chuchu, 2022; Zalando, 2021). Although

it was found in Lundblad and Davies' (2016) study that sustainable fashion consumers are less interested in following current trends in fashion and they rather invest in long-lasting clothing pieces. Sustainable fashion consumers seem to be more interested in the uniqueness and exclusivity of smaller sustainable clothing brands and could even prefer those as opposed to generally popular and big name clothing brands (Lundblad & Davies, 2016). What is said to be more important for sustainable fashion consumers than a specific brand is the country of origin of the piece of clothing or the brand, and consumers often prefer brands and clothing that are produced locally (Haines & Lee, 2022, p. 385).

Another big factor when comparing sustainable fashion and fast fashion is the price, since more often than not, sustainable fashion does have a higher price point (Muposhi & Chuchu, 2022, p. 741). Even though there are several reasons why sustainable apparel is more expensive, (proper salaries for laborers and more environmentally produced materials with higher quality to name a few), some consumers find it difficult to justify using more money on clothing just because it is claimed to be sustainable (Ritch, 2014, p. 1165). On the other hand, the higher price can also function as a preferred factor for consumers who want to purchase high quality and sustainably made products, thus indicating these aspects with the higher price for the product (Watson & Yan, 2013, p. 152). These consumers perceive more costly clothing to enable them to use their apparel for many years due to the long lasting and/or natural materials used in making them.

Materials are also one of the key components when comparing fast fashion and sustainable fashion (Zalando, 2021). According to Farzin et al., (2023), in the era of social media, consumers have started to pay more attention to the materials in their apparel. Lundblad and Davies (2016), also found in their research that especially sustainable fashion consumers perceive the usage of natural materials to link to high quality and environmentally friendly efforts. Additionally, consumers who purchase sustainable apparel emphasize that the natural materials feel good and comfortable on their skin, making sustainable fashion more appealing to them (Lundblad & Davies, 2016). Another common consideration for sustainable fashion consumers in the garment's material is animal welfare,

whether it is the lack of usage of animal derived fibers, or any harm caused for animals in the apparel's production (Zalando, 2021). Furthermore, many sustainable fashion consumers also prefer to purchase clothing from material that does not contain harmful chemicals or is not produced using harmful chemicals (Lundblad & Davies, 2016). This is according to Lundblad and Davies' (2016) research mainly due to the worry of skin and health related issues with chemicals and pesticides from the production in clothing.

Most consumers are indeed proven to be interested in many different qualities and values of sustainable fashion, especially due to emotional reasons (Haines & Lee, 2022, p. 384). According to Vehmas et al. (2018), consumers are getting more and more interested in organically and ethically produced products, and brands that convey sustainable development in their actions. The problem is that while consumers have some understanding of worker exploitation and other unethical factors in the fashion industry, the knowledge of how fashion industry coherently damages the environment and the difference between for example cotton versus organic cotton does not facilitate as well in their purchase decision (Ritch, 2015). Zalando found in their 2021 study that some of the key elements in enhancing consumers purchase intention of sustainable fashion is for brands to inform their sustainability efforts both transparently and in a way that resonates with the consumers values. From the consumers' point of view, to make them more likely to purchase sustainable fashion the information they get from brands has to be easily accessible, comparable, and verifiable, and most importantly in very clear and understandable language (Zalando, 2021).

2.1.3 Values driving sustainable fashion consumption

Values are characterized as persistent beliefs about what is right and wrong (Niinimäki, 2015; Madi, 2016). Personal values are seen to be the guiding factor in humans' moral behavior, and they stay quite unvarying throughout people's lifetimes (Madi, 2016, p. 624). Meaning that when compared to factors affecting consumer behavior, for example motives, attitudes, and moods, values provide a more coherent measure. Indeed, values

have been of great interest in the marketing industry due to their prominent influence on consumer behavior and overall importance in people's everyday lives (Madi, 2016, p. 624). The role of values in affecting consumers' purchase decision and overall behavior is even more distinctly present in sustainable consumption (Jung & Jin, 2016, p. 411). According to Manchiraju and Sadachar (2014), consumers' personal values have a clear effect on their sustainable consumer behavior and overall attitude towards environmentally and ethically friendly products and services. This is also the case in sustainable fashion consumption, where several studies conclude that displaying certain values is even more important factor in consumer behavior in sustainable fashion consumption compared to consuming non-sustainable fashion (Lundblad & Davies, 2016; Niinimäki, 2015).

Personal values are cognitive representations that enable people to determine and assess others, different situations, and people's own activities that they choose to take part in (Margaça et al., 2024, p. 162). Due to the guiding role of personal values in human behavior, they also act as social justifications for people's purchasing intentions and choices (Margaça et al., 2024, p. 162). Personal values have an exceptionally notable effect on sustainable consumption and buying behavior (Jung & Jin, 2016). According to Margaça et al. (2024), these types of personal values that encourage certain people to consume more sustainably affect the person's overall environmental beliefs, concerns, and attitudes towards the environment. Therefore, specific personal values impact consumers overall sustainable purchasing behavior and decision making towards environmentally and ethically friendly products.

Based on Schwartz's research (1992) personal values can be divided into 10 value types. These 10 value types are universalism, benevolence, tradition, conformity, security, power, achievement, hedonism, stimulation, and self-direction (Schwartz, 1992). Furthermore, according to Jung and Jin (2016) the Schwartz value structure (Figure 1.) creates a circular continuum of these 10 value types, putting the more compatible values next to each other, and the contrasting value types opposite of each other. The opposing value sides create two so called bipolar dimensions: Self-enhancement vs. Self-

transcendence, and Openness to change vs. Conservation (Jung & Jin, 2016, p. 412). According to Potts (2015) the dimension of Self-enhancement includes the value types of achievement and power, as well as hedonism, whereas the dimension of Self-transcendence includes the value types of universalism and benevolence as can be seen in Figure 1. On the other hand, Figure 1. shows how the dimension of Openness to change includes the value types of self-direction and stimulation, and hedonism, while the dimension of Conservation includes the value types of security, conformity, and tradition (Potts, 2015).

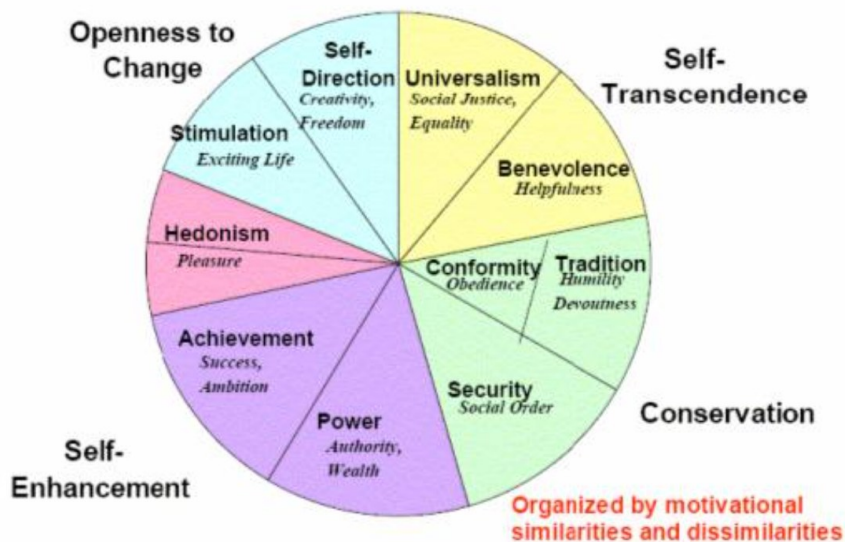


Figure 1. Potts, D. (2015) Copy of Schwartz (1992) Structure of Values

According to Jung and Jin (2016) the dimensions of Self-enhancement and Self-transcendence have been used as a factor when studying consumers ethical behavior, concluding that consumers who showcase higher benevolence and universalism values, are more likely to consider sustainability issues when making a purchase. This is due to the fact that people who value benevolence and universalism highly are more considerate of other people's well-being as well as nature overall (Jung & Jin, 2016, p. 412). On the other hand, values related to the dimension of Self-enhancement (achievement and power) seem to have a negative effect on consumers' intention to consume ethically (Jung & Jin, 2016, p. 412). These findings are supported by Haines and Lee (2022), stating

that consumers who value pleasure and immediate gratification, and who value hedonism highly, are less likely to prioritize sustainable consumption. Furthermore, proving Jung and Jin's (2016) theory that sustainable consumers have especially prominent values from the dimensions of Self-transcendence and Conservation (universalism, benevolence, conformity, tradition, security). Although the authors also suggest that the dimensions of Self-enhancement and Openness to change can also be prominent in some sustainable consumers, by possibly reflecting their unique and innovative propensities, that can also be seen in sustainable fashion consumers.

One of the most important aspects concerning sustainable development is protecting the environment (Leiserowitz et al., 2006, p. 415). Environmentally concerned consumers showcase a bigger likelihood of purchasing sustainable products due to their worry about the natural environment and taking concrete measures against the environmental effects of consumerism (Channa et al., 2022, p. 415). Environmental concern relates to consumers emotional reactions that convey their concerns, compassion, and animosity against environmental deterioration (Channa et al., 2022, p. 413). Additionally, Channa et al., (2022) found that other environmental factors, such as environmental attitude and perceived environmental responsibility, enhanced consumers purchase intention and behavior towards sustainable products. On the other hand, environmental values can be described as the principles, beliefs, and considerations that influence people's attitudes, behaviors, and decision-making in regard to environmental issues (Latif et al., 2024, p. 545). Environmental values often vary across cultures and individuals, and they typically emphasize sustainability, biodiversity protection, ecosystem preservation, and the well-being of current and future generations.

Environmental values are also one of the key factors in the purchase intention of sustainable fashion consumers (Lundblad & Davies, 2016). Environmental values that sustainable fashion consumers showcase include saving the planet's resources and keeping the planet in good shape (Lundblad & Davies, 2016). According to Manchiraju and Sadachar (2014), responsible water consumption is one of the main methods for conservation of

the environment, and thus especially present in sustainable clothing consumption due to the vast amount of water usage in the fashion industry. As found in Jung and Jin's (2016) research, consumers who are willing to use more money on clothing that is environmentally and ethically made, are more likely to value universalism and benevolence. Their research also showed that in somewhat paradoxical matter, these same consumers who valued the environmental and ethical aspects of fashion consumption, also valued the opposing values from the Self-enhancement dimension (Figure 1.), presenting a preference towards uniqueness and exclusivity in their fashion, which is often also connected to sustainable fashion, that is generally less mass produced and more exclusive.

Consumers worry about social justice in their clothing purchases, specifically regarding the working conditions of sweatshop workers in many popular fashion companies, has been rising for a while, and is one of the most prominent ethical concerns of sustainable fashion consumers (Shen et al., 2012, p. 236). Jung and Jin (2016) found in their study that values related to Schwartz's value dimension of Conservation, such as security and tradition, are also related to ethical consumption in fashion. This can be seen by the sustainable fashion consumers' nature of preferring high quality and time lasting design of sustainable fashion rather than frequently changing their wardrobe (Jung & Jin, 2016, p. 418). Additionally, Lundblad and Davies (2016) found social justice to be one of the guiding values of sustainable fashion consumption, stating that sustainable fashion consumers view ethical issues such as equality, human and animal rights, and living standards of fashion factory workers as important aspects when making a purchase decision. Furthermore, Pérez et al., (2022) suggest that consumers' concern about ethical issues even surpasses their efforts in environmental engagement, making ethical values perhaps more prominent in sustainable fashion consumers.

2.2 Segmentation

The emergence of green, environmental, and ethical considerations in consumers' purchase intention has raised the need for green market segmentation, that aims to divide

consumers based on their sustainable consumption patterns, values and behavior (Jaiswal et al., 2021, p. 793). According to Jaiswal et al. (2021) various scholars have proposed that in order to understand the different sustainable consumer segments, they should be categorized based on their attitudes, behavior, and perceptions of different environmental and ethical aspects. Additionally, segmentation based on consumer values, as well as other psychographic variables, has been seen to be very useful in discovering consumers' underlying sustainable consumption profiles (Jaiswal et al., 2021, p. 794). Indeed, segmentation based on values seems to be the chosen method for various studies on green and sustainable consumption as well as in fashion studies, for example Haines and Lee (2022) segmented consumers based on their values to discover their sustainable fashion consumption behavior. Similarly, Wiedmann et al. (2009) segmented luxury consumption behavior based on consumers' values, and Sultan et al. (2018) heavily focused in their segmentation on consumers values and perceived benefits when purchasing organic food in the Australian market.

2.2.1 Consumer segmentation

Consumer segmentation has been a prominent theory in marketing since the late 1950's, utilized by companies as an essential tool in identifying their most relevant consumers and keeping those consumers as their customers (Qi et al., 2023, p. 4495). Consumer segmentation separates consumers according to their values, attitudes, interests, opinions, and purchasing patterns (Haines & Lee, 2022, p. 386). In order to comprehend consumers more effectively, it is vital to divide them into smaller, homogeneous groups based on similar variables (Haines & Lee, 2022, p. 386). These variables include anything from similarities in purchasing behavior, age, and salary among many other aspects (Qi et al., 2023, p. 4497). Consumer segmentation has been approached through many different dividing methods throughout the years. According to Lin (2022, p. 250) both Becker et al. (1985) and Becker and Conner (1981) focused on separating consumers from one another based on their personality traits. On the other hand, Lin (2022) also states that Jain (1993) further explored consumers by more specific social and economic

segmentation factors such as brand loyalty and consumer attitude. But perhaps the most commonly used method for consumer segmentation was presented by Kotler in 1997, when he suggested that consumers should be compartmentalized based on geographic, demographic, psychographic and behavioral factors (Lin, 2022, p. 250).

Based on Kotler's segmentation model, consumer segmentation is usually divided into these four main categories which are demographic, geographic, behavioral, and psychographic segmentation (Qi et al., 2023, p. 4498). Kotler and Armstrong define demographic segmentation as "Dividing the market into segments based on variables such as age, life-cycle stage, gender, income, occupation, education, religion, ethnicity, and generation." (Kotler & Armstrong, 2010, p. 214). Demographic variables are the most utilized baselines for segmentation, since consumers desires, necessities and application rates fluctuate tightly with demographic variables (Kotler & Armstrong, 2010, p. 214).

On the other hand, geographic variables relate to segmentation on the basis of locations such as specific geographical areas, be it for example countries, cities, or continents (Qi et al., 2023, p. 4498). According to Nusair et al., (2022) nationality is seen to be a strong geographic segmentation variable at least when looking at cultural and personal preferences in destination marketing. Sultan et al. (2018) also state that when studying organic food consumption, geographical factors such as climatic and geographic conditions, and overall availability do in fact affect consumers' purchase intent. Indeed, it can be quite beneficial for companies to localize their products, services and advertising based on a specific nation, region, or city to target the right consumer segment (Kotler & Armstrong, 2010, p. 213).

Behavioral segmentation methods cover variables that separate consumers from one another by their purchasing behavior and aspects related to purchase behavior such as how often the consumers intend to buy their products, how brand loyal they are, and their attitude towards the company's products (Qi et al., 2023, p. 4498). The difficulty with studying consumers behavior for segmentation purposes is that the true

understanding of why consumers behave the way they do can remain incomplete and make it hard to draw rational conclusions (Bruwer & Li, 2007). Another problem with relying on behavioral segmentation variables is that past behavior does not always predict the same behavior in the future, especially in the drastically changing era of consumption trends (Bruwer & Li, 2007).

Lastly, psychographic variables refer to psychological factors such as values, attitudes, motives, and personality that define consumers' overall lifestyle and personality traits (Qi et al., 2023; Kotler & Armstrong, 2010). According to Jaiswal et al. (2020, p. 794) many studies suggest that especially when profiling sustainable or green consumers, psychographic factors are more efficient in revealing the underlying motives behind consumers' attitudes, behaviors, and intentions. Furthermore, psychographic characteristics used in segmentation together with demographic variables have a substantial effect on consumers decision-making (Koziel & Shen, 2025, p. 1266). Making both psychographic and demographic variables especially significant for this study.

The process of segmentation usually involves firstly the specification of the problem, the pre-existing demands and designing of the framework (Jiang et al., 2024, p. 3064). After the problem specification, the process of segmentation includes designing the research, collecting data, analyzing said data by classifying and profiling, and lastly drawing conclusions from the results as well as applying the results in action. In practicality, the process is often simplified into three stages, which are "survey or data collection, analysis and profiling" (Jiang et al., 2024, p. 3064). In the segmentation process, consumers are clustered into homogeneous groups based on their similarities and then profiled into the actual segments that combine various aspects that bring these consumers together (Jiang et al., 2024, p. 3064). The data in consumer segmentation is most often gathered through online surveys or focus groups, but there is generally a bias either in question selection or consumers answers in empirical setting (Jiang et al., 2024, p. 3065). Despite this, using cluster analysis in consumer segmentation is beneficial when combining

demographic and psychographic factors to define consumer segments (Koziel & Shen, 2025).

2.2.2 Consumer segmentation based on values

According to Sarabia-Sanchez et al. (2012) due to their imminent effect on consumer behavior, psychographic factors should especially be analyzed in order to understand a company's customer base better and utilize this information in the company's strategy. Personal values are one example of psychographic segmentation variables that can be used to combine similar consumers into separate segments (Qi et al., 2023, p. 4498). Values are overall seen to directly impact decision making and purchase intention in regard to consumer behavior (Jung & Jin, 2016, p. 412). The advantage of values, as well as other psychographic segmentation factors, is that they help explain consumer behavior and also affect consumers' purchase decisions (Qi et al., 2023, p. 4498). This makes studying consumer values and segmenting consumers based on their values very useful and insightful for companies. Consumer segmentation based on values provides broader and more stable comprehension of consumers' motivations behind their consumption behavior compared to other segmentation methods such as behavioral or lifestyle based segmentation (Madi, 2016, p. 624).

Furthermore, studying consumers' values thoroughly provides a more consistent conclusion on why consumers behave in a certain way due to personal values being quite static throughout people's lives (Madi, 2016, p. 624). While values are static in nature, it does not indicate that they are all unwavering to additions or minor changes due to, for example, major developments in society (Sarabia-Sanchez et al., 2012, p. 181). New values may rise based on certain time periods, countries, cultures, or phenomena, to fulfill a need for an opinion and stance towards the new phenomenon. This means that sustainable values towards fashion consumption are quite recent in nature and thus need more analyzing to understand coherently. Another advantage of focusing on values in

segmentation is their universal nature, making them easily usable and adjustable on a global scale (Madi, 2016, p. 624).

According to Jung and Jin (2016) especially in sustainable consumption, it is crucial to understand consumers' personal values in order to recognize different segments. This is also supported by Lundblad and Davies (2016) who argue that personal values have an especially prominent role in ethical consumption patterns and decision making, giving valuable input in consumer segmentation when studying sustainable consumption. Prior researchers have also proposed a connection between consumers' fashion consumption choices and personal values (Sarabia-Sanchez et al., 2012, p. 181). Due to the fact that clothing not only serves a practical purpose but also satisfies consumers' need for expression, values have a significant impact on how people consume clothing and in the fashion industry as a whole (Sarabia-Sanchez et al., 2012, p. 183). The authors continue that personal values are important and determining factors for fashion consumers since what they decide to wear depends on their values, beliefs, and lifestyles (Sarabia-Sanchez et al., 2012, p. 181). Making it quite crucial to segment sustainable fashion consumers based on both their personal and sustainable values, and to create these new consumer segments to understand what values drive towards sustainable fashion consumption as a whole.

2.3 Theoretical framework of the consumer values driving sustainable fashion consumption

According to Lundblad and Davies (2016), there are six main values that enhance sustainable fashion consumption. These values are self-expression, self-esteem, responsibility, protecting the planet, sense of accomplishment, and social justice. Furthermore, Lundblad and Davies (2016) have created a hierarchical value map for eco-clothing consumption, showcasing certain patterns as well as connections between said values, their consequences and product attributes as can be seen in Figure 2. Based on Lundblad and Davies's six values, as well as the previous literature review on this research, a theoretical

framework is created to discover and describe the sustainable values that drive sustainable fashion consumption.

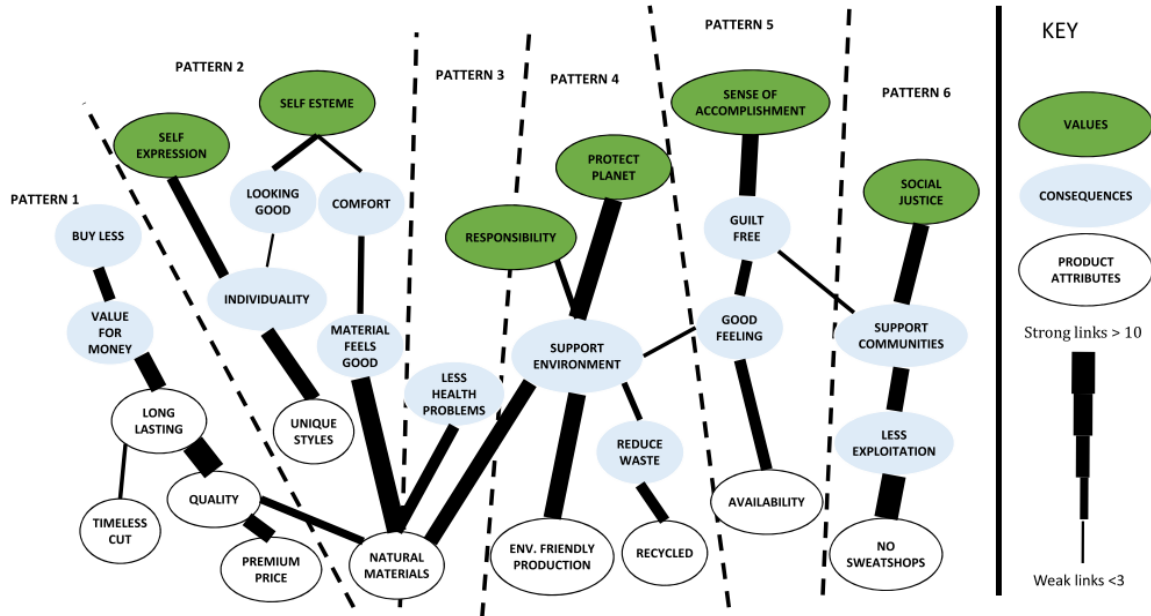


Figure 2. Lundblad & Davies (2016) The hierarchical value map for eco-clothing consumption

One of the prominent patterns in Lundblad and Davies's (2016) value map is the pattern of the self. This pattern includes the values of self-esteem and self-expression. On a closer look their research shows that sustainable consumers do not necessarily value the opinions of others when buying their clothes, but they rather aim to purchase clothing that is comfortable and that the clothing enables them to indicate their opinions and values. Since fashion is most often used as a way of self-expression for many consumers, it is hardly surprising that for sustainable consumers purchasing ethically and environmentally friendly clothing is a symbolic way to show one's identity and social image (Zollo, 2024, p. 564). The research done by Lundblad and Davies (2016), argues that sustainable consumers are in fact more concerned with looking good for themselves and feeling at peace with their individual image, rather than gaining external acceptance. This feeling stems especially from confidence and looking good in their clothing as well as from comfortable and psychologically good feeling materials. According to their research, Lundblad and Davies (2016) believe that the thought of using natural materials for

sustainable fashion consumers already makes the material feel better and more comfortable, showcasing the true effect of personal values in consumption behavior. Based on these values and factors, the first value or attribute in the framework (Figure 3.) is personal preferences.

For many fashion consumers one of the first priorities in apparel purchases is the style of their clothing, and that it matches their own personal preferences and self-expression well (Lundblad & Davies, 2016). Additionally, the quality of clothing is found to be a very defining attribute for both sustainable and non-sustainable fashion consumers in their purchase decision, often being a more important factor than ethical or environmental aspects (Zalando, 2021; Lundblad & Davies, 2016). Quality clothing materials often indicate that the clothing is both long lasting and easy to take good care of, which can make it more appealing to many fashion consumers. Based on Gurova's research (2024) on Gen Z's sustainable clothing consumption in Finland, some Finnish consumers indicate a Finnish brand to be more ethical and environmentally friendly than foreign brands are. This showcases that a local brand, in this case a Finnish brand, can be viewed as more trustworthy or as a personal preference overall. Based on these aspects, personal preferences for sustainable fashion consumers include the attributes of personal style, high quality, easy material care, and clothing from a domestic brand.

A second pattern in Lundblad and Davies's (2016) value map that is broader is the pattern of the environment. The environmental pattern includes the values of responsibility and protection of the planet. This pattern covers consumers' worries about the planet's health, wants of saving the world's resources, usage of natural materials and overall support for the environment. The environmental pattern also covers consumers worry about their own health especially in regard to the usage of natural materials and the lack of harmful chemicals in their production (Lundblad & Davies, 2016). Additionally, Lundblad and Davies (2016) found that sustainable fashion consumers also place great importance on the garment's lifecycle, the usage of recycled materials, and also the possibility of reducing garment waste with long lasting clothes that can be recycled forward

after the consumer is done using the piece of clothing. Combining the pattern of the environment from Lundblad and Davies's (2016) value map and theoretical research, one of the main values for sustainable fashion consumption in this framework (Figure 3.) is environmental attributes.

On a closer look, environmental values or attributes for consumers consist of many different goals. Some sustainable fashion consumers are interested in preserving the natural environment by minimizing emissions in production or in logistics, some feel that the most concrete measure is using natural and sustainable materials as well as avoiding harmful chemicals in the apparel's production (Lundblad & Davies, 2016; Channa et al., 2022). For some consumers, the biggest environmental issue from the fashion industry is the amount of wastewater that it causes, and they want to make sure that the clothing they purchase minimizes this as well (Manchiraju & Sadachar, 2014). Based on these factors and on Lundblad and Davies' (2016) value map, the three environmental attributes considered in the framework are minimizing environmental emissions in the clothing production (this can also be seen to cover wastewater as well), avoiding harmful chemicals in production, and using sustainable materials in the apparel (which also prioritize minimizing wastewater).

The last pattern from Lundblad and Davies's (2016) value map that is utilized in this framework is social justice. Their research describes that consumers who find this attribute especially important want to purchase their clothing from companies that take care of their workers in the factories, and that the workers are not exploited. According to Shen et al. (2012), the most significant ethical concern that consumers have is that there are no human rights violations in the clothing company's labor conditions. Sustainable fashion consumers are especially concerned about both the safety and fairness of the clothing factories' workers as well as that they are paid a proper wage for their inputs (Lundblad & Davies, 2016). The concern for ethical aspects can also be seen in consumers who aim to purchase their clothing from brand that supports a certain community, be it from more local productions or western production or even brands that utilize female

labor and support their efforts around the world (Lundblad & Davies, 2016). Another ethical aspect that is important for some sustainable fashion consumers is the lack of animal cruelty of any kind in fashion production (Lundblad & Davies, 2016). Based on the pattern of social justice as well as the previous theory, the third sustainable fashion consumption attribute is ethical attributes, which includes the more specific aspects of living wage for factory workers, safe and fair working conditions for factory workers, protected animal rights, production within a well perceived region, in this research Europe, since it is considered to be more ethical by consumers than production in third world countries.

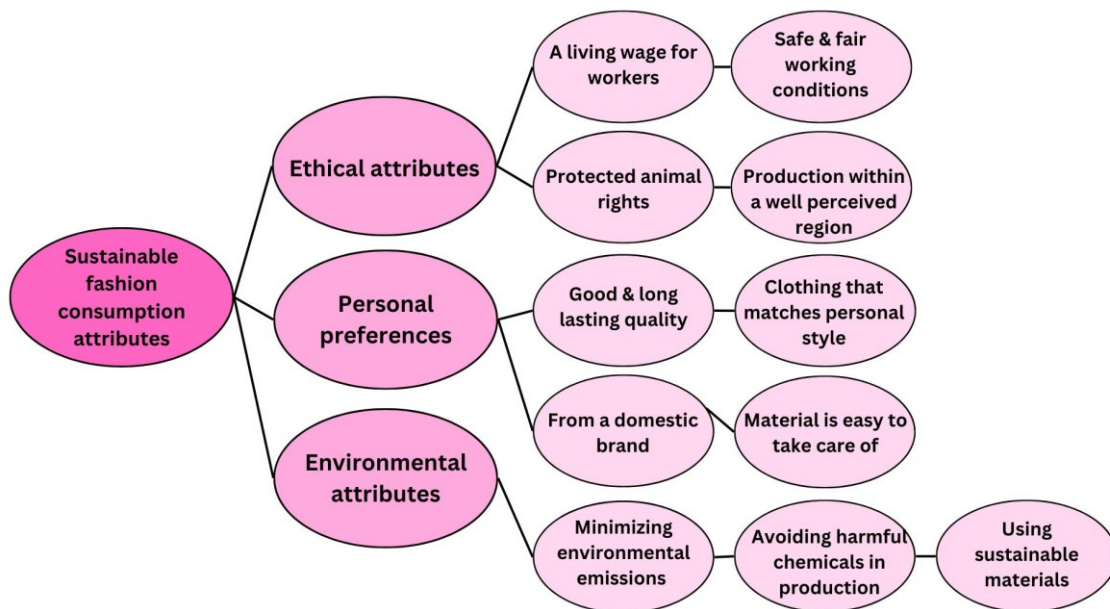


Figure 3. Framework of sustainable fashion consumption attributes

3 Methodology and research method

This chapter will describe the methodological choices made in this research. First the case company IVALO.COM is introduced, then the research approach is explained. After the research approach, the collection of data, the survey itself, the analysis methods and the collected data are described in detail. Lastly, the reliability and validity of the research is analyzed.

3.1 Case company: IVALO.COM

IVALO.COM is a Finnish online marketplace that was originally founded in 2015 and found its current form as an online store for sustainable fashion in 2019 (IVALO.COM, 2025). Since then, IVALO.COM has been working on their framework for sustainable fashion and building their 360 Sustainability Validation process that provides both consumers and fashion brands with a cohesive and reliable view of a brand's overall sustainability (IVALO.COM, 2015). Currently IVALO.COM has over 150 sustainable fashion brands that have gone through their 360 Sustainability Validation process, available on their online marketplace (IVALO.COM, 2025). IVALO.COM states on their website that "IVALO.COM 360 Sustainability Validation ensures that the brands on the marketplace meet the requirements of truly sustainable fashion". Promising their customers clothing and apparel that fulfills their ethical and environmental concerns.

The IVALO.COM 360 Sustainability Validation process focuses specifically on eight different categories when reviewing a brand's sustainable efforts (IVALO.COM, 2025). These eight categories are working conditions & labour, environmental impact, sustainable materials, transparent value chain, design for circularity, inclusivity & community, commitment to sustainability, and responsible e-commerce. Out of these eight categories IVALO.COM 360 Sustainability Validation gives a different focus percentage for each category, the most focus being on working conditions & labour (20%), environmental impact (19%), sustainable materials (14%), and transparent value chain (13%).

IVALO.COM can be viewed as a suitable case company for this study through them being a marketplace for only sustainable brands that have gone through the thorough 360 Sustainability Validation process, and them providing the transparency of each brand on their store for easy access to see for their customers and possible customers. This makes IVALO.COM customers the optimal participants when studying sustainable fashion consumers in Finland.

3.2 Research approach

A quantitative approach was chosen for this research as the primary research method. This is due to the fact that in order to reach the study's aims and objectives, quantitative cluster analysis combined with theoretical background on the subjects was the most optimal because this method enhances the application of current theories in explaining the researched topic. Additionally, due to previous research on sustainable fashion consumers and their values (Lundblad & Davies, 2016) focusing on qualitative research, it gives a new perspective on the research field to analyze sustainable consumer values and their different segments through quantitative research.

Using a descriptive-analytical methodology, the research focuses on describing, analyzing, and contrasting the data that was gathered. The reasoning process follows a deductive, theory-driven framework, meaning that the study is grounded in existing theoretical knowledge derived from previous research on the subject. Making assumptions and testing hypotheses are examples of deductive thinking in action. This research aims to test and assess the validity of theories made in previous studies, as well as to develop assumptions regarding sustainable fashion consumers values driving their purchase decisions and create possible consumer segments based on those assumptions.

The scientific philosophical position of this study is postpositivism which suggests that knowledge and the knower cannot be detached from each other (Eriksson & Kovalainen,

2016, p.20). Meaning that there does not exist one single reality that is shared by everyone, but with careful and profound research people can broaden their incomplete understanding. Postpositivism views knowledge to be an always developing matter, which is dependent on the individual's own relative experience. Leading to the conclusion that knowledge and understanding about the world can be achieved through scientific methods, but the knowledge is not perfect. Postpositivism is a suitable position for this research because it emphasizes individual experiences as part of reality, making consumers personal values and sustainable values part of the reality for sustainable fashion consumption.

3.3 Data collection

The data for this research was collected by an online survey that was distributed via the case company IVALO.COM's e-newsletter to their subscribers as well as their social media channel on Instagram. These were the chosen channels due to the assumption that the newsletter subscribers and Instagram followers of IVALO.COM are the most likely group to describe themselves as 'sustainable fashion consumers' making them the target group for this study. The survey was open for ten days from 26.2.-7.3.2025. and it gained 255 answers. As a reward for answering the survey, IVALO.COM gave away five 50 euro gift cards to their online store that were randomly selected from all of the respondents who optionally gave their email after the survey.

The online survey was a structured questionnaire, where all of the questions and answer options were already set. The advantage of structured surveys is that the questions can be answered quickly, and that the analyzing of the results is quite straight forward. This research aimed to gain a semi-randomized sample of respondents by randomizing the sample from the intended universe by the survey being open to anyone who decided to answer it, with the limiting factor being that the answers were gathered via IVALO.COM's newsletter subscribers and Instagram followers. This sample represents the intended universe of this study, which is Finnish sustainable fashion consumers.

3.4 Research survey

The research survey consists of questions that cover the answerers' demographic background, their preferences between different sustainable fashion and apparel attributes, how important they view specific factors behind their decision making in fashion purchases, and what values are important to them. The demographic variables consider sex, age, place of residence, social status, family, and monthly income. More detailed information about the survey can be found in Appendix 1.

In order to understand and measure specifically sustainable fashion consumption and values behind it, rather than consumers' overall views on sustainable consumption a new scale was created for this research. The first set of questions about consumers' preferences between different fashion and apparel attributes were based on the theory collected for this thesis and created from the framework built in 2.3. (Figure 3.). The questions follow three sustainable fashion consumption attributes of ethical attributes, environmental attributes, and personal preferences, which were created especially based on Lundblad and Davies's hierarchical value map for eco-clothing consumption. Ethical attributes included in the questions were: a living wage for workers in fashion production, safe and fair working conditions in fashion production, animal rights considered in fashion production, and production within Europe, since it is the closest region to Finland. Environmental attributes consisted of minimizing environmental emissions in fashion production, avoiding harmful chemicals in fashion production, and using sustainable materials in fashion production. Personal preferences included good and long lasting quality of clothing, apparel matching personal style, clothing from a Finnish (domestic) brand, and clothing made from material that is easy to care for.

These questions were positioned in three separate sections putting each attribute category against each other, meaning that the first set of questions considered ethical attributes against personal preferences, second set of questions considered ethical attributes

against environmental attributes, and the third set of questions considered environmental attributes against personal attributes. The unique positioning of making respondents choose between two different sustainability attributes instead of just stating their overall sustainability stance gives a more realistic and in depth picture of what sustainable fashion consumers actually want from their clothing. The questions were answered from a scale of 1 to 5, where 1 meant prioritizing for example one of the ethical attributes, 3 meant that the two attributes presented were equally important, and 5 meant that the answerer prioritized for example one of the personal preferences. The questions were answered with a slider that had the attribute choices at the opposite ends, and the slider was set to begin from the middle to not affect the positioning of the answerers on either attribute prior to answering. The slider was chosen due to the heaviness of the questions, having to choose from two very specific choices on repeat in the first 40 questions, and after testing the survey with IVALO.COM employees against traditional Likert scale questions the slider was chosen as the clearer option.

The second section focused on the answerer's consumption preferences and criteria in fashion purchases. The questions were based on the theory on fashion consumption and sustainable fashion consumption, and aimed to create an overall picture of sustainable fashion consumers by understanding more basic motivations behind their apparel purchases such as do they view sustainable production or trendiness as important aspects. The second set of questions was edited from Pyötsiä (2018), where the author studied different food consumption criteria in Finnish consumers. The questions were assessed with Likert scale of 1 to 5, with 1 being "Not important at all", and 5 indicating "Very important". The third section assessed consumers personal values and used a Likert scale of 1 to 5, with the specific factor ranging from "Not important at all" to "Very important". The third set of questions was adapted from the short Schwartz's value survey (Lindeman & Verkasalo, 2005) changing the ranging from 8 point scale to the scale of 1 to 5 to match the other questions in this survey.

3.5 Methodological approach

The main analytical methods used in this study were factor analysis and cluster analysis. Firstly, the data was analyzed through a factor analysis where the data was compressed into sum variables, and their reliability was tested. After that, the cluster analysis was conducted, where the answerers were divided into clusters or groups that are as similar as possible, but which differ from each other significantly. The aim of the clusters was to recognize different segments of sustainable fashion consumers based on their values and priorities in sustainable fashion attributes.

3.5.1 Factor analysis

Factor analysis is a quantitative research method that aims to compress or summarize the number of variables from the data (Tähtinen et al., 2020, p. 213). The goal of factor analysis is to create more comprehensive and understandable entities from the variables utilized in the measure, which are often statements about various aspects of a particular phenomenon (Tähtinen et al., 2020, p.213). Factor analysis is based on the correlations between variables, meaning that the new sum variable consists of the variables that the answerers have given similar answers to (Tähtinen et al., 2020, p. 215). The variables in factor analysis should be either interval or scaled variables and measured with Likert scale. Tähtinen et al. (2020) suggest that factor analysis should include at least 200 observation units, which was fulfilled in this research with the 255 answers gained for the survey. This research utilized 5 point Likert scale on the variables.

Factor analyses are divided into confirmatory and explorative factor analysis (Tähtinen et al., 2020, p. 213). This research used explorative factor analysis which is a data-driven research method, meaning that the factor structures are found based on data and material. Explorative factor analysis is done when the researcher has some prior assumptions or theories about what connects the researched variables (Tähtinen et al., 2020). Additionally, this research used confirmatory factor analysis, where already existing

measures are tested to see if the data works as intended (Tähtinen et al., 2020, p. 213). In this study, confirmatory factor analysis was used for Schwartz's value survey.

The usability of a factor model is evaluated with eigenvalue, factor loadings and communality. The eigenvalue rule, which states that only factors with eigenvalues greater than one should be kept, is an often used criterion for choosing the number of factors (Tähtinen et al., 2020, p. 215). Greater explanatory power is indicated by higher values of the eigenvalue, which shows the percentage of total variance explained by a particular factor. Furthermore, the total variance explained by all of the chosen components can be inferred from the cumulative sum of eigenvalues (Tähtinen et al., 2020, p. 216). After the factors are established, the loadings of individual variables onto each factor must be examined, as they indicate the strength of the relationship between the observed variables and the latent constructs (Tähtinen et al., 2020, p. 216). The communalities indicate how much of the variance in the variable in question can be attributed to the factors in the set, or how much of the variable itself is explained by the factors (Tähtinen et al., 2020, p. 217). In this study the eigenvalue of 1 was used, as well as KMO $>.60$ and communality of $>.30$.

It is advised to apply rotation in order to improve the factors' interpretability. According to Tähtinen et al. (2020) rotation aims to guarantee that each factor exhibits both high and low loadings, in order to maximize the variance among the variables. This research utilized varimax rotation when analyzing the factor results. On the other hand, Cronbach's alpha is used to evaluate the measuring scale's dependability. Cronbach's alpha values $.60$ and $.80$ indicate strong reliability, and above $.80$ excellent reliability, whereas those below $.60$ indicate weak reliability. The dependability level aimed at this research was to be higher than $.60$. The factor analysis will be discussed in more detail in the results chapters 4.1. and 4.2.

3.5.2 Cluster analysis

The purpose of cluster analysis is to divide the data into different groups based on similar answers that are also called clusters (Tähtinen et al., 2020, p. 226). Cluster analysis is often said to be a very descriptive and material driven analysis method, making it an explorative method (Tähtinen et al., 2020, p. 226). The role of the researcher is highlighted in cluster analysis since there is no one right or wrong result in it. The aim of cluster analysis is to recognize groups that have as little internal variation as possible, and external variation with the other groups as much as possible, meaning that the respondents who belong to a certain group have answered very similarly with each other, but very differently with the answerers in other groups. For this research it meant that the aim was to discover groups of sustainable fashion consumers that differ from each other, and within those found groups the sustainable fashion consumers are a lot alike with each other but have clear differences with the other groups.

The most common methods of cluster analysis are hierarchical cluster analysis and K-means cluster analysis (Tähtinen et al., 2020, p. 228). Hierarchical cluster analysis is the most useful in smaller data sizes, meaning that usually the number of respondents is rather in tens than hundreds (Tähtinen et al., 2020, p.228). However, it can be utilized for larger data as part of the cluster analysis before doing for example K-means cluster analysis, as was the case with this research. For instance, the Dendrogram plot, which depicts groups in a more visual format and shows how the variable clusters in phases, with as many clusters at the start as there are variables, can be analyzed by researchers (Tähtinen et al., 2020, p. 228). Subsequently, the two variable units that are nearest to one another are merged into a single cluster and so forward until all the clusters are connected. The Dendrogram plot can then be used to estimate the proper number of clusters from the data before moving to K-means analysis, which was also done in this research.

K-means cluster analysis on the other hand is suitable for larger data's where the number of answerers is in the hundreds (Tähtinen et al., 2020, p. 229). In this analysis method all

the variables should be both quantitative and standardized into a unified measurement scale. In this research this scale is from 1 to 5. K-means cluster analysis was the method chosen for this research due to it being more proper fit for the size of the data (N=225). K-means analysis requires the researcher to decide the number of clusters beforehand in order to divide the initial cluster centers, which where the analysis from hierarchical cluster analysis can be utilized to estimate the number of possible clusters (Tähtinen et al., 2020). Cluster analysis will be discussed in more detail in the results chapter 4.3.

3.6 Data description

The data used in this research was only collected for this study, making it primary data. The online survey got 255 answers during the time of 26.2. - 7.3.2025. The research data was analyzed using the IBM SPSS Statistics 26 program.

As can be seen from Table 1. the vast majority of the respondents were women. Women covered 96,9% of the answerers, men, other gender, and "I don't want to say" covered the other 3,1%. This result was expected due to IVALO.COM's customer base being mainly female. Consumers were asked to give their age in given age groups that were curated based on IVALO.COM's prior knowledge of their consumers and the relevance of certain age groups rather than specific ages. Almost half of the respondents (49,8%) were aged 30-45 years, while the second largest age group was 46-60 years with 29,0% of the answerers. The youngest age group of 18-29 years included 10,2% of the respondents, and the oldest age group of over 60 years consisted of 11,0% of the answerers.

Most of the respondents resided in the capital region of Finland with 41,2% of the answerers claiming it as their place of residence. Bigger Finnish cities such as Tampere, Turku and Oulu covered 23,9% of the respondents, while smaller towns included 25,1% of the answerers. The smallest residence group was smaller cities such as Lappeenranta and Vaasa with only 9,8% of the respondents living there. A large majority of the respondents stated their social status to be in a relationship with 78% of the answerers

being part of that group, while 22% of respondents were not in a relationship. Out of the respondents 56,5% have children, of which 35,7% have their children still living with them and 20,8% have children who have moved out of their childhood home. 43,5% of the answerers don't have children.

Most of the answerers have a monthly income of 2501-4000 euros with 39,6%. The second largest group had a monthly income of 0-2500 euros with 26,7% of the respondents belonging there. Monthly incomes of 4001-5500 euros and over 5500 euros were more evenly divided with 16,5% belonging to the former, and 17,3% belonging to the latter.

Table 1. Demographic backgrounds

	Amount	Percentage
Sex		
Female	247	96,9 %
Male	2	0,8 %
Other	3	1,2 %
N/A	3	1,2 %
Age group		
18–29	26	10,2 %
30–45	127	49,8 %
46–60	74	29,0 %
Over 60	28	11,0 %
Place of residence		
Capital region	105	41,2 %
Big city	61	23,9 %
Medium sized city	25	9,8 %
Smaller town	64	25,1 %
Social status		
In a relationship	199	78,0 %
Not in a relationship	56	22,0 %
Family		
Kids in the family (live at home)	91	35,7 %
Kids in the family (moved out of home)	53	20,8 %
No kids	111	43,5 %
Monthly income		
0–2500 e	68	26,7 %
2501–4000 e	101	39,6 %
4001–5500 e	42	16,5 %
Over 5500 e	44	17,3 %

3.7 Reliability and validity of the study

Validity in the research means that the chosen metrics actually measure the things they are supposed to (Tähtinen et al., 2020, p. 84). In other words, validity means that the research is competent and lacks systematic error. These errors might occur if the questions were structured poorly and fail to measure the phenomenon as intended. In order to better the validity of the research the researcher should establish clear goals for the study, specify the concepts that will be measured clearly, and properly plan and execute the data gathering process.

Several steps have been taken in order to improve this study's validity. First off, the survey questions were carefully designed, including a number of already validated items from earlier research, which were edited to fit this research topic based on theory. For the purpose of maintaining their original meaning and making sure that respondents who speak Finnish could understand them, these questions were thoroughly translated from English to Finnish. Additionally, another thesis work from the University of Vaasa (Pyötsiä, 2018) with similar already validated metrics about consumption habits as well as a translated version of Schwartz's value survey was utilized in the translation process due to some similarities in the research and their validity already proven to be fit for research.

Nevertheless, there were no proper metrics or set of questions on all of the topics that came up in the research for theory, specifically related to sustainable fashion consumption values and attributes affecting consumers decision-making. Since sustainable consumption is most often studied as part of fashion consumption or sustainable fashion consumers are found as one group from studies on fashion consumption, it was proper to create a new scale to understand the differences within the group of sustainable fashion consumers and their values. Lundblad and Davies (2016) already studied sustainable fashion consumers values in their qualitative research, but in order to utilize the existing

theory into quantitative research a new scale needed to be made. Thus, it was essential to create a new set of questions related to sustainable fashion attributes, and more importantly force sustainable fashion consumers to rank them compared to each attribute, in order to gain valuable new knowledge on the topic. This creates possible pitfalls for the validity of the research, but the questions were carefully constructed based on prior research as can be seen in 2.3, and they were also tested by professionals in the field of sustainable fashion marketing, in order to further ensure the validity of the questionnaire.

There were some risks for errors in the survey that could affect the validity of the research. For example, it is possible that the answerers understood the questions wrong, the answers were altered by their mood during the answering, or that they simply would change their answers later. In online surveys there is also the factor that the respondents cannot ask for clarification if they do not understand something in the questionnaire. These possible errors were minimized by written guidelines before each section of questions in the survey as well as by testing the survey several times by the author of this thesis and by the case company's employees. This ensured that the questions were understood clearly and effortlessly in their intended way.

Reliability on the other hand, considers that the metrics do not bring random results, but that the results are rather trustworthy and precise. The competence of metrics is one of the key factors in research, which is why it is important that the questions are properly designed and tested, as well as the reliability of the data is inspected. The ability to replicate the research and get consistent results over time is part of research reliability. Errors can possibly come up during data collection, analysis, processing, and interpretation, so the researcher has to be precise and critical throughout the whole research process to ensure reliability.

The reliability of this research was measured with Cronbach's alpha, which can gain values from zero to one (Tähtinen et al., 2020, p. 87). The closer to one that Cronbach's

alpha is the more similar the variables and questions are to each other, making the measure more reliable (Tähtinen et al., 2020, p.87). To make sure that the research is reliable, the process of the research is described in great detail to make it easier to replicate in the future. Although, it is also possible that repeating the survey later on can give different results, as the overall perception of fashion industry, fast fashion and sustainable fashion change. The differences in results do not then necessarily indicate poor reliability but rather can hint of a change in consumer values and perceptions of sustainable fashion. This research aimed to ensure the reliability with an online survey that was distributed to the most likely group of sustainable fashion consumers in Finland, as well as the survey being online giving a chance to respond both quickly and easily to the questions. Responding to the survey was anonymous, making it more approachable, and the questions regarding the research were all obligatory to answer so the lack of answers on all questions was eliminated.

4 Results

The results chapter consists of four different parts. First the factor analysis results of three different survey sections are introduced, then the final factor analysis results are combined and analyzed as a whole. After that the results of the cluster analysis are described, and lastly the final clusters and thus the resulting consumer segments are depicted.

4.1 Factor analysis results

The factor analysis was done separately for three different sets of ordinal variables based on the different aspects they aimed to understand. These topics were personal values, based on the short Schwartz's value survey, fashion consumption criteria, adapted from Pyötsiä (2018), and sustainable fashion consumption attributes that were based on this research's theoretical framework. The short Schwartz's value survey measured the respondents' personal values, from their own perception. The survey included 10 variables that were measured with 5 step Likert scale. The fashion consumption criteria section measured the respondents' consumption habits toward different aspects or criteria affecting fashion item's purchase decision. There were 11 variables that were measured with 5 step Likert scale. Lastly, the sustainable fashion consumption motivations aimed to measure sustainable fashion consumer's priorities between different attributes affecting sustainable fashion consumption. These attributes were divided into three categories of ethical, personal, and environmental fashion attributes. There were 40 variables that were measured with 5 step Likert scale. With the factor analysis the variables were summarized into factors and the metrics' reliability was analyzed.

4.1.1 Fashion consumption criteria factors

The factor analysis for fashion consumption criteria began again with inspecting if the metrics were fitted for a factor analysis, by doing both the Kaiser Meyer-Olkin (KMO) test and Barlett's test (Karjaluoto, 2012, p. 44). The KMO test should give results of $>.6$ and the Barlett's test should be statistically significant at Sig. $>.05$ (Karjaluoto, 2012, p. 44). For fashion consumption criteria metric the KMO was $.695$, and Barlett's test was statistically significant at $.001$, making the metric good enough for factor analysis.

The first factor analysis was conducted for the metric that measured fashion consumption criteria. The Principal Axis factoring method was utilized in this analysis, since it is suitable for exploratory factor analysis when the variables do not follow a normal distribution as is the case in this research. The factor solution was interpreted using Varimax rotation. The established cut-off values for the factor analysis are the following: Eigenvalue 1, factor loadings must be $>.40$ and communality values must be $>.30$. This factor analysis gave a four factor model result. Only the factors with eigenvalues higher than 1 were included in the result. The four factor model result explains 66% of the total variation in the data. The initial results of the factor analysis are represented in Table 2. The table also shows the statements, factor loadings, communalities, and Cronbach's Alpha of the factor.

Table 2. Initial factor results - fashion consumption criteria

		Claim	Factor loading	Communality	Cronbach Alpha
F1	FCC6	Sustainable production	.847	.741	.833
	FCC7	Ethical working conditions	.819	.684	
	FCC5	Sustainable material	.695	.498	
F2	FCC8	Mood impacts	.720	.534	.666
	FCC9	Trendiness	.716	.525	
	FCC3	Image reasons	.595	.359	
	FCC1	Brand loyalty	.305	.167	
	FCC10	Personal style	.345	.356	
F3	FCC4	Quality material	.686	.486	.565
	FCC11	Sustainable design	.579	.376	

	FCC10	Personal style	.449	.356
F4	FCC2	Inexpensiveness	.608	.394

From the initial results it can be seen that variable FCC10 is loaded with two different factors creating a cross-loading. Even with the cross-loading variable the Cronbach Alpha for Factor 2 is still $>.60$. However, the cross-loading affects the Cronbach Alpha of Factor 3 by not fulfilling the minimum value of Cronbach Alpha $>.60$. Another notable aspect from the initial factor results is that the variable FCC1 does not have the required communality of $>.30$, making it inadequate to consider in the factor analysis. Lastly, Factor 4 includes only one variable, making it unsuitable to become a sum variable for following analyses. In order to fix these errors Factor 4 or variable FCC2 will be removed, variables FCC10 and FCC1 will also be removed. After this Factor 3 still had the Cronbach Alpha of .582 meaning that it does not measure the claims reliably enough. With all the fixings in place the final factor analysis consists of 2 factors which are represented in Table 3.

Table 3. Final factor analysis results - fashion consumption criteria

	Claim	Mean	Standard deviation	Min	Max
Sustainable Fashion Criteria					
	SFC1 Sustainable production	3.99	.860	1	5
	SFC2 Ethical working conditions	4.11	.888	1	5
	SFC3 Sustainable material	4.02	.874	1	5
Hedonistic Fashion Criteria					
	HFC1 Mood impacts	2.82	1.084	1	5
	HFC2 Trendiness	2.28	.995	1	5
	HFC3 Image reasons	1.82	.948	1	5

The first factor, Sustainable Fashion Criteria or SFC combined all claims related to sustainability and ethicality variables. This was no surprise based on the research theory where sustainable fashion consumers view different sustainability, responsibility, and ethical factors as important, as well as these criteria being quite similar to each other. The loadings for SFC are on a good base, and the Cronbach Alpha of .833 meaning it can be seen as a reliable metric. Additionally, the mean values for SFC indicate that sustainable fashion consumers consider sustainability criteria to be highly important. With the mean values around 4, respondents consistently rated these criteria as significant in the survey.

The second factor Hedonistic Fashion Criteria or HFC combined more hedonistic claims that relate to fast-fashion purchase behavior and emotional reasoning for buying clothing. This also goes hand in hand with the research theory where these aspects are often related to consumer behavior. The loadings for HFC are also relatively good, and the Cronbach Alpha of .720 shows proportionate reliability. Furthermore, the mean values around 2 for HFC show that sustainable fashion consumers view hedonistic criteria as less important for their purchase decision.

4.1.2 Personal value factors

Firstly, the factor analysis for personal values commenced with inspecting if the metrics were fitted for a factor analysis, by doing both the Kaiser Meyer-Olkin (KMO) test and Barlett's test (Karjaluoto, 2012, p. 44). For the personal values metric, the KMO was .618, and the Barlett's test was statistically significant at .001, making the metric good enough for factor analysis.

The second factor analysis was done for personal values, based on the existing metric of short Schwartz's value survey. Again, the Principal Axis factoring method was used in this analysis and the factor solution was interpreted using Varimax rotation. The established

cut-off values for the factor analysis are still the following: Eigenvalue 1, factor loadings must be $>.40$ and communality values must be $>.30$. This factor analysis gave a three factor model result. Only the factors with eigenvalues higher than 1 were included in the result. The three factor model results explain 57% of the total variation in the data.

The initial results of the factor analysis for personal values are represented in Table 4. The table also shows the statements, factor loadings, communalities, Cronbach's Alpha of the factor, and for each statement the mean and standard deviation.

Table 4. Initial factor results - personal values

		Claim	Factor loading	Communality	Cronbach Alpha
F1	PV10	Security	.780	.653	.620
	PV9	Conformity	.650	.463	
	PV1	Tradition	.344	.153	
	PV2	Benevolence	.344	.498	
F2	PV6	Universalism	.606	.373	.635
	PV7	Self-Direction	.593	.371	
	PV2	Benevolence	.549	.498	
	PV4	Stimulation	.385	.282	
	PV3	Hedonism	.374	.231	
F3	PV4	Stimulation	.365	.282	.592
	PV8	Power	.798	.643	
	PV5	Achievement	.607	.402	

The initial factor analysis results show some cross-loading between factors, with variables PV2 and PV4 both included in two different factors. Table 4. also shows that variables PV1, PV3 and PV4 all have communality scores that are below the needed value of $>.30$. Due to these aspects, all of the above mentioned variables are excluded from

the final factor analysis, and the cross-loading factor PV2: Benevolence will be included in Factor 2 due to it being more theoretically relevant together with Universalism based on Schwartz's value model, as well as its factor loading fulfilling the minimum value of $>.40$ in Factor 2 but not in Factor 1. The final factor analysis for personal values still includes three factors, which can be seen below in Table 5.

Table 5. Final factor analysis results - personal values

		Claim	Mean	Standard deviation	Min	Max
Conservation Values	CV1	Security	4.25	.818	1	5
	CV2	Conformity	3.44	1.025	1	5
Self-Transcendence Values	STV1	Universalism	4.15	.873	1	5
	STV2	Self-Direction	4.01	.849	1	5
	STV3	Benevolence	4.44	.801	1	5
Self-Enhancement Values	SEV1	Power	2.03	.887	1	5
	SEV2	Achievement	3.03	1.009	1	5

The final factor analysis results inclined that the factor Conservation Values or CV includes the value types of Security and Conformity, giving them the Cronbach Alpha of $.601$ making it just enough to be considered reliable. This result goes in line with Schwartz's value structure where the value types of Security, Conformity and Tradition belong to Conservation dimension, with Tradition being excluded from the factor in this research. The exclusion of Tradition in this instance might be due to the translation of the survey not being relatable enough for the respondents, leading to low communality. The mean scores from CV show that overall Conservation values are perceived to be important by sustainable fashion consumers.

Self-Transcendence Values or STV from the factor analysis contains the value types of Universalism, Self-Direction, and Benevolence, having the Cronbach's Alpha of .651 that is enough to consider STV reliable. This result goes partly in line with Schwartz's value structure, where the value types of Universalism and Benevolence do belong into the same value dimension of Self-Transcendence, but the value type of Self-Direction belongs to the dimension of Openness to Change. However, the value type of Self-Direction can be seen to be connected with the Self-Transcendence values by all of them including appreciation of creativity, beauty and freedom. From the mean scores for STV it can be seen that sustainable fashion consumers value Universalism, Benevolence and Self-Direction very highly.

The last factor of personal values or Self-Enhancement Values (SEV) involves the value types of Power and Achievement, which also belong to the value dimension of Self-Enhancement in Schwartz's value structure. SEV has the Cronbach's Alpha of .683 showcasing reliable reliability. The mean scores for SEV, especially the mean for Power, are on the lower side, indicating that sustainable fashion consumers do not view Self-Enhancement values as important.

4.1.3 Sustainable fashion consumption attribute factors

The factor analysis for sustainable consumption attributes started by inspecting if the metrics were fitted for a factor analysis, by doing both the Kaiser Meyer-Olkin (KMO) test and Barlett's test (Karjaluoto, 2012, p. 44). For sustainable fashion consumption motivations, the KMO was .873, and the Barlett's test was statistically significant at .001, making the metric good for factor analysis.

The third factor analysis was done for sustainable fashion attribute variables, based on questions where the respondents were asked to select between two different sustainable fashion attributes on a scale of 1 to 5, where 1 meant preferring one option clearly

and 5 meant preferring the other option clearly. These questions were based on the theory collected for this research and the framework introduced in 2.3. Again, the Principal Axis factoring method was used in this analysis and the factor solution was interpreted using Varimax rotation. The established cut-off values for the factor analysis are still the following: Eigenvalue 1, factor loadings must be $>.40$ and communality values must be $>.30$. This factor analysis gave a ten factor model result. Only the factors with eigenvalues higher than 1 were included in the result. The ten factor model results explain 76% of the total variation in the data.

The initial results of the factor analysis for sustainable fashion attributes are represented in Table 6. The table also shows the statements, factor loadings, communalities, and Cronbach's Alpha of the factor.

Table 6. Initial factor results – sustainable fashion attributes

		Claim	Factor loading	Communality	Cronbach Alpha
F1	SFA30	Emissions vs style	.794	.773	.913
	SFA6	Working conditions vs style	.774	.822	
	SFA38	Sustainable material vs style	.715	.706	
	SFA34	Harmful chemical vs style	.697	.797	
	SFA2	Wage vs style	.683	.629	
	SFA14	European production vs style	.559	.673	
	SFA8	Working conditions vs easy material care	.324	.810	
	SFA40	Sustainable material vs easy material care	.324	.706	
	SFA32	Emissions vs easy material care	.315	.745	
F2	SFA34	Harmful chemicals vs style	.311	.797	.909
	SFA8	Working conditions vs easy material care	.760	.810	
	SFA4	Wage vs easy material care	.744	.773	
	SFA40	Sustainable material vs easy material care	.711	.706	
	SFA32	Emissions vs easy material care	.704	.745	
	SFA36	Harmful chemicals vs easy material care	.626	.771	
	SFA16	European production vs easy material care	.540	.649	

	SFA12	Animal rights vs easy material care	.503	.817	
F3	SFA23	Animal rights vs emissions	.765	.716	.901
	SFA25	Animal rights vs sustainable material	.724	.748	
	SFA10	Animal rights vs style	.714	.840	
	SFA9	Animal rights vs quality	.683	.750	
	SFA12	Animal rights vs easy material care	.671	.817	
	SFA24	Animal rights vs harmful chemicals	.671	.724	
	SFA11	Animal rights vs Finnish brand	.657	.731	
F4	SFA11	Animal rights vs Finnish brand	.507	.731	.827
	SFA31	Emissions vs Finnish brand	.770	.702	
	SFA35	Harmful chemicals vs Finnish brand	.738	.804	
	SFA7	Working conditions vs Finnish brand	.734	.676	
	SFA3	Wage vs Finnish brand	.725	.665	
	SFA39	Sustainable material vs Finnish brand	.715	.681	
	SFA15	European production vs Finnish brand	.470	.432	
	SFA27	European production vs harmful chemicals	.583	.520	
F5	SFA14	European production vs style	.531	.673	.773
	SFA16	European production vs easy material care	.487	.649	
	SFA15	European production vs finnish brand	.413	.432	
	SFA13	European production vs quality	.652	.627	
	SFA28	European production vs sustainable material	.626	.613	
	SFA26	European production vs emissions	.620	.647	
	SFA27	European production vs harmful chemicals	.361	.520	
F6	SFA25	Animal rights vs sustainable material	.312	.748	.780
	SFA28	European production vs sustainable material	.425	.613	
	SFA19	Wage vs sustainable material	.770	.724	
	SFA22	Working conditions vs sustainable material	.738	.718	
	SFA18	Wage vs harmful chemicals	.307	.528	
F7	SFA9	Animal rights vs quality	.390	.750	.818
	SFA13	European production vs quality	.302	.627	
	SFA1	Wage vs quality	.685	.614	

	SFA5	Working conditions vs quality	.607	.595	
	SFA33	Harmful chemicals vs quality	.350	.740	
	SFA37	Sustainable material vs quality	.351	.547	
	SFA29	Emissions vs quality	.374	.559	
F8	SFA24	Animal rights vs harmful chemicals	.499	.724	.735
	SFA21	Working conditions vs harmful chemicals	.655	.575	
	SFA18	Wage vs harmful chemicals	.591	.528	
	SFA27	European production vs harmful chemicals	.583	.520	
F9	SFA26	European production vs emissions	.401	.647	.720
	SFA20	Working conditions vs emissions	.766	.720	
	SFA17	Wage vs emissions	.643	.552	
F10	SFA34	Harmful chemicals vs style	.356	.797	.816
	SFA36	Harmful chemicals vs easy material care	.387	.771	
	SFA33	Harmful chemicals vs quality	.606	.740	
	SFA37	Sustainable material vs quality	.404	.547	
	SFA29	Emissions vs quality	.403	.559	

There are a lot of cross-loadings in the initial factor results. This is due to the nature of the questions that were built based on three broader themes of ethical, personal, and environmental fashion attributes, as well as the fact that the questions inherently include two claims each, making it inevitable that the questions overlap with each other. Since all the communalities and Cronbach's Alphas fulfill the minimum values, the only differential are the factor loadings and theory behind the variables. Furthermore, most of the cross-loadings have clear differences, where one fulfills the factor loading minimum of $>.40$ and the other does not. Additionally, when considering the final factor results, the final factors have clear similarities with one of the claims being same for the factor and the other claim changing. The final factor results for sustainable fashion attributes still include all ten factors, which can be seen in Table 7.

Table 7. Final factor analysis results - sustainable fashion attributes

Claim	Mean	Standard deviation	Min	Max
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Personal Style in Clothing	PSC1	Emissions vs style	3.25	1.097	1	5
	PSC2	Working conditions vs style	3.21	1.113	1	5
	PSC3	Sustainable material vs style	3.08	1.093	1	5
	PSC4	Harmful chemical vs style	2.86	1.159	1	5
	PSC5	Wage vs style	3.37	1.041	1	5
	PSC6	European production vs style	3.34	1.096	1	5
Easy Material Care in Clothing	EMCC1	Working conditions vs easy material care	2.82	1.078	1	5
	EMCC2	Wage vs easy material care	2.90	1.045	1	5
	EMCC3	Sustainable material vs easy material care	2.75	1.038	1	5
	EMCC4	Emissions vs easy material care	2.89	1.079	1	5
	EMCC5	Harmful chemicals vs easy material care	2.55	1.059	1	5
	EMCC6	European production vs easy material care	3.07	1.100	1	5
Animal Rights in Clothing	ARC1	Animal rights vs emissions	3.08	1.014	1	5
	ARC2	Animal rights vs sustainable material	3.10	1.043	1	5
	ARC3	Animal rights vs style	3.03	1.185	1	5
	ARC4	Animal rights vs quality	3.35	1.126	1	5
	ARC5	Animal rights vs easy material care	2.75	1.178	1	5
	ARC6	Animal rights vs harmful chemicals	3.28	1.041	1	5
	ARC7	Animal rights vs Finnish brand	2.79	1.155	1	5
Finnish Clothing Brands	FCB1	Emissions vs Finnish brand	2.96	1.092	1	5
	FCB2	Harmful chemicals vs Finnish brand	2.67	1.143	1	5
	FCB3	Working conditions vs Finnish brand	2.97	1.079	1	5
	FCB4	Wage vs Finnish brand	3.07	1.059	1	5
	FCB5	Sustainable material vs Finnish brand	2.85	1.099	1	5
Clothing Production in Europe	CPE1	European production vs quality	3.50	1.049	1	5

	CPE2	European production vs sustainable material	3.33	1.001	1	5
	CPE3	European productions vs emissions	3.29	1.020	1	5
Sustainable Materials in Clothing	SMC1	Wage vs sustainable material	3.31	.948	1	5
	SMC2	Working conditions vs sustainable material	3.06	.920	1	5
Quality compared to Ethical Working Conditions	QEWC1	Wage vs quality	3.66	.801	1	5
	QEWC2	Working conditions vs quality	3.54	.925	1	5
Harmful Chemicals in Fashion	HCF1	Working conditions vs harmful chemicals	3.35	.909	1	5
	HCF2	Wage vs harmful chemicals	3.58	.846	1	5
	HCF3	European production vs harmful chemicals	3.70	.929	1	5
Emissions from Fashion Production	EFP1	Working conditions vs emissions	3.03	.902	1	5
	EFP2	Wage vs emissions	2.94	.881	1	5
Quality compared to Environmental Aspects	QEA1	Harmful chemicals vs quality	3.15	1.081	1	5
	QEA2	Sustainable material. vs quality	3.49	.947	1	5
	QEA3	Emissions vs quality	3.69	.883	1	5

The final factor results show that Personal Style in Clothing or PSC, is the first factor from sustainable fashion attributes, and it includes variables where both ethical and environmental claims are compared with style. Meaning that when looking at the mean scores, the scores below 3 indicate that the respondents prefer ethical and environmental aspects over style, and the scores above 3 indicate that the respondents prefer style over ethical and environmental aspects. The final Cronbach's Alpha of .899 indicates great reliability of the factor.

Easy Material Care in Clothing or EMCC, on the other hand, consists of ethical and environmental factors compared to easy material care. With EMCC again, the mean scores below 3 prefer ethical and environmental variables, and the mean scores above 3 prefer easy material care over ethical and environmental variables. EMCC has the Cronbach's Alpha of .906 which shows great reliability of the factor.

Furthermore, Animal Rights in Clothing or ARC includes variables from environmental and personal preference aspects compared to animal rights in clothing. Here the mean scores below 3 show preference toward animal rights, and scores above 3 a preference towards the environmental and personal preferences. The Cronbach's Alpha of .901 showcases a great reliability of this factor.

Factor Finnish Clothing Brands or FCB focuses on ethical working conditions (laborers living wage and safe working conditions) and environmental aspects compared to the clothing brand being from Finland. In this factor the mean scores below 3 indicate a preference for ethical working conditions and environmental aspects, and scores above 3 for Finnish clothing brands. This factor's Cronbach's Alpha of .871 indicates a good reliability of the factor.

The final result of Clothing Production in Europe or CPE includes three more specific aspects of clothing quality, sustainable material, and production emissions compared to clothing that is produced in Europe. With this factor the mean score below 3 indicates a preference for European produced clothing and a score above 3 shows a preference for the other three aspects. CPE has a Cronbach's Alpha of .696, which is reliable enough to consider as a factor.

The factor Sustainable Materials in Clothing or SMC consists of ethical working conditions compared to sustainable material. In SMC, the mean score below 3 indicates that the respondents prefer ethical working conditions, and the score above 3 means that

the respondents prioritize sustainable materials compared to ethical working conditions. This factor has a Cronbach's Alpha of .848, that shows good reliability of the factor.

On the other hand, from the final factor results, factor Quality compared to Ethical Working Conditions or QEWC includes ethical working conditions versus clothing quality, where the mean score below 3 favors ethical working conditions, and the mean score above 3 favors quality in clothing. The Cronbach's Alpha of .754 indicates a solid reliability of the factor.

Factor Harmful Chemicals in Fashion or HCF considers ethical aspects compared to harmful chemicals used in fashion production. In HCF the mean score below 3 means that the respondents prioritize ethical aspects and score above 3 that the respondents prioritize the minimalization of harmful chemicals in fashion products. The factor has Cronbach's Alpha of .712, which makes it relatively reliable.

Additionally, factor Emissions from Fashion Production or EFP focuses on ethical working conditions versus minimum emissions used in clothing production. In EFP the mean score below 3 shows a preference towards ethical working conditions, and the score above 3 a preference for minimal emissions in clothing production. EFP has the Cronbach's Alpha of .785, indicating a solid reliability of the factor.

Lastly, factor Quality compared to Environmental Aspects or QEA consists of environmental aspects compared to quality clothing. Here the mean score below 3 indicates that the respondents prioritize environmental aspects, and a score above 3 that the respondents prioritize quality. The last final factor has the Cronbach's Alpha of .715 which is considered reliable enough.

The factor analysis was conducted in three parts considering the topics of fashion consumption criteria, personal values, and sustainable fashion attributes. The final factor results consist of fifteen factors in total that were changed into sum variables for the

following cluster analysis. All of the factors were named based on their characteristics as sum variables. These sum variables were then used to conduct the cluster analysis.

4.2 Cluster analysis results

The cluster analysis fulfills the research aim of discovering underlying consumer segments of sustainable fashion consumers based on their personal values and specific sustainability priorities. The purpose of the cluster analysis is to find groups from the data that have as small variation as possible inside the group, and as big as possible variation with the other groups. In this research sustainable fashion consumers are segmented based on their fashion consumption criteria, personal values, sustainable fashion attribute preferences, and demographic variables. The cluster analysis will utilize the sum variables created in the factor analysis conducted in the previous part. The factor analysis resulted in fifteen sum variables which are Sustainable Fashion Criteria, Hedonistic Fashion Criteria, Conservation Values, Self-Transcendence Values, Self-Enhancement Values, Personal Style in Clothing, Easy Material Care in Clothing, Animal Rights in Clothing, Finnish Clothing Brands, Clothing Production in Europe, Sustainable Materials in Clothing, Quality compared to Ethical Working Conditions, Harmful Chemicals in Fashion, Emissions from Fashion Production, and Quality compared to Environmental Aspects.

The cluster analysis began with a hierarchical cluster analysis to first estimate the possible number of clusters. The hierarchical cluster analysis results gave a dendrogram that showed that there are possible 3 to 5 clusters in the data, but since the data was big, it is less clear to see the amount of clusters from the dendrogram. With the hierarchical cluster analysis results, K-mean cluster analysis was utilized next in order to better define the number of clusters. The amount of clusters in K-means cluster analysis is predetermined by the researcher, and then assigned into initial cluster centroids, in this research initial cluster numbers of 3, 4 and 5 were all tested due to the results of hierarchical cluster analysis and based on theory. After the cluster centroids stabilize and their values

stop fluctuating, the observations are iteratively grouped using distance measures (Tähtinen et al., 2020, p.229).

This research resulted in four cluster results as the most practical and clear to analyze on the purposes of this research. Although, five cluster results had relatively more evenly distributed groups based on the number of respondents in each group, the four cluster results made more sense based on theory, and the larger differences in mean scores that indicate clearer distinctions between the clusters. Additionally, the analysis of variance (ANOVA) results showed that the clusters had statistically significant differences for each variable ($>.05$). The F test and Sig. from ANOVA show if the means of the variables are significantly different from each other, but they do not show specifically which clusters have differences between them. In this research the F test results showed that there are clear differences between at least some of the clusters of sustainable fashion consumers and their different values.

Because ANOVA does not show which clusters differ from one another, a Post Hoc test was conducted in order to see if the mean values of the clusters are statistically significant from one another. The Post Hoc tests conducted were Tukey's and Tamhane's T2, where Tamhane's T2 was used on the sum variables for which the homogeneity of variances was not fulfilled. These sum variables were Personal Style in Clothing, Easy Material Care in Clothing, Finnish Clothing Brands, Sustainable Materials in Clothing, Quality compared to Ethical Working Conditions, and Quality compared to Environmental Aspects. The sum variables that did not fulfill the homogeneity of variance were analyzed with Brown-Forsythe test, were all of the sum variables were significant. The Post Hoc tests indicated that there were significant differences between the clusters in most sum variables. For example, the sum variables of Conservation values and Self-Transcendence only had significant differences between few of the groups. However, this was an expected result based on the theory, especially the research by Lundblad and Davies (2016), that have come to the conclusion that sustainable fashion consumers showcase these value types strongly. The other sum variables had more or less significant differences

between the four clusters, and due to the large number of sum variables there are clearly enough significant differences in all of the clusters. The final clusters are shown in Table 8. with the mean scores and standard deviations. Based on the analysis, Cluster 1 is called **The Ethicals**, Cluster 2 is called **The Practicals**, Cluster 3 is called **The Refineds**, and Cluster 4 is called **The Fashionables**.

Table 8. Cluster centers

	Cluster 1 (n=82)	Cluster 2 (n=56)	Cluster 3 (n=97)	Cluster 4 (n=20)
Sustainable Fashion Criteria	4.48 (.53)	3.54 (.78)	3.92 (.69)	4.17 (.78)
Hedonistic Fashion Criteria	2.45 (.60)	2.92 (.66)	2.89 (.59)	3.60 (.75)
Conservation Values	3.74 (.83)	3.65 (.86)	3.96 (.71)	4.25 (.66)
Self-Transcendence Values	4.40 (.54)	3.85 (.81)	4.25 (.56)	4.08 (.58)
Self-Enhancement Values	2.14 (.77)	2.61 (.72)	2.65 (.79)	3.33 (.77)
Personal Style in Clothing	2.45 (.60)	3.40 (.78)	3.42 (.74)	4.50 (.40)
Easy Material Care in Clothing	2.14 (.51)	3.13 (.74)	2.95 (.74)	4.29 (.49)
Animal Rights in Clothing	2.43 (.68)	3.56 (.67)	3.05 (.73)	4.22 (.67)
Finnish Clothing Brands	2.40 (.69)	3.06 (.86)	3.05 (.78)	3.85 (1.03)
Clothing Production in Europe	3.25 (.74)	3.81 (.65)	3.01 (.69)	4.38 (.54)
Sustainable Materials in Clothing Quality compared to Ethical Working Conditions	2.89 (.72)	3.98 (.45)	2.76 (.69)	4.20 (.82)
Harmful Chemicals in Fashion	2.92 (.51)	4.07 (.58)	3.70 (.63)	4.60 (.45)
Emissions from Fashion Production Quality compared to Environmental Aspects	3.48 (.66)	3.90 (.54)	3.21 (.61)	4.43 (.67)
	2.85 (.71)	3.39 (.72)	2.65 (.68)	3.98 (.79)
	2.82 (.61)	3.60 (.72)	3.67 (.54)	4.53 (.52)
	The Ethicals	The Practi- cals	The Re- fineds	The Fash- ionables

The first cluster is **the Ethicals**, which includes 82 respondents. These consumers have especially high mean scores in both the sustainable fashion criteria (4.48) and in self-transcendence Values (4.40), meaning that they find sustainable consumption criteria, universalism, benevolence, and self-direction of great importance. This group prioritizes ethical and environmental aspects more than personal preferences such as style, quality, and easy material care. Between ethical and environmental aspects, these consumers choose ethical working conditions (living wage and safe working conditions) over

minimal emissions and sustainable materials but prefer clothing without harmful chemicals over ethical working conditions. These consumers do not find hedonistic consumption habits (2.45) or self-enhancement values (2.14) of power and achievement as important, meaning that they do not tend to focus or care about the trendiness or image impacts of their clothing.

The second cluster is **the Practicals**, which includes 56 respondents. These consumers still found sustainable fashion criteria (3.54) and self-transcendence values (3.65) important to them, but this group found them the least important out of all the clusters. This group of consumers prioritizes personal style over both ethical and environmental factors. They also prefer high quality in their clothing over ethical and environmental aspects such as ethical working conditions, minimal emissions, harmful chemicals, and sustainable materials. Between ethical and environmental aspects, these consumers prioritize the lack of harmful chemicals used in their clothing's production rather than ethical labor conditions. They also view personal preferences and environmental aspects as more important in their purchase decision than animal rights in clothing production. Like cluster 1, these consumers also do not view hedonistic consumption habits (2.92) and self-enhancement values (2.61) as important to them.

The third cluster is called **the Refined**s, that includes 97 respondents. These consumers also found sustainable fashion criteria (3.92) and self-transcendence values (4.25) very important to them. Additionally, they found the values of security and tradition (3.96) highly important to them. These consumers prefer style over ethical and environmental aspects, but view them as important as easy material care, and Finnish brands. They find quality clothing more preferable than clothing that ensures ethical labor conditions or environmental aspects. Between ethical and environmental aspects, these consumers prioritize ethical working conditions over sustainable materials or minimal emissions but prefer clothing without harmful chemicals over ethical aspects. Overall, these consumers view sustainable aspects as important, but choose selectively clothing that is long lasting,

timeless and high quality, valuing hedonistic fashion criteria (2.89) such as trendiness, stimulation, mood effects as less important in their purchase decision.

The fourth cluster is called **the Fashionables**, which includes only 20 respondents. These consumers, like the previous ones, perceive sustainable fashion criteria (4.17), conservation values (4.25) and self-transcendence values (4.08) as very important. However, these consumers also found hedonistic consumption criteria (3.60) and self-enhancement values (3.33) important to them. This group prioritizes both style and easy material care clearly over ethical and environmental aspects. They also keep Finnish brands in higher regard than ethical and environmental factors. High quality clothing is also more important for them than ethical labor conditions or environmental actors. Between ethical and environmental aspects, this group prioritizes all environmental factors over ethical aspects.

4.2.1 Sustainable fashion consumer demographics within the cluster results

After forming the cluster results the clusters are examined through the demographic variables. When categorizing two variables cross-tabulation helps specifying their interdependence. The chi-square test (χ^2 test of independence) assesses the statistical significance of this relationship, indicating whether any observed dependency is due to chance. In this research, cross-tabulation and the chi-square test were employed to analyze variations between clusters based on the respondent's demographic information, such as their sex, age, place of residence and monthly income. The clusters are reviewed by the background variables in Table 9.

Based on the chi-square test, both age $\chi^2 (4) = 22.858$; $p = .007$ family $\chi^2 (3) = 16.026$; $p = .014$ background divided the differences between clusters statistically relevantly. Over half of the Refinedes belong in the age group of 30-45 years (61.9%), and half of the Fashionables are aged 46-60 years (50.0%). Respondents aged 30-45 years also take up just over half of the Practicals (55.4%). Interestingly also, half of the age group 18-29 years

belong in the Ethicals. Half of the Ethicals also have no kids (51.2%), and only 11.3% of the Refinedes have children who have moved out of their childhood home. Statistically interesting is also that the Fashionables is the only cluster where there are more respondents with children who have moved out of their family home than respondents with children who still live with them. Additionally, when combining the two variables that include children in the respondent's family, the respondents without children cover only a third (32.1%) of the Practicals.

There was no dependence found between the clusters and sex $\chi^2(4) = 14.637$; $p = .101$, place of residence $\chi^2(4) = 15.472$; $p = .079$, social status $\chi^2(2) = 3.297$; $p = .348$, and monthly income $\chi^2(4) = 12.148$; $p = .205$. Still interesting to note is that all male and other sex respondents belong into the Ethicals, and almost half of smaller town residents also belong into the Ethicals. Most people who live in medium sized cities in Finland belong the Refinedes. A little bit less than half of respondents whose monthly income is from 0 euros to 2500 euros belong in the Ethicals, and almost half of the Refinedes earn the monthly income of 2501-4000 euros (44.3%).

Table 9. Clusters by demographics

	Cluster 1 (n=82) The Ethicals	Cluster 2 (n=56) The Practicals	Cluster 3 (n=97) The Refinedes	Cluster 4 (n=20) The Fashionables
Sex				
Female	77 (93.9%)	54 (96.4%)	96 (99.0%)	20 (100.0%)
Male	2 (2.4%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Other	3 (3.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
N/A	0 (0.0%)	2 (3.6%)	1 (1.0%)	0 (0.0%)
Age group				
18-29	13 (15.9%)	2 (3.6%)	9 (9.3%)	2 (10.0%)
30-45	31 (37.8%)	31 (55.4%)	60 (61.9%)	5 (25.0%)
46-60	27 (32.9%)	14 (25.0%)	23 (23.7%)	10 (50.0%)
Over 60	11 (13.4%)	9 (16.1%)	5 (5.2%)	3 (15.0%)
Place of residence				
Capittal region	30 (36.6%)	24 (42.9%)	43 (44.3%)	8 (40.0%)
Big city	17 (20.7%)	13 (23.2%)	25 (25.8%)	6 (30.0%)
Medium sized city	5 (6.1%)	4 (7.1%)	15 (15.5%)	1 (5.0%)

Smaller town	30 (36.6%)	15 (26.8%)	14 (14.4%)	5 (25.0%)
Social status				
In a relationship	63 (76.8%)	40 (71.4%)	81 (83.5%)	15 (75.0%)
Not in a relationship	19 (23.2%)	16 (28.6%)	16 (16.5%)	5 (25.0%)
Family				
Kids in the family (live at home)	21 (25.6%)	22 (39.3%)	43 (44.3%)	5 (25.0%)
Kids in the family (moved out of home)	19 (23.2%)	16 (28.6%)	11 (11.3%)	7 (35.0%)
No kids	42 (51.2%)	18 (32.1%)	43 (44.3%)	8 (40.0%)
Monthly income				
0-2500 e	32 (39.0%)	11 (19.6%)	19 (19.6%)	6 (30.0%)
2501 - 4000 e	28 (34.1%)	22 (39.3%)	43 (44.3%)	8 (40.0%)
4001 - 5500 e	10 (12.2%)	11 (19.6%)	19 (19.6%)	2 (10.0%)
Over 5500 e	12 (14.6%)	12 (21.4%)	16 (16.5%)	4 (20.0%)

4.2.2 Introducing the sustainable fashion consumer segments

This section introduces the final sustainable fashion consumer segments that were recognized in the cluster analysis. The segments are the Ethicals, the Practicals, the Refined, and the Fashionables.

Segment 1. – The Ethicals

The consumers belonging to this segment can be described as highly universalist and benevolent with strong self-direction values. The Ethicals value sustainable fashion criteria such as ethical labor conditions, sustainable materials, and sustainable production very highly, and perceive security and conformity as important values. This segment shows the least importance for power and achievements.

The Ethicals prioritize ethical issues over environmental issues, and environmental issues over personal preferences in regard to fashion. The only exception being their prioritization towards clothing that lacks the usage of harmful chemicals in production when compared to clothing that is produced in ethical labor environments. The Ethicals still prioritize high quality in clothing, but not at the cost of ethicality. On the other hand, the Ethicals do not care for hedonistic consumption criteria such as trendiness and image reasons, and do not purchase clothing based on mood effects. The Ethicals perceive easy

material care and Finnish brands as less important factors in their clothing than ethical and environmental aspects.

This segment includes the most sustainable fashion consumers under 30 years and consumers without children in their family out of all the segments. It also has the most division by age out of all the segments in this research. Most of the consumers belonging to the Ethicals earn under 4000 euros per month, live either in the capital region of Finland or in smaller towns, and are in some type of relationship.

Segment 2. – The Practicals

This segment includes sustainable fashion consumers that seek especially practicality in their clothes above anything else. The personal values of benevolence, universalism, self-direction, safety, and conformity are still important to these consumers, as they are to all sustainable fashion consumer segments, but the Practicals perceive them the least important out of the segments. The Practicals do not see image reasons or mood impacts, nor power or achievement as very important aspects in their purchase decision.

The Practicals prioritize style above ethical and environmental aspects and consider easy material care and Finnish clothing brands to be a bit more preferable than clothes that fulfill the different ethical and environmental fashion attributes. The most important attribute for the Practicals is the quality of the clothing, which is clearly more important to them than ethical labor conditions, and a bit more important than environmental aspects such as minimal emissions, sustainable materials and lack of harmful chemicals. When choosing between ethical and environmental aspects, the Practicals prioritize clothing that minimizes environmental damage.

Over half of the Practicals are aged between 30 to 45 years. Most Practicals live in the capital region of Finland, are in a relationship, and earn 2500-4000 euros per month. However, the Practicals are the most evenly divided segment by their income and by their family format.

Segment 3. – The Refined

The sustainable fashion consumers that belong in the Refined segment value sustainable fashion criteria like all of the other segments. The Refined showcase the personal values of benevolence, universalism, self-direction, safety, and conformity very highly, and find the values of power and achievement as less important. Furthermore, consumers in this segment do not find trendiness and image impacts significant in their fashion consumption.

The Refined prioritize clothing that fits their personal style clearly more compared to clothing that considers ethical and environmental aspects. Otherwise, the Refined are quite even on which sustainable fashion attributes are important to them, when they view easy material care and ethical and environmental issues, animal rights and personal preferences and environmental aspects, as well as European clothing production, quality, sustainable material, and minimal emissions equally important attributes. The most important attribute for the Refined is high quality in their clothing, which is prioritized clearly over both ethical labor conditions and environmental aspects. These consumers prefer clothing without harmful chemicals over clothing that is produced in ethical working conditions but prioritize ethical working conditions over minimal emissions.

Typically, the Refined are aged 30-45 years, have the monthly income of 2500-4000 euros, live in the capital region of Finland, and are in a relationship. Just over half of the Refined have children, but only 11% of those have children who do not live at their childhood home anymore. Additionally, most sustainable fashion consumers from this survey who live in medium sized cities belong to the Refined segment.

Segment 4. – The Fashionables

Segment 4 is the smallest segment of sustainable fashion consumers. The Fashionables view sustainable fashion criteria very highly, as well as convey the personal values of safety, conformity, universalism, benevolence, and self-direction. However, these

consumers also perceive both hedonistic fashion consumption criteria and self-enhancement values as somewhat important to them, unlike the other segments do. Meaning that the Fashionables do value sustainability aspects as can be expected from sustainable fashion consumers, but they also find trendiness and style very important in their clothing.

The Fashionables prioritize both style and easy material care very highly over ethical and environmental aspects. They prefer clothing that fulfills their personal preferences and environmental factors over clothing that is ensured without animal cruelty. This group also finds Finnish brands to be preferable for them instead of specific ethical and environmental aspects. The most important sustainable fashion attribute for the Fashionables is still quality in clothing compared to ethical labor conditions and environmental aspects. These consumers can be seen to perhaps prioritize slow fashion over sustainable fashion due to their preferences in easy material care and high quality in their clothing indicating an aim for long lasting fashion choices. The Fashionables also prioritize minimal emissions, sustainable materials, and the lack of harmful chemicals over any ethical considerations. A typical fashionable is 46-60 years old, has the monthly income of 0-4000 euros, and lives either in the capital region or a bigger city in Finland.

5 Discussion and conclusions

The theme of sustainable fashion consumption was chosen as the main research focus for this thesis due to its current relevance in the fashion industry, as well as the lack of research on sustainable fashion consumers specifically. Personal values and sustainability attributes related to fashion consumption helped to understand sustainable fashion consumers on a deeper level, and creating segments of them based on these values provided a profound picture of different types of sustainable fashion consumers. Due to these aspects sustainable fashion consumers were studied based on their personal values and sustainability motivations and attributes. This research added new layers to sustainable fashion consumption theory by creating a sustainable fashion attributes framework (Figure 3.) as well as creating a new scale to utilize in quantitative research on sustainable fashion consumption.

The first objective of this research was to discover what sustainable values and motivations as well as personal values are related to sustainable fashion consumption. The first objective was only theoretical with the aim of creating a framework of sustainable consumer values in sustainable fashion. This objective was achieved by going through the literature on sustainable fashion, values, and sustainable values. The second objective was to understand the different values driving Finnish consumers who purchase sustainable fashion via a structured online survey distributed to IVALO.COM's consumers. The survey results were analyzed with factor analysis and cluster analysis in order to gain a holistic picture of the different sustainable fashion consumer segments based on personal values and sustainability motivations in Finnish consumers. Both of the objectives set for the research were achieved.

Based on the survey results all sustainable fashion consumers rated the personal value types of universalism, benevolence, self-direction, safety, and conformity highly. This result was supported by findings in the previous research done by Jung and Jin (2016). Additionally, sustainable fashion consumers showed less interest in Self-Enhancement values of power and achievement, with the smallest segment of the Fashionables being

the only exception to this. The results also showed that sustainable fashion consumers view sustainable production, ethical working conditions, and sustainable materials as very important criteria in their apparel purchases. Whereas, sustainable fashion consumers do not find image reasons, trendiness, low price points or mood effects as important to their fashion purchases. These findings were in line with the previous theory from Lundblad and Davies (2016).

In order to gain novel insight into sustainable fashion consumers and on what attributes actually weigh in their fashion purchase decisions, a new scale was created. Prior research showed that when asked about overall criteria in fashion purchases, sustainable fashion consumers rate sustainable materials, ethical working conditions, among other sustainability factors quite highly (Lundblad & Davies, 2016; Haines & Lee, 2022), these results were supported by this study. However, previous research lacked deep input as to which sustainability attributes sustainable fashion consumers find the most important to them when having to choose only between different sustainability attributes. Thus, the new scale measured these attributes by comparing them against each other in three different sections of ethical attributes (a living wage for workers, safe and fair working conditions, no animal harm in production, production in Europe) versus personal preferences (good and long lasting quality, clothing that matches personal style, clothing from a Finnish brand, and clothing with material that is easy to take care of) versus environmental attributes (minimized emissions in production, no harmful chemicals used in production, and sustainable materials). The survey questions forced the respondents to choose between ethical attributes versus personal preferences, ethical attributes versus environmental attributes, and environmental attributes versus personal preferences, resulting in reliable and meaningful findings.

The new scale showed that there indeed are clear differences within the sustainable fashion consumer group, where some consumers clearly prioritized ethical attributes over the other two (the Ethicals), some consumers prioritized personal preferences clearly above the other two (the Fashionables) and some groups valued all of the three

attribute types quite evenly. The research results also revealed that overall, both personal style and high quality in clothing top all other attributes with sustainable fashion consumers. Additionally, based on the results, it was found that sustainable fashion consumers are quite evenly distributed based on demographic variables such as age, income, and residence in Finland. However, the clear majority of sustainable fashion consumers based on this research are female, which can be limited to the fact that women tend to both answer surveys more and also shop online more than men.

The research found four different sustainable fashion consumption segments from Finnish sustainable fashion consumers. These segments were the Ethicals, the Practicals, the Refinedes, and the Fashionables. Using K-means clustering to distinguish statistically relevant differences between the four groups, clear segments were found. The results of the cluster analysis can be utilized by the case company IVALO.COM, as well as other sustainable fashion companies, to enhance their marketing efforts and target their consumers more specifically. For example, the Ethicals can be reached better by focusing the marketing on the clothing brands that are proven to pay a living wage for their workers, that utilize fair and safe working conditions or that are produced in better perceived locations as well as giving transparent information about these aspects to the consumers. On the other hand, the Practicals might prefer to see more marketing information on the materials in their clothing and the overall high quality should be enhanced in the marketing messages. The Refinedes, however, should be targeted with emphasizing timeless style or even silent luxury style, as well as the sophisticated quality of the clothing materials making the apparel pieces sustainable by them being slow fashion. The group of Fashionables could find style, trend, and environmental messages the most appealing in their clothing's marketing, focusing especially on the aspect that sustainable fashion can also be stylish and on trend.

When discussing the results the limitations of the study need to be addressed. Firstly, the research focused only on Finnish consumers, as well as collected the data from one company's customer base, making the results limited to these aspects of geographic

location and quite limited consumer segment, which was also relevant to this study. Furthermore, the research relies on the assumption that IVALO.COM's consumers that gained access to the survey from their e-newsletter or Instagram define themselves as sustainable fashion consumers, which is still a quite broad term and rests on the consumers themselves. In future research the term of sustainable fashion consumer could be more refined, and the segment of sustainable fashion consumers should be studied on a broader scale for example in Europe as a whole, in the United States or in other than Western nations.

Additionally, a new scale was created for this research, which was carefully based on theory and tested prior to the research with IVALO.COM's employees. However, there needs to be further testing to show how the scale develops and behaves in different studies related to sustainable fashion consumers' values and preferences. Due to the heaviness of the new scale some of the respondents might have been more prone to errors or simply not thought of the questions that were positioned last as much as the first questions. In future research, it is suggested that the questions of the new scale are randomized for respondents to repair this type of error. The scale could also be developed further with more specific sustainability attributes based on broader research on sustainable fashion consumption and consumers.

Quantitative research provided the intended results for this research by resulting in four clear segments of sustainable fashion consumers, which have profound characteristics that can be utilized in sustainable fashion marketing. Additionally, the new scale provided highly reliable measures that can be used to describe and analyze sustainable fashion consumers or even just fashion consumers attitudes and motivations towards sustainable attributes. In future research, the scale could be utilized to compare sustainable fashion consumers and more average fashion consumers. The strength of the survey questionnaire was the quick answering time, a larger response rate, and the possibilities for analyzing the material. Potential coding errors were avoided because the survey's questions were all compulsory to answer so there were no missing observations.

However, it is feasible to draw the conclusion that the respondents may not have fully comprehended the questions due to the construction of the questions. Additionally, the respondents were not given the chance to respond with open-ended questions that would have included more specific details on their sustainable fashion consumption. Lastly, qualitative research based on these same comparison questions of ethical attributes versus personal preferences, ethical attributes versus environmental attributes, and environmental attributes versus personal preferences could indicate different or more profound results as to what sustainable attributes drive sustainable fashion consumers.

Theoretically this research fills gaps in sustainable fashion consumption research by focusing only on sustainable fashion consumers and their preferences in sustainable attributes and values. Although sustainable fashion is currently an often researched topic, this study adds to the field by creating both a new framework and a new scale that can be further developed and utilized in the fields of fashion, sustainable fashion, and sustainable consumerism. Additionally, these results of this research offer new insights into sustainable fashion consumption for companies, marketers, and consumers. Overall, the results are in line with the sustainable fashion theory, but also gave new and deeper insights into the motivations and preferences of sustainable fashion consumers.

6 References

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Appendices

Appendix 1. Sustainable fashion consumption survey

Vastuullisen muodin kuluttajakysely

Pakolliset kysymykset merkitty tähdellä (*)

Tämän kyselyn tarkoituksena on kartoittaa vastuullisen muodin kuluttajien syvempiä arvopohjaisia valintoja vaateen ostopäätöstä tehdessä. Kyselyn tavoitteena on ymmärtää paremmin IVALO.COMin nykyisiä ja potentiaalisia asiakkaita ja kehittää IVALO.COMin toimintaa. Haluamme muistuttaa, että kyselyssä esitettyjen vastuullisten valintojen tekeminen on valintaa hyvien asioiden välillä.

Kysely on osa Vaasan yliopistossa toteutettavaa pro gradu -tutkielmaa. Vastaamalla kyselyyn autat tutkielman onnistumisessa, ja siksi jokainen vastaus on tutkimuksen kannalta ensiarvoisen tärkeä. Kaikkia kyselyn tietoja käsitellään erityisellä luottamuksella ja täysin anonymisti. Kyselyssä annettuja tietoja hyödynnetään ainoastaan osana Vaasan Yliopiston opiskelijan Ella Fredrikssonin pro gradu -tutkielmaa, sekä osana IVALO.COMin liiketoiminnan kehittämistä.

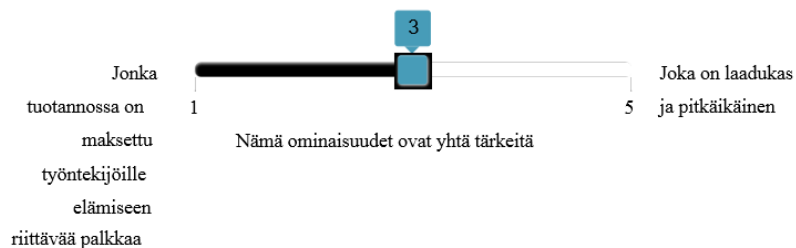
Tämä kysely koostuu kolmesta toisistaan erillisestä osiosta. Ensimmäisessä osiossa pääset priorisoimaan vaateen ostopäätökseen liittyviä ominaisuuksia, valitsemalla jokaisen kysymyksen kohdalla kahden eri ominaisuuden väliltä. Toisessa osiossa pyydämme sinua arvioimaan kuinka tärkeitä eri kriteerit ovat sinulle vaateen ostopäätöksessä. Kolmannessa osiossa kuvaat eri arvojen tärkeyttä elämässäsi ja arjessasi. Lopuksi pyydämme antamaan muutamia taustatietoja itsestäsi vastausten tilastollista käsittelyä varten.

Kyselyyn vastaaminen kestää n. 10–15 minuuttia ja kaikki vastaukset käsitellään luottamuksellisesti. Lopussa pyydämme ilmoittamaan sähköpostiosoitteesi mikäli haluat osallistua IVALO.COMin lahjakorttiarvontaan. Arvomme viisi 50 € arvoista lahjakorttia vastaajien kesken perjantaina 7.3. Kiitos ajastasi - mielipiteesi on meille tärkeä!

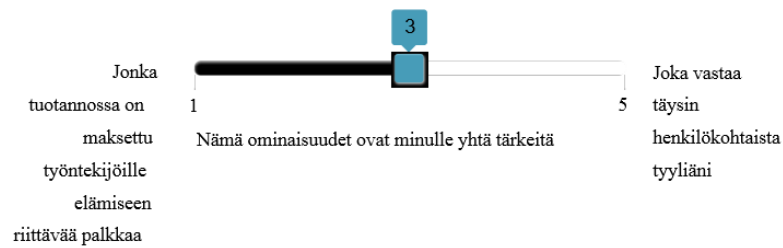
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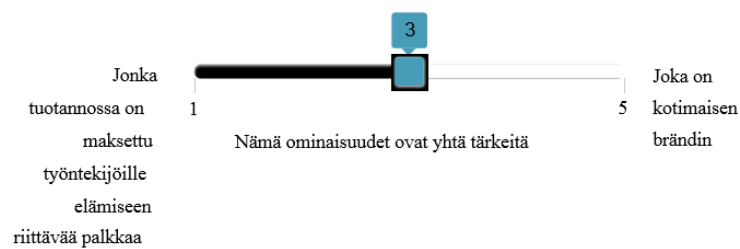
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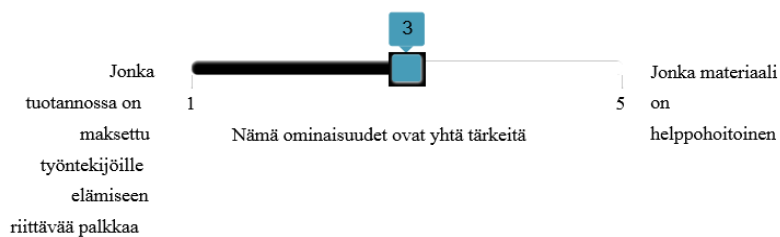
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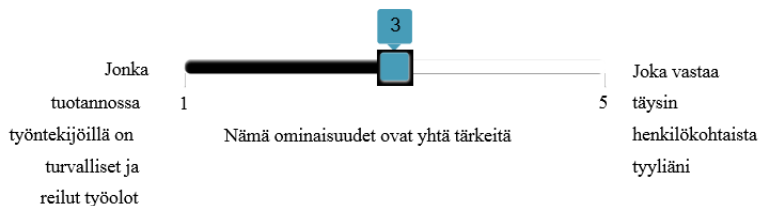
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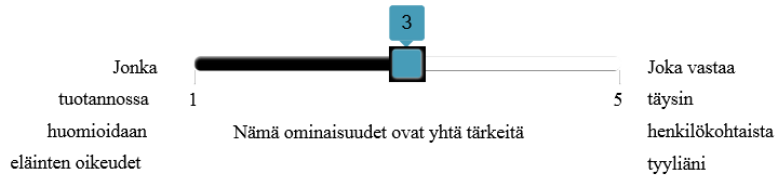
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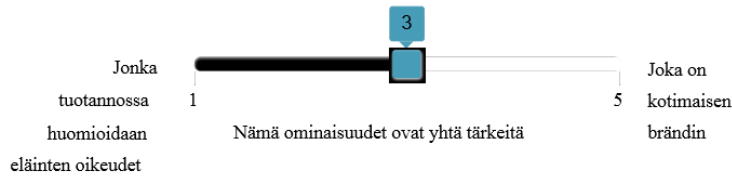
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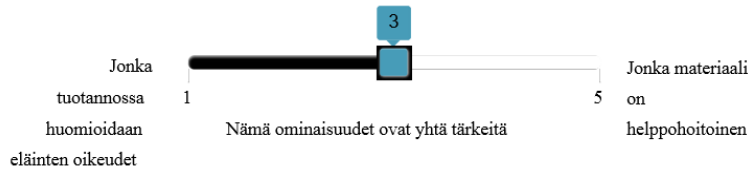
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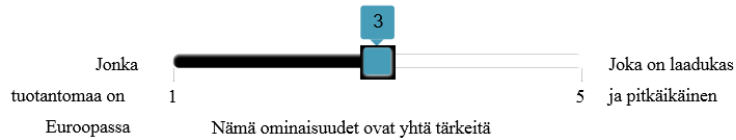
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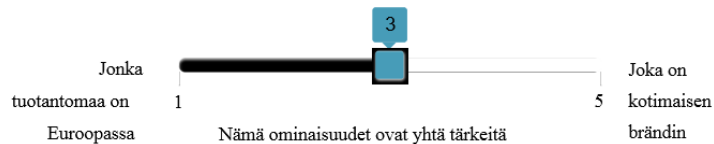
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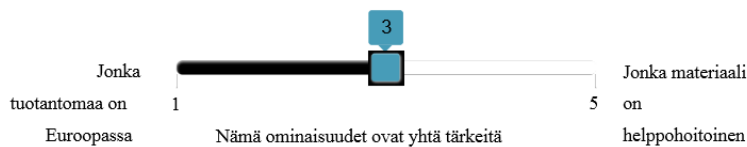
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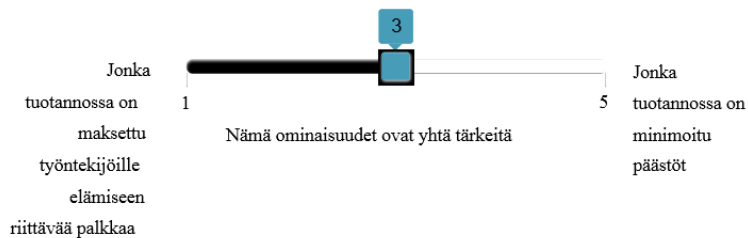
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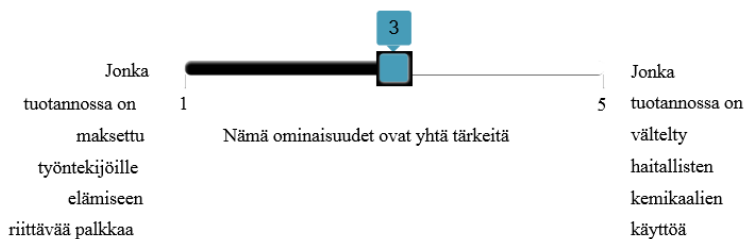
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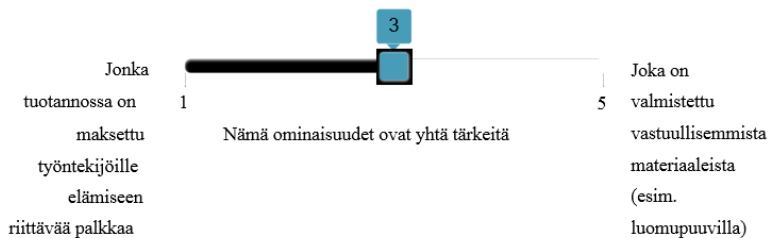
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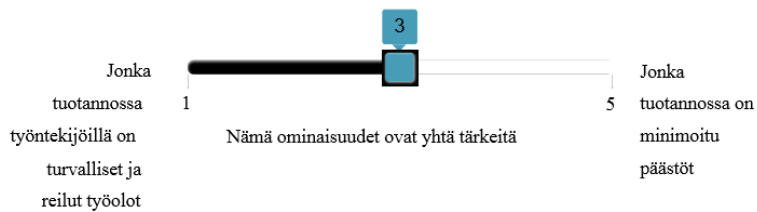
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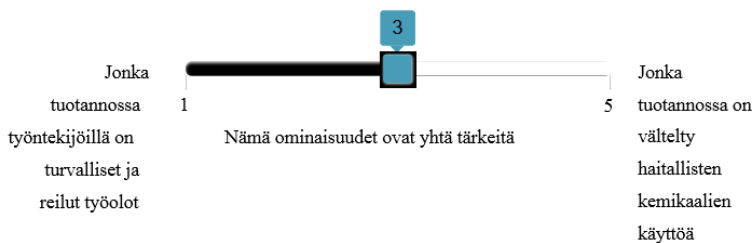


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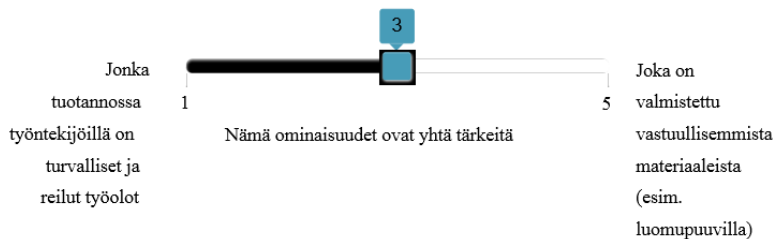
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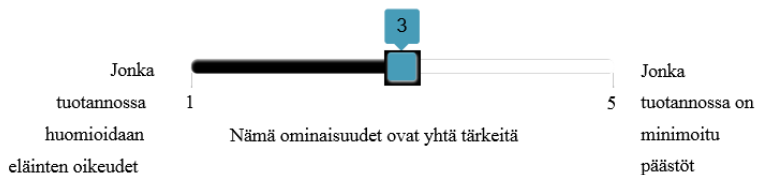
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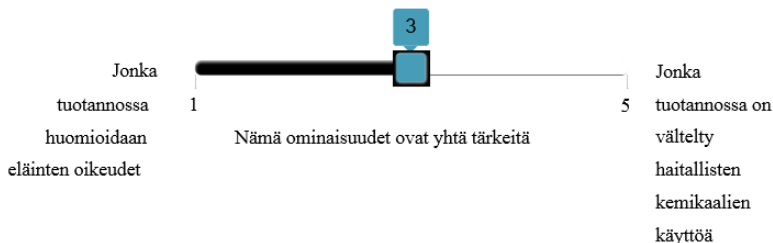
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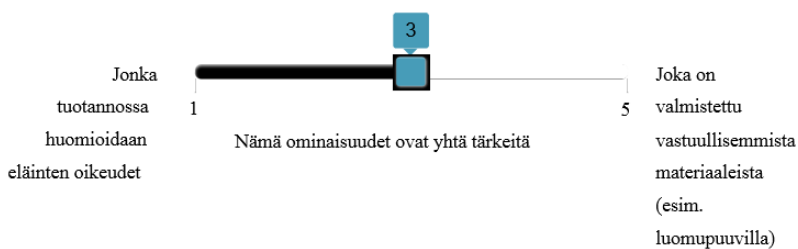
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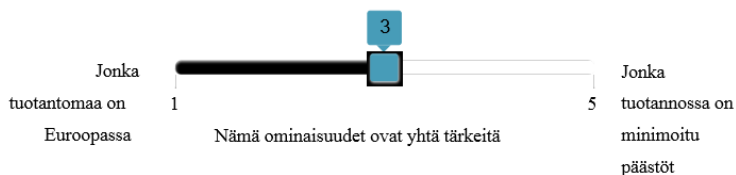


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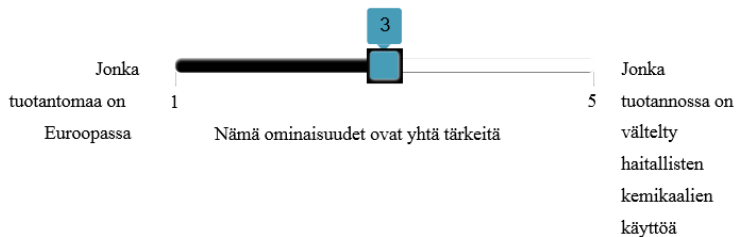
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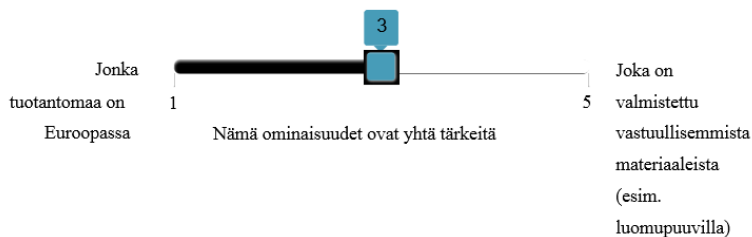
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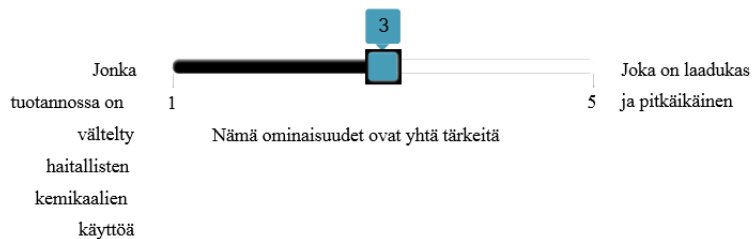
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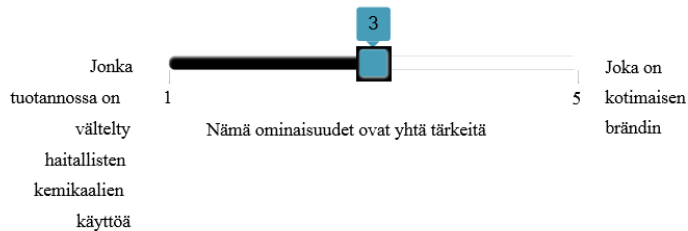
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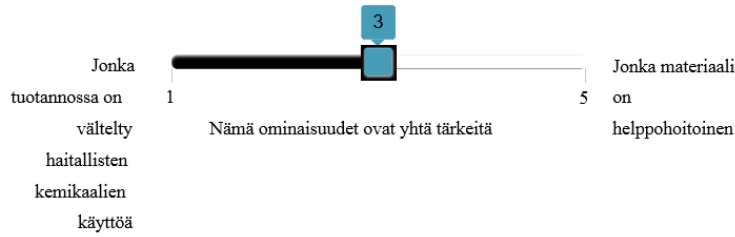
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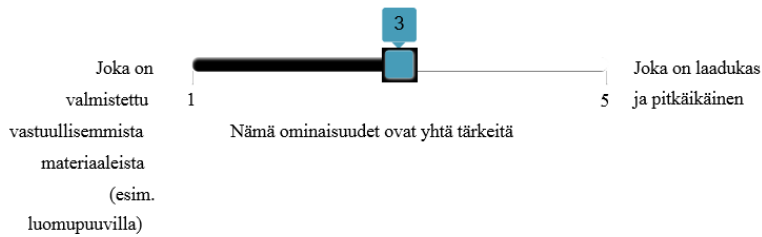
35. Priorisoin ostopäätöstä tehdessäni vaatetta: *



36. Priorisoin ostopäätöstä tehdessäni vaatetta: *



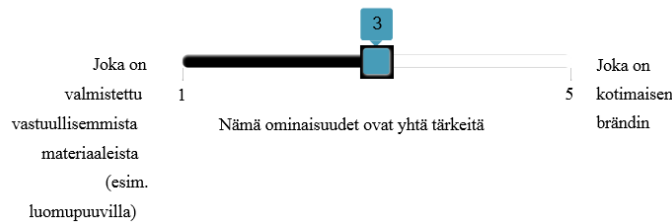
37. Priorisoin ostopäätöstä tehdessäni vaatetta: *



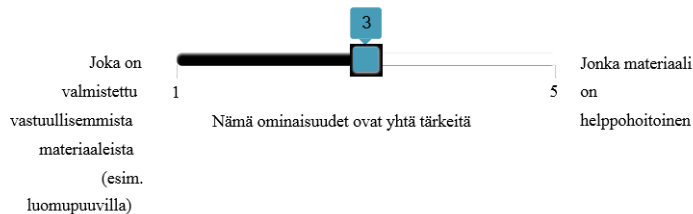
38. Priorisoin ostopäätöstä tehdessäni vaatetta: *



39. Priorisoin ostopäätöstä tehdessäni vaatetta: *



40. Priorisoin ostopäätöstä tehdessäni vaatetta: *



2. Osio: Kuinka tärkeinä pidät eri vaateen ostamiseen liittyviä valintakriteerejä

41. Kuinka tärkeänä pidät vaatteiden eri valintakriteerejä: Ole hyvä ja ota

kantaa siihen, kuinka tärkeitä seuraavat kriteerit ovat sinulle asteikolla 1-5: 1 =

Ei yhtään tärkeä, 3 = Jonkin verran tärkeä, 5 = Erittäin tärkeä

	*				
	1	2	3	4	5
BRÄNDIUSKOLLISUUS (esim. tietyt hyväksi todetut, luotettavat tai tunnetut brändit) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EDULLISUUS (esim. halpuus, tarjoushinta, alennus) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IMAGOSYYT (esim. muihin vaikutuksen tekeminen) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
LAADUKAS MATERIAALI (esim. vaate tuntuu kestävältä tai vaateen listattu materiaali on yleisesti kestävä) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
VASTUULLINEN MATERIAALI (esim. vaate ei sisällä eläinperäisiä kuituja, ja tuotannossa käytetyt kemikaalit ovat tarkasti valvottu) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
VASTUULLINEN TUOTANTO (esim. vaateen alkuperämaa, uusiutuvan energian käyttö, hiilijalanjäljen ja vesijalanjäljen minimointi) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EETTISET TYÖOLOJAT (esim. vaateen tuotannossa työntekijöillä turvalliset työolot, kohtuulliset työajat, elämiseen riittävä palkka) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MIELIALA-VAIKUTUKSET (esim. piristyminen, palkitseminen) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TRENDIKKYYS (esim. vaateen sopiminen tämänhetkisiin muotitrendeihin) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
HENKILÖKOHTAINEN TYYLI (esim. omalle keholle sopivat vaatteet, suosikkivärit, itseilmaisu) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
KESTÄVÄ SUUNNITTELU (esim. vaateen tyylin ja värin ajattomuus, kierrätettävissä olevat materiaalit) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Osio: Kuinka tärkeänä koet seuraavat arvot arjessasi

42. Kuinka tärkeitä seuraavat arvot ovat elämässäsi: Ole hyvä ja ota kantaa siihen, kuinka tärkeitä seuraavat arvot ovat sinulle asteikolla 1-5: 1 = Ei yhtään tärkeä, 3 = Jonkin verran tärkeä, 5 = Erittäin tärkeä *

	1	2	3	4	5
PERINTEET (mm. perinnäistapojen kunnioitus, nöyryys, oma elämänsänsä hyväksyminen, uskoon pitäytyminen, kohtuullisuus, maltillisuus) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
HYVÄNTAHTOISUUS (mm. auttavaisuus, rehellisyys, anteeksiantavuus, uskollisuus, luotettavuus, ystävyys) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MIELIHYVÄ (mm. mielihalujen tyydyttäminen, itsensä hemmottelu, elämästä nauttiminen) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
VIRIKKEISYYS (mm. seikkailut, riskien otto, monipuolinen ja jännittävä elämä) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SUORUTUMINEN (mm. menestys, kyvykkyys, kunniahimo, työteliäisyys, tavoitteiden saavuttaminen, vaikutusvalta ihmisiin ja tapahtumiin) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
UNIVERSALISMI (mm. laajakatseisuus, luonnon ja taiteiden kauneus, sosiaalinen oikeudenmukaisuus, maailmanrauha, tasa-arvo, kypsä elämänymmärrys, luonnonsuojelu) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
ITSEOHJAUTUVUUS (mm. luovuus, vapaus, uteliaisuus, riippumattomuus, omien tavoitteiden valitseminen) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
VALTA (mm. muiden hallitseminen, arvovalta, yhteiskunnallinen valta, varakkuus) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
YHDENMUKAISUUS (mm. tottelevaisuus, vanhempien ihmisten kunnioittaminen, itsekuri, kohteliaisuus) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TURVALLISUUS (mm. kansallinen turvallisuus, perheen turvallisuus, yhteiskunnallinen järjestys, siisteys, palvelusten vastavuoroisuus) *	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Taustatiedot**43. Sukupuoli ***

- Nainen
- Mies
- Muu
- En halua sanoa

44. Ikä *

- 18–29 vuotta
- 30–45 vuotta
- 46–60 vuotta
- Yli 60 vuotta

45. Asuinpaikka *

- Pääkaupunkiseutu
- Suuri kaupunki (Tampere, Oulu, Turku, Jyväskylä, Lahti, Kuopio, Pori)
- Keski-suuri kaupunki (esim. Vaasa, Lappeenranta, Joensuu)
- Pienempi paikkakunta

46. Sosiaalinen status *

- Parisuhteessa
- Sinkku

47. Perhe *

- Perheessä on lapsi/lapsia (asuvat kotona)
- Perheessä on lapsi/lapsia (muuttaneet pois kotoa)
- Perheessä ei ole lapsia

48. Henkilökohtaiset kuukausitulot bruttona (ennen veroja) *

- 0–2500 euroa
- 2501–4000 euroa
- 4001–5500 euroa
- Yli 5500 euroa

49. Kiitos vastauksistasi, mielipiteesi on meille tärkeä! Anna palautetta tästä tutkimuksesta :)

Appendix 2. Report on AI usage as part of the master's thesis

I utilized AI tools in my master's thesis research (Open AI ChatGPT 3.5. and Quillbot) in order to better the academic language of the thesis and minimize language errors. The AI tools recognized some inconsistencies in the sentence structures, and helped make the text more cohesive. Additionally, I used Open AI ChatGPT 3.5. to help compose parts of the segmentation analysis by summarizing the main points of each segment that resulted from the research. The final responsibility and ethical approach for the thesis content are my own.