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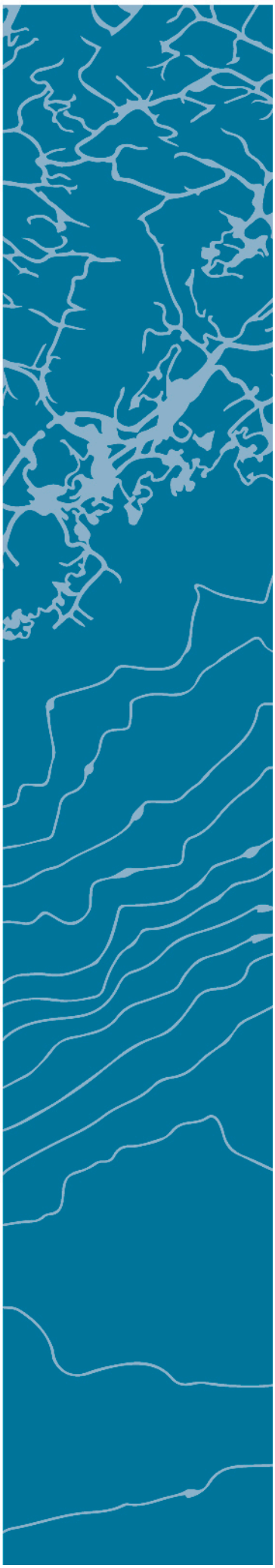
Sustainable fashion: A study of information's affect on sustainable shopping behaviour

Is the more informed consumer a more conscious consumer?
Attitudes and behaviour towards sustainable fashion

MARIA KJELLEVAND
MARTINE KJELLEVAND

SUPERVISOR
Sangeeta Singh

University of Agder, 2018
Faculty of School of Business and Law
Department of Economics and Finance



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Martine Kjellevand
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Abstract

The fashion industry today is one of the most polluting industries in the world. The industry is pouring out new trends and cheap quality, creating a never-ending hunger for newness. Many consumers wish to behave green, but they are struggling to put their intentions in to actions, there is an attitude-action gap. In a world with cheap and trendy apparel, it is hard to choose the more expensive and sustainable choice. Self-efficacy is believing in one owns abilities and when a consumer does not believe that their purchasing behaviour makes an impact, it is difficult to change it. Thaler believes consumers can be nudged to change behaviour, can information nudge consumers to chose sustainably?

In this research a survey was created to test if information could increase self-efficacy and result in higher likeliness to buy green. The survey entailed an experiment and was distributed in two groups, one receiving more information than the other. The participants were shown a sustainable t-shirt, where the group with information received explanation of the sustainability of the t-shirt. This way, it was possible to test the effects of information. Analysing the results within the groups and between the groups, the information did not increase likeliness to buy sustainable products in general, but it was evident that information resulted in higher likeliness to buy the sustainable, simulated t-shirt. The self-efficacy scale was included to further research the link between self-efficacy and the attitude-action gap. The scale did not result in a clear connection to sustainable behaviour, though agreement to statement of believing in own abilities gave a higher likeliness to act sustainably.

The conclusion of this study is that information can nudge consumers' likeliness to buy sustainable.

Table of contents

List of figures

List of tables

Keywords

Sustainable development, attitude-action gap, self-efficacy, sustainable consumption

1 Introduction

Sustainable development is when all basic needs are met and the opportunity to satisfy personal aspiration for a better life is extended to all. Sustainable development relies on three different aspects: the social factor, the economical factor and the environmental factor.

The social factor is a balance of the needs within a society as well as the needs of the individual at the present time and for the future.

The economical factor focuses on cost and benefit aspects and aims to be able to grow in the long term and increase Gross Domestic Product, GDP.

The environmental factor is based on the idea of not endangering our natural systems that ultimately support existence on earth. Using renewable resources and limiting the use of un-renewable resources, limiting toxic emissions and care for natural habitats is central in the environmental factor. Where these three factors meet, is where sustainable development occurs (Brundtland, 1987).

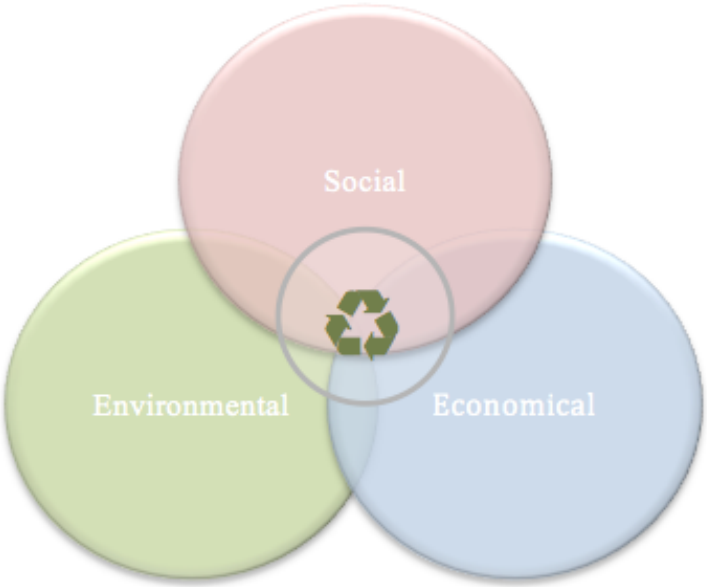


Figure 1: Sustainable development

The problems arise when one of the factors is more valued than the others, to the extent that it disturbs the other factors.

In the fashion industry with the fast growing pace, the economical factor and to some degree the social factor is in centre.

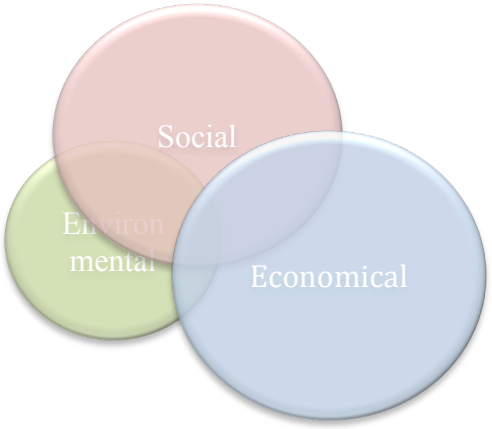


Figure 2: Focus of the fashion industry

Most fashion brands today focuses on cost efficiency in productions as well as being able to offer low product prices to increase sales. The last decade the issue of poor labour conditions has been more and more addressed, but the issue of environmental impact is still lagging behind.

In the world of fashion, there used to be two seasons: spring/summer and fall/winter. Clothes were made of quality and was made to last. Today, the fashion industry has changed. There are no longer two seasons, but 52 micro seasons. New trends are created every week and has evolved to what we today call fast fashion. The industry is set up to make consumers feel out of style after one week, with the goal to get consumers to buy more and faster than ever before. Fast fashion is fashion produced quickly, poorly and cheaply. Fast fashion is not made to last, after a couple of times used and washed, the clothes are produced to fall apart, making consumers throw away the old and buy new clothes (Whitehead, 2014).

There has grown an insatiable need for trendy and discounted fashion, which is not necessarily positive for the environment. Can the consumption change from fast to slow, from quantity to quality?

This research will examine attitudes and perception of sustainable products. The thesis studies nudging techniques, especially the nudge of providing information, and investigates whether information affects attitudes and choices. Through an experiment using two different surveys,

the research aims to observe a link between providing information and the likeliness to act sustainable.
The study uses a quantitative approach, launching the surveys at amazon's mturk to collect data and then uses SPSS, Statistical Package for the Social Sciences, in analysing them.

This thesis works with the research questions:

> Will information nudge consumers to choose sustainably? Who is responsible to make a change towards sustainability in the fashion industry, the industry itself or the consumers?

Motivation

The researchers of this thesis were motivated to write about sustainable fashion after company collaboration, with Kristiansand based Viking Heat Engines, earlier in the master program. The company, producing machines to make industrial production processes more sustainable and energy efficient, inspired the researchers to look further into production and attitudes about sustainability in the fashion industry.

Relevance

The fashion industry is one of the largest industries in the world. This industry is the 2nd biggest consumer of water and the 3rd most polluting manufactures in the world (Impact of fashion, Reformation). The fashion industry is also an industry that involves us all. Whether we are interested in fashion or not, we all wear clothes.
In the fight against climate change, this polluting production process is something the consumers can make an impact on. Making the industry change for the better.
In the duration of this spring, while this research has been completed, the researchers have noticed more and more brands marketing their sustainability. It is clearly current at the moment. The chosen factors of relevance in this thesis are trending, climate effects and laws and regulations.

Trending

Being environmentally friendly or going green is today an increasing trend. The popularity of driving hybrid or electric cars, using textile shopping bags or buying products made with recycled materials is increasing across the world. It has become trendy to talk and care about the environment. However, change requires more than talking. Now is the time to take action,

grow awareness and change the industry. Several apparel brands are incorporating a sustainable line of products such as H&M, Cubus and Lindex (www.hm.no, www.cubus.no, www.lindex.no) amongst many, while other brands differentiate themselves by only offering products that are sustainable.

Climate effects

The climate change is a huge consequence of human actions. As mentioned, the fashion industry is an industry with a lot of waste and pollution.

The fact that more than a billion people do not have access to clear and safe water, while clothing production use so much water and pollute the water in the process is horrific.

To show a picture of how much water is used in production, one can look at the production of a $5 cotton t-shirt. It requires 2700 liters (700 gallons) of water from the production of the cotton and the t-shirt itself; only to be used and washed a couple of times before disposal (WWF, 2013). After the water has been used in a production process, it is released back into nature. The released water, sometimes dyed water, containing toxic chemicals is going in to our lakes, rivers and oceans. It is also common to use materials containing plastic, and when plastic is used it makes the process of waste management more complicated, as it is not easily degradable. Most companies outsource production to developing countries due to lower labour costs, this also result in more CO2 emissions as a consequence of long shipping distances.

Laws and regulations

The 12th goal, of the UN's 17 goals to transform our world, is to ensure sustainable consumption and production patterns (UN, 2015). The goal of sustainable production and consumption is to do more and better by using less.

Today approximately all UN countries have a department (with a minister) for environmental policies. Legislations regarding the environment have since 1992 increased immensely. International agreements such as the Kyoto protocol (1997) and the Paris agreement (2015), promote the profile and engagement of environmental change on a global scale (Report of the IUCN Renowned Thinkers Meeting, 2006). Several goals are set in the different agreements, such as restraining the global warming to lower than 2°C (the Paris agreement), which means that the different nations have to limit emissions and make production processes more energy efficient to be able to reach the numerous goals. In Europe, the European commission has set

their own goals, where the nations work together (with individual goals) to work on sustainable development. Each nation is responsible for their goals, which have resulted in several restrictions, laws and penalties regarding emissions and efficiency.

The remainder of the thesis is composed as follows: in the next chapter previous literature and coherent hypothesis will be revealed. Then the methodology and data observations will be presented in chapters three and four. Followed by discussions of the findings in chapter five. In the sixth chapter limitations of the study will be disclosed, and then in the seventh chapter conclusions will be drawn.

2 Literature review

In this chapter previous literature regarding general attitudes and behaviour towards sustainability and pro-environmental behaviour, as well as literature specific to the fashion industry will be disclosed.

Sustainability

"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs"
(Brundtland 1987, 24)

Sustainable essentially means maintainable. When talking about sustainability, one can talk about the economy, society, processes, usage of resources and environmental. Issues revolving environmental sustainability are waste, emissions and resource management (Goodland, 1995, Ramjohn, 2008). There has been a growing awareness in consumer's behaviour the last decades. Buying eco-products, managing recycling and driving electric/hybrid is an increasing behaviour. Still, when it comes to the apparel industry and purchasing garments, style and fit is more important than environmental issues (Butler and Francis, 1997). The environmental problems arising from the apparel industry is use of harmful chemicals in production processes, polluting water and air, and huge amounts of waste. The industry can solve some environmental issues by better managing waste and emissions, using renewable resources, minimizing use of non-renewable resources and put effort in to reducing the speed of the industry, reducing consumption (Goodland, 1995, Ramjohn, 2008). As for the consumers, the significant role of duties and responsibility play a huge role of purchasing behaviour. Consumers who participate in sustainable practices are generally more and better informed of the consequences of their sustainable, pro-environmental behaviour (Ohtomo and Hirose, 2007). Therefor the hypothesis, H1: Participants with more information will show higher likeliness to buy sustainably. The importance of ethics has the last two decades show great growth for both consumers and companies. With the revealing of use of sweatshops and poor labour conditions in developing countries, the topic of ethics plays a significant role in the decision-making process. The perception of the importance of ethics influences the consumer's behaviour. If perception of ethical importance is high, the individual's level of engagement is higher and the probability of embracing ethically desired practices is higher. An ethical consumer will show more conscious actions (Haines et al, 2008, Singhapakdi, 1999, Vitel and Hidalgo, 2006).

Sustainable consumption

Sustainable consumption is when the decision-making process includes both the consumer's social responsibility and individual needs such as taste, price and convenience (Vermeir and Verbeke, 2008). Sustainable consumption is a rather recent term and can be traced to the Agenda 21, and the UN Earth Summit in Rio 1992 (Vittersø and Tangeland, 2014). Agenda 21 includes a request for actions that are promoting consumption patterns reducing environmental stress but also encounter basic humanity needs (Vittersø and Tangeland, 2014). The research sustainability has grown and changed in the more recent years, papers written between 2006 and 2014 are differently focused compared with papers written between 1995 and 2005 (Liu et al, 2017). Today there is a larger focus on sustainable consumption, trying to reduce over-use that leads to waste. The view on sustainability and green products has also changed for some consumers. In Norway for example, when considering consuming organic food, the purchasing behaviour have not shifted significantly and the view on organic food has in some aspects become more negative over the years (Vittersø and Tangeland, 2014). There have been reported that consumers do not find it beneficial to buy organic food (Vittersø and Tangeland, 2014). It is also interesting that the consumers saw more benefits from buying organic in year 2000 then what they did in year 2013 in Norway (Vittersø and Tangeland, 2014).

Nowadays, it is more focus on the consumer side regarding responsibilities of changing lifestyle, with a general demand that consumers have information and act in compliance with sustainable consumption (Liu et al, 2017). Environmental knowledge is important, and in order to achieve adequate decision-making it is necessary to obtain a full understanding of the circumstances (Sproles and Badenhop, 1978).

On another page, to maintain a sustainable household finance, spending should not extend resources (Hüttel et al, 2018). Therefore consumers need to refrain from buying certain products and to forgo some purchases (non-eco) (Hüttel et al, 2018). Different household with different finance are spending different and their saving motives are different (Hüttel et al, 2018). Therefore the hypothesis, H2: Higher income will result in a higher likeliness to buy sustainable.

Attitude-action gap

The attitude-action gap is a theory that has become more popular in the more recent years. It is the phenomenon of consumers that are concerned about the environment, but are having

difficulties to change their actions into more sustainable ones (Liu et al, 2017). The most significant driver to make ethical decisions when making a purchase is environment, before human rights and welfare for animals (Young et al, 2010). Considering ethical products: 30% of consumers reveal that they are intending to buy ethical, however only 3% actually buys them (Cowe and Williams, 2000). Eliminating the attitude-action gap is complicated and there is a need to reveal the factors influencing consumers towards a sustainable consumption attitude (Liu et al, 2017). There are a lot of theories concerning influencing factors; one suggests that a change in consumption is more likely to last if it is done by environmental citizenship, rather than by financial incentives (Dobson, 2007). Others suggest that sustainable consumption is on an individual level, focusing on social and situational factors driving consumers towards sustainable consumption (Steg and Vlek, 2009). Consumers' repeated purchasing decisions turns into behaviour (Young et al, 2010). Self-acknowledged environmentalists will buy green if available, it helps if the selection is good and not only presented with "one green alternative". It is also more likely for green consumers to buy green if larger and entrusted retailers offer it (Young et al, 2010). Furthermore, the consumers seeing themselves as green consumers are having difficulties deciding what cause is more important, what should be prioritized when buying green. In an ocean of information consumers are finding it challenging to make time to do thorough research and understand enough to make green purchases (Young et al, 2010). Besides some consumers suspects that companies use claims of sustainability or ethics for marketing purposes, as a method to defend high prices and to help the company in a competitive market (Bray et al, 2010).

Everyday decisions become more complex when adopting a sustainable lifestyle, and there are multiple trade-offs between a more traditional consumption and a sustainable consumption (Young et al, 2010). Time is an important factor concerning consumers' actions and influencing product evaluation (Wright and Weitz, 1977). The believed time that passes by between time of action and encountering some results, by the consumer, is the time horizon (Wright and Weitz, 1977). This time horizon is something that could press the consumer to immediately change their behaviour in some cases (Wright and Weitz, 1977). Individuals will be more likely to behave pro-environmentally when they cost less, when for example the effort and time is minimized (Kollmuss and Agyeman, 2002). Time pressure and overload of information results in consumers rushing through shopping centres, which ultimately results in disregard of ethical aspects (Carrigan and Attalla, 2001). There seem to be some sort of contradiction regarding information. As stated, information is a factor that

promotes buying ethical or sustainable, but information is also a factor that eventually can confuse the consumer to the point that they continue in habitual patterns (Carrigan and Attalla, 2001; Papaoikonomou et al 2010).

There are also other factors that could possibly enlarge the attitude-action gap; if a consumer is loyal to a specific brand it is less likely to make changes in the consumption pattern (Bray et al, 2010; Papaoikonomou et al, 2010). When a consumer is highly loyal, their information process becomes selective, and when the process becomes selective it is difficult for other providers to inform the consumer with information that perhaps is more truthful and correct (Papaoikonomou et al, 2010). Amongst young consumers, there are strong influences that alter purchasing behaviour: price, design, influencers and especially the relevance of brand image; therefore wearing the desired clothes are far more important than other factors, such as wearing sustainable clothes (Carrigan and Attalla, 2001; Miniero et al, 2014). Another factor that might be taken into consideration is the locus of control. Whether an individual feel that locus of control is internal or external influences purchasing behaviour. If the individual perceives the locus of control as external, the individual does not agree that their actions are significant, they believe change is something that can only happen if someone with more power would do it (Bray et al, 2010). Therefore, they are less likely to take actions out of ordinary patterns as it does not make a difference and thus be a hindering element for pro-environmental behaviour (Kollmuss and Agyeman, 2002). Another factor, would be the economic situation, individuals are firstly bearing in mind profits for themselves, even if it means keeping aside their attention to the environment, and prioritize low prices (Balderjahn, 2013).

Goal-framing theory suggests that motivations usually are not homogenous (Steg and Vlek, 2009). Individuals have a goal in focal and this goal is the one that is highly responsible for information processing, but at the same time there is a presence of multiple smaller background goals. If the background goals are matching the goal-frame and the focal goal it becomes strengthened. However, if there is a mismatch between the background goals and the goal-frame and the focal goal it is weakened and as a consequence having difficult behaving as pro-environmentally as one might hope to. Motivation or goals alone is not what makes an individual act pro-environmentally or refrain from it, it is of course in the combination with other factors like, availability, the quality (one example is the quality of public transport), or price regimes (Steg and Vlek, 2009).

Self-efficacy

One possible explanation for the presence of the attitude-action gap could be self-efficacy. Self is referred to our identity and efficacy is referred to as our ability to produce an effect. Self-efficacy is a person's judgement on own capabilities to accomplish an activity to ensure a certain outcome (Zulkosky, 2009). Self-efficacy refers to individual differences to what extent individuals believe they are able to accomplish a goal (Bandura, 1982). Generally individuals with high self-efficacy are anticipated to reach their goals more frequently than individual with low self-efficacy. The individual is more likely to set higher goals and commit to challenges if the individual has high self-efficacy (Bandura, 1989). Further, individuals' emotional reactions could potentially affect the thought process, individuals with high self-efficacy are less disturbed by this and are also able to lower their stress with encountering threats (Bandura, 1989). Locus of control is the individual understanding of how things are happening, some individuals believe faith are causing events in life, but some believe own actions are the reason for outcomes. Internal locus of control is when individuals believe that they themselves with their actions are causing events in their lives, external locus of control is when individuals believe the events are caused by faith and that they are unable to change the outcome (Zulkosky, 2009). When individuals are mastering experiences their self-efficacy gradually increases, and when failing experiences and tasks their self-efficacy gradually decreases. The way individuals motivate themselves, think and act are influenced by their level of self-efficacy. When individuals have high self-efficacy they are motivated to continue behaviour they believe eventually will lead to benefits, and therefore individuals with low self-efficacy are not motivated in the same way (Zulkosky, 2009). Therefore the hypotheses, H3: Subjects scoring high on the self-efficacy scale will act more sustainably.

Theory of Planned Behaviour

Products that claim sustainability have become increasingly appealing to consumers in recent years (Vermeir and Verbeke, 2008). The Theory of Planned Behaviour aims to explain the relationship between intention and behaviour, revealing possible explanation behind choices and behaviour. Thus, the TPB could contribute to explain the attitude-action gap. The TPB (Ajzen, 1985) proposes three independent influencers of intent: attitude on behaviour, subjective norm and the perceived behavioural control. Attitude on behaviour is to what degree a person has a positive or negative evaluation of that behaviour; subjective norm is the perceived pressure to do something or not to do something. Control of behaviour is whether a

buyer is able to consume a product or if consumption is difficult (Ajzen, 1985). The control is expected to be a reflection of previous experiences and also anticipated difficulties. According to the theory the initial origin of behaviour is intention to behave in a certain way, the stronger this intent is the more likely it is to be performed. However the behaviour control is directly influencing behaviour, to the extent that even if an individual intend to do something it might be unable to execute (Ajzen, 1985). Perceived behavioural control includes both inner and external factors, inner being for example self-efficacy and external being for example perceived barriers (Sparks et al, 1997). More detailed, perceived product availability as well as perceived consumer effectiveness has been related to the perceived behavioural control (Vermeir and Verbeke, 2008). Perceived availability is to what degree consumers think a product is easy to obtain, and perceived consumer effectiveness is to what extent a consumer believes own efforts can contribute in solving a problem. It is necessary with high-perceived consumer effectiveness to motivate consumers to communicate their positive attitudes on sustainable products (Vermeir and Verbeke, 2008). The theory of planned behaviour is linked to self-efficacy, and the perceived control is an extension from self-efficacy. Robinson and Smith (2002) demonstrate that attitudes, subjective norms and perceived behavioural control, all independently predict purchase intention of sustainable products.

Willingness to pay

Sustainable products often comes with a higher price, this a possible reason for the gap between the intention of behaving sustainable and actually behaving sustainable, the attitude-action gap. Today there is a lot of literature trying to determine the highest price consumers are willing to pay for a sustainable product (Salazar and Oerlemans, 2016). There are some products that consumers are willing to pay more premium than others, for example consumers are willing to pay a higher premium for food than they are for disposable products. Research reveals that most consumers have a preference for buying sustainable (Salazar and Oerlemans, 2016). A report from Colorado, USA, 40% of the interviewed were willing to buy sustainable products (Loureiro and Lotade, 2005). However, when it is difficult to see a substantial noticeable compensation, the justification of higher prices for sustainable products is challenging to understand (Bray et al, 2010). For that reason hypothesis H4: Participants with more information will reveal a higher premium for sustainable products than those who does not receive the same information.

Even though it is reported a relatively high willingness to pay premium it does not translate into market shares (Salazar and Oerlemans, 2016). Research shows that consumers use and rely on information, such as willingness to pay, from other consumers, their peers, in order to make decisions themselves. Consumers rely on different social groups for information on different product groups, and there is no reason to not assume this peer-effect on sustainable products is the same (Salazar and Oerlemans, 2016). The knowledge and concern about the environment generally has a positive effect on the willingness to pay a premium for sustainable products (Salazar and Oerlemans, 2016). Consequently the hypothesis, H5: Higher education will result in a higher consciousness on sustainability. Previous studies completed on willingness to pay has mostly been on food and renewable energy, and more recently it has been researched on other consumer goods (Salazar and Oerlemans, 2016), American families are for example willing to pay a premium of 9.5% for a sustainable music player and 10.4% premium for the sustainable choice of a hybrid car (Drozdenko et al, 2011). Lack of information and credibility in all the information "out there" and the lack of transparency are factors that are affecting a consumer in its decision making process (Papaoikonomou et al 2010). There also seems to be a gap in the availability of for example ethical clothes, and consumers find it difficult to find ethical and sustainable clothes with up-to-date designs (Lundblad's et al, 2016).

Pro environmental behaviour

Behaving in a way that is pro-environmental is shown to be difficult for many consumers. Other possible explanations behind the attitude-action gap may be factors that make it difficult in conducting a behaviour that is pro-environmental and sustainable. 1) Cost and benefit, 2) moral and prescriptive concerns, and 3) affect, are all underlying factors, working as motivations, of environmental behaviour (Steg and Vlek, 2009). As previously mentioned the consumer will choose the product that gives them the highest benefit and for the lowest cost (Steg and Vlek, 2009). The Theory of Planned Behaviour (TPB) (Ajzen, 1991) has shown to be successful in explaining numerous forms of environmental behaviour. Individuals are more likely to participate in pro-environmental activities, if they strongly pledge to values not far from their own immediate interest (Steg and Vlek, 2009). Though not strong, there is a relationship between having a higher concern about the environment and proceeding in more pro-environmental behaviour (Steg and Vlek, 2009). Affect, often studied

in relation to car use, related to affective and symbolic factors, the material possession that makes it difficult to act pro-environmentally (Steg and Vlek, 2009; Dittmar, 1992).

Behaviour is habitual many times and is led by automated cognitive processes, instead of being led by thorough reasoning. If individuals frequently act in the same way when a particular situation presents itself, the situation will be associated mentally with the behaviour contributing to goals or benefit (Steg and Vlek, 2009). When individuals act in their habitual ways it is reasonable to assume that they have selective attention and neglect information that are not in connection with own habitual behaviour, habitual behaviour is only considered to be changed if circumstances are changed significantly (Steg and Vlek, 2009). There are different strategies identified to change behaviour, 1) antecedent strategies aim to change factors that leads to behaviour, 2) Consequence strategies is when behaviour leads to rewards and punishment (Steg and Vlek, 2009).

The attempt to change behaviour is more successful if it is systematically planned. First, the identification of a behaviour to changed needs to be identified, second, there need to be an examination of the underlying factors to this behaviour, third, a strategy best suitable to change the behaviour needs to be applied then, fourth, there can be an observation whether the strategy caused a change in the behaviour (Steg and Vlek, 2009).

Values are considered to have an influence on determining behavioural intentions when it comes to sustainable food. Human values are normally relatively stable, and the beliefs on personal and social desirable modes of existence (Vermeir and Verbeke, 2008). There are for example individuals that attach great value to material possessions, comfortable living, at the same time some individual that are generally more concerned about the environment adhere to a lifestyle that are less materialistic (Vermeir and Verbeke, 2008). Studies have linked ethical or sustainable behaviour to the individual personal values (Finegan, 1994).

Nudging

Nudging can influence self-efficacy, which again can influence behaviour. Nudging can be applied to change people's behaviour.

Human behaviour is often spontaneous and driven by habits. Verplanken and Wood (2006) imply that about 45% of our daily behaviour is not actively thought out actions. Thaler and Sunstein explains the phrase "nudging" as changing people's behaviour in to predictable actions, without banning possibilities or drastically affecting financial situations. Nudging could therefore be appropriate for routine behaviour as well as complex decisions. The

purpose of nudging is not to try to change consumer's values, but to focus on empowering decisions and behaviour that benefits the society in addition to consumer's private long-term interests (Thaler and Sunstein, 2008). The approach of nudging is to provide a choice for the consumer that benefits themselves, as well as benefitting their fellow consumer.

Nudging is an emerging strategy many policy changers are adopting in attempt to change the public behaviour for the better. When applying a nudge, there is an assumption of bounded rationality. The preferable situation would be that consumers could process information perfectly and act rationally as a consequence. Consumers are however restricted by normal human problems. Processing information, grasping information and determining consequences of actions are affecting people's decision-making process (John et al, 2011).

As consumers have bounded rationality, acting bias and frequently make unintentional choices relying on habits and mental shortcuts, it is therefore not unusual that governments/managers/policy makers decide to take action. Although the attitude of "we know best" will probably not be well reciprocated, decision makers are advised to provide the default choice, giving the consumers a choice. Nudging techniques are widely used to change consumer behaviour. Nudging projects like the flies in the urinals at Schiphol, Amsterdam airport, and the electrical bills in developing countries where the average consumption in the neighbourhood was disclosed, both resulted in cleaner airport bathrooms and lower electric bills (Sommer J., 2009 and Joubert L., 2015), showing that nudging techniques can be successful.

There are four types of nudging techniques (Lehner et al., 2016). The first type of nudging is simplification and framing of information. Making the information clear and simple makes it easier for the consumer to choose (Lehner et al., 2016). Providing information will also save consumers time. Many consumers will find if difficult to do the research themselves, and therefore choose the simple choice. If information is provided in clear form, the consumers can easier make more conscious decisions. Framing products differently shows to be effective (Wansink et al., 2001). By adding descriptive information, for example changing it from Strawberry jam to Grandma's Strawberry jam increased sales by 27% (Wansink et al., 2001).

The second type of nudging is changes to the physical environment. Placement of products has for a long time been recognised to play a significant role in consumers' choices. Placing products at eye level or close to the cashier will increase the sale of that particular product.

The third type of nudging is changes to the default policy. People often shy away from resistance, acting only when needed. This means that people are vastly influenced by standard

choices, defaults (Lehner et al., 2016). A Swedish study by Egebark and Ekström, 2013, showed by changing the default of a print option from single-sided to double-sided can reduce paper consumption by 15%. Johnson and Goldstein's study in 2003 about organ donation programs disclosed that in the countries where consent was presumed, where the default option was to be enrolled in an organ donation program, participation was significantly higher than in countries where one actively has to enrol in an organ donation program. Both these studies are indicators of this nudging technique, and that people chose the option with least resistance (Lehner et al., 2016). The fourth nudging technique is use of social norms. Humans are social creatures and visible social norms greatly influence people's thoughts and actions (Cialdini and Goldstein, 2004). A study trying to change the reuse rates of towels at hotels by using the power of social norms showed a significantly increase. By placing the sentence: "the majority of guests reuse their towels" in the hotel bathrooms, people got more awareness and social consciousness of towel usage (Goldstein et al. 2008).

Fast- and slow fashion

Over the past decade, fast fashion has revolutionised the industry. The production of garments is prompt with short lead-time and has created a number of fashion seasons through low costs in labour and materials. This is a business strategy applied by multinational companies like H&M, Zara and Forever 21. Consumer's attitude towards fashion consumption has changed and has led to an impulse buying culture resulting in an insatiable need for newness (McNeill and Moore, 2015). Studies show that young female consumers are particularly influenced by this mind set, and have little awareness of the social consequences rising from the overconsumption (Morgan and Birtwistle, 2009). The fast fashion industry exploits both human and natural resources to speed manufacturing processes, resulting in poor and disposable fashion (Jung and Jin, 2014). The cheap and poor quality fashion has changed the consumer's attitude as much as actually reducing clothes to disposable use. Lucy Siegle observed, outside of a Primark store in London, a customer leaving the store with four full bags, paper bags, of clothes. The customer was waiting for a bus when the rain caused the bags to dissolve. Instead of collecting the garments from the pavement, the customer left it all there on the ground and went on the bus. Treating the clothes as litter. The prices at Primark are so low that the clothes become disposable. Changing the consumer's attitude towards consumption is key to attain a more sustainable fashion industry.

Contrast to fast fashion and mass production, there is slow fashion. Slow fashion is a concept derived from the slow food movement, a movement that connects the joy of food with mindfulness and responsibility (Slow food movement, Carlo Petrini). The slow fashion movement aims to awaken the consumer's awareness for the fashion industry (Fletcher, 2007). Slow fashion has two concepts: slow production and slow consumption. Slowing down the production process will allow the workers and the environment to cooperate in better ways and allow the environment to regenerate (Jung and Jin, 2014). As the natural resources are not exploited in slow fashion processes, the raw materials are allowed to grow naturally (Fletcher, 2007). Slow production is eco friendly and the total amount of waste is reduced due to resource reduction and smaller production scales (Cline, 2012). Taking the time pressure off production, workers will gain greater quality of life as well as spending more time on each piece that results in improved quality of the garment (Jung and Jin, 2014). Although, today the perception of sustainably produced clothes is still inferior to that of traditionally produced garments, thus, the hypothesis H6: The perception on quality of sustainable products is lower than that of traditional products. Cataldi et al. (2010) suggests that if the consumers' experience how the garments are made, this could lead to greater awareness and more sense of responsibility of how the clothes are made. Slow production is a step towards sustainable fashion, but even clothes produced sustainably can become unsustainable if the clothes are only worn a few times before disposal and ending up as waste (LeBlanc, 2012). Therefor sustainable consumption is crucial. This is why consumers also must slow down the consumption. Slow consumption reduces waste of energy and use of natural resources. Slow fashion encourages consumers to buy less with greater quality and long-lasting products. By buying style of quality instead of following trends, consumers can use the clothes longer. When the consumer take time to really appreciate the fashion, the need for personal identity will be fulfilled, more so than by following fast tracking mass trends (Johansson, 2010). As slow fashion production is the opposite of fast fashion production with all its waste and emissions; slow fashion is linked to environmental sustainability (Jung and Jin, 2014).

Sustainable usage of garments

Research shows that as much as 40% of the environmental impact arising from the fashion industry, occurs after the purchase. This essentially means that the consumers also have the ability to influence the environmental impact vastly. Everything that the consumers do while

owning an outfit to the disposal of the outfit is in their hands; the fashion industry can however influence and inform the consumers (Stål and Jansson, 2017).

Most brands advise on how to maintain the garments, as use of washing machines consumes a lot of both water and energy. Brands often recommend washing at 30-40 degrees Celsius instead of 60 degrees Celsius and limited use of tumble-drying.

The other great challenge is disposal of garment. The easiest thing to do when one is finished with a piece of clothing is to throw it in the trash, and this leads to great waste. Fabrics can be reused for several different purposes, but as collection of clothing does not have facilitated collection or drop off systems, it results in a lot of waste (Stål and Jansson, 2017). This is something several fashion companies are trying to simplify. A study by Stål and Jansson (2017) on sustainable consumption and value propositions among Swedish fashion firms show that several large fashion companies, as an alternative to charity hand in, have good in-store collection practises. Brands like H&M, Lindex, KappAhl and Gina Tricot all accept garments from all brands. This might not make it easier for the consumer to get rid of clothes, but it can give the consumer value in form of store vouchers or the satisfaction of contributing to giving the used garments new life through recycling. There is however been shown that there is a downside to this in-store collection practises. Consumers tend to dispose/store clothes in their own closets. Looking at any person's closet, and you will find pieces of clothing that have never been worn or are rarely worn. So when consumers bring in bags of clothes to a store and receives a store voucher that can only be used for purchase of new clothes, this could essentially lead to more consumption (Stål and Jansson, 2017). Other brands like Filippa K, Boomerang and Nudie Jeans have a different solution to the disposal problem. In their in-store collection, they only accept their own brand. If the garments they receive are in good condition, the clothes can be sold in second-hand corners in the store, or as Filippa K has, an own second-hand brand store. As for the garments not suitable to be sold as second-hand, Indiska, Boomerang and Nudie Jeans recycle and use the garments for new home-products, since recycled fabrics are usually easier to use in furniture filling or rugs (Stål and Jansson, 2017).

The take-back initiatives are good in theory, however it seems as if this does not decrease consumption but is rather a solution to the waste. In effort to help reducing consumptions, Filippa K has initiated a leasing program for clothes. They offer short-term lease for their pieces at a discounted price. The garment can be leased for four days at 20% of the full price, including cleaning cost, and when it is returned to the store they clean it and make it ready for

someone new to lease it (Filippa K, webpage). This initiative is a new and innovation way of fashion consumption, and is definitely a growing concept. An obstacle to this type of consumption seems to be to lack of ownership. Fashion and style is very much associated with identity. The significance of individuality, being fashionable and unique, to many consumers often outweighs the desire to be sustainable or ethical (Stål and Jansson, 2017). By leasing rather than purchasing clothes, the consumer relinquishes ownership of the clothes, the social validity of wearing expensive/branded items and the expression of purchasing power, showing class and style. Nevertheless, the concept of leasing clothes could be accepted in situations where a special outfit is required. For a special party or a job interview leasing an outfit could be a good, sustainable option (Stål and Jansson, 2017).

From the literature, here are the summarized hypotheses:

H_{01}: Participants with more information will show higher likeliness to buy sustainably
H_{A1}: Participants with more information will not show higher likeliness to buy sustainably

H_{02}: Higher income will result in a higher likeliness to buy sustainably
H_{A2}: Higher income will result in a lower likeliness to buy sustainably

H_{03}: Subjects scoring high on the self-efficacy scale will act more sustainably
H_{A3}: Subjects scoring high on the self-efficacy scale will not act more sustainably

H_{04}: Participants with more information will reveal a higher premium for sustainable products than those who does not receive the same information.
H_{A4}: Participants with more information will not reveal a higher premium for sustainable products than those who does not receive the same information.

H_{05}: Higher education will result in a higher consciousness on sustainability
H_{A5}: Higher education will result in a lower consciousness on sustainability

H_{06}: The perception on quality of sustainable products is lower than that of traditional products
H_{A6}: The perception on quality of sustainable products is higher than that of traditional products

It is revealed from the literature that the majority of people like the idea of being environmentally friendly, but often struggles with actions. How can consumers' mind be changed from fast to slow fashion, from quantity to quality? Could the nudging of providing information and explanation be the answer to consumption reduction and supporting the slow fashion industry?

In the survey, it is tested whether information will affect participants' likeliness to act sustainable.

Research model:

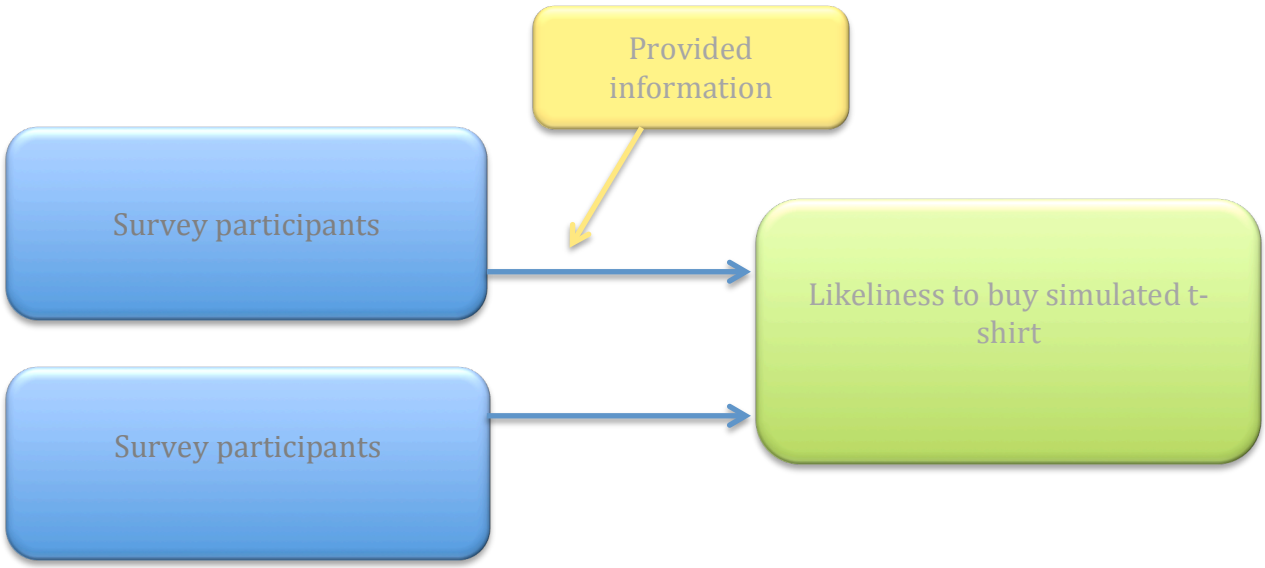


Figure 3: Research model

3 Method

The purpose of conducting research is to get answers to questions raised when looking at previous literature, to fill a gap in the literature or to serve as clarification if there is inconsistency amongst other studies (Bryman and Bell). This chapter presents the chosen research design, conducting of the survey, analytical tools and variables.

3.1 Research design

Research design functions as a framework in the process of gathering and analysing data. The research design emphasises the dimensions and how they are ranked of importance in the process of research. Dimensions could be: 1) the connections between variables, 2) linking the sample to the larger population, 3) understanding how behaviour is being expressed in its social context and the meaning of it and 4) to understand social phenomena and all interconnections (Bryman and Bell). In this research, the aim is to reveal connections between variables.

3.1.1 Quantitative study

This research relies on a quantitative study. A quantitative research focuses on either describing a specific phenomenon or collecting numerical data and generalising across groups of people. A quantitative approach was chosen to fulfil the research purpose of conducting surveys with an experiment. In the experiment, the nudging technique of providing information is used. The goal of quantitative research is to establish a relationship between the independent variable, in this case information provided, and a dependent variable/outcome, in this case attitude towards sustainability and willingness to pay premium for sustainable products.

3.2 Composing of survey

The survey was divided in 5 parts: purchase intention, attitude towards sustainability, self-efficacy, shopping behaviour and lastly some personal information.

The survey was created through the web-based software SurveyXact. The survey contained 23 multiple-choice questions with one answer and one multiple-choice question with the possibility of choosing more than one alternative, and three questions where subjects indicate answers with gliders.

3.2.1 Purchase intention: As an experiment, it was chosen to show a picture of a plain white t-shirt where half of the participants were provided with information regarding the sustainability of the t-shirt, while the other half only received information that it was sustainable. Following the participants were asked to indicate how likely they were to purchase the t-shirt. They were asked to indicate their answers on a seven point Likert scale, going from strongly disagree, 1, to strongly agree, 7. The purpose was to see if more information about the sustainability would affect the likeliness of buying this particular t-shirt. They were also asked to indicate their general willingness to buy sustainable products, to see if the participant in general is a conscious buyer. Then they were asked how much premium as a percentage they were willing to pay for the product to be sustainably produced. If the participants were unwilling to pay a premium, they were able to select 0% premium. This question was added because there is generally a higher price for sustainable, ethical and eco-friendly products. The higher prices are, as disclosed in the literature, because sustainable production provides better working conditions for the workers, balanced use of resources and correct waste management (Jung and Jin, 2014).

3.2.2 Attitude towards sustainability: The next category was to reveal the participants general attitude towards sustainable products. Green consumers are known to consistently make trade-offs. Choosing sustainable products can result in seeking out particular suppliers, time consuming search for information on product values, having to pay premium and accepting different designs/looks (Song and Ko, 2017). There is also the stigma of lower quality, excessive prices and in the case of fashion, poor designs and trendiness. The participants were asked to indicate on a glider ranging from 1 to 7 their perception on sustainable products on quality, stylishness and price.

3.2.3 Self-efficacy: There is an action-attitude gap for many consumers. The desire to be green and sustainable is often outweighed by convenience. The sense of ones choices making a difference could also be a reason for this gap. High self-efficacy indicates ones belief in own abilities, believing that actions equals impact. A person might think that: “if I am the only one how buys sustainable products, it will not make a difference” and with that mind-set not willing to make the trade offs. To reveal the link between self-efficacy and likeliness to buy sustainable, the survey entailed the self-efficacy scale by Matthias Jerusalem and Ralf

Schwarzer, 1995, using the Likert scale (from 1. Strongly disagree to 7. Strongly agree). The participants were also asked to indicate whether they agreed or disagreed to two specific statements regarding the fashion industry and responsibility: "I believe my actions and choices makes an impact" and "The apparel industry is responsible to make the change towards a sustainable production, not the consumers". This was to better link the self-efficacy of the participants to this research study on sustainable fashion and choices.

3.2.4 Shopping behaviour: To better understand the participants' habits and attitudes towards shopping, usage and disposal, the survey included five questions about personal consumer behaviour. Knowing how much the participants on average spend a month on apparel, if they use second-hand stores and whether they pay attention to what materials are used in the garments and where it is produced can reveal the participants' awareness of environmental affect caused by the fashion industry. The question of how much money the participants spend on shopping a month, on average, is to see if only people who normally spend a lot of money on apparel are the ones willing to buy sustainable. The question of if the participants pay attention to where the garments are made, is to test if they take in to account the long transportations and if they pay attention to the different labour conditions in developing countries. The survey also included a question of how the participants dispose unwanted/outworn garments, this to show their awareness on possible options to reduce waste. This category can also be linked to self-efficacy; participants with low self-efficacy can reveal lower consciousness than those with high self-efficacy, as they are more likely to believe that their actions and choices actually can make a difference.

3.2.5 Personal information: Gender, age, income and education are variable chosen in this study to research if they influence sustainable consumption and attitude. The variables income and education are expected to have a positive correlation with awareness and likeliness to buy sustainable products. This is because it reasonable to assume that these segments are more willing to spend more money on fashion, as well as more willing to receive and process information. Gender and age are also two interesting variable, as females in the ages 18-29 are shown to spend a large percentage of their income on fashion items and to be generally less concerned of consequences (Morgan and Birtwistle, 2009).

To see the complete survey, see appendix 1.

3.3 Primary data

This thesis is working with primary data. Primary data is first hand data, data that is collected by the researchers themselves. The source of primary data can be surveys, questionnaires observations, experiments and personal interviews amongst other. This research gathered the data from surveys with an integrated experiment. Collecting primary data can be time consuming and expensive. The process of making the survey in this research, was time consuming with a lot of adjustments being made along the process. It was also more expensive gathering the primary data, as the participants often are compensated in collection, rather than using already existing data (secondary data), which would have been more economical. Choosing primary data are in this case preferred, as it is more accurate and reliable than secondary data, as well as specific to the need of this research.

3.4 Application of an experiment in this sustainable fashion study

For this research a survey was composed regarding sustainable fashion following the previous literature. As on of the research's main hypotheses H4: participants with more information will reveal a higher premium for sustainable products than those not receiving sufficient information and H1 Participants with more information will show higher likeliness to buy sustainably, it was necessary to divide the survey by making two different questionnaires. The subjects were exposed to a picture of a plain, white t-shirt. The control group was informed that the t-shirt was sustainable and had a price of $28. The other group received this information: "This t-shirt is sustainable. It is made from Tencel (Lyocell), originating from the eucalyptus tree. Cotton production requires great amounts of water from start till finish, by using Tencel instead of cotton; water usage is reduced from 700 to 300 gallons per t-shirt. Tencel is 100% degradable in contrast to other materials such as polyester, viscose and acrylic containing plastic, which is not degradable and ends up in our oceans. Therefore, using Tencel reduce waste. White t-shirt, $28".

3.5 Sample gathering

To test the hypothesis of this research, data was gathered through the distribution of online surveys. The sampling was conducted to identify the difference in attitudes between participants given information and those who did not. The survey was developed using multiple-choice questions and gliders for the participants to indicate their answers. To make

sure the questions were clear and bias, the two researchers of this thesis conducted screen-tests asking friends and family to complete the survey and give feedback. The survey was launched at Amazon mechanical turk (Mturk), with criteria of subjects to be located in the United States, US. A total of 110 participated, with 55 participants at each of the surveys. The surveys where launched at four different days, first the survey without information, 22.04.2018 and 23.04.2018, then the one with information, 24.04.2018 and 25.04.2018. The average time consumed of the survey without information was 10 minutes and 21 seconds, and the average time consumed of the survey with information was 21 minutes and 20 seconds.

3.6 Variables

The aim of this research is to establish if there exist a relationship between likeliness to buy sustainable and being well informed. It is also reasonable to assume a presence of control variables to have an effect on the relationship between the dependent and independent variable. When choosing this study's variables theoretical relevance and the researchers own interest have been taken in to consideration. The dependant variable relies on other measured variables and is expected to change if the independent variable or control variables are experimentally manipulated. The dependant variables of this study are likeliness to buy sustainable and price premium, therefore the purpose of this study is to see if the dependent variables change as a result of an experimental testing. The independent variable is unaffected by the dependent variable. It is chosen due to presumed cause and is in this case absents or presences of information. The control variables are the perception of sustainable products, self-efficacy, green awareness and demographics. Perception of sustainable products is chosen because it is important to understand the general views on product features, and test if it affects the dependant variables. Self-efficacy is chosen to test how individual perceived abilities may affect the dependent variables. Green awareness is chosen as a control variable to better understand the relationship between conscious behaviour and the dependent variables. Demographics such as age, gender, income and education are chosen since they are socio-psychological variables known to influence green behaviour (Belz and Peatti, 2009, Gupta and Pirsch, 2015). With emphasis on education as it is realistic to assume processing information could vary on different levels of education.

3.7 Rationale

For this research, a survey with an integrated experiment was chosen. Another approach to better understand the significance of nudging could be through face-to-face interviews dividing in two groups where one receives information and the other does not.

The two researcher of this thesis found that it was better suited to conduct a nudging technique through surveys rather than face-to-face as the latter alternative is extremely time consuming in this large amount of subjects. Furthermore, due to the attitude-action gap, it is reasonable to assume that this gap would be bigger when the subjects are asked face-to-face. By conducting the surveys online and anonymously, it is more likely to receive more honest opinions and behaviour.

3.8 Reliability

Reliability of the research depends on the consistency of the measurements. The two surveys were launched in two batches. The first survey with no information was launched in two rounds with a one-day interval. The second survey with information was also launched in two rounds with a one-day interval. In both cases the results where consistent, see table 1 for the different means in the two surveys and the four batches.

Table 1, consistency in results of likeliness to buy the simulated sustainable t-shirt

Survey 1, first batch	Mean: 3.333
Survey 1, second batch	Mean: 3.500
Survey 2, first batch	Mean: 4.370
Survey 2, second batch	Mean: 4.714

Showing no significant difference between the two batches, making it reasonable to assume consistency in the results, making the research reliable.

For the survey itself, the researchers believe that there is a larger chance of detecting statistical significance by using a scale of seven alternatives. The reason for including all 10 of the self-efficacy questions, instead of just using the two specific self-efficacy statements related to fashion, is to avoid reliability and validity issues. Additionally, the fact that 10 out of 27 questions revolved around self-efficacy can perhaps acts as a decoy for the research's real purpose.

3.9 Validity

Table 2, Validity

General Validity To what degree is it possible to make conclusions from the research?
External Validity To what degree is it possible to generalise the conclusions from the research to other contexts, different location and period?
Internal Validity Does the research explain the outcome? Is it possible to conclude that there is a hypothesised relationship between cause and effect?

Note: modified from John et al., 2011

General validity: From the experiment with the two different surveys, conclusions are made based on the significant level from *t*-test and analysis of variance (ANOVA), where the confidence interval of 95% has been applied. When the outcomes show a significant difference it is reasonable to draw conclusions from the results.

External validity: The conclusions from the research can be generalised as the surveys were launched to a random selected sample. The population chosen was located in the US, different result can occur when another population is chosen or it can in fact reveal similar results. If the research were to be repeated after a period of time, different results could be revealed as a consequence of more general awareness.

Internal validity: The research in this study explains the outcome, as it is possible to reveal a relationship between the cause and effect. It is possible to uncover the effect of information on the participants' responses.

3.10 Transferability

The transferability of a research refers to whether the results of the research can be transferred to different locations and population. As for a quantitative study often relies on anonymous and random respondents, this study can easily be replicated in another location and population.

3.11 Sources of error

Sources of error and uncompleted surveys are minimized due to launching the survey and paying the subjects, and it is not possible to submit the survey without answering all the questions. Although there is always the chance of misinterpret the questions or just fast-forwarding through the surveys.

4 Results and analysis

This chapter presents the data analysis and observations registered from the two different surveys of this research. It entails the findings and comparisons, while the discussion and conclusion of the findings will be presented later in the thesis.

This research uses independent *t*-test and Analysis of variance, ANOVA, when analysing the results.

4.1 Independent *t*-test

The independent *t*-test compares means between an independent variable with two groups and a dependent variable. In this research the independent variable with two groups is gender, and the two groups were male and female. The dependent variables are likeliness to buy sustainable t-shirt, likeliness to buy sustainable products in general and willingness to pay price premium for sustainable products. The t-test in this study was completed using IBM's SPSS statistics.

4.2 Analysis of variance, ANOVA

The ANOVA test analyses whether there is a significant difference between the means of independent variables with two or more independent groups. The independent variables with more than two groups in this study are age, education, and income. The ANOVA tests if there is a significant difference between these independent variables and the dependent variables of likeliness to buy sustainable t-shirt, likeliness to buy sustainable products in general and willingness to pay price premium for sustainable products. The ANOVA test in this study was completed using IBM's SPSS statistics.

4.3 Observations

When collecting data from distributed surveys, this study is operating with completely anonymous responses. The respondents answers where transferred from amazon mturk to SurveyXact, where each respondents was given a unique ID. It is ethically correct to keep the respondents anonymous, and the respondents' mturk ID will not be revealed in this study.

4.3.1 Observations from survey with no information

Analysing the demographics compared to likeliness to buy simulated t-shirt, sustainable products in general and price premium.

Table 3, Participant's demographics

Age ranges	Male %	Female %	Total, both genders
Under 18			
18-24		1,8	1,8
25-34			
25-34	25,5	25,5	51
35-44	12,6	18,2	30,8
45-54	5,5	3,6	9,1
55+		7,3	7,3
Total	43,6	56,4	100

Education groups	Percentage distribution
High school	29
Bachelors	51
Masters	16
Ph.D./M.D	2
Other	2
Total	100

Income groups	Percentage distribution
$0-$20,000	13
$20,001-$40,000	29
$40,001-$60,000	36
$60,001-$80,000	13
$80,001-$100,000	2
More than $100,000	7
Total	100

Gender

The result of a *t*-test reveals that there is no significant difference between male (mean = 3.208, N = 24) and female (mean = 3.580, N = 31; *t*-test: P = 0.747, df = 53, *t* = -0.744) when it comes to likeliness to buy the supplied t-shirt in the experiment. A *t*-test also shows no significant difference when comparing gender (Male: mean = 4.5, N = 24, Female: mean = 5.48, N = 31; *t*-test: P = 0.780, df = 53, *t* = -2.879) and likeliness to buy a sustainable product in general. Regarding price premium, the *t*-test reveals no significant difference between male and female (*t*-test: P = 0.708, df = 53, *t*= -1.084) and how much premium they are willing to pay.

Age range

The result of an analysis of variance (ANOVA) reveals no significant difference between the age groups and likeliness to buy the simulated t-shirt (N = 55; F = 1.712; df = 54; P = 0.162). The analysis also shows no significant difference when comparing the age groups and likeliness to buy a sustainable product (N = 55; F = 1.412; df = 54; P = 0.244). Regarding price premium, the analysis of variance (ANOVA) reveals no significant difference between the age groups (N = 55; F = 1.670; df = 54; P = 0.172) and how much premium they are willing to pay.

Income

The result of an analysis of variance (ANOVA) reveals no significant difference between the income level and likeliness to buy the simulated t-shirt (N = 55; F = 0.906; df = 54; P = 0.485).

The analysis also shows no significant difference when comparing the age groups and likeliness to buy a sustainable product (N = 55; F = 0.534; df = 54; P = 0.749). Regarding price premium, the analysis of variance (ANOVA) reveals no significant difference between the income groups (N = 55; F = 0.672; df = 54; P = 0.646) and how much premium they are willing to pay.

Education

The result of an analysis of variance (ANOVA) reveals no significant difference between the education groups and likeliness to buy the simulated t-shirt (N = 55; F = 0.856; P = 0.497). The analysis also shows no significant difference when comparing the education groups and likeliness to buy a sustainable product (N = 55; F = 1.682; P = 0.169). Regarding price premium, the analysis of variance (ANOVA) reveals no significant difference between the education groups (N = 55; F = 0.225; df = 54; P = 0.923) and how much premium they are willing to pay.

Self-efficacy

In the analysis, the 10 self-efficacy questions are computed as a mean, and all comparison are executed with this mean as representation of the respondents' total self-efficacy. Respondents classified as having high self-efficacy are those who had a computed mean of 5 or higher on the self-efficacy scale.

The result of an analysis of variance (ANOVA) reveals no significant difference between respondents showing high self-efficacy and those showing low self-efficacy on their likeliness to buy the simulated t-shirt (N = 55; F = 1.232; df = 54; P =0.295). Furthermore, the result of an analysis of variance (ANOVA) reveals a significant difference between respondents showing high self-efficacy and those showing low self-efficacy on their likeliness to buy sustainable products in general (N = 55; F = 2.042; df = 54; P = 0.034<0.05). Those showing high self-efficacy are more likely to buy sustainable products in general. ANOVA also shows a significant difference between respondents showing high self-efficacy and those showing low self-efficacy on their willingness to pay price premium (N = 55; F = 2.085; df = 54; P = 0.031<0.05). Those showing high self-efficacy are revealing a higher price premium.

The result of ANOVA reveals a significant difference between respondents showing high self-efficacy and those showing low self-efficacy on the statement "The apparel industry is responsible to make the change towards a sustainable production, not the consumers" (N = 55; F = 2.635; df = 54; P = 0.007<0.05). Those showing low self-efficacy reveal higher agreement to the statement.

The result of ANOVA reveals a significant difference between respondents showing high self-efficacy and those showing low self-efficacy on the statement "I believe my actions and choices makes an impact" (N = 55; F = 2.783; df = 54; P = 0.005<0.05). Those showing high self-efficacy reveal higher agreement to the statement.

Responsibility

ANOVA test reveals no significant difference between the statement "I believe my actions and choices makes an impact" and likeliness to buy the simulated t-shirt (N= 55; F = 2.095; df = 54; P = 0.082). The result of ANOVA reveals a significant difference between the statement "I believe my actions and choices makes an impact" and likeliness to buy other sustainable products (N= 55; F = 7.289; df = 54; P = 0.000).

As for price premium, the ANOVA test reveals a significant difference between the statement "I believe my actions and choices makes an impact" and willingness to pay price premium (N= 55; F = 3.499; df = 54; P = 0.009). Participants with high agreement to the statement, reveal a higher likeliness to buy sustainably and willingness to pay price premium.

ANOVA reveals no significant difference between the statement "The apparel industry is responsible to make the change towards a sustainable production, not the consumers" and

likeliness to buy the sustainable t-shirt (P = 0.861), likeliness to buy other sustainable products (P = 0.842) and willingness to pay price premium (P = 0.943).

Awareness

ANOVA results suggest that there is a significant difference between participants who pays attention to what material used in production and likeliness to buy sustainable products (N =55; F = 3.497; df = 54; P = 0.014<0.05). However, there are no significant difference between participants who pays attention to where the products are produced and likeliness to buy sustainable products (N =55; F = 1.342; df = 54; P = 0.267).

The ANOVA test shows no significant difference between high agreement to the statement: "I believe my actions and choices makes an impact" and disposal habits (second-hand stores/charity P = 0.106, recycle P = 0.286, garbage P = 0.096, in-store collection P = 0.379) with the exception of swap-parties (P = 0.029<0.05) showing significant difference.

Another ANOVA test reveals that there is a significant difference between using second-hand stores and likeliness to buy sustainable (N =55; F = 3.6; df = 54; P = 0.012).

ANOVA results suggest no significant difference between monthly apparel spending and likeliness to buy sustainable products (P = 0.307), yet it suggests a significant difference between monthly apparel spending and likeliness to buy the t-shirt from the experiment (N = 55; F = 2.865; df = 54; P = 0.033<0.05).

Perception of features

On perception of sustainable products regarding quality the mean of the respondents' answers were 4.855 (on a scale from 1 to 7, where 1 was lower and 7 was higher). Indicating that the perception of quality on sustainably produced products is slightly higher compared to normally produced products.

On perception of sustainable products regarding design (fashionable) the mean of the respondents' answers were 4.2 (on a scale from 1 to 7, where 1 was more and 7 was less). Indicating that the perception of design on sustainably produced products is close to equal compared to normally produced products (See limitations regarding collecting perception of design of sustainable products).

On perception of sustainable products regarding price the mean of the respondents' answers were 5.436 (on a scale from 1 to 7, where 1 was lower and 7 was higher). Indicating that the

perception of price on sustainably produced products is higher compared to normally produced products.

Key findings

From the analysis above, there is no significant difference between demographics and likeliness to buy the simulated t-shirt and sustainable products in general as well as willingness to pay price premium.

The analysis does however show significant difference when comparing the likeliness to buy the simulated t-shirt and buying sustainable products in general. Total mean for buying the simulated t-shirt was 3.418, while total mean for buying sustainable products in general was 5.0545. The participants were more likely to buy a sustainable product than the simulated t-shirt.

The analysis shows that 69% of the respondents, receiving no information, were willing to pay a price premium of 1-10%.

Table 4: Summarised table of significance levels from survey with no information

	Likeliness to buy the t-shirt	Likeliness to buy sustainable products	Willingness to pay price premium
Gender	α 0.747	α 0.780	α 0.708
Age	α 0.162	α 0.244	α 0.172
Education	α 0.497	α 0.169	α 0.923
Income	α 0.485	α 0.749	α 0.646
Self-efficacy	α 0.295	α 0.034	α 0.031
"I believe my actions…."	α 0.082	α 0.000	α 0.009
"The apparel industry…."	α 0.861	α 0.842	α 0.943
Awareness to material	α 0.285	α 0.014	α 0.014
Awareness to where it is produced	α 0.015	α 0.267	α 0.045

The green results indicate where one can see a significant difference between two variables.

4.3.2 Observations from survey with information

Analysing the demographics, after receiving information, compared to likeliness to buy simulated t-shirt, sustainable products in general and price premium.

Table 5, Participant's demographics

Age ranges	Male %	Female %	Total, both genders
Under 18			
18-24	1.8	1.8	3.6
25-34	41.8	23.7	65.4
35-44	14.6	3.6	18.3
45-54	5.5	3.6	9.1
55+	1.8	1.8	3.6
Total	65.5	34.5	100

Education groups	Percentage distribution
High school	9
Bachelors	44
Masters	16
Ph.D./M.D	0
Other	31
Total	100

Income groups	Percentage distribution
$0-$20,000	12
$20,001-$40,000	20
$40,001-$60,000	42
$60,001-$80,000	22
$80,001-$100,000	2
More than $100,000	2
Total	100

Gender

A *t*-test reveals a result that there is no significant difference between male (mean = 4.833, N = 36) and female (mean = 4.00, N = 19; *t*-test: P = 0.901, df = 53, *t* = 1.636) when it comes to likeliness to buy the supplied t-shirt, with the information, in the experiment. A *t*-test also reveals that there are no significant difference when comparing gender (Male: mean = 5.611, N = 36, Female: mean = 4.947, N = 19; *t*-test: P = 0.803, df = 53, *t* = 1.533) and likeliness to buy a sustainable product in general. Concerning price premium, the *t*-test shows no significant difference between male and female (Male: mean = 2.722, N = 36, Female: mean = 2.368, N = 19; *t*-test: P = 0.152, df = 53, *t* = 1.443) and how much premium they are willing to pay.

Age range

The result of an analysis of variance (ANOVA) reveals no significant difference between the age groups and likeliness to buy the simulated t-shirt when receiving information (N = 55; F = 2.068; df = 54; P = 0.099). The analysis shows a significant difference when comparing the age groups and likeliness to buy a sustainable product (N = 55; F = 2.580; df = 54; P = 0.048<0.05). Regarding price premium, the ANOVA reveals no significant difference between the age groups (N = 55; F = 2.285; df = 54; P = 0.073) and how much premium they are willing to pay.

Income

An analysis of variance (ANOVA) reveals no significant difference between the income level and likeliness to buy the simulated t-shirt (N = 55; F = 1.134; df = 54; P = 0.355).

The analysis also shows no significant difference when comparing the age groups and likeliness to buy a sustainable product (N = 55; F = 1.365; df = 54; P = 0.254). Regarding price premium, an ANOVA reveals no significant difference between the income groups (N = 55; F = 1.952; df = 54; P = 0.103) and how much premium they are willing to pay.

Education

The result of an analysis of variance (ANOVA) reveals no significant difference between the education groups and likeliness to buy the simulated t-shirt (N = 55; F = 0.330; df = 54; P = 0.804). The analysis also shows no significant difference when comparing the education groups and likeliness to buy a sustainable product (N = 55; F = 0.812; df = 54; P = 0.493) As for the price premium, the ANOVA reveals a significant difference between the education groups (N = 55; F = 2.988; df = 54; P = 0.040<0.05) and how much premium they are willing to pay.

Self-efficacy

When analysing the self-efficacy, the 10 self-efficacy questions are computed as a mean, and all comparison are done with this mean as representation of the respondents' total self-efficacy. Respondents classified as having high self-efficacy are those who had a computed mean of 5 or higher on the self-efficacy scale. The result of an analysis of variance (ANOVA) reveals no significant difference between respondents showing high self-efficacy and those showing low self-efficacy on their likeliness to buy the simulated t-shirt (N = 55; F = 0.911;

df = 54; P = 0.588). Also, the result of the ANOVA reveals no significant difference between respondents showing high self-efficacy and those showing low self-efficacy on their likeliness to buy sustainable products in general (N = 55; F = 1.327; df = 54; P = 0.229). ANOVA also shows no significant difference between respondents showing high self-efficacy and those showing low self-efficacy on their willingness to pay price premium (N = 55; F = 0.714; df = 54; P = 0.800).

The result the ANOVA reveals a significant difference between respondents showing high self-efficacy and those showing low self-efficacy on the statement "The apparel industry is responsible to make the change towards a sustainable production, not the consumers" (N = 55; F = 2.197; df = 54; P = 0.021). Those revealing high self-efficacy also agree with the statement of industry responsibility.

The result of ANOVA reveals no significant difference between respondents showing high self-efficacy and those showing low self-efficacy on the statement "I believe my actions and choices makes an impact" (N = 55; F = 1.278; df = 54; P = 0.260).

Responsibility

ANOVA test reveals a significant difference between the statement "I believe my actions and choices makes an impact" and likeliness to buy the simulated t-shirt (N = 55; F = 2.871; df = 54; P = 0.024<0.05). The result of ANOVA reveals a significant difference between the statement "I believe my actions and choices makes an impact" and likeliness to buy other sustainable products (N = 55; F = 2.826; df = 54; P =0.025<0.05). Those believing that ones actions make an impact are more likely to buy sustainably.

As for price premium, the ANOVA test reveals no significant difference between the statement "I believe my actions and choices makes an impact" and willingness to pay price premium (N = 55; F = 1.700; df = 54; P = 0.152).

ANOVA reveals no significant difference between the statement "The apparel industry is responsible to make the change towards a sustainable production, not the consumers" and likeliness to buy the sustainable t-shirt (N = 55; F = 0.948; df = 54; P = 0.459).

The ANOVA test reveals a significant difference between the statement "The apparel industry is responsible to make the change towards a sustainable production, not the consumers" and likeliness to buy other sustainable products (N = 55; F = 3.065; df = 54; P = 0.017<0.05), but

no significant difference regarding the willingness to pay price premium (N = 55; F = 1.028; df = 54; P = 0.412).

Awareness

ANOVA results suggest that there is no significant difference between participants who pays attention to what material used in production and likeliness to buy sustainable products (N = 55; F = 1.986; df = 54; P = 0.111). However, there is a significant difference between participants who pays attention to where the products are produced and likeliness to buy sustainable products (N = 55; F = 3.742; df = 54; P = 0.010). Participants more aware of where the products are produced are showing higher likeliness to buy sustainable.

The ANOVA test shows no significant difference between high agreement to the statement: "I believe my actions and choices makes an impact" and disposal habits (second-hand stores/charity P = 0.068, swap-parties P = 0.051, recycle P = 0.438, garbage P = 0.629, in-store collection P = 0.510).

Another ANOVA test reveals no significant difference between using second-hand stores and likeliness to buy sustainable (N = 55; F = 0.963; df = 54; P = 0.901).

ANOVA results suggest no significant difference between monthly apparel spending and likeliness to buy sustainable products (P = 0.208); it also reveals no significant difference between monthly apparel spending and likeliness to buy the t-shirt when receiving information from the experiment (P = 0.136).

Perception of features

On perception of sustainable products regarding quality the mean of the respondents' answers were 4.981 (on a scale from 1 to 7, where 1 was lower and 7 was higher). Indicating that the perception of quality on sustainably produced products is slightly higher compared to normally produced products.

On perception of sustainable products regarding design (fashionable) the mean of the respondents' answers were 3.890 (on a scale from 1 to 7, where 1 was more and 7 was less). Indicating that the perception of design on sustainably produced products is close to equal, though a little lower, compared to traditionally produced products (See limitations).

On perception of sustainable products regarding price the mean of the respondents' answers were 5.727 (on a scale from 1 to 7, where 1 was lower and 7 was higher). Indicating that the

perception of price on sustainably produced products is higher compared to normally produced products.

Key findings

Demographics illustrate no significant difference regarding the likeliness to buy the simulated t-shirt when provided with information or sustainable products in general.

The analysis shows that there is a small difference when comparing the likeliness to buy the simulated t-shirt when receiving information and buying sustainable products in general. Total mean for buying the simulated t-shirt was 4.545, while the total mean for buying sustainable products in general was 5.381.

The analysis shows that 40% of the respondents, receiving information, were willing to pay a price premium of 1-10%.

Table 6: Summarised table of significance levels from survey with information

	Likeliness to buy the t-shirt	Likeliness to buy sustainable products	Willingness to pay price premium
Gender	α 0.901	α 0.803	α 0.152
Age	α 0.099	α 0.048	α 0.073
Income	α 0.355	α 0.254	α 0.103
Education	α 0.804	α 0.493	α 0.040
Self-efficacy	α 0.588	α 0.229	α 0.800
"I believe my actions…."	α 0.024	α 0.025	α 0.152
"The apparel industry…."	α 0.459	α 0.017	α 0.412
Awareness to material	α 0.134	α 0.111	α 0.334
Awareness to where it is produced	α 0.071	α 0.010	α 0.104

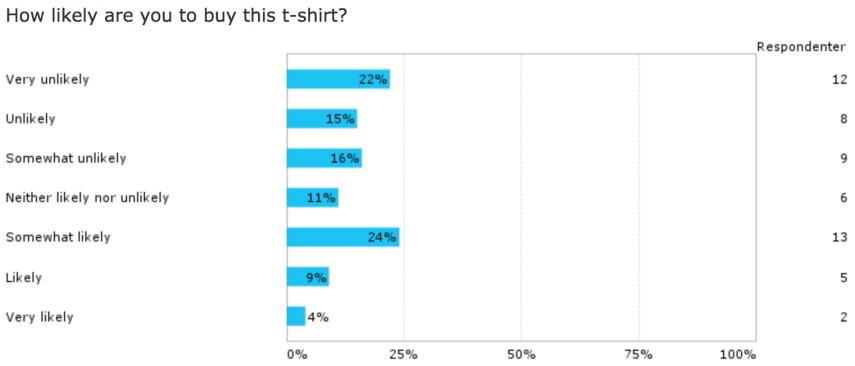
The green results indicate where one can see a significant difference between two variables.

4.3.3 Comparing data from the two different surveys

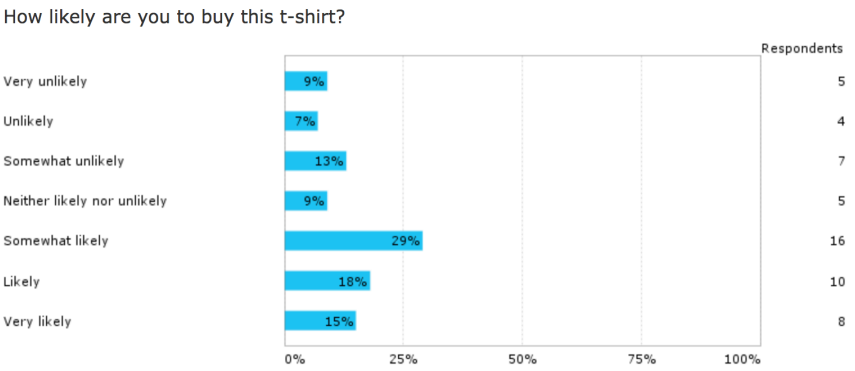
In this part the key findings from comparing the two surveys will be disclosed.

Results from an ANOVA test with both surveys, show a significant difference between the group receiving information and the one who did not on their likeliness to buy the simulated t-shirt, ($N = 110$; $F = 10.454$; $df = 109$; $P = 0.002<0.05$). Meaning the group receiving the information showed a significantly higher mean and more likely to buy the t-shirt.

Group 1

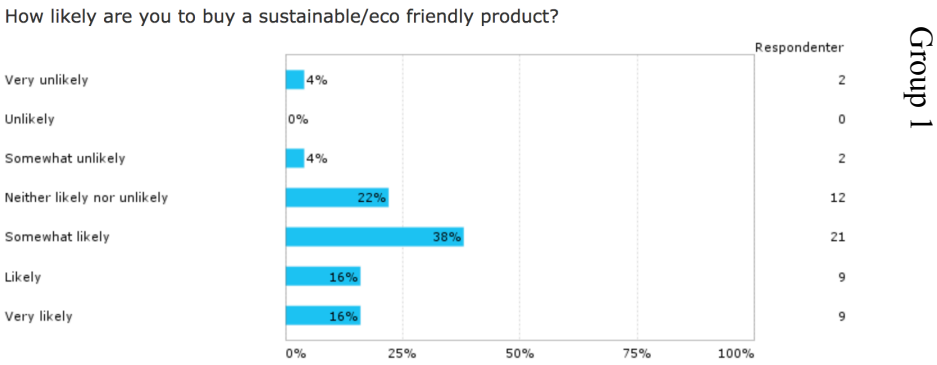


Group 2

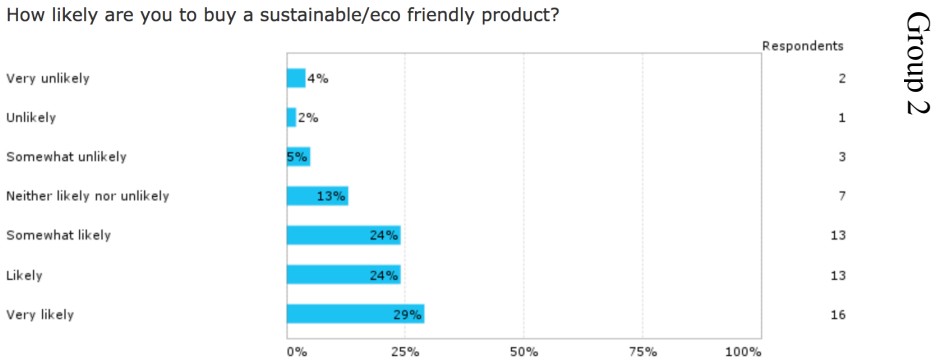


From the diagrams above, one can see a clear shift from the unlikely half in the first group to the likely half in the second group where they received information.

The ANOVA test shows that there is no significant difference between the two groups, regarding the likeliness of buying sustainable products in general, (N = 110; F = 1.409; df = 109; P = 0.238). Thus, the information about the t-shirt did not affect the participants' likeliness to buy sustainable products.



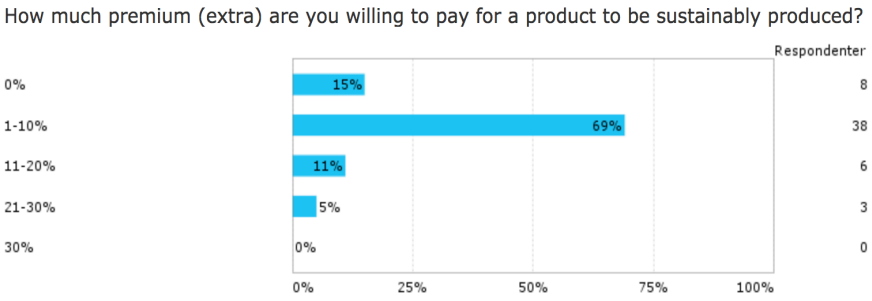
Group 1



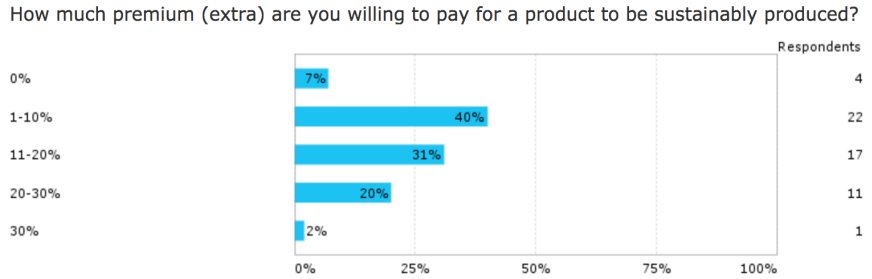
Group 2

From the charts, one can see that the participants from both groups show a similar likeliness to purchase sustainable/eco friendly products. The provided information has not greatly affected differentiations between the groups.

The ANOVA test reveals a significant difference between the two groups and how much premium they are willing to pay, (N = 110; F = 12.341; df = 109; P = 0.001<0.05). The group receiving the information revealed a significantly higher mean and price premium.



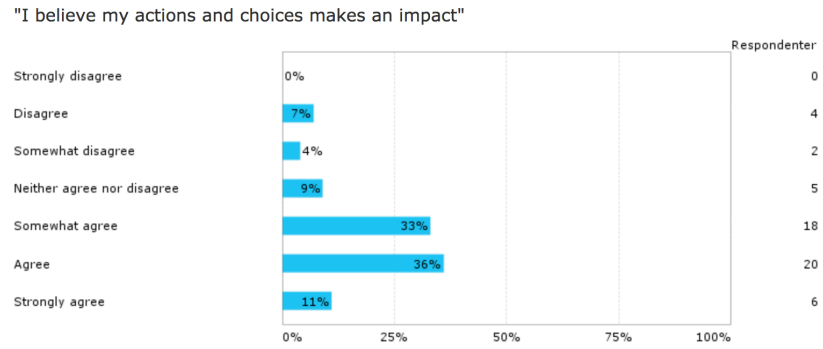
Group 1



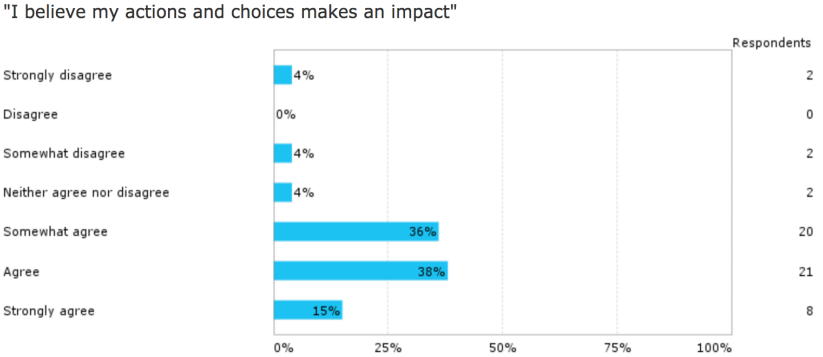
Group 2

The charts show that the level of price premium has increased from the first to the second group. More participants are willing to pay a higher premium after receiving information.

An ANOVA test comparing the two groups and the statement “I believe my actions and choices makes an impact”, showed a significant difference (N = 110; F = 0.802; df = 109; P = .0372).



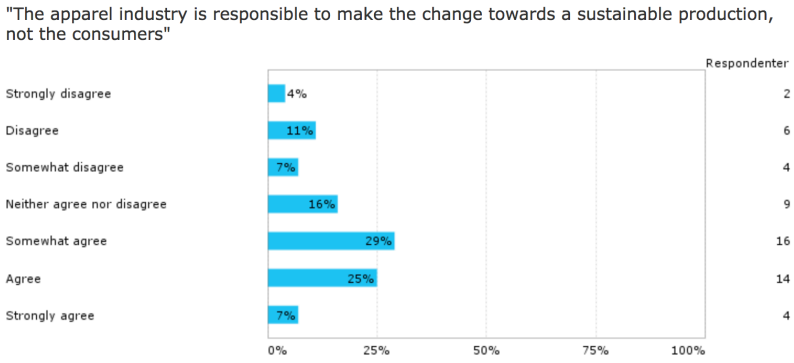
Group 1



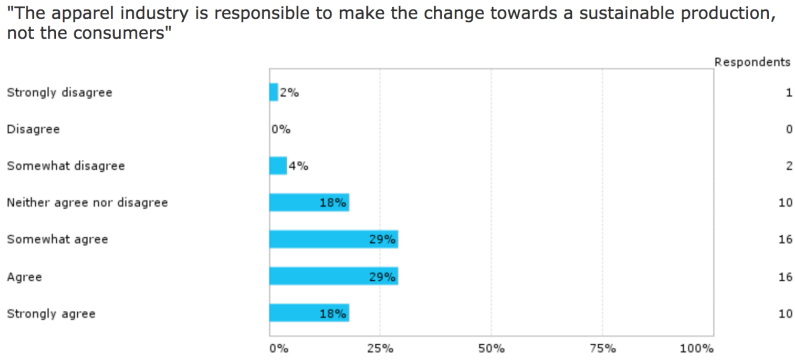
Group 2

The second group are showing higher agreement to the statement, showing higher belief in own actions after receiving information. As self-efficacy is defined by the belief in own abilities, the self-efficacy has in one way increased.

An ANOVA test comparing the two groups and the statement “The apparel industry is responsible to make the change towards a sustainable production, not the consumers”, showed a significant difference ($P = 0.010 < 0.05$). There is a shift in responsibility between the two groups. In the second group the participants agree even more to the statement that the apparel industry is responsible to make a change.



Group 1



Group 2

The results of the analysis regarding the self-efficacy showed a difference between the two groups. In the first group where the respondents did not receive any information, there was a significant difference between those showing high self-efficacy and those showing low self-efficacy and their likeliness to act sustainable. While in the second group where the respondents received information, the self-efficacy showed less significance. The level of self-efficacy in this group did not affect their likeliness to act sustainable.

5 Discussions

In this chapter the findings from both surveys will be discussed and the researchers aim to interpret the results. In the end of the chapter, the participants will be categorised in three different types of consumers based on their individual answers.

5.1 The experiment

In the first group (no information) there was a significant difference comparing the likeliness to buy the simulated t-shirt and buying sustainable products in general, participants who answered likely to buy sustainable products in general, were normally the ones who were likely to buy the sustainable t-shirt. While in the second group (with information), there was no significant difference, participants who revealed high likeliness of buying the sustainable t-shirt were consumers who usually buy sustainable products as well as consumers who normally do not buy sustainable. The reason might be that without information the simulated t-shirt appears to be somewhat expensive and with information the participants get a better understanding of the reason behind the somewhat high price. H1: participants with more information will show higher likeliness to buy sustainably.

This hypothesis is accepted. Although the likeliness to buy sustainable in general did not increase significantly, this demonstrates that the information regarding the t-shirt helped the already mindful consumer's likeliness to buy it. In the first group, a big portion showed high likeliness to buy sustainable, but not likely to buy the simulated t-shirt. While after receiving information there was a more linked connection between the participants answering that they were likely to buy sustainable products and were also likely to buy the simulated t-shirt. The mean of likeliness to buy the t-shirt in the first group was 3.418 and the mean of likeliness to buy the t-shirt in the second group was 4.545, implying that providing information resulted in a more positive attitude towards the t-shirt. The information explained why the t-shirt was sustainable, this could have given the respondents more understanding and awareness and therefore more likely to buy. The experiment may also have worked as a nudge, the technique of providing information, in that it exclaimed the extremely high water usage and waste, thus the participants felt more convinced to buy the simulated sustainable t-shirt.

5.2 Demographic

The purpose of this research was not to investigate whether demographics affected the sustainable behaviour, but it is an interesting observation that in fact it did not affect the participants' choices. Initially the researchers assumed the level of education would somehow affect the participants' attitudes and knowledge of sustainability, H5: Higher education will result in a higher consciousness on sustainability. As the tests resulted in no significant difference this hypothesis is rejected. Reasons for this could be a small (110) sample, perhaps if there was a larger sample the result would be different and there would be a significant difference. The article by Salazar and Oerlemans, 2016, suggest that individuals tend to get information from one's social group, therefor a person with low education might be in a social group with a very conscious consumer and be influenced to act outside of own demographic. The researchers also presumed level of income would affect the sustainable behaviour, H2: Higher income will result in a higher likeliness to buy sustainably. This hypothesis is rejected, as the results showed no significant difference between the different income levels.

5.3 Price premium

H4: Participants with more information will reveal a higher premium for sustainable products than those who do not receive the same information. This hypothesis can be accepted. There is a significant higher premium percentage in the second group (with information) than in the first group (no information), this demonstrates again that more information gives a better understanding of the logic behind the higher prices. The price premium within group one had a mean of 2.018, translated to 1-10% premium, and group two had a mean of 2.690 which is still translated in to the 1-10% premium, but closing up on 11-20% premium. Additionally, the amount of participants in the two highest groups (20-30% and +30%) was raised from 3 participants in the first group to 12 participants in the second group, showing an increase in choosing a rather high premium.

5.4 Self-efficacy

The self-efficacy results showed a difference between the two groups regarding sustainable behaviour. In the first group the level of self-efficacy resulted in significant difference. Meaning, those with high self-efficacy are more likely to act sustainably and more willing to pay price premium. While in the second group, the level of self-efficacy did not show the

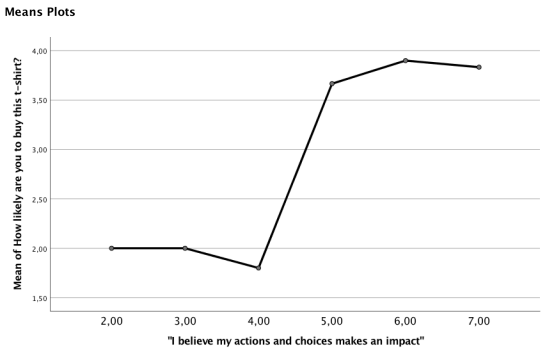
same significant difference. The reason for this result could derive from the provided information. All the participants in the second group could be under the impression that a single purchase can make a difference, and therefor more likely to act sustainable. To transform a consumer with low self-efficacy to act sustainable, an important influencer of gaining more self-efficacy is the feeling of achieving results. In this context consumers could gain confidence in own abilities when realising buying more and more sustainable, bigger retailers like H&M notices the demand and consequently supplies more, and more frequently sustainable product lines.

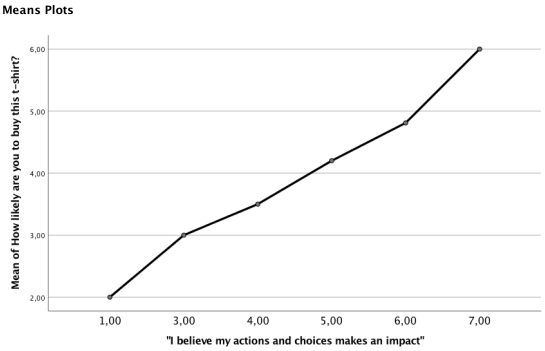
Regarding self-efficacy and sustainable behaviour when analysing all 110 participants together, the hypothesis H3: Subjects scoring high on the self-efficacy scale will act more sustainably, is rejected. According to the testing done in this research there has not been found any significant difference between participants with high self-efficacy and participants with low self-efficacy and their likeliness to buy sustainably. See limitations as to why the researchers believe the link is missing.

Both groups show a significant difference between self-efficacy and the statement "I believe my actions and choices makes an impact". High self-efficacy indicates more trust in results from own actions and choices. Thus it is apparent that agreement to the statement indicates higher level of self-efficacy. The first group resulted in significant difference between self-efficacy and agreement to the statement "The apparel industry is responsible to make the change towards a sustainable production, not the consumers". While the second group, showed no significant difference between self-efficacy and the statement, the second group blames the industry more than the first group. The change is perhaps the information provided makes the participants realise the significant environmental effect the production of apparel is and therefor more participants believes the industry itself needs to make the changes.

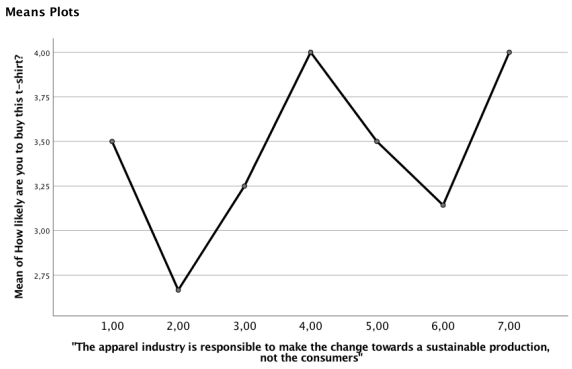
5.5 Responsibility

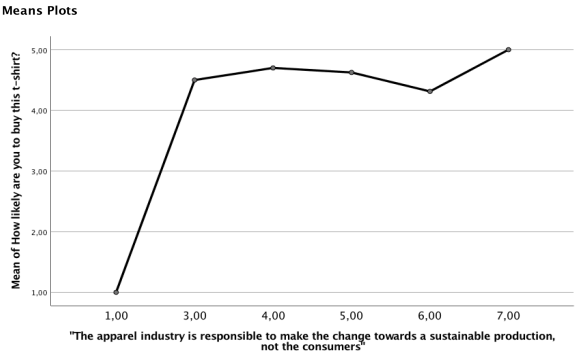
There is a significant difference between the likeliness to buy the t-shirt and the statement "I believe my actions and choices makes an impact" between the two groups. When receiving information, the ones believing in own abilities are more likely to buy the t-shirt. Perhaps the information about the sustainability of the t-shirt shows that every purchase can make a difference, therefor it is more rewarding to make a green choice. As the statement is linked to self-efficacy, one can assume that self-efficacy regarding own actions, not discussion abilities, affect sustainable behaviour. See graphs below.





From the ANOVA test the results revealed no significant difference between the two groups and whether they are likely to buy the t-shirt and still believe the apparel industry is responsible for making the change. Still, from the graphs below, one can clearly see more consistency in the second group, that those who are likely to buy the t-shirt also believes the industry itself needs to change. This can indicate that the information revealed unknown environmental effects deriving from the production processes, and that the participants wish that the industry provides with sustainable choices as a norm.





5.6 Awareness

The result was different between the two groups and the awareness of what and where the apparel is made. In the first group (no information) those who act sustainable pays attention to what material used in production of the apparel, while in the second group (with information) those who pays attention to where the apparel is produced acts sustainable. The significant difference could be due to a more environmental mind-set after receiving the information, and therefor more aware of where it is produced. A more satisfying result would have been if the

participants who pays attention to where it is produced, also paid attention to what it is made of. That would have shown a greater awareness and more consistency of acting sustainable.
It was revealed no significant difference between buying from second-hand stores and the likeliness to buy sustainably combining the two groups. One might think that second-hand shoppers are more concerned with environmental effects of the apparel industry and therefore are more likely to buy sustainably, but the fact is that second-hand shoppers' reasoning could be based on money, preference or environmental effects. The result of no significant could also be because individuals shopping second-hand already considers them self as green consumers as they are not buying new products. The significant difference in the first group regarding swap-parties and likeliness to buy sustainable can be coincidental as the few participants saying they attend swap-parties are not representable for the population. Those attending swap-parties may also be very conscious in regards to fashion.
When testing for significant difference between monthly apparel spending and the likeliness to buy the t-shirt from the experiment, it changed from significant difference to no significant difference after receiving information. Which perhaps indicate that with the information even participants with a lower budget are willing to buy the somewhat expensive sustainable t-shirt. Consistency as regards to disposal habits and sustainable behaviour did not occur. Most of the participants revealed that they do in fact throw used clothes in the garbage. If proper information was provided, this result can in the future change. Informing consumers about recycling options and making in convenient, can help getting more garments for recycling. To be used as furniture fillings or to be reborn as new garments.

5.7 Perception of features

The perception of the three features chosen in this study; quality, fashionable and price, are quite similar within the groups. Both groups believe the quality of sustainably produced products bare a slightly better quality, 4.92 (on a scale from 1 to 7) compared to traditionally produced products. Therefor the hypothesis H6: The perception on quality of sustainable products is lower than that of traditional products, can be rejected. This can be linked to the perception of price. The perception of price is that sustainable products, 5.58 (on a scale from 1 to 7) are more expensive than traditional products within both groups. Therefor people might think that because the price is higher the quality must also be higher.
From the literature it is clear that fashion is a form of personal identification (Stål and Jansson, 2017) and that for consumers to act/buy sustainably one have to make trade offs of

own individuality. From the survey, design (fashionable) was considered equally good, 4.045 (on a scale from 1 to 7). The findings are interesting, because the current selection of sustainable fashion is limited, though rising, and within most brands the sustainable choice tends to be simple design. See limitations on survey and default regarding the view of design (fashionable). The result of the survey may explain indications of the new market, as more and more suppliers are offering a sustainable choice and the consumers are becoming continuously more aware.

5.8 Categorising the participants

The purpose of making the categories is not to put every single participant in a distinctive grouping, but after observing the results some groupings has occurred and comes with different features that has been observed repeatedly. The groups this research is working with are: the powerless consumer, the disbelieving egoist and the conscious consumer.

The powerless consumer, this type of participant is a consumer who scores low on likeliness to buy the t-shirt and other sustainable products as well as self-efficacy and to the statement "I believe my actions and choices makes an impact". The consumer does not believe in own abilities and acts accordingly. An example of the powerless consumer is a participant who strongly disagreed to the statement "I believe my actions and choices makes an impact" and chose unlikeliness to buy sustainable products and somewhat unlikely to buy the simulated t-shirt. Within this group there is also the consumer who choose sustainable and believes the products are superior in quality, but still does not believe one person can make an impact.

The disbelieving egoist, this type of participant has a high self-efficacy and believe in one owns actions but is still not willing to purchase either the simulated t-shirt or sustainable products in general. This can indicate that this type of consumer either 1) simply does not care, 2) is not willing to make the trade offs required to act sustainably, behave like a green consumer, or 3) is a non-believer of environmental problems. An example of this was one participants who scored high (7) on the statement "I believe my actions and choices makes an impact" and self-efficacy (5.7), but still chose very unlikely to buy the t-shirt and sustainable products in general. There are also low scores on price premium amongst this type of consumer. The perception of sustainable products is low in this group. They believe the

quality as well as the design is inferior to traditionally produced products. This is a type of consumer observed in both survey groups.

The conscious consumer, this type of participant shows both low and high scoring on the statement “I believe my actions and choices makes an impact”, this consumer scores high on likeliness to buy the simulated t-shirt and other sustainable products, additionally revealing high price premium. This consumer appears to be more aware of both what materials used in production and where the product is produced. This group has a higher opinion of sustainable products. They find the quality to be superior and the design to be equally as good as traditional products. In general this consumer is remarkably mind-full in both shopping and disposal habits.

To change the patterns of the powerless consumer, the level of self-efficacy needs to be supported and it is important to inform that each decision from every single consumer can make a difference. For the disbelieving consumer, the alternative to change their behaviour could be inform of nudging, by for example creating a default choice, leaving them more likely to chose the sustainable choice as it is also the easiest choice.

6 Limitations

In this chapter the limitations of the research will be disclosed.

6.1 Sample size

The population for this study is US citizens with an amazon mturk account. It turned out that the sample size probably is too small since some expected results did not appear. If the sample size was bigger, other significant differences and results could have been detected.

6.2 Likeliness to buy the sustainable t-shirt

The mean of likeliness to buy the t-shirt in the first group (no information) was 3.418 and the mean in the second group (with information) was 4.545, however the researchers finds it reasonable to assume even higher likeliness to buying the t-shirt if the image was more appealing. Purchasing a simple, white t-shirt for $28, looking exactly like a nothing out of the ordinary cotton t-shirt, could have decreased the likeliness to buy the t-shirt from the experiment. The t-shirt was however chosen in consideration to both genders, and in consideration of racial differences.

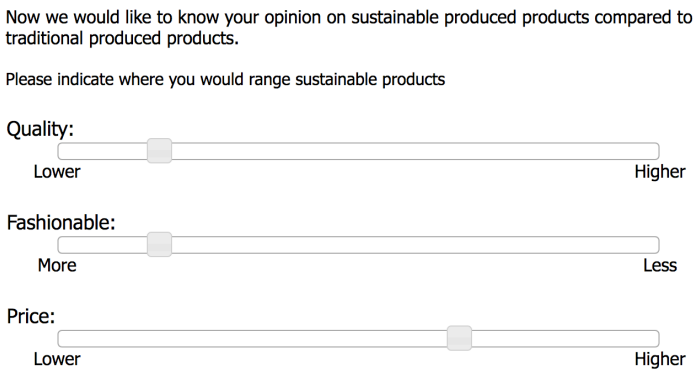
6.3 Self-efficacy scale

The purpose of including the self-efficacy scale in the survey was to see if there was a link between self-efficacy and the likeliness to buy sustainable. However the researchers are not satisfied with the findings, as there are little to no linkage between the variables. This may be caused by the fact that the self-efficacy questions are not 100% relatable to the subject of sustainability, and there were more connections between the participants showing strong agreement to the statement “I believe my actions and choices makes an impact” and likeliness to buy sustainable. This is perhaps because the statement is more specific to the topic of sustainable fashion. As self-efficacy is described as believing in own abilities, the researchers believe there is in fact a link between self-efficacy and acting sustainable, just not between the self-efficacy scale and acting sustainable.

6.4 Perceptions

Design (fashionable) perception

To get the indication of perceptions on sustainable products, gliders were chosen as a selection instrument. As the gliders start at a default choice (starting at 1) the researcher chose to reverse the scale on design going from high to low, the opposite from quality and price that went from low to high, to test if the participants answered automatically. From observing the results, it becomes clear that certain participants have misinterpret or not carefully read the scale. This resulted in some mixed signals from some of the participants. They may have chosen that they believe the quality is inferior, the price is much higher and yet said they believed the design was superior. See example:



It is rather unlikely that the participant who is very unlikely to buy both the t-shirt and other sustainable products, as well as feeling the quality is inferior still believes it to be more fashionable. From this particular participants answer, it is clear that the participant meant to say that he believed the design is worse than traditional products.

7 Conclusion

In this chapter conclusion drawn from the results is disclosed, as well as the purpose, reason and hope for further research from this study.

7.1 Purpose of the study

The purpose of this study was to identify the relationship between provided information and sustainable behaviour. This was tested by observing mean of likeliness to buy a simulated sustainable t-shirt between two groups. The first group only received the information that the t-shirt was sustainable, while the second group received detailed explanation about the sustainability of the t-shirt. The surveys were created through the web-based software SurveyXact. The surveys were later launched at Amazon's Mturk; the results from the participants were transferred back to SurveyXact. To analyse the primary, quantitative date, tests were conducted by SPSS statistics from IBM. Both independent *t*-test and one-way ANOVA was used to detect significant differences between the chosen variables.

7.2 The reason for the study

The reason for conducting this research was based on previous literature and the limitations in the fashion industry. The curiosity of understanding solutions to the fashion industry was intriguing. Fast fashion is harming the environment by creating an endless hunger for quick and trendy fashion. Though the awareness and concern for environmental issues are increasing, there seems to be an attitude-action gap. People desire to act sustainable, but falls through when confronted with a choice. The literature also indicates that the locus of control is influencing human behaviour. When an individual feels an external locus of control, the feeling of personal behaviour making any impact is absent; change is only something that can happen if masses or a more powerful person are changing their behaviour. The researchers wanted to test if a nudging technique could assist sustainable choices.

7.3 Conclusions from the study

From this research it can be concluded that the demographics, such as age, gender, income and education, affects the decision making process very little, as in the cases where the age and education actually affected choices, it was not consistent for all of the three dependent variables.

The self-efficacy scale, by Matthias Jerusalem and Ralf Schwarzer, gave significant results when comparing the participants' mean of self-efficacy and their likeliness to buy sustainable and pay price premium in the first group. However, it did not reveal a connection in the second group. The self-efficacy scale may have been too far off topic as it is very related to problem solving and convincing in different situation, perhaps if the self-efficacy questions were more revolved around decision-making it would have revealed greater correlation.

The researchers conclude that with regards to the more topic specific statements "I believe my actions and choices makes an impact" and "The apparel industry is responsible to make the change towards a sustainable production, not the consumers", one can see a more distinct relationship with the dependent variables. Another conclusion resulted from the statements is that when people are more informed; they believe the industry is more responsible to make the change and people have more faith in that own actions can make an impact. It is therefore important that sustainable brands produce apparel with good quality and timeless designs to ensure that the sustainable products are in fact sustainable with long lifespan. Consuming apparel with long lifespan, will add to the consumers perception and likeliness to purchase sustainably.

The result of the experiment was satisfactory. The group receiving the information about the simulated t-shirt showed a significant difference from the group who did not receive the information. Participants in the group who received the information were more likely to buy the t-shirt. Although there were no significant difference between the two groups and their likeliness to buy sustainable products in general, the researchers find it even more convincing that the information helped the likeliness to buy the simulated t-shirt. The researchers therefor conclude that giving information about the sustainability affects the participants' choices.

As for the research question of whether information will nudge consumer to choose sustainably, the experiment was a success in that it was possible to nudge participants to reveal higher likeliness to buy the sustainable t-shirt. As for who is responsible to make a

change towards sustainability in the fashion industry, the industry itself or the consumer, it is clear that the industry needs make improvements, such as better designs and more affordable prices to minimize the trade offs. There needs to be an option to choose sustainable, and increased accessibility to nudge consumers towards sustainable behaviour. Overall, it is clear that the fashion industry needs to take action in order to close the attitude-action gap.

7.4 Lessons learned from the study

The most important outcome of this study is that when given information, the explanation of the sustainability, people make more conscious decisions. This could be beneficial for different brands in their marketing process for sustainable products. This could lead to sustainable and ethical products gaining a larger market share. It is necessary to considerably increase the market shares in order to attempt to limit the environmental struggles. Further the researchers envision that the results can be of interest for sustainable fashion brands in their process of convincing consumers to act sustainably. Stating that the product is sustainable is not enough; people need to know how it is sustainable to make the choice.

7.5 Further research

It would be interesting for further research to do this experiment with a larger population, to further test if information affects the decision-making process. Experiments with products other than a simple white t-shirt could show different results. It would also be interesting to see what other independent variable, other than information such as store placement or default choices, could trigger the decision-making process.

The fashion industry has escalated in to a hazardous, mass production showing no sign of ending. Nonetheless, the fashion industry cannot keep up with the fast pace forever and at some point there will be necessary to create a default to save the environment. Meaning that the easiest and most convenient choice is also the sustainable choice.

Reflection note

Summary of thesis findings

Previous literature has identified a gap when it comes to consumers' intentions to buy sustainable and actually buying sustainable. The wish and desire of living green is present, but the trade-offs are too high, and therefore they fall short. It is necessary to change the consumers' consumption patterns into more sustainable consumption. This thesis is based on the assumption that by nudging consumers it is possible to change their behaviour. More specific, nudging by providing information in order to change purchase intention of sustainable products. By providing information on why the simulated t-shirt is sustainable to only one group, it was possible to observe the effect of the provided information. The different groups show similar likeliness to buy sustainable, but there is a significant difference in the likeliness to buy the simulated t-shirt. The second group that was provided more information showed a significant higher likeliness to buy the t-shirt. These findings are satisfactory as they show that providing information changed the behaviour. It shows that it is necessary to not only state when a product is sustainable, but also how it is sustainable. By showing the consumer the approach of making sustainable products, and giving information on for example what could be saved it is giving the consumer the belief that a single purchase in fact could make a difference.

The consumer

This thesis works to investigate how to change the consumers' behaviour. The approach is to study the consumer and the likeliness to buy sustainable, with or without a nudge. This thesis is using the data from a survey produced for this specific research. The survey was constructed both to observe if our nudge, the information, would affect the likeliness and also to investigate the linkage of self-efficacy and choosing sustainable. The survey also included some questions in order to get a fuller picture of the total consumption behaviour. It is in the end the supplier side that will have to supply information to the demand side on sustainability.

Personal motivation

Writing and working on this thesis has been very interesting. It is our belief that the industry needs to make improvement in both design and prices. They need to limit some of the trade-offs, make it easy to buy sustainable. Information regarding disposal also needs to be improved. We learned in the early research that in Norway, Fretex, second-hand store, accepts garments of all quality. They then send it to be properly managed and to give it new life through recycling. As we have been more aware about sustainability in the fashion industry this past semester, new discoveries consistently appeared. While out shopping we discovered that the store, Selected Femme, mainly operates with recycled garments. Most of the pieces in the store, revealed on the note on the inside that it was made by recycled material. This was a pleasant surprise. Most costumers shopping in the store are probably not aware of this initiative; therefore this initiative works as a nudge, a default choice, the easiest choice.

We both have learned a lot from the literature and have a more clear understanding of the attitude-action gap we were introduced to early in the process. We had our initial thoughts in the beginning, but they have changed during the process.

We both wish to work with sustainability in the future, whether it is concerning the fashion industry or another. We are apart of the new generation, focusing on the importance of sustainability. Sustainability is something we all should strive for.

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Appendix 1, surveys

(Front page for participants receiving no information:)

This is a survey made by two students, for a master thesis. The purpose is to review habits and attitudes on apparel shopping. Thank you!

This t-shirt is sustainable.

White t-shirt, $28

(Front page for participants receiving information:)

This is a survey made by two students, for a master thesis. The purpose is to review habits and attitudes on apparel shopping. Thank you!

This t-shirt is sustainable. It is made from Tencel (Lyocell), originating from the eucalyptus tree. Cotton production requires great amounts of water from start till finish, by using Tencel instead of cotton; water usage is reduced from 700 to 300 gallons per t-shirt. Tencel is 100% degradable in contrast to other materials such as polyester, viscose and acrylic containing plastic, which is not degradable and ends up in our oceans. Therefore, using Tencel reduce waste.

White t-shirt $28.

(The remaining of the survey, same for both groups:)

How likely are you to buy this t-shirt?

(1) ❑ Very unlikely
(2) ❑ Unlikely
(3) ❑ Somewhat unlikely
(4) ❑ Neither likely nor unlikely
(5) ❑ Somewhat likely
(6) ❑ Likely
(7) ❑ Very likely

How likely are you to buy a sustainable/eco friendly product?

(1) ❑ Very unlikely
(2) ❑ Unlikely
(3) ❑ Somewhat unlikely
(4) ❑ Neither likely nor unlikely
(5) ❑ Somewhat likely
(6) ❑ Likely
(7) ❑ Very likely

How much premium (extra) are you willing to pay for a product to be sustainably produced?

(1) ❑ 0%
(2) ❑ 1-10%
(3) ❑ 11-20%
(4) ❑ 21-30%
(5) ❑ 30%

Now we would like to know your opinion on sustainable produced products compared to traditional produced products.

Please indicate where you would range sustainable products

Quality:

(1) ❑ Lower
(2) ❑
(3) ❑
(4) ❑
(5) ❑
(6) ❑
(7) ❑ Higher

Fashionable:

(1) ❑ More
(2) ❑
(3) ❑
(4) ❑
(5) ❑
(6) ❑
(7) ❑ Less

Price:

(1) ❑ Lower
(2) ❑
(3) ❑
(4) ❑
(5) ❑
(6) ❑
(7) ❑ Higher

"I believe my actions and choices makes an impact"

(1) ❑ Strongly disagree
(2) ❑ Disagree
(3) ❑ Somewhat disagree
(4) ❑ Neither agree nor disagree
(5) ❑ Somewhat agree
(6) ❑ Agree
(7) ❑ Strongly agree

"The apparel industry is responsible to make the change towards a sustainable production, not the consumers"

(1) ❑ Strongly disagree
(2) ❑ Disagree
(3) ❑ Somewhat disagree
(4) ❑ Neither agree nor disagree
(5) ❑ Somewhat agree
(6) ❑ Agree
(7) ❑ Strongly agree

Please indicate to the best of your abilities the answers to these questions regarding your behaviour as a person

I can always manage to solve difficult problems if I try hard enough

(1) ❑ Strongly disagree
(2) ❑ Disagree
(3) ❑ Somewhat disagree
(4) ❑ Neither agree nor disagree
(5) ❑ Somewhat agree
(6) ❑ Agree
(7) ❑ Strongly agree

If someone opposes me, I can find means and ways to get what I want

(1) ❑ Strongly disagree
(2) ❑ Disagree
(3) ❑ Somewhat disagree
(4) ❑ Neither agree nor disagree
(5) ❑ Somewhat agree
(6) ❑ Agree
(7) ❑ Strongly agree

It is easy for me to stick to my aims and accomplish my goals

(1) ❑ Strongly disagree
(2) ❑ Disagree
(3) ❑ Somewhat disagree
(4) ❑ Neither agree nor disagree
(5) ❑ Somewhat agree
(6) ❑ Agree
(7) ❑ Strongly agree

I am confident that I could deal efficiently with unexpected events

(1) ❑ Strongly disagree
(2) ❑ Disagree
(3) ❑ Somewhat disagree
(4) ❑ Neither agree nor disagree
(5) ❑ Somewhat agree
(6) ❑ Agree
(7) ❑ Strongly agree

Thanks to my resourcefulness, I know how to handle unforeseen situations

(1) ❑ Strongly disagree
(2) ❑ Disagree
(3) ❑ Somewhat disagree
(4) ❑ Neither agree nor disagree
(5) ❑ Somewhat agree
(6) ❑ Agree
(7) ❑ Strongly agree

I can solve most problems if I invest the necessary effort

(1) ❑ Strongly disagree
(2) ❑ Disagree
(3) ❑ Somewhat disagree
(4) ❑ Neither agree nor disagree
(5) ❑ Somewhat agree
(6) ❑ Agree
(7) ❑ Strongly agree

I can remain calm when facing difficulties because I can rely on my coping abilities

(1) ❑ Strongly disagree
(2) ❑ Disagree
(3) ❑ Somewhat disagree
(4) ❑ Neither agree nor disagree
(5) ❑ Somewhat agree
(6) ❑ Agree
(7) ❑ Strongly agree

When I am confronted with a problem, I can usually find several solutions

(1) ❑ Strongly disagree
(2) ❑ Disagree
(3) ❑ Somewhat disagree
(4) ❑ Neither agree nor disagree
(5) ❑ Somewhat agree
(6) ❑ Agree
(7) ❑ Strongly agree

If I am in trouble, I can usually think of something to do

(1) ❑ Strongly disagree
(2) ❑ Disagree
(3) ❑ Somewhat disagree
(4) ❑ Neither agree nor disagree
(5) ❑ Somewhat agree
(6) ❑ Agree
(7) ❑ Strongly agree

No matter what comes my way, I'm usually able to handle it

(1) ❑ Strongly disagree
(2) ❑ Disagree
(3) ❑ Somewhat disagree
(4) ❑ Neither agree nor disagree
(5) ❑ Somewhat agree
(6) ❑ Agree
(7) ❑ Strongly agree

Now we would like you to answer some questions regarding your behaviour as a consumer, please answer to the best of your abilities

Do you use second-hand stores?

(1) ❑ Never
(2) ❑ Rarely
(3) ❑ Not yet
(4) ❑ Sometimes
(5) ❑ Often/always

How do you dispose unwanted clothes? (More than one answer is possible)

(1) ❑ Second-hand stores/Charity
(2) ❑ Swap parties
(3) ❑ Recycle
(4) ❑ Garbage
(5) ❑ In-store collection

How much, on average, do you spend a month on shopping (apparel)?

(1) ❑ $0-$49
(2) ❑ $50-$79
(3) ❑ $80-$99
(4) ❑ $100-$150
(5) ❑ More than $150

Do you pay attention to where your clothes are produced?

(1) ❑ Never
(2) ❑ Sometimes
(3) ❑ About half the time
(4) ❑ Most of the time
(5) ❑ Always

Do you pay attention to what material is used producing your clothes?

(1) ❑ Never
(2) ❑ Sometimes
(3) ❑ About half the time
(4) ❑ Most of the time
(5) ❑ Always

Finally we would like some personal information

Gender

(1) ❑ Male
(2) ❑ Female

Please indicate your age

(1) ❑ Under 18
(2) ❑ 18-24
(3) ❑ 25-34
(4) ❑ 35-44
(5) ❑ 45-54
(6) ❑ 55+

Please indicate degree of education

(1) ❑ High school
(2) ❑ Bachelors
(3) ❑ Masters
(4) ❑ Ph.D/M.D
(5) ❑ Other

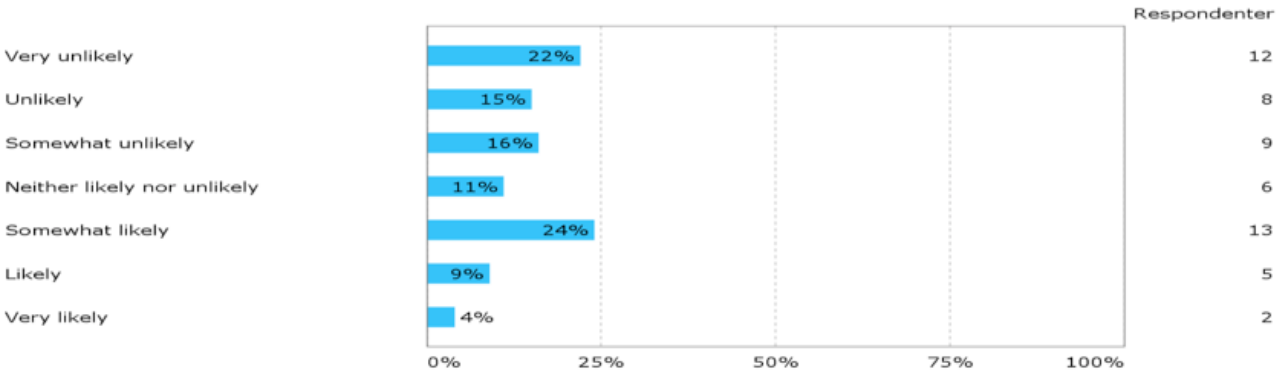
Please indicate your level of income

(1) ❑ $0-$20,000
(2) ❑ $20,001-$40,000
(3) ❑ $40,001-$60,000
(4) ❑ $60,001-$80,000
(5) ❑ $80,001-$100,000
(6) ❑ Over $100,000

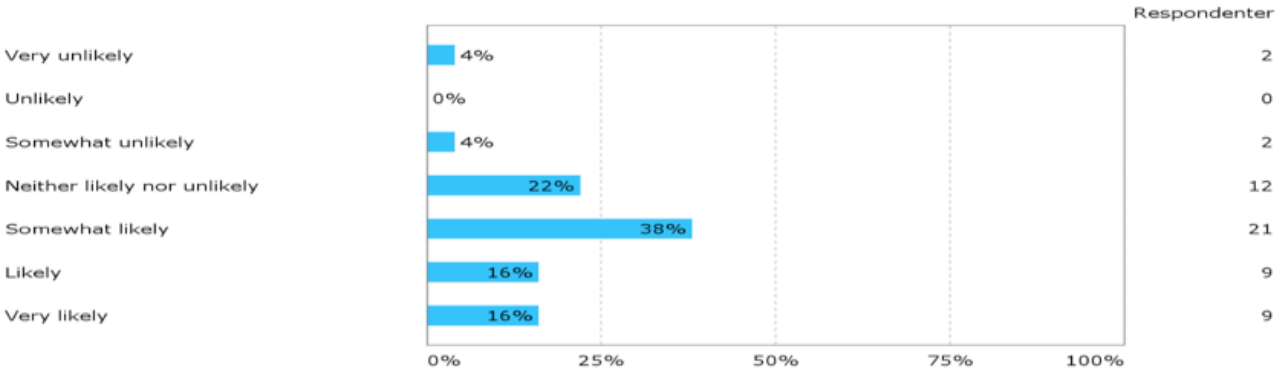
Thank you for your time!

Appendix 2, results group 1

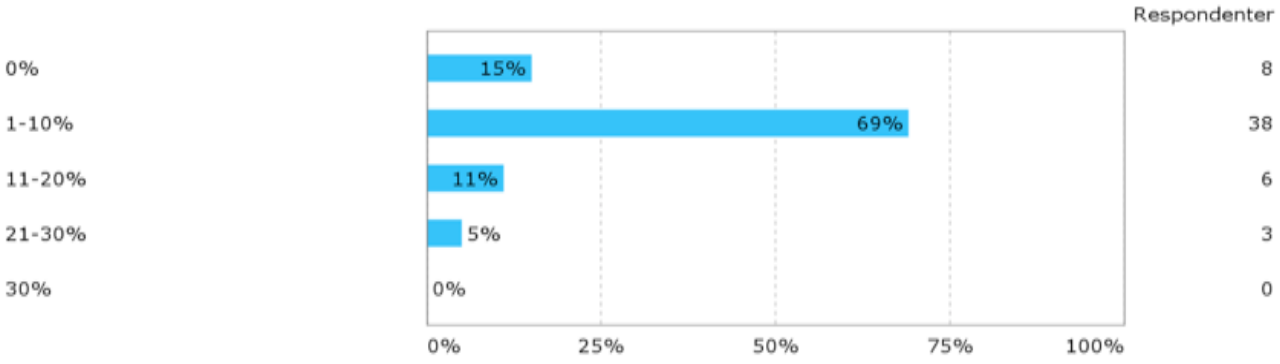
How likely are you to buy this t-shirt?



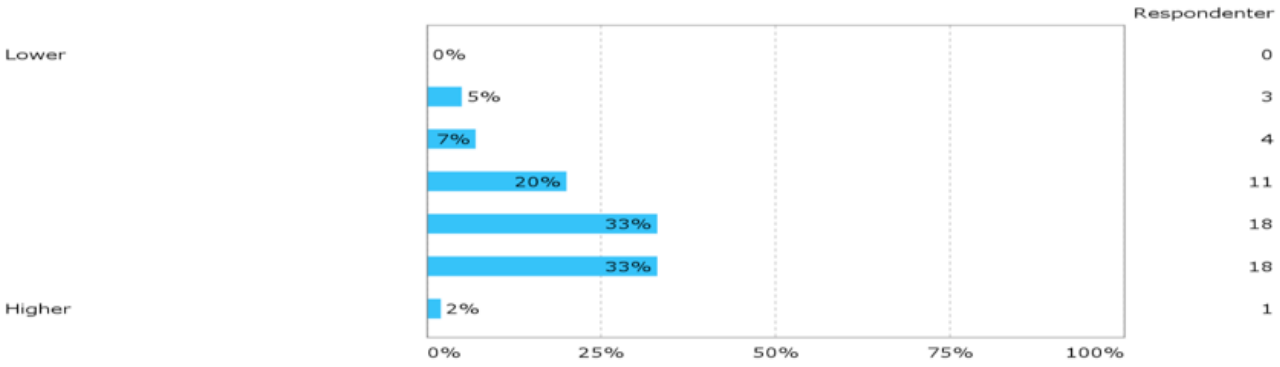
How likely are you to buy a sustainable/eco friendly product?



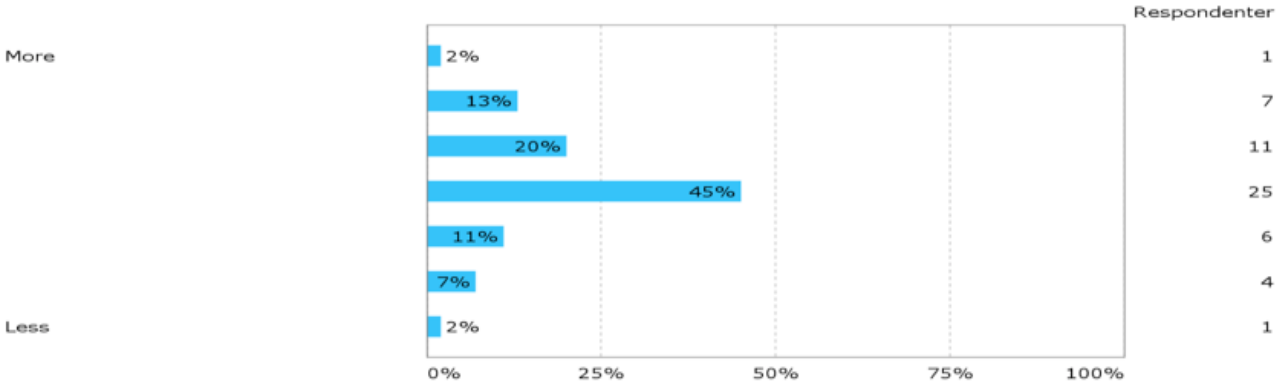
How much premium (extra) are you willing to pay for a product to be sustainably produced?



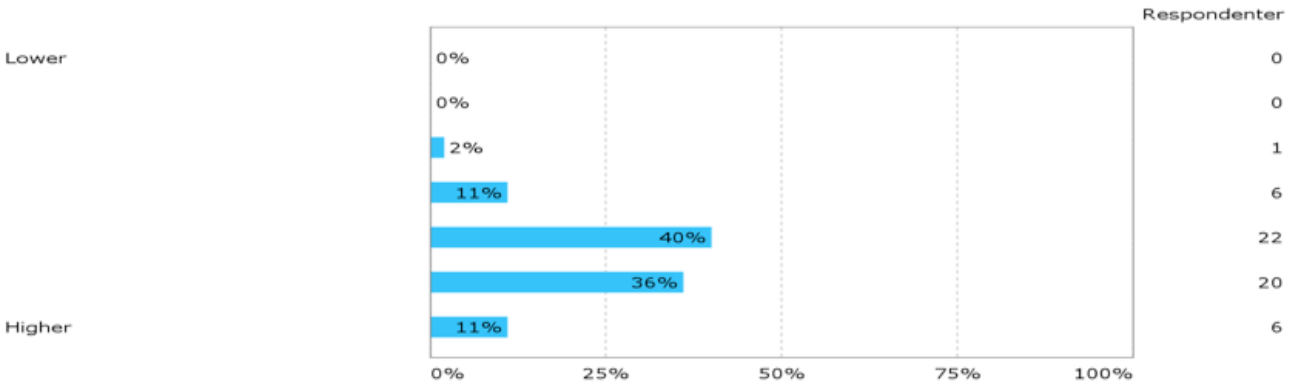
Quality:



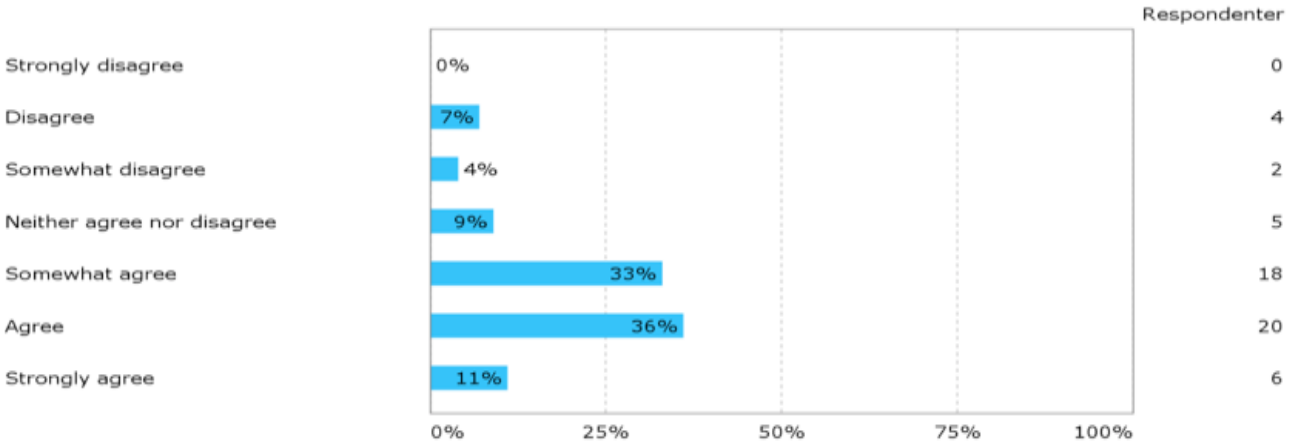
Fashionable:



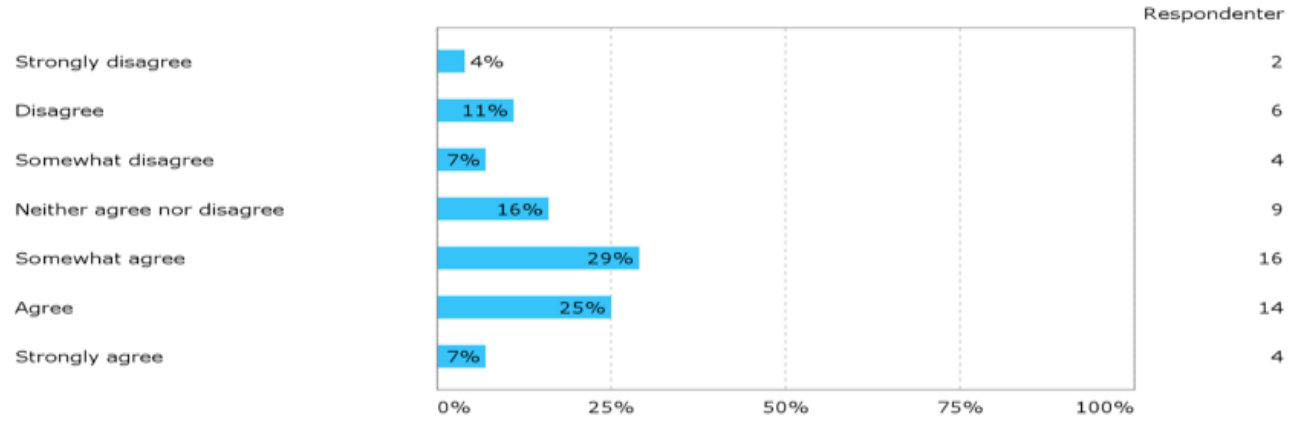
Price:



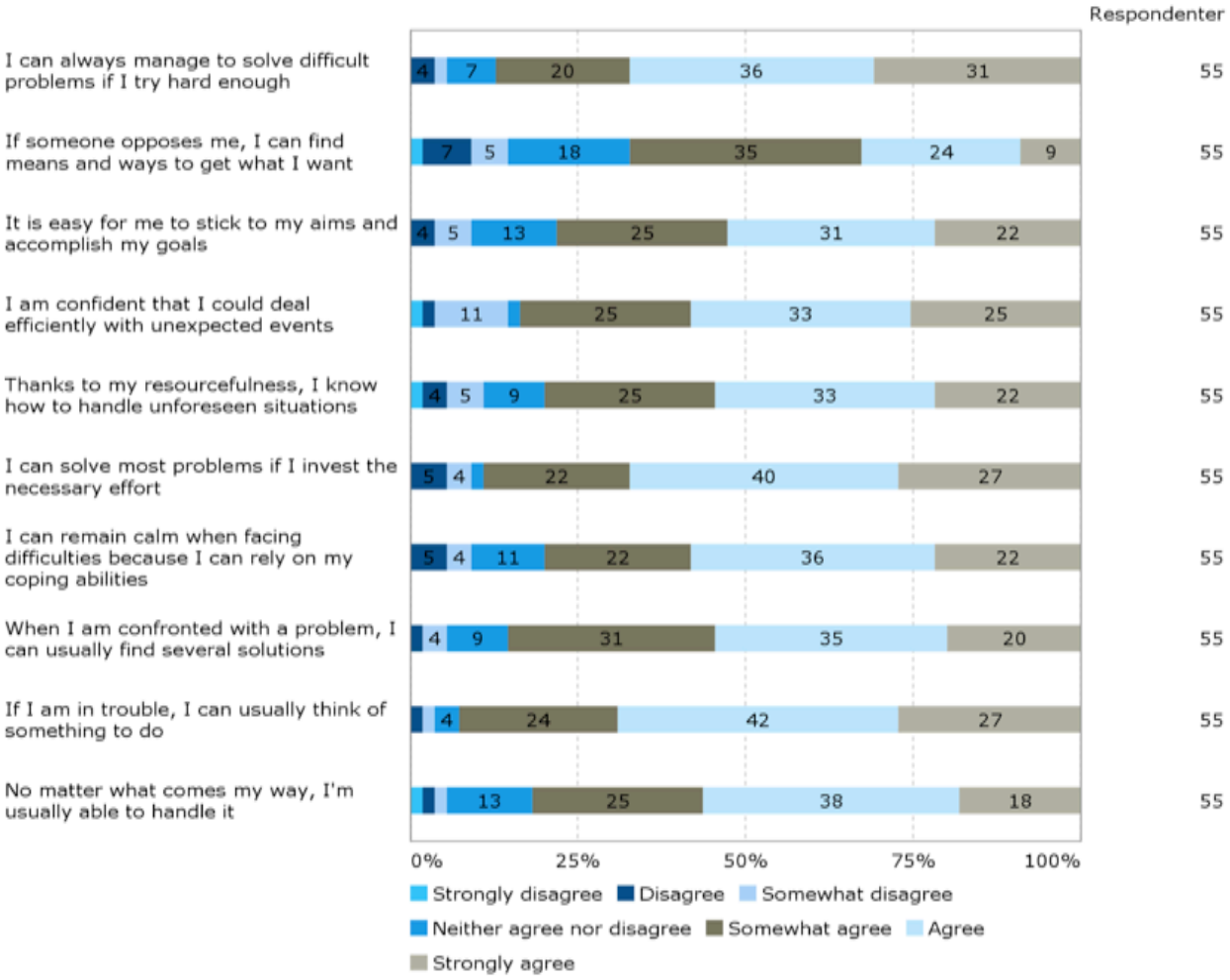
"I believe my actions and choices makes an impact"



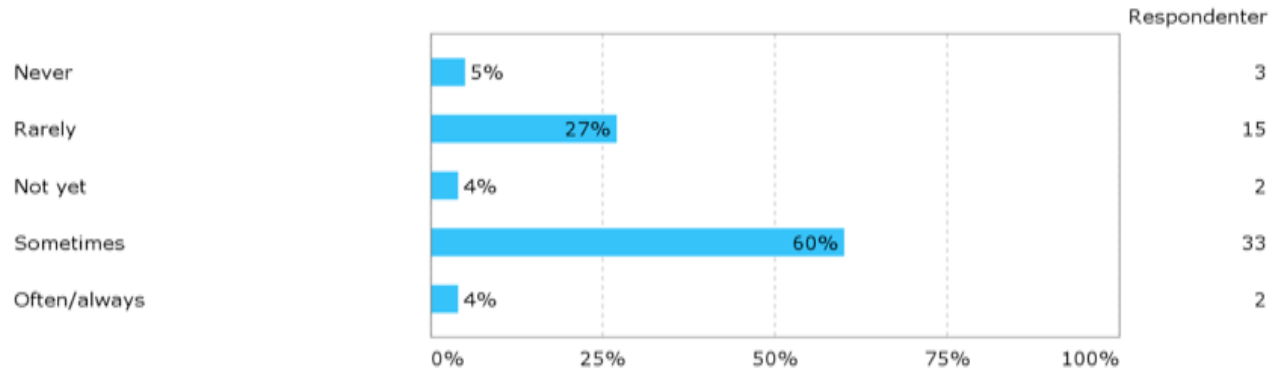
"The apparel industry is responsible to make the change towards a sustainable production, not the consumers"



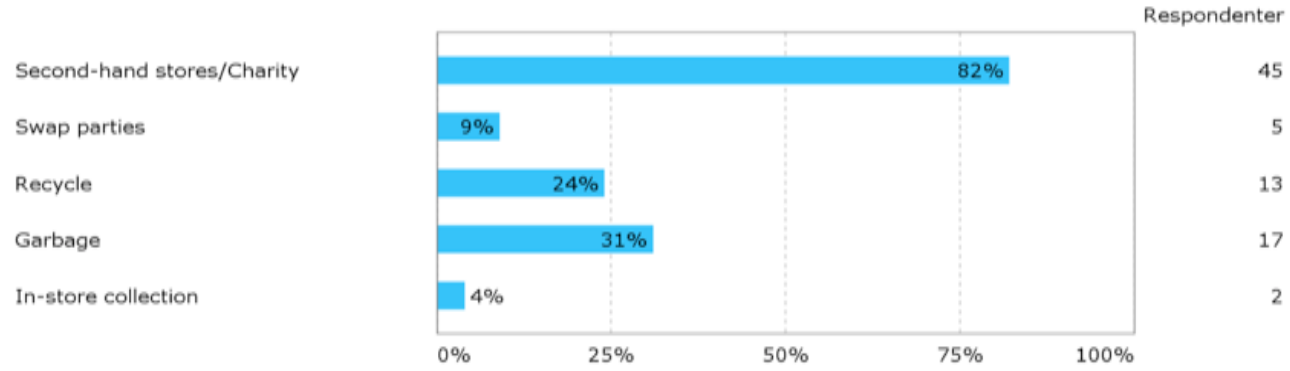
Self-efficacy results



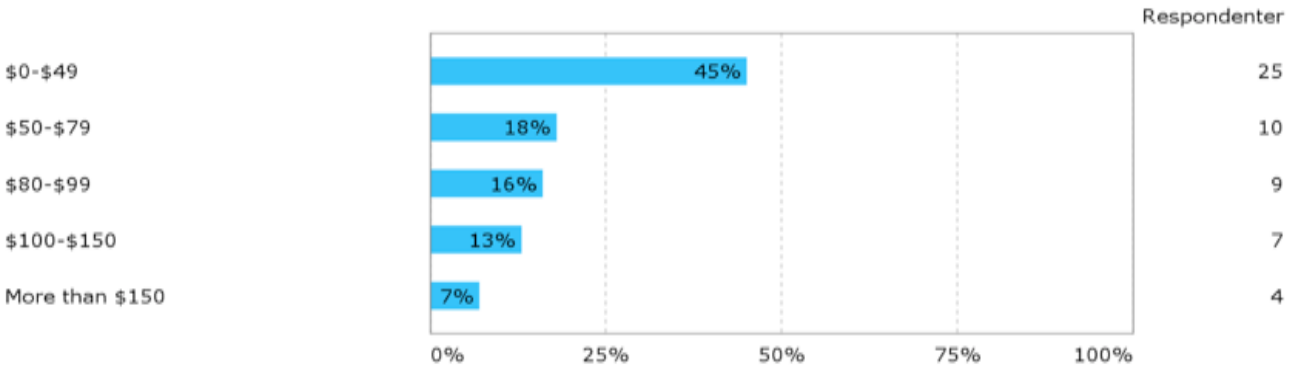
Do you use second-hand stores?

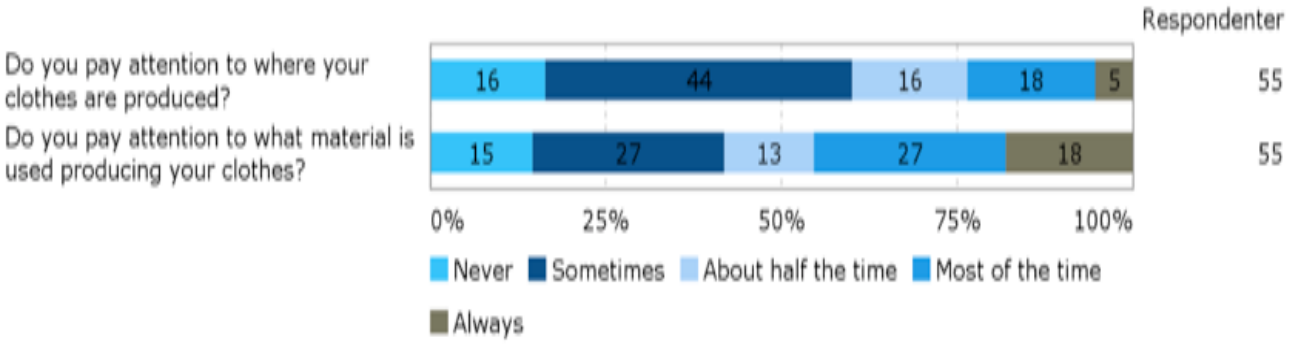


How do you dispose unwanted clothes? (More than one answer is possible)

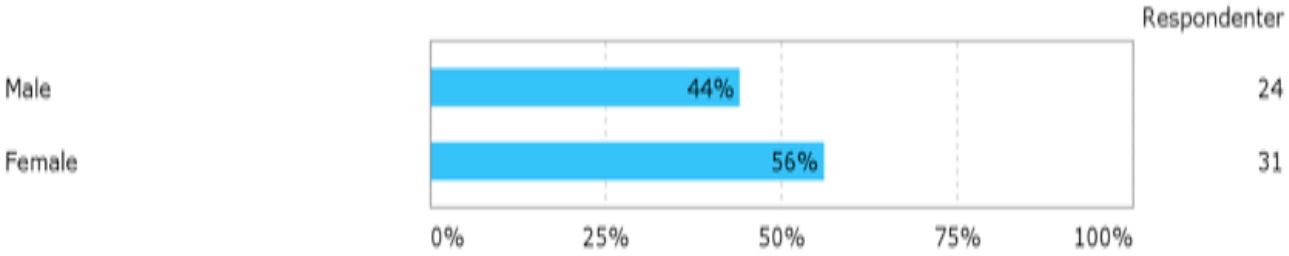


How much, on average, do you spend a month on shopping (apparel)?

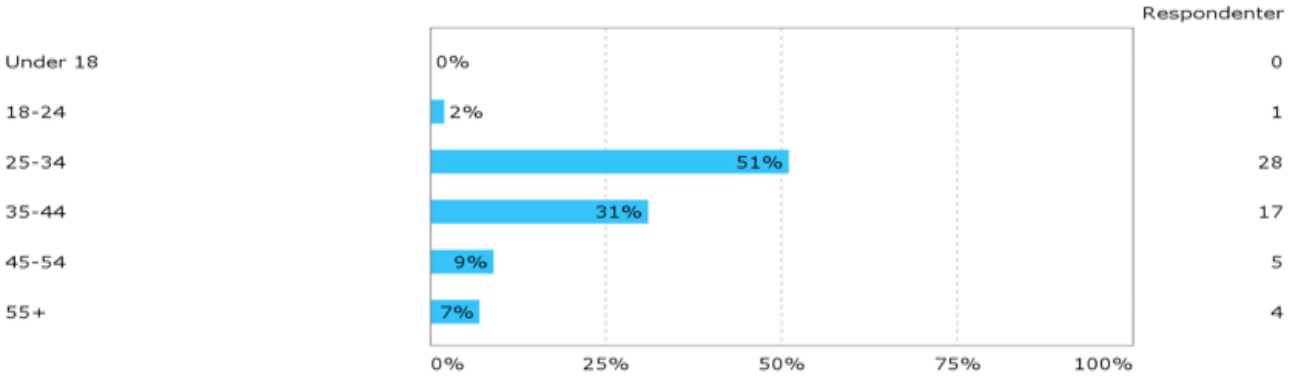




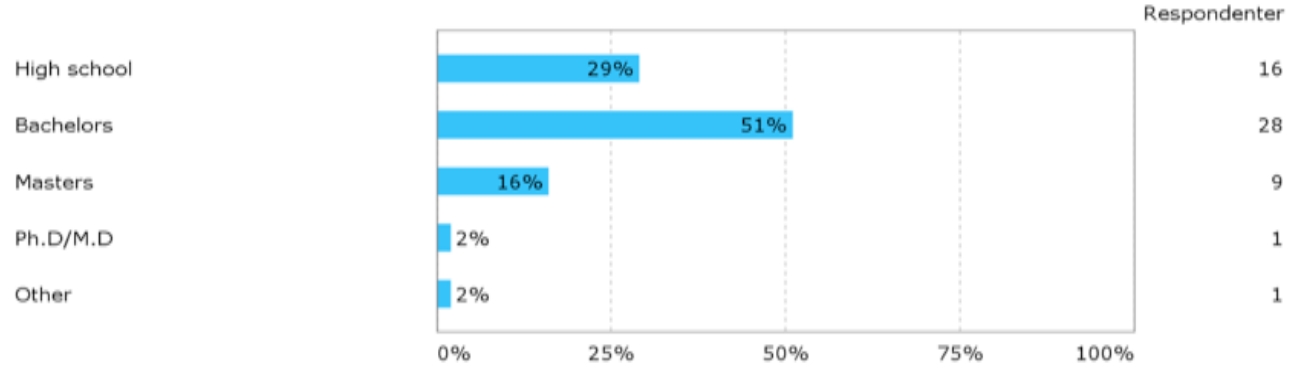
Gender



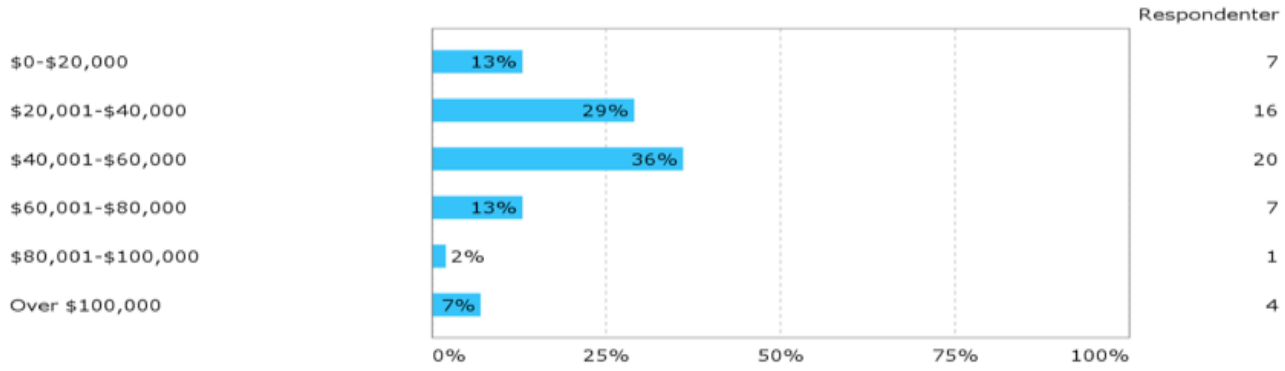
Please indicate your age



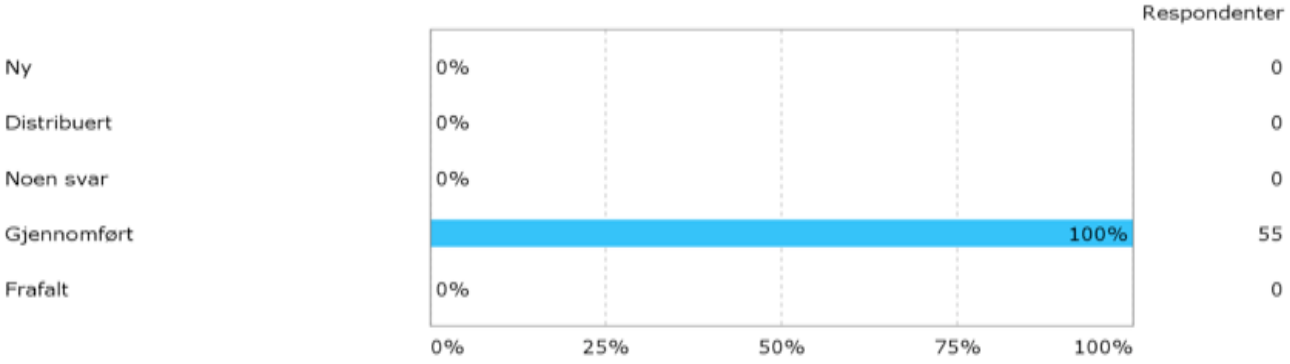
Please indicate degree of education



Please indicate your level of income

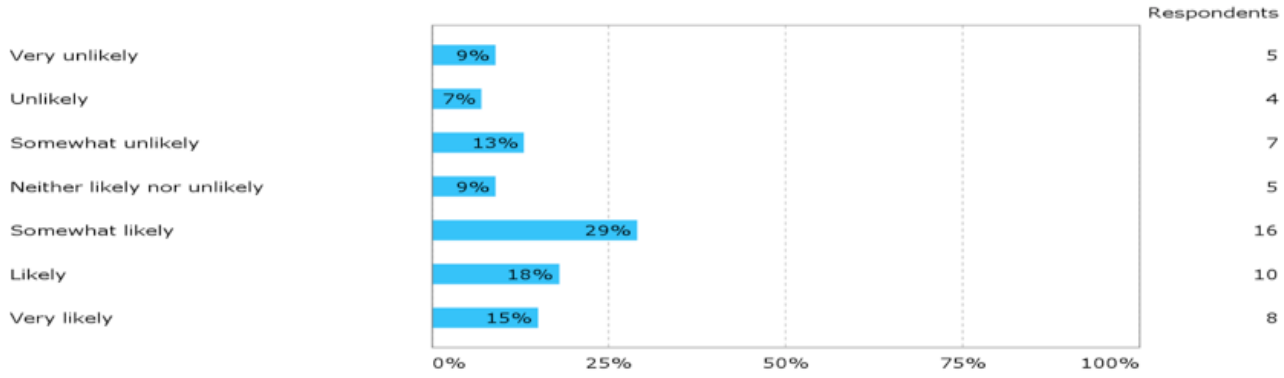


Overall status

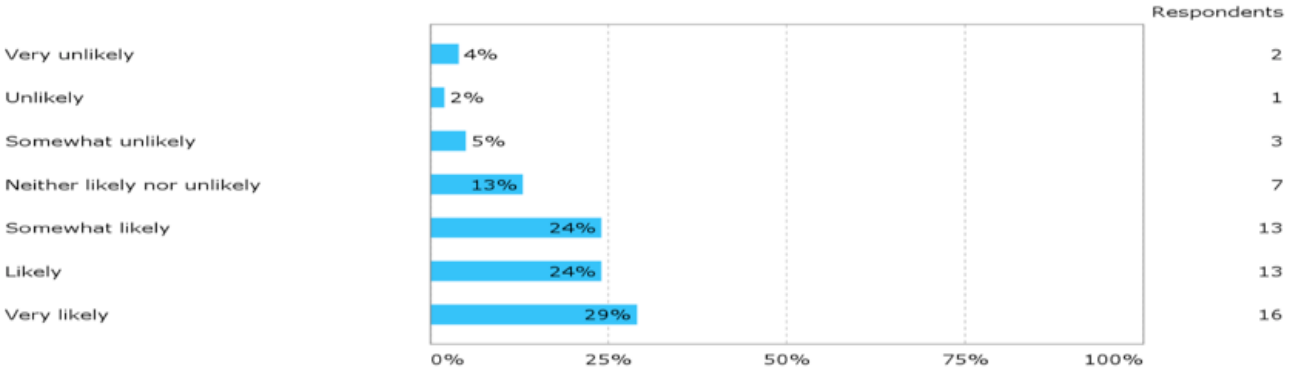


Appendix 3, results group 2

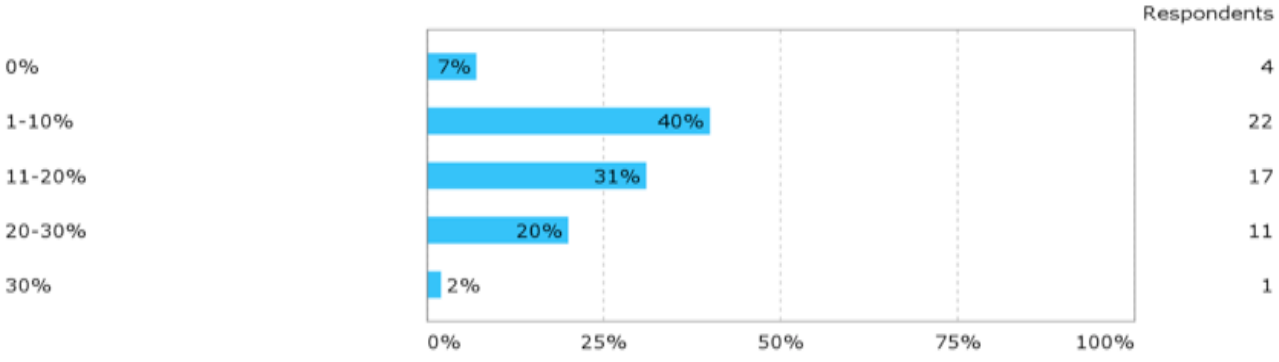
How likely are you to buy this t-shirt?



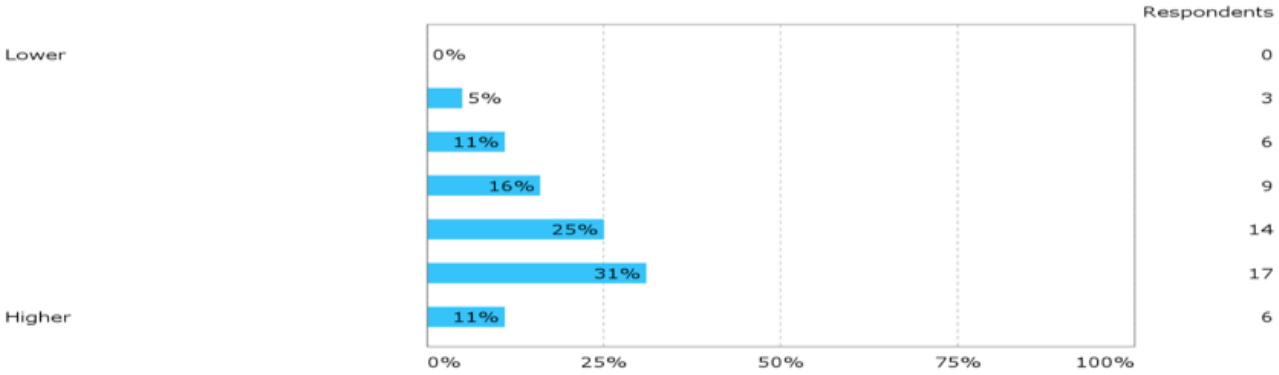
How likely are you to buy a sustainable/eco friendly product?



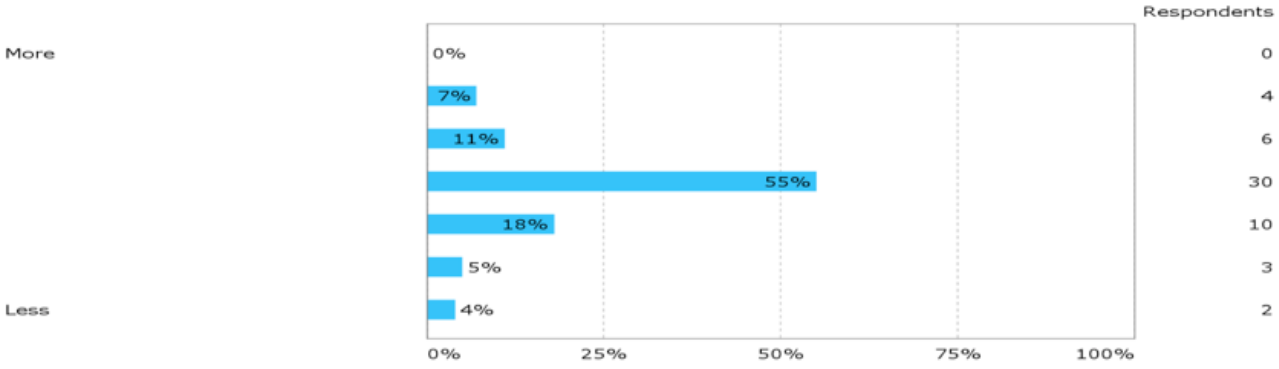
How much premium (extra) are you willing to pay for a product to be sustainably produced?



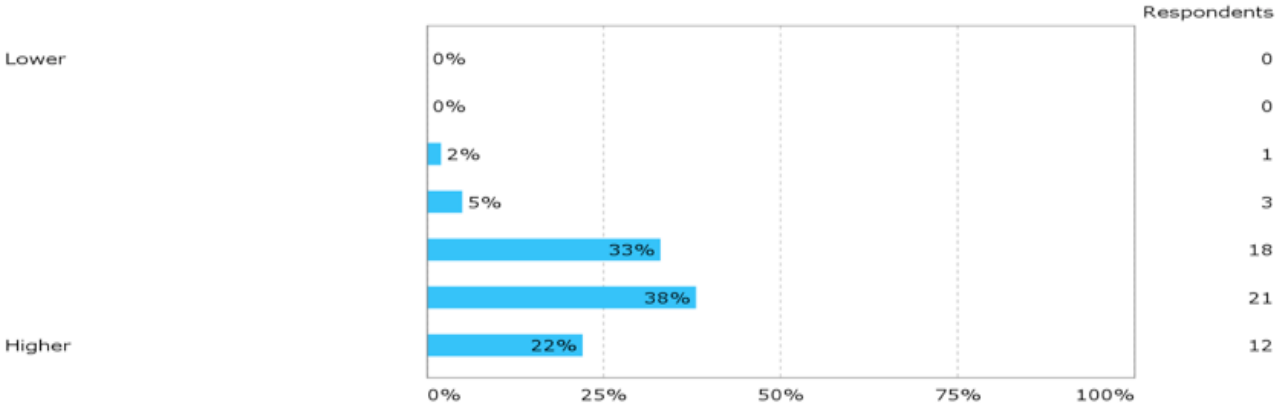
Quality



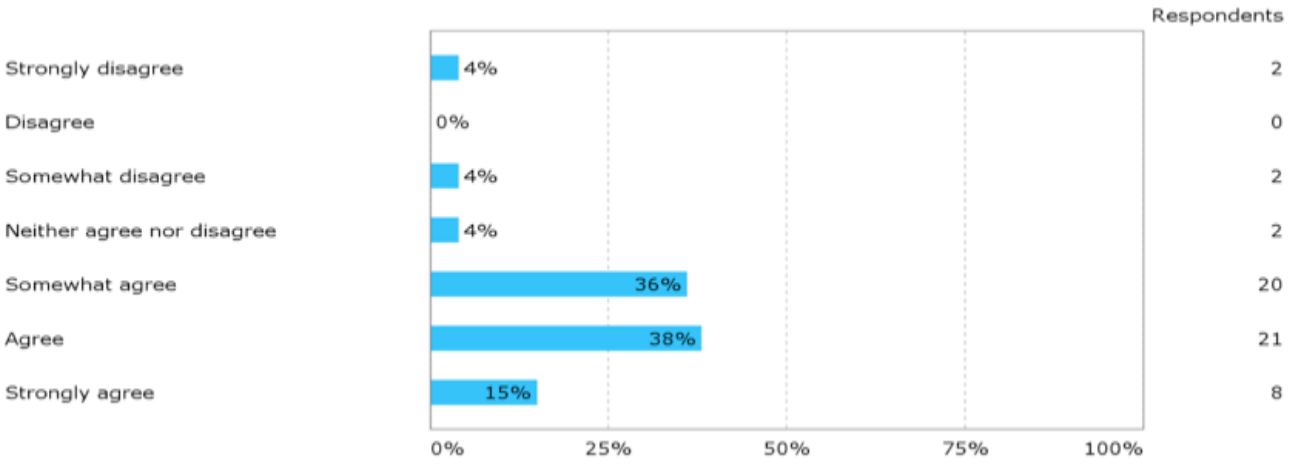
Fashionable:



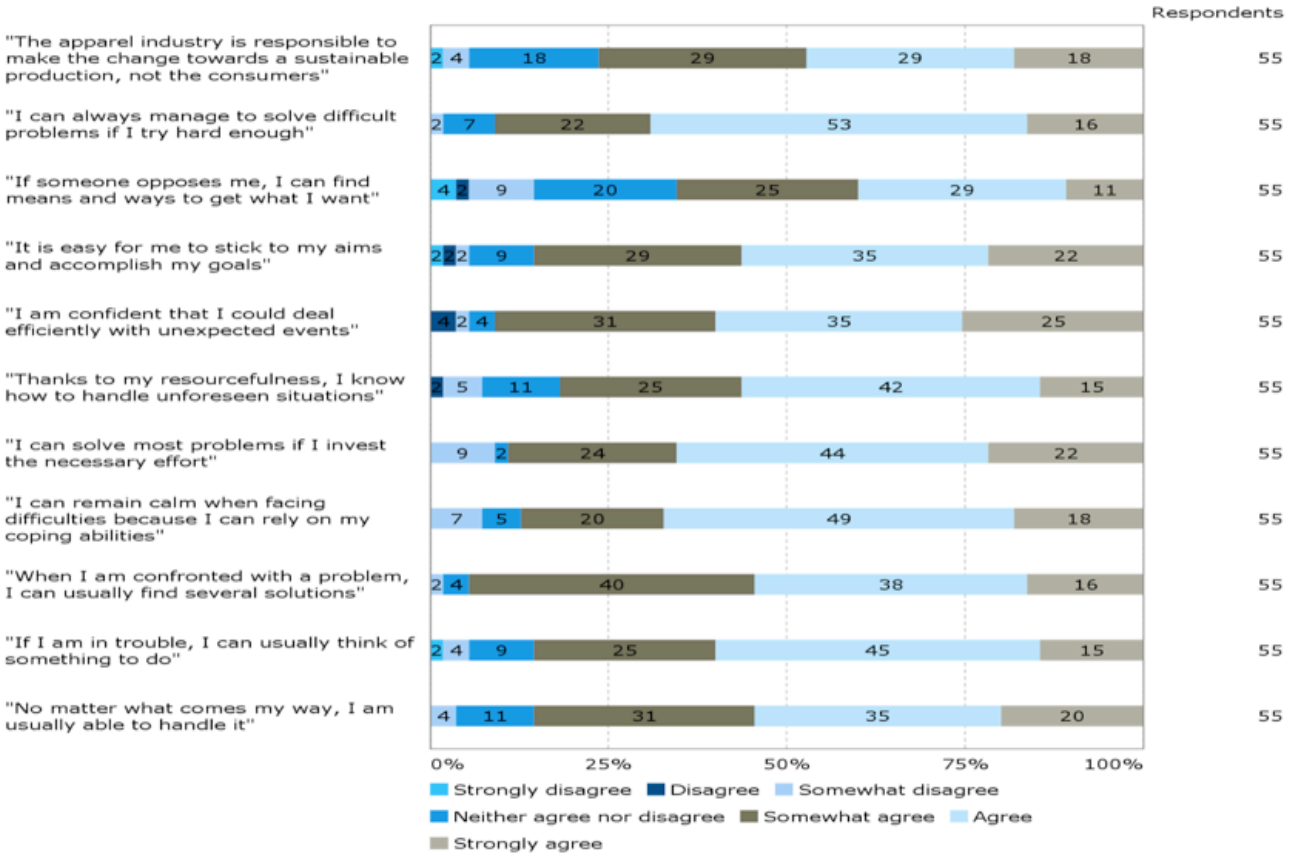
Price:



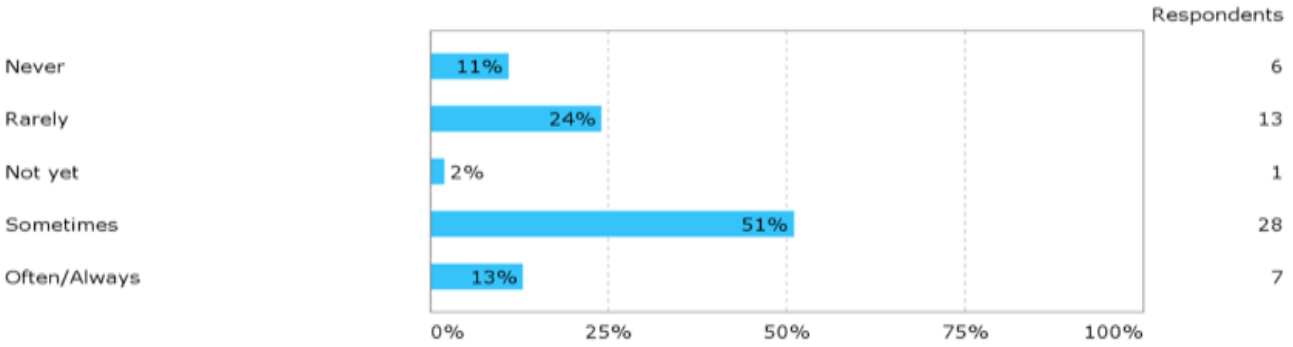
"I believe my actions and choices makes an impact"



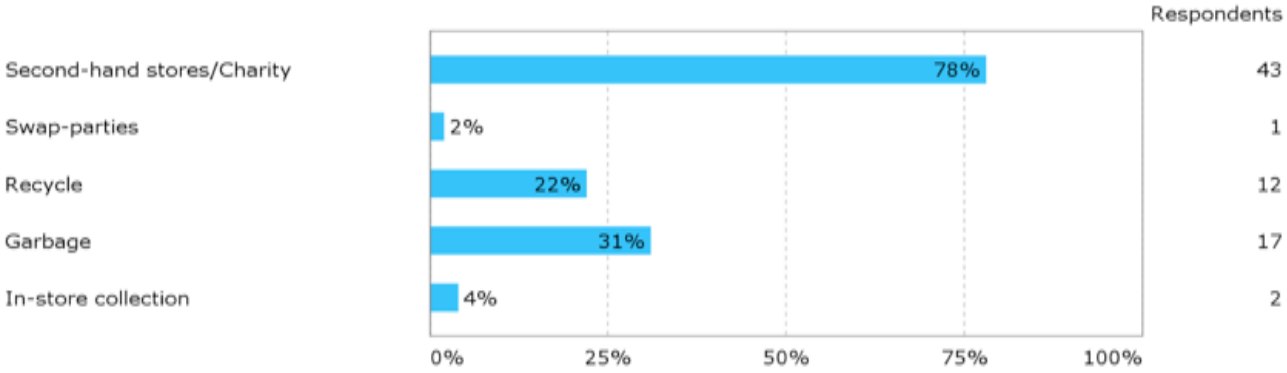
Self-efficacy results



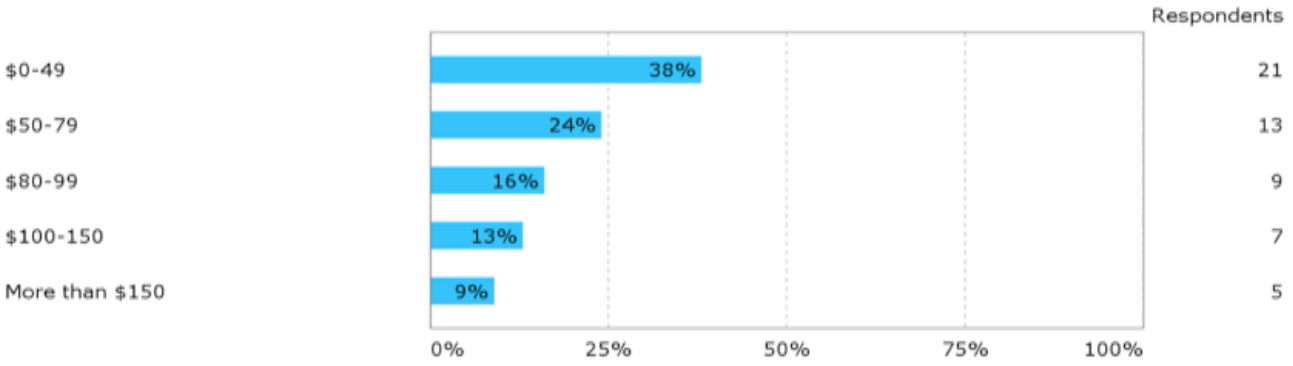
Do you use second-hand stores?



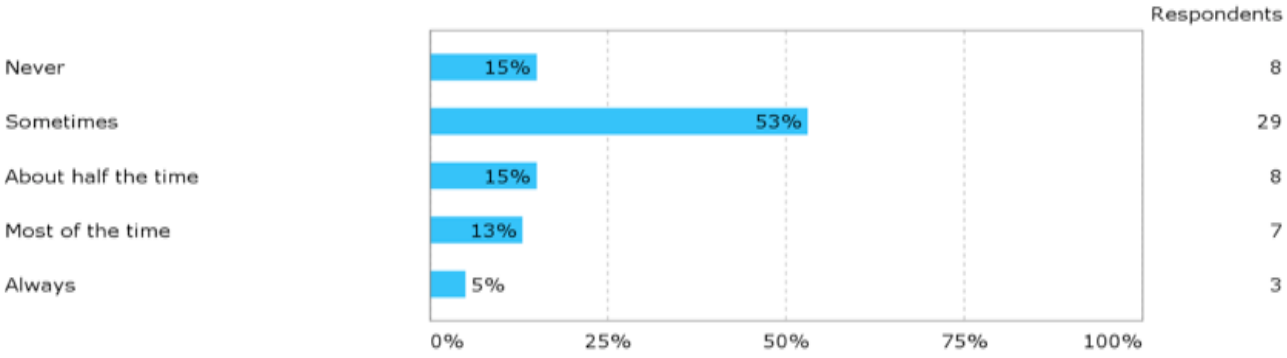
How do you dispose unwanted clothes? (More than one answer is possible)



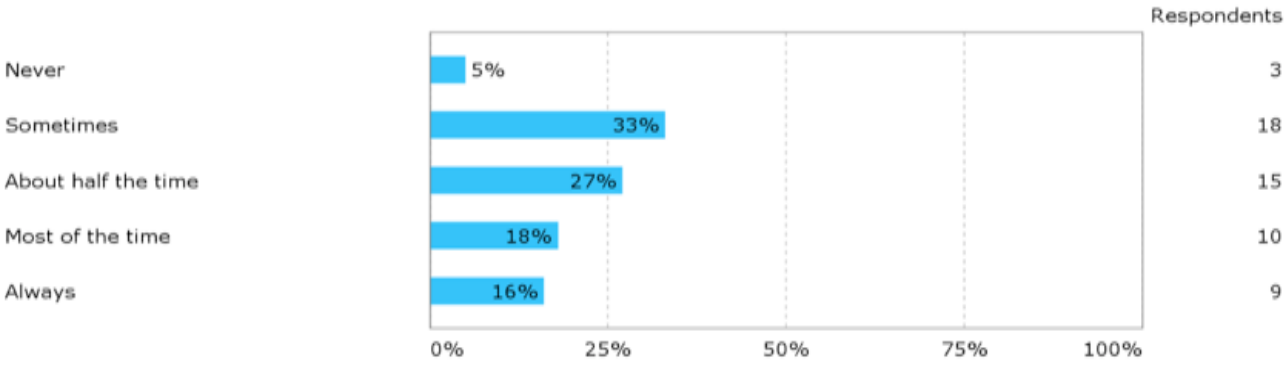
How much money (on average) do you spend a month on shopping (apparel)?



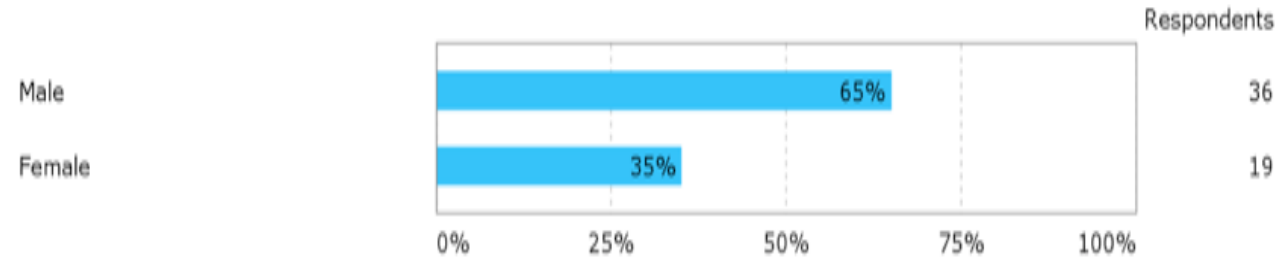
Do you pay attention to where your clothes are produced?



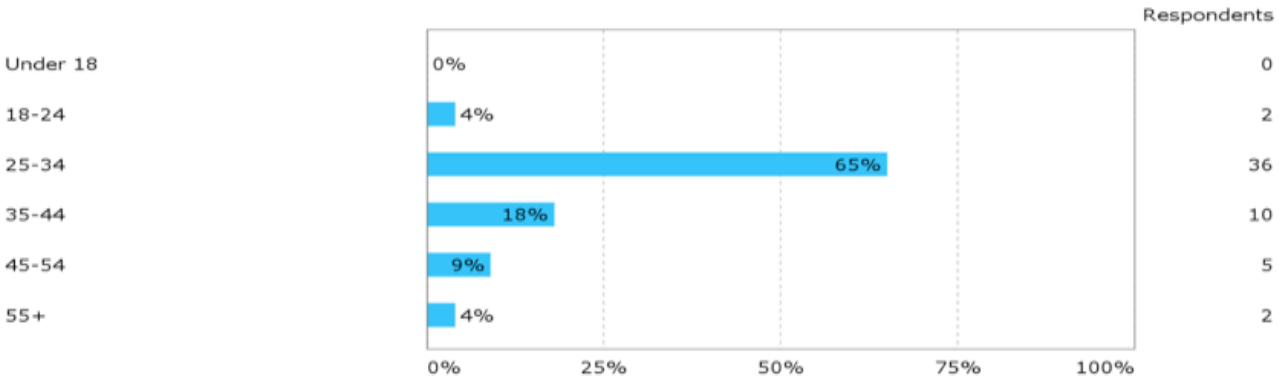
Do you pay attention to what material is used producing your clothes?



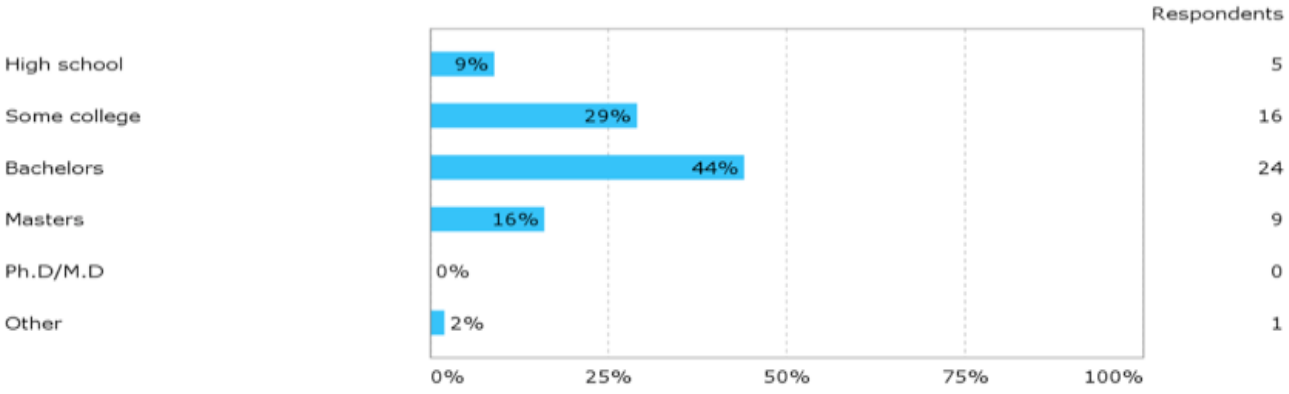
Gender



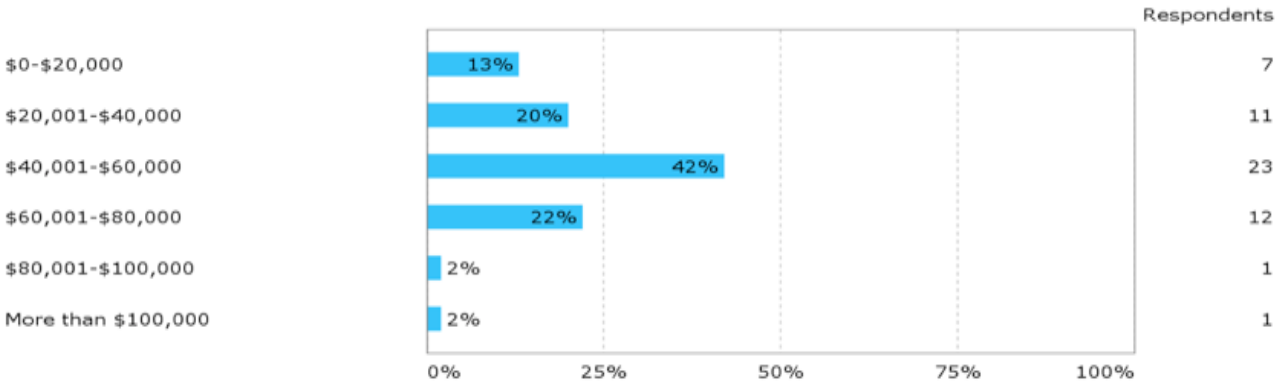
Please indicate your age



Please indicate degree of education



Please indicate your level of income



Overall Status