



**HÁSKÓLI  
ÍSLANDS**

**Thesis for MSc Degree  
in Environment and Natural Resources**

**Barriers Hindering Pro-Environmental  
Consumption of Clothing in Iceland**

**Nouraiz Nazar**

Supervisors: Professor Lára Jóhannsdóttir and Dr Nína María  
Saviolidis  
June 2022

**FACULTY OF BUSINESS ADMINISTRATION**



# **Barriers Hindering Pro-Environmental Consumption of Clothing in Iceland**

Nouraiz Nazar

Thesis for MSc degree in Environment and Natural Resources

Supervisors: Professor Lára Jóhannsdóttir and Dr Nína María Saviolidis

Faculty of Business Administration

School of Social Sciences, University of Iceland

June 2022

Barriers Hindering Pro-Environmental Consumption of Clothing in Iceland.

This thesis is equivalent to 60 ECTS final project for an MSc degree in Environment and Natural Resources from the Faculty of Business Studies, School of Social Sciences, University of Iceland.

© Nouraiz Nazar

This thesis may not be reproduced without the author's permission.

Reykjavík, June 2022

## Preface

This thesis is equivalent to 60 ECTS towards an MSc degree in Environment and Natural Resources from the Faculty of Business Administration at the University of Iceland. The project was conducted under the guidance of Lára Jóhannsdóttir, Professor in Environmental and Natural Resources at the Faculty of Business Administration, and Dr Nína María Saviolidis, postdoctoral researcher at the School of Engineering and Natural Sciences.

This study is very near to my heart. During my time, working at World Wide Fund for Nature (WWF), I was working on the projects that helped manufacturers reduce their environmental impact by implementing Best Environmental Management Practices in the production. I always wanted to study the barriers that consumers face while shopping for environmentally friendly clothing. The University of Iceland (Háskóli Íslands) provided me with the opportunity and guidance to conduct this study amongst some of the stakeholders in Iceland.

Firstly, I want to thank my family, friends, and my partner for supporting, helping, and guiding me, especially for this study. I would also like to thank my supervisors, Lára Jóhannsdóttir and Nína María Saviolidis, who were a great help in providing feedback and advice on how to carry out the study. I would also like to pay my gratitude towards all the interviewees from focus groups as well from the individual interviews for sharing their opinion and experience for this study.

## **Abstract**

The increased consumption of textile and clothing over the years has led to overconsumption of natural resources that has resulted in emissions of greenhouse gas, discharging pollution in the environment as well human impacts have put textile industry under strict scrutiny worldwide. It is widely discussed in the literature that the awareness and knowledge of environmental issues can lead to pro-environmental behaviour, on the other hand it has been also discussed that not only knowledge but there are number of barriers that hinder pro-environmental consumerism. This study is aimed to explore the barriers consumers face when shopping for environmentally friendly clothing in Iceland. Six data collection sessions were conducted, that is four focus group interviews and two individual interviews, with a total of 19 interviewees. The data was analysed by conducting a thematic analysis that gave rise to three main themes: characteristics of environmentally friendly clothing, purchasing behaviour and barriers hindering pro-environmental consumption, and role of government and clothing stores. Additionally, 15 sub-themes emerged, associated to the main themes. The barriers that were most related to consumption practices in Iceland were the high cost of environmentally friendly clothing and limited availability of stores as well as, sizes, style, and other choices in Iceland. This thesis provides important insights related to the barriers, mainly the market being so small because of the small population that environmentally friendly clothing or second-hand clothing is scarcely available and if available, it still seems to be more expensive than large fast fashion brands. The study also helps providing suggestions for stores to make environmentally friendly clothing more visible by making designated sections and proper labelling. For the government, the suggestion is to make processes easy for the environmentally friendly clothing brands as well as second-hand clothing stores by reducing taxes and introducing grant schemes.

# Contents

Preface .....	iv
Abstract .....	v
List of figures .....	viii
List of tables .....	viii
1 Introduction .....	1
2 Literature Review .....	4
2.1 Internal barriers facing consumers .....	9
2.2 External barriers facing consumers .....	11
3 Research methods .....	14
3.1 Data Collection .....	14
3.2 Focus groups and interviews .....	15
3.3 Selection of interviewees .....	16
4 Findings .....	18
4.1 Characteristics of Environmentally friendly clothing .....	19
4.1.1 Carbon footprint of clothing .....	19
4.1.2 Recycled and recyclability .....	20
4.1.3 Long lasting .....	22
4.1.4 Sustainable production of clothing .....	23
4.2 Purchasing behaviour and barriers hindering pro-environmental consumption .....	24
4.2.1 Lack of information on products .....	25
4.2.2 Buy as little as possible but higher quality .....	25
4.2.3 High cost of environmentally friendly clothing .....	26
4.2.4 Limited number of stores available .....	27
4.2.5 Non-availability of sizes, style, and other choices .....	28
4.2.6 Credibility and transparency of the brands .....	30
4.3 Role of government and clothing stores .....	31
4.3.1 Labelling on clothes .....	31
4.3.2 Financial incentives from the government .....	33
4.3.3 Public education and awareness .....	36
5 Discussion .....	38
5.1 Characteristics of environmentally friendly clothing .....	38
5.2 Barriers faced by the consumers while shopping for environmentally friendly clothing .....	40

5.3 Government and stores encouragement of consumption of environmentally friendly clothing .....	46
6 Conclusion.....	49
References.....	51
Appendix A.....	58

## List of figures

Figure 1: Early models of pro-environmental behaviour. Source: Kollmuss & Agyeman, 2002, page 241 .....	7
Figure 2: Barriers between environmental concern and actions. Source: Blake, 1999, page 267 .....	8
Figure 3: Model of the barriers hindering pro-environmental consumerism in Iceland .....	46

## List of tables

Table 1: List of the Interviews and number of interviewees.....	16
Table 2: Themes Explored .....	17
Table 3: Emerging themes and sub-themes .....	18
Table 4: Overview of the answers provided by interviewees on characteristics of environmentally friendly clothing .....	39
Table 5: Overview of the answers provided by interviewees on barriers hindering pro-environmental consumption .....	41
Table 6: Barriers identified in study compared to the barriers in literature.....	42
Table 7: Overview of the answers provided by interviewees on role of government and stores .....	46

# 1 Introduction

During the last few centuries, human interaction with nature has led to overconsumption of natural resources (Crompton & Kasser, 2019). The effect can be seen as greenhouse gasses emissions since 2010 have increased by 1.4 per cent per year on average (UNEP, 2020). Industries like textile and clothing, are heavy users of water and energy, and high polluters (Hasanbeigi, & Price, 2015). For instance, there are more than 8.000 harmful chemicals released during the cotton production process and finishing of textile products (Eryuruk, 2012), along with use of high amount of freshwater and energy in the form of electricity and heat. As a result, this sector is responsible of considerable amount of pollution related to water and air pollution (Toprak & Anis, 2017).

Aside from the environmental cost, safety issues related to the textile industry have affected employees as well as firms. Some companies have been fined as much as 55.000 US dollars for the violation of safety guidelines provided by authorities (Cline, 2013). In 2013, after cracks appeared in the eight-storey building of Rana Plaza, in Bangladesh, the building collapsed killing around 1100 workers. These cases show that the industry is not only responsible for environmental impacts, but that human lives have been affected by the textile industries as well (Donaghey, & Reinecke, 2018). The regulations on these industries are inadequate, thus putting much responsibility on citizens seeking to change the textile and clothing industry through their consumption practices (Austgulen, 2016).

There are few reasons of consumption that are discussed in the literature, which are not only related to fulfilling ones' basic needs, Solomon (2004), recognizes four types of activities related to consumption. These types are the following:

- consumption as an experience that relates to emotions and reactions to product(s),
- integration relating to use of product that makes one part of the society,
- classification scale, which refers to the kind of products consumers choose, and places consumer on how we are seen by our surroundings and society,
- game or leisure activity.

Keeping in mind the consumption practices related to clothing, the aim of this study is to explore the barriers consumers face when shopping for environmentally friendly clothing and green textile products in Iceland. Previous studies indicate that consumers are to some extent willing to pay more for environmentally friendly clothing, in different countries including some Scandinavian countries like Finland (Niinimäki, 2010; Lee, 2011). However, there are several studies conducted over time, about attitude-behaviour gap, when it comes to consumption of environmentally friendly clothing. The knowledge, awareness and environmental consciousness does contribute to behaviour but it doesn't reflect in the actions, despite of having knowledge/awareness, being conscious about the environment and being willing to pay for environmentally friendly products, it is reported in numerous studies that there is a gap between attitudes and behaviour (Hines et al., 1987; Blake, 1999; Kollmuss & Agyeman, 2002; Connell, 2010; Singh & Verma, 2017). These studies refer to the point that there are other reasons that the environmentally friendly consumption actions are not taken by the consumer and these reasons, barriers or hurdles are discussed widely. When it comes to Iceland, there is not much research conducted, about the consumption behaviours amongst consumers regarding environmentally friendly clothing (Lebas, 2017), yet much research has been conducted in other countries relating to the consumption behaviour, as well as the barriers consumers face to becoming more a pro-environmental. In Iceland, research on barriers consumers face in terms of environmentally friendly clothing has not been conducted to the best of the researcher's knowledge.

This thesis aims to fill this gap by conducting the research in Iceland and providing insight into the views of the consumers themselves, experts, clothing store owners and officials from different institutions, about the barriers faced by the public in Iceland, in terms of becoming pro-environmental consumers of clothing. This study will provide information and insights to policies and decisions that may help reduce the number or remove these barriers in the market.

The thesis is comprised of 6 chapters summarized as follows. Chapter 1 introduces the effects of the textile industry on the environment and humans, consumption practices, the gap between consumers' attitudes and behaviours and the objectives of the research. Chapter 2 provides the literature review on consumption practices, factors behind the

consumption, concepts about environmentally friendly clothing, awareness, willingness to pay among the consumers, the attitude-behaviour gap, and different kinds of barriers consumers face while shopping. In chapter 3, the details about the methodology used in data collection for this research is given. Chapter 4 includes the findings from the focus groups and the individual interviews, providing the details of the kinds of barriers consumers face while shopping in Iceland. Chapter 5 provides a discussion about the findings for the qualitative research of the study, limitations and recommendations, and chapter 6 includes the conclusion for the research findings.

## 2 Literature Review

Jonah Peretti, an assistant adjunct professor at the New York University, confronted by sending a chain of emails to NIKE after receiving his order of shoes with the name saying *sweatshop*. In 2001, these emails reached a lot of people and led to the NIKE sweatshop labour campaign, resulting in the boycott of NIKE running shoes. This is one example of how citizen mobilization can pose threats and risks to the sales of a company (Micheletti et al., 2004; Stolle and Micheletti, 2013). Such example of citizen mobilization where the consumers choose the products and brands which are focused on changing the practices based to ethics and better environmental management, is termed as political consumerism (Micheletti et al., 2012). Such political consumerism shows that consumers' consistency and commitment can bring about changes which can be evident through veganism, vegetarianism, or minimalist living (Micheletti et al., 2012).

For consumers to make decisions about what and when to consume, there are few factors that are discussed in the literature that may influence them in their consumption practices (Lebas, 2017).

- *Personal factors* are unique for everyone, and are about age, place of living, occupation, economic conditions, personality, sex, and environmental consciousness (Horska & Sparke 2007).
- *Psychological factors* refer to motivation, knowledge and skills, perception, position and lifestyle (Stávková, Stejskal & Toufarová, 2008).
- *Situational factors* are mainly the social environment, the physical environment of the place of purchase, and time (Stávková, Stejskal & Toufarová, 2008).
- *Cultural factors* include culture, class, norms, beliefs, ideas and the social behaviour of a particular society (Lebas, 2017).
- *Social factors* include group, family and social status (Lebas, 2017).

Over the last few decades, psychologists and sociologists have been studying pro-environmental behaviour in terms of the environment and the human interaction within the environment. Pro-environmental behaviour, green behaviour, and other concepts

like environmentally friendly consumption, build upon studies of direct and indirect impacts of humans on nature and explore why people act in an environmentally responsible manner and what kind of difficulties they face in the process. These concepts describe the conscious efforts of humans as they try to reduce the effect of their consumptive behaviours on nature (Kollmuss & Agyeman, 2002).

A study conducted in Mexico showed that most consumers were aware of their buying and consumption patterns regarding textile products, and they felt that it was important for textile and clothing companies to adopt sustainable practices across their entire supply chain (Deschamps et al., 2017). Another study in Finland, found that participants believed ethical values are strong drivers for buying eco-friendly clothes and other products and that more than 90% of the participants responded that they were willing to pay more for environmentally friendly clothes (Niinimäki, 2010). It was found that consumers who are engaged in more fashionable consumption are more likely to be a heavy purchaser of clothes, thus causing more harm to the environment by over-consumption of natural resources. Because of the over-consumption, such type of consumers is thought to have less environmental knowledge and/or consciousness (Grunert, 1993). Awareness, knowledge, or education about environmental degradation can help change the attitude of consumers to consume more eco-friendly products including textile which can also be a motivation to pay more for these products (Dickson, 2000; Domina & Koch, 1998). The consumers' acceptability can also be increased by the awareness and education as it was inferred that when it comes to recycled or reclaimed textile, consumers can be more accepting when they have better knowledge of such clothing (Hawley, 2006). As the consumers are now more aware of the processes related to paper and plastic recycling, more and more countries are moving towards it; similarly, by educating consumer as well waste management service on reusing textiles, it can be useful when it comes to tackling the issue of environmental problems related to textiles (Domina & Koch, 2002)

However, even after much information and knowledge the behaviour can not necessarily change because of barriers faced like high cost of engaging in pro-environmental behaviour, lack of time and unwillingness to make an effort (Kollmuss & Agyeman, 2002).

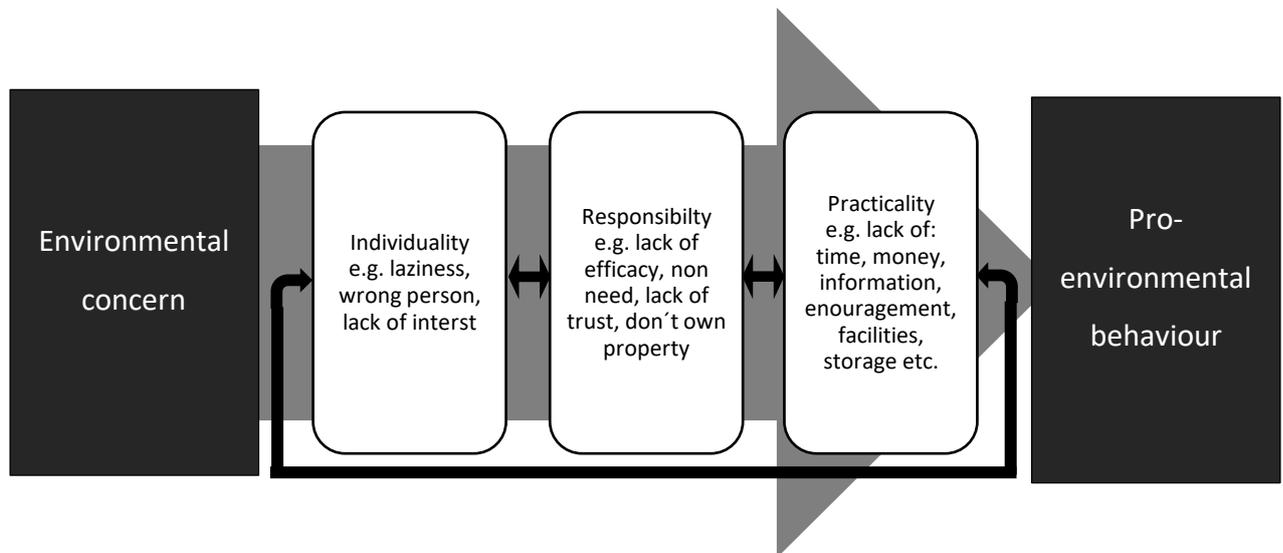
Another study conducted in the United States of America (US) showed that consumers who were more concerned about the environment and made more effort to conserve energy and natural resources were willing to pay more for environmentally friendly clothes (Lee, 2011). Even if consumers are willing to pay more and want to be responsible as consumers, retailers have not paid attention to promoting the sale of environmentally friendly clothing which can be partly aided by altering the layout of stores (Hyllegard et al., 2006). It is widely understood that the store atmosphere, which includes physical design, placement of products and décor may have an impact on the behaviour of the consumers. As explained by Yuan et al., 2021, there is a relationship between consumer experience and the architectural design of the store, since it is helpful for costumers when it comes to efficiently allocating time and energy in the store (Yuan et al., 2021). Not only the physical factors, but also the ambient scent has proved to be very important for the consumer experience, as the consumers tend to develop an impression of the store (Ward et al., 2004). Bitner, 1992 explains how environmental features of the store can affect the consumer experience, such as lighting, colours, temperature, scent, signs, complexity of layout especially in self-service settings (Bitner, 1992). The physical environment of the stores, sometimes terms such as “concept stores”, have proved to play a vital role in consumers experience by developing meaning and enhancing the appreciation of it as a store (Peñaloza, 1998). A study conducted in 2006 in the US, for an outdoor clothing and equipment store, found that the perception influenced the decision of consumers shopping at the store, mainly by the store’s design, artwork, and use of natural light (Hyllegard et al., 2006). In the literature, the researchers have defined these issues as internal or external barriers that consumers face while purchasing (Lebas, 2017).

In the past, models and frameworks for analysing pro-environmental behaviour have been based on knowledge and awareness leading to pro-environmental behaviour. These models assumed that knowledge and education of consumers would increase pro-environmental behaviour, which turned out not to be the case (Kollmuss & Agyeman, 2002). The earliest models explain how the knowledge of environmental issues can result in pro-environmental behaviour, and it was believed that if consumers are aware of environmental issues, the sheer knowledge will be able to help them take environmentally friendly actions. This model is depicted in Figure 1 below:



**Figure 1: Early models of pro-environmental behaviour. Source: Kollmuss & Agyeman, 2002, page 241**

These models were later proved not to be useful as more models were developed by various researchers, analysing the previously developed models, showing that the relationship between knowledge and attitude about environmental issues to pro-environmental behaviour was found not to be so strong (Hines et al., 1987). Recent studies explain how behaviours are not translated into action while shopping for environmentally friendly products by pointing to other limitations that consumers face (Singh & Verma, 2017). Blake (1999) talks about the limitations consumers face while shopping and that pro-environmental attitude is not necessarily reflected in purchasing behaviour (Blake, 1999). Blake (1999) also discusses a number of barriers that come in between the desired behaviour or action of consumers who are concerned about environmental issues and have plenty of knowledge and awareness. Figure 2 below adopted from Blake (1999) shows the barriers that hinder an environmentally concerned person in taking pro-environmental actions.



**Figure 2: Barriers between environmental concern and actions. Source: Blake, 1999, page 267**

Blake 1999 presents 3 types of barriers as presented above in Figure 2, and listed in more depth in the following bullet points:

1. Individual barriers that refer to a person's position, where the environment is important to a person, but the actions are overcome by factors like lack of interest, laziness, and person considering themselves to be a wrong person to take actions which are related to environmental consciousness like campaigning.
2. The second box represents the barrier related to responsibility, which concerns a person's social factors, where the individual wants to support environmental actions, but they feel it will not make a difference if they take such actions on their own. Whereas the responsibility of taking such actions, one considers to be a group activity rather than personal. For example, people who don't own a property themselves won't work on environmental improvement projects because it will not be benefiting them directly.
3. The third box relates to practical barriers, where an individual both wants to take environmental actions and takes responsibility for such actions but still doesn't engage in them. At this point, a person is restricted from taking environmental action because of practical issues that include institutional constraints, facilities like recycling and public transportation, lack of time, lack of resources (e.g., money), insufficient storage space and others.

More recently, a study conducted in the US about the barriers consumers are facing while engaging in shopping for environmentally friendly clothing, described these barriers as internal and external and are briefly discussed in what follows (Connell, 2010).

## **2.1 Internal barriers facing consumers**

Limited knowledge of the impact of clothing on the environment is an important barrier that consumers face, as described in a paper by Leiserowitz (2005), suggesting that most people do not completely understand the seriousness of environmental problems like climate change and its impacts on humans. Ballew et al. (2019) discussed that people have a constrained risk perception since they do not have personal experience with climate change. The same paper claims that nearly half of the US public neither know nor accept that climate change is manmade (Ballew et al., 2019). Similarly, impacts of the clothing and fashion industry, are not well known to consumers i.e., that is one of the world's most polluting industries, consuming precious natural resources in huge amounts and discharging pollution in air as well as in water ways without any prior filtration and treatment (Hasanbeigi, & Price, 2015). The manufacturing process, operation side and the impact of the clothing industry on the environment as well as on the human lives is not much known the final consumer (Cervellon & Wernerfelt, 2012).

As discussed above, it is not only the knowledge or lack of knowledge that affects the consumer behaviour but many other factors. Consumers' lifestyles and personal characteristics, such as various demographics like sex, age, education, race, etc. are also considered as barriers, although this barrier category is not as strong as the others in terms of pro-environmental consumption (Goldsmith, 2015).

Lack of resources, including financial resources, is another strong barrier faced by pro-environmental consumers, but studies show that green products like organic food or green electricity solutions, such solar panels, are costly and income is directly correlated to behaving in a pro-environmental manner (Thøgersen, 2014).

Cultural barrier is another factor that hinders pro-environmental consumerism, explained by the studies as needs versus desires behaviour, which is set by a standard of comparison in a culture affecting the consumption choices in society (Swim et al., 2011).

As consumer culture theory explains, consumption is more likely to help consumers establish individual or collective identities as well as lifestyle goals. It does so by experiential consumption activities where collective identities such as shared beliefs, meanings, mythologies, rituals, social practices and status are nurtured by consumption activities like fandom, countercultural lifestyles, temporary consumption communities, skydiving, etc. Cultural theory research shows that this kind of consumption is likely to spread quickly in a group of people, hence forming a consumptive culture (Arnould & Thompson, 2005).

A society's cultural values, define what is right or wrong, or what are the general preferences is an important barrier or an enabler. For example, in Hangzhou, China, there is a strong bike-sharing culture to help address problems like traffic and pollution. There are more are than 60.000 bikes available for the public to use for free for the first hour, then a minimal fee for the second hour, and so on, that helped citizens to use more readily available bikes to commute short distances, saving time and money rather than waiting for public transport or using cars. This bike sharing culture helps fight climate change and also promote a healthy lifestyle (Goldsmith, 2015).

Yet another barrier identified in literature is that actions with constant and satisfying conditions and consequences, tend to become habits. The repeated actions gradually develop into habits for everyday actions, one's family and/or personal habits have an impact on those daily life actions (Ding et al., 2018). This lifestyle acts as barrier while shopping and makes consumers shop for similar types of clothes again and again (Thøgersen, 2014). In recent studies, it has been shown that positive habits can influence consumption practices, specifically related to energy consumption citizens of both urban and rural areas (Ding et al., 2017). Habits like the use of warm clothes inside instead of using heating systems, have positive influences on intentions and decision making related to energy conservation (Girod et al., 2017). Habits like these can become a barrier in terms of consumption and change of behaviour when it comes to consumption related to clothing.

A study conducted by Wells, Ponting, and Peattie (2010), found a relationship between pro-environmental consumerism and consumers taking responsibility of their part in pro-climate change actions. The study discussed how the consumers who are frequent

travellers are more likely to consider environmental factors while purchasing and making other decisions, as opposed to decisions taken for special activities or for travelling (Wells et al., 2010). This phenomenon was acknowledged by McDonalds et al. (2006) as a group of consumers named 'exceptors', that would like to make sustainable behaviour changes in their lifestyle but keep few behaviours outside of this change circle, like travelling abroad frequently or car ownership. Emotions like denial and delegating responsibility to others, act as a big barrier for pro-environmental consumption (Goldsmith, 2015).

## **2.2 External barriers facing consumers**

The biggest external barrier that consumers face is the physical one, where the physical infrastructure is limited, as explained by Gifford et al. (2011). For instance, cycling is considered an environmentally friendly option for reducing emissions from vehicles but can be limited by the lack of bike tracks and lanes in cities. Therefore, it becomes difficult and dangerous for the cyclist to ride a bike on roads (Gifford et al., 2011). Similarly, studies have found that store-related attributes like inadequate supply of environmentally friendly clothing, store design, store convenience and other limitations in the structure of clothing stores makes it difficult for consumers to be pro-environmental consumers (Chan & Wong, 2012).

Social norms and culture also play a vital role in ones' pro-environmental behaviour (Kollmuss & Agyeman, 2002). Individuals, depending on their social group or culture, and the culture of the countries they belong to, tend to show different behaviours; small and highly populated countries versus the large and resource-rich countries, tend to be more resource conscious (Gifford et al., 2011). For example, Italy in the European Union, is the biggest consumer of clothing products (Courault, 2004; Eurostat, 2017). The Italian fashion system comes from the culture of aristocratic taste, where the small city-states were exposed to arts, décor, and clothes which were very stylish (Mora, 2004). This aesthetic escalation gave rise to the importance of elegance and beauty in different social classes, irrespective of socio-economic status. The country's culture chose clothing to use it to express oneself, defining unity and bond to code of taste (Crane & Bovone, 2006).

Institutional barriers also affect pro-environmental behaviours of consumers, since as is discussed in the literature consumers are more likely to take pro-environmental actions

if the required infrastructure is present. For instance, if the facilities for recycling are present, like separate public disposal bins for plastic, paper, metal or glass; recycling units, or recycling trash pick-up facilities, the consumers are more likely to sort the waste and more prone to focus on recycling. Similarly, the decision of use of public transportation can be influenced by the presence of good transportation facilities, the poorer the facilities that are provided, the less likely consumers are to use them (Kollmuss & Agyeman, 2002).

The government of South Korea implemented an infrastructure model that was used to develop several walking paths and trails, by the year 2019, in mountains as well as along the shores. The government reported that due to the development of infrastructure related to walking, running, cycling and outdoor activities, in 2018, 60% of the South Koreans and 31% of the visitors have reported to visit the paths and trails (Choi & Kim, 2021). Barriers like lack of infrastructure and facilities, come under institutional barriers, and can exert quite a large influence on consumer's decisions.

Economic factors also act as one of the very important deciding aspects in pro-environmental consumerism. Consumers are more likely to choose an environmentally friendly product while shopping, vs the product which is not environmentally friendly, only if the payback period of the environmentally friendly product is short, for instance in the purchase of energy efficient appliances (Kollmuss & Agyeman, 2002). It has been discussed in the literature, that pro-environmental behaviour is more likely to be seen in a citizen and in a country of more income or higher economic class. The reason given for such behaviour in literature is that the citizens of richer countries favour better environmental conditions, because of the higher income it is easier to allocate funds towards pro-environmental actions. Another reason reflects on how more income makes the citizen start paying more attention towards other values including personal welfare, well-being and self-development, which leads to better realisation of environmental problems and in return pro-environmental behaviours are more common (Gifford & Nilsson, 2014).

Another barrier that hinders pro-environmental behaviour is proximity to the problem site. Citizens who are closer to the environmental problem and get affected from it tend to care about such issues more than ones further away. For instance, citizens who live

near to the waste disposal site will be affected more from it, and in return will be more troubled (Gifford & Nilsson, 2014).

### **3 Research methods**

This section presents the research methods employed, explains how the data was collected, the sample selected for data collection, and the question framework that was used for the purpose of data collection.

#### **3.1 Data Collection**

The study employed focus group interviews and interviews with individuals as a research method to explore the barriers faced by the consumers in their pro-environmental consumption of clothing in Iceland (Kamberelis, 2010). The research design focused on individuals as well as on the groups of people to gain an in-depth insight of the barriers. At first, a literature review was conducted, which was a very important part of this research, since it provided an overview of the types of barriers and hurdles consumers face generally. The literature review aided in plotting the gaps, ideas, and themes related to the topic, which led to the question framework for the exploratory research. Using the knowledge gained from the literature, a questions framework was developed and used in the interviews as well for the focus group discussion. The exploratory study used semi-structured questions to understand perceptions, awareness, and experience around the topic. This method has been used in literature to explore the experiences of people around services for example health services (Kitzinger, 1994). Since the aim of the study was to explore choices, consumers make in everyday life and the barriers consumers face in order to be pro-environmental consumers in Iceland, such methodology was selected because it is diversely used in the literature to understand the everyday life choices of the citizen and experiences and barriers faced by them (Wiklund et al., 2014). The focus group and individual interviews were preferred because such methods are a favoured method in consumer behaviour research (Chrysochou, 2017). Chrysochou, 2017 explains how focus groups help explore the viewpoint of the consumers on different aspects of products or brands, varieties offered, brand image, packaging, increases approval of consumers and grants researchers the ability to deeply understand the subject matter (Chrysochou, 2017).

In consumerism research, this methodology is used to explore the motive behind the choices consumers make in their daily lives, buying products, using services such as health services, online buying services and food consumption, along with the businesses employing this method for marketing, subsequently helping brands explore insights and concern about specific product types (Nagarkoti, 2014; Geissler, & Zinkhan, 1998; Barrios et al., 2008). In this study, the research aimed to ask the interviewees about their perceptions of environmentally friendly clothing and brands. The questions were broad and open with aim of exploring the views and perspectives from different interviewees in the focus groups but moderated by the researcher in order to provide everyone with equal opportunity to contribute to the discussions. Open and broad questions were often followed up with more specific questions (probes) in order to collect more detailed information. The interview framework is attached in Appendix A that was used for the data collection.

### **3.2 Focus groups and interviews**

The study includes the total of four groups taking part in focus group interviews, and two interviews with interviewees, to explore a diverse pool of experiences, perceptions, views and thoughts. The interviews were conducted separately with interviewees because the individuals found it difficult to be join the focus group due to COVID-19 restrictions in Iceland as well as prior commitments at the time the groups were meeting. The first group consisted of students from the Environment and Natural Resources graduate programme from the University of Iceland. The second group consisted of owners/employees of Icelandic second-hand clothing stores around the country. The session with the second-hand clothing stores provided a good overview of the purchasing patterns related to new versus used clothing in Iceland. The third group comprised of the general public which were selected based on personal contacts and friends of friends and considered as consumers. This group provided good insight about general consumption practices related to clothing in Iceland. The fourth group comprised personnel from different institutions, these institutions included governmental agencies, policy makers and NGOs. The first interview was conducted with the senior employee from one of the very well-established second-hand clothing stores in Iceland. The second interview was conducted with a scholar with experience in business, marketing and sustainable fashion.

**Table 1: List of the Interviews and number of interviewees**

		<b>ENR students</b>	<b>Consumers</b>	<b>Second-hand stores</b>	<b>Institutions</b>
<b>Focus Groups Interviews</b>	Male	1	5	2	1
	Female	4	2	1	1
	<b>Total</b>	<b>5</b>	<b>7</b>	<b>3</b>	<b>2</b>
<b>Individual Interviews</b>	Male				
	Female			1	1
<b>Total</b>		<b>5</b>	<b>7</b>	<b>4</b>	<b>3</b>

Table 1 above provides the number of interviewees in all sessions along with the number of male and female interviewees present in each session. From the group of students of Environmental and Natural Resources, total of 1 male joined and 4 females, that combined makes 5 participants. For the consumer group, 5 males and 2 females joined making it a total of 7. Second-hand stores total of 3 stores joined, the 2 CEOs of different stores were male and 1 female employee from 3<sup>rd</sup> store. From the governmental institutions, 1 male and 1 female joined. Interview with the 1 female expert was conducted, and similarly the second-hand store employee from another store was also female. All the sessions were conducted online, amidst COVID-19 restrictions in Iceland, through Microsoft Teams.

### **3.3 Selection of interviewees**

Interviewees were contacted with the help of the supervisors, using personal contacts, contacting stores online and the rest using personal references through the snowball technique. The interviewees were given a specific time to join the call through Microsoft Teams. Interviews, focus groups and individual interviews, were conducted between March and September 2021, a total of 19 people joined in different groups and categories.

The focus group started with a short introduction about the research, the aim of the research and a short introduction by each of the interviewees to build rapport. Proceeding with the questions one by one, where interviewees were given some time, and responded with their experiences, perspectives and ideas related to questions; the same questions were also presented during the interview sessions. Each session took lasted between one and two hours, depending on the number of interviewees and discussion. The sessions were recorded through the in-built feature in the Microsoft Teams. Later the recordings were converted to transcripts to formulate results. The transcribed files were then coded on the statement level to encourage discussion on themes, based on the literature review conducted earlier. The themes explored were classified in three categories, which are mentioned in Table 2, see more detailed questionnaire in Appendix A.

**Table 2: Themes Explored**

<b>Themes Explored based on the Interview Framework</b>
Defining environmentally friendly clothing
Barriers related to clothing
Role of government, businesses and stores

## 4 Findings

A diverse range of topics emerged in discussions during the focus group interviews as well as in the two additional interviews. This resulted in the emergence of three main themes and 15 sub-themes, which are (1) characteristics of environmentally friendly clothing, (2) pro-environmental purchase behaviour and barriers hindering pro-environmental consumption, and (3) role of government and clothing stores, including second-hand clothing stores (see table 3). In addition, the interviews, both individual and focus group interviews, also included a discussion about other aspects, such as the impact of production of clothing on human lives, eco-labels, clothing disposal methods, and culture of second-hand stores as per the questions posed for the discussion according to the interview framework, see Appendix A. The themes which emerged from the discussion sessions are elaborated in the following sections.

**Table 3: Emerging themes and sub-themes**

Themes	Sub-themes
Characteristics of Environmentally friendly clothing	<ul style="list-style-type: none"> <li>• Carbon footprint of clothing</li> <li>• Recycled and recyclability of clothing</li> <li>• Long lasting material</li> <li>• Sustainable production of clothing</li> </ul>
Purchasing behaviour and barriers hindering pro-environmental consumerism	<ul style="list-style-type: none"> <li>• Lack of information on products</li> <li>• Buy as little as possible but higher quality</li> <li>• High cost of environmentally friendly clothing</li> <li>• Availability of stores</li> <li>• Non-availability of sizes, style &amp; other choices</li> <li>• Buying second-hand</li> <li>• Credibility and transparency of the brands</li> </ul>
Role of government and clothing stores	<ul style="list-style-type: none"> <li>• Labelling on clothes</li> <li>• More visibility of environmentally friendly products in stores</li> <li>• Financial incentives</li> <li>• Public education and awareness</li> </ul>

## **4.1 Characteristics of Environmentally friendly clothing**

For the most part, the characteristics of environmentally friendly clothing were clearly stated by focus group members and individuals during the interviews. But there seemed to be a bit of a confusion related to the characteristics of environmentally friendly clothing among the people in the general consumer group as compared to the other groups. In this context it is good to point out that this group included interviewees who belong and work in different fields than most of the interviewees, including information technology, food industry, engineering, and sociology, as compared to the other group which included students of the master's programme in Environment and Natural Resources, people working in the Environmental agency and people from the second-hand clothing stores. Interview interviewees in these groups were aware of environmental issues and had more up to date information about the manufacturing process of clothing as well as the origin, transportation, and disposal methods in Iceland and around the globe. Generally, the responses from all the interviewees, both focus group interviewees and individual interviewees, revolved around the carbon footprint of clothing, the ability to reuse and recycle, durability, and sustainable production. Only the consumer group discussion revolved around just three answers: the footprint of the clothing, the materials used in clothing, and sustainable production.

### **4.1.1 Carbon footprint of clothing**

The sub-theme of carbon footprint of clothing emerged from the discussions with the consumers group, that mainly revolved around lower carbon footprint/emissions of the clothing, when asked about their definition of the environmentally friendly clothing. One participant from the consumer group explains:

*.. something that has small carbon footprint so it's made nearby locally...*

Where the carbon footprint of the clothing is mentioned, one of the interviewees suggested that the clothing is environmentally friendly when it has a small carbon footprint as well as when it is made locally.

*I just wanted to add the carbon footprint because I think it's also very important.*

People from within the consumer group discussed more about the carbon emissions as the main characteristic of environmentally friendly clothing. The discussion got more focused on carbon emissions generated during the production phase. The interviewees from the consumer group used claims such as the following:

*There should be minimum of fossil fuels spent on actually producing this clothing...*

*I just think to change the source of energy that is being used in production, should be like energy so doesn't give carbon emissions...*

From this discussion, the perception of a lay person or generally the consumers can be seen that when they think about the characteristics of environmentally friendly clothing, for them it is something which has lower carbon footprint than other clothing, and mainly in terms of emissions during the production phase.

#### **4.1.2 Recycled and recyclability**

In the other focus group sessions, phrases related to carbon footprint were not so frequently discussed, instead other characteristics of environmentally friendly clothing came up. One of them was the reusability of clothing material, which was a very common discussion point across all the groups and interviews. It was widely expressed that the clothes are environmentally friendly for the interviewees if the clothing material is either made of biodegradable, organic, recycled material and/or the clothing can be recycled or reused at the end of its life. The participant from the consumer group expressed:

*I think that the clothes should be made out of biodegradable material...*

Interviewees from the students of master's programme in Environmental and Natural Resources also mentioned much about the natural and organic material use in clothes. Also, one interviewee stressed that during the production, any toxic chemicals should not be released to environment:

*I personally think, natural or organic fabrics that are rather more important that can be used in clothes making and clothes' recycling...*

*...organically produced fabrics in the processing part, there should not be any toxic or chemicals used...*

Interviewees from the second-hand store focus group also responded similarly, and said:

*...when you are manufacturing environmental or organic cotton or something like this...*

*...we are all working in the same direction, we are working towards reusing the existing material ...*

Similar responses could be seen in other groups and interviews, where the interviewees argued that they considered clothes environmentally friendly, if they have a capacity to be reused and/or recycled. For example, an interviewee of the consumer group stated:

*...you wear it few times and then you buy a new one, so it should be reusable, and it should last longer...*

The responses from interviewees from the group of students of master's programme in Environmental and Natural Resources included the following statements:

*...first thing in my mind is that it uses fabrics from the recycled fabrics...*

*...for me at least recycled material.*

*...something that has been used in another time and then take it and created a new product.*

*...I think the most environmentally friendly clothes would be the ones that are made from reused fabrics.*

While mentioning the use of type of material for clothing, the interviewee from the group of students from the master's programme in Environment and Natural Resources also mentioned that the material should be durable and emphasized the impact of fabric production on humans. One interviewee particularly talked about the production method should be in a way that it doesn't affect humans, specifically the hands of the people dealing with the fabric.

*...people that are producing the fabrics, it is bad for the hands and everything, like it is, so using like a recycled fabric...*

*I think, so most of them I think clothing that has durable (material), that can be reused...*

Most responses coming from the interviewees from both the focus groups and individual interviews, are emphasising on the material, which should be made from organic or biodegradable, should be durable and material that can be reused or recycled.

#### **4.1.3 Long lasting**

Upon asking about the characteristics, the responses received from the interviewees also insisted on the fact that the clothes are environmentally friendly if the clothing is made from good quality material, that lasts longer than other clothes meaning that this results in less consumption of newer clothes. The consumer interviewees made statements like:

*... it should last longer.*

An interviewee from the group of second-hand stores responded:

*...when the clothing item is used again and again that kind of item is environmentally friendly...*

One interviewee from the institutional focus group said that:

*...buying less and buying clothes that [are] going to last longer...*

*...buy something [...] that [should] last for long like 10 or 20 years ...*

Issues relating to the material use in clothing production, emerged from the focus group of second-hand store owners as exemplified in the following:

*...should be very good quality, that will be considered environmentally friendly...*

*...quality of clothing is obviously very important.*

Interviewees underlined that the clothes should last longer, but few stressed on the fact that the material should be really good quality, that will help the clothes to last longer. Although, it could be inferred here that the emphasis is mainly given to the durability of the material used.

#### **4.1.4 Sustainable production of clothing**

One kind of response to the characteristics of environmentally friendly clothing discussed by the focus group interviewees with environmental science education and background, related to pollution and effluents during the production of the clothing. The group members stressed that environmentally friendly clothing is one that takes in account efficient chemical usage, water and energy consumption, and reduction in pollution discharged into the environment during and after the production.

*...in the processing part they should not use toxic chemicals that can be harmful to the environment...*

*...there should not be any harmful chemicals or toxins entering environment.*

*...chemicals which are not harming like water bodies around, efficient production method...*

The responses not only included environmental issues but also highlighted the social impacts from the production. It was further elaborated, by the focus group interviewees as they talked more specifically about that environmentally friendly clothing taking in account good working environment/conditions for the workers, good wages, and facilities during and after the production, such as in the transportation, sales processes, and facilities. Examples of responses include the following statements:

*...no harm to people working in manufacturing or to [the] environment...*

*I would say it has a good work environment for the people that have good wages and facilities...*

*...people that are producing the fabrics, it is bad for the hands and everything, [...] so using like a recycled fabric [reduces harmful effects on people].*

#### **4.2 Purchasing behaviour and barriers hindering pro-environmental consumption**

In the second part of the discussion, questions addressed purchasing behaviour of clothing, if the interviewees buy environmentally friendly clothing themselves or not, and why that is the case (see Appendix A). The responses received were more about the reasons why the interviewees don't buy environmentally friendly clothing rather than why they do it, which helps in the research since the aim is to explore the barriers hindering pro-environmental consumerism in Iceland. These barriers are discussed in the following sections.

#### **4.2.1 Lack of information on products**

Most discussions were centred around the lack of information about the clothes sold in Iceland on whether they are environmentally friendly or not. It was further elaborated upon asking that the clothes are hard to identify, and it is hard to know if the product is sustainably sourced. They discussed how it is easy in Iceland to go to the groceries stores and find items with labels identifying products as vegan, organic or gluten free. The group members compared such practices used in the grocery stores to the clothing stores and came to the point that there are not able to find environmentally friendly clothing since it is neither clear nor is the information available at the stores, and when it is, the labels tend to be really small. The interviewees from the consumer focus group expressed the following issues:

*...it is easier with groceries than with the clothes to distinguish whether this item is produced environmentally friendly...*

*...information is basically like printed really small on the label...*

*...I don't know if it was environmentally friendly...*

The consumer group discussed that it is not clear if the clothing item is environmentally friendly or not, in the clothing stores, and it is not easy to find such clothing in stores. Interviewees from the same group responded that they are not able to find information or any special designated (labelled) area for environmentally friendly clothing, unlike with food products that are clearly marked and have a special designated area labelled "healthy products", where they are able to find organic food and more.

*...there was nothing on the tag...*

*...where to find environmentally friendly clothing...*

#### **4.2.2 Buy as little as possible but higher quality**

Upon asking about if they buy environmentally friendly clothing, some interviewees from the focus group of students of master's programme in Environment and Natural

Resources responded that they try to buy as little as possible, but when needed buy clothing of higher quality and take good care of it for example during the wash and repairing if damaged. That helps them reduce the amount of clothes they buy, and they also try to use the item for longer time since it is higher quality that should last longer.

*I'm trying to buy less, buying less clothes and higher quality...*

*...I try to buy clothes that last long, and I take good care of my clothes...*

*...possible to buy durable clothes because if [the] fabric is good, it can last longer...*

Similar response was received from the interviewees from the consumers group, here they claimed that the higher quality items are preferred in order to consume less.

*...buying less clothes and higher quality so that I don't have to buy so much...*

*...I am just trying to buy higher quality and less clothing in order to be environmentally friendly...*

#### **4.2.3 High cost of environmentally friendly clothing**

The high cost of environmentally friendly clothing was one of the main discussion points, this theme came forth in all the focus groups as well as in the individual interviews. It was discussed that the price for clothing is generally high in Iceland, but for the environmentally friendly clothing it is even higher and even if clothes are bought from the second-hand stores, those are also not so low in terms of prices. The interviewees from the focus group including students from the master's programme in Environment and Natural Resources, talk about the clothing being expensive, but this topic was not widely discussed in this group. The examples of statements made by the interviewees are:

*...they are very expensive which it should not be...*

*...in Iceland the second-hand clothing shops can be expensive...*

Similarly, the consumer group interviewees responded the same way, one of them saying:

*...what makes it difficult for you to purchase those clothes is prices in Iceland, see the prices...*

From the institutional individual interview, the interviewee responded that:

*...we know that environmentally friendly clothes need to be in much higher prices...*

The institutional focus group also highlighted that the cost of environmentally friendly clothes and the second-hand clothing is high in Iceland. On the one hand, if one decides to go for the second-hand clothes, they are expensive and on the other hand the style is not according to the taste of consumers, they responded:

*...cost is a factor, like these clothes that you find here they're pretty expensive...*

*...there are different factors like how much it costs and the style...*

*...now probably the other factors would be styling or price...*

#### **4.2.4 Limited number of stores available**

One point that came up for the discussion was that there are not many stores offering sustainable or environmentally friendly clothing. The interviewees from the focus group of students of master's programme in Environmental and Natural Resources expressed that they have not been able to find such a store, they responded:

*...it's difficult to find those kinds of clothes here...*

*...I still haven't found any shops...*

Consumer group interviewees also responded similarly, but the interviewees expressed it would be more environmentally friendly if there were more stores and brands which were making clothes locally, they said some of following for example:

*...where to find things that are made more locally...*

*...where to find environmentally friendly clothing...*

This, however, does not include the second-hand stores, which are gaining popularity according to the discussion specifically with second-hand store owners in Iceland.

#### **4.2.5 Non-availability of sizes, style, and other choices**

Apart from the limited number and availability of stores, the interviewees from the group of second-hand store owners as well as interviewees from the consumer group, the institution focus group and the individual interviews, mentioned that even if there is a store or if they are shopping at the second-hand store, there is always an issue related to the limited availability of sizes, colours, specific style and other factors. The interviewees mentioned this as a significant barrier, one member from the consumer group said:

*...for example, second-hand store, the problem is the choice... there is much less choice, much less sizes, ...*

During an interview with second-hand store owners, the interviewee stressed much upon the less variety of clothing available to the consumers, that includes size, colour, style, and moreover that consumers must spend a lot of time looking for the ideal clothing item for themselves, that wastes a lot of time and hence acts as barrier.

*...it's always usually just one product in the same size, colour and the same exact model...*

*...can't guarantee that we have the products that our consumers are looking for, the style, time is factor...*

*...it's more time consuming...*

The interviewees from the institution focus group also highlighted how finding the ideal item from the second-hand stores requires time, additionally the participant explains how the market is small and said:

*...availability I mean it is a small market...*

*...I would think that maybe time is factor, it's much easier to go into store that sells all sizes...*

People within the second-hand stores focus group also emphasised the issue of time while shopping at the second-hand stores, by saying:

*...you need to go through a lot of clothes to find what you need...*

*...can't just go to a certain store and buy the right size and colour...*

*...but it requires more time, you need to be able to know what fits you...*

While interviewing the interviewees from the institutions, one of the interviewees highlighted the same issue of Iceland being a small market for the second-hand clothing, also such clothing not being fashionable to consumers here was described as one of the barriers. The interviewee explained:

*...I think it is not fashionable enough for them...*

*...they're not doing it in action because I think it is a very small market as well, it's one of these barriers...*

On the contrary, where the interviewees mentioned that there are not many environmentally friendly clothing stores, they are expensive, and there is not much variety at the second-hand stores, the participant responded that they are shopping more at the second-hand stores and the culture of buying second-hand clothes is becoming more popular in Iceland. There is a growing number of such stores across the country as informed by the second-hand store owners, and more and more people are avoiding the fast fashion brands and coming to second-hand clothing stores, the interviewees remarked:

*I buy second-hand clothes and I avoid fast fashion brands*

*it is a big step [second-hand store popularity] in Iceland especially now when it [the second-hand store] is getting a lot more popular*

#### **4.2.6 Credibility and transparency of the brands**

Talking about barriers that are being faced by the consumers, interviewees from the individual interviews, as well as from the focus group with institutions, discussed widely about how it would help consumers to a great extent, if the clothes were labelled by some eco-label. On the contrary, discussion turned towards how “*there is an information chaos*”, that implied towards the confusion found amongst the consumers when it comes to choosing environmentally friendly clothing. Similarly, there was a discussion about how people have trust and transparency issues on who to trust and who not, there are too many labels, which products or brands are environmentally friendly, and which are not. It was discussed by the interviewee how the consumer could know from where this recycled item is coming from or how it was recycle/produced. If the product is really recycled or not, as well as the risk of greenwashing from the producers, which may be calling themselves environmentally friendly. Such concerns were raised by the expert interviewee, and it was suggested that there is a dire need for transparency and measuring sustainability when it comes to the environmentally friendly clothing, that complies with environmental indicators such as the United Nations’ Sustainable Development Goals (SDGs) or Life Cycle Assessments (LCA). It was highlighted that:

*...you could see recycled item but you don't know the history; we need the transparency to know where it comes from and where it was produced...*

*...people don't believe what they read on the label...*

*...there are so many producers calling something environmentally friendly...*

*...there is no rule of how you measure the sustainability of your production process...*

*...it is hard for consumers to recognize what is correct information and what is not...*

### **4.3 Role of government and clothing stores**

In the last part of the discussion, the interviewees were asked what government and the clothing stores can do, that would encourage consumers to buy more environmentally friendly clothing. The responses received from the interviewees mostly revolved around making the environmentally friendly clothing more visible by adding labels and proper information on them. It was also suggested that the stores should add special sections or designated areas for environmentally friendly clothing. It was also suggested that the government should work on lowering the taxes and helping environmentally friendly and second-hand clothing stores in various ways. Lastly, emphasis was also given on education and awareness raising on issues related to clothing, and that the government should work on promoting more environmentally friendly and second-hand clothing in the country. These suggestions are discussed in detail in the following sections.

#### **4.3.1 Labelling on clothes**

As discussed in section 4.2.1, the most frequent point that was talked about was the difficulty faced in finding environmentally friendly clothing in the stores, and it was suggested that the stores should put obvious labels or banners in the sections as well as on the clothes. On the contrary, in sections 4.2.6, it was discussed by the interviewees from the institutions, that there are too many labels and consumers are not able to trust these labels, which is creating confusion amongst the consumers on what to buy and which manufacturer/producer to trust. The interviewees from the consumer group and the group of students from the master's programme in Environment and Natural Resources argued that if the labels are not there, consumers won't even know that these

clothes fall into the environmentally friendly clothing, the consumer group interviewees commented the following:

*...sections that say this is environmentally friendly because it is hard to check every time...*

*...I wish there was like a way to find out where to find environmentally friendly clothing just like I know one store like that...*

The focus group of students from the master's programme in Environment and Natural Resources provided more suggestions for the manufacturers and brands. It was suggested that it would help if the labels were clear and precise, not only on the clothing, but it would also be helpful to have such information clearly posted online, on the website or on social media that consumers can research before buying, they said:

*...more clear information on what kind of fabric or processing; something that you can use to actually compare...*

*...the labels which on the clothes should be clear and precise...*

*...if they have that info prepared online so that one can read on the website...*

The focus group of students of master's programme in Environmental and Natural Resources, insisted on the fact that the labels should more clear, precise, and visible. The interviewee supported their suggestion by giving an example of a certification scheme in Iceland for the tourism companies called Vakinn. They also stressed upon having an eco-label which is international, from the Nordic countries or just from Iceland. They suggested:

*...if stores gave clear information about the clothes, certification like they have for tourism (Vakinn) ...*

*...I think it would be very nice to have like a label that is international that everybody knows...*

Where the interviewees put emphasis on labelling environmentally friendly clothing in the stores, they also indulged in a discussion that if such clothing were available in the store, they should make it more visible by making special sections. An interviewee from the consumer group argued for example that:

*...stores should have separate section or just a sign that sells environmentally friendly clothes...*

Similarly, one interviewee from the focus group with students from the master's programme in Environment and Natural Resources suggested that:

*...they should make it visible in the shop where there is environmentally friendly clothing...*

A comparable suggestion was also made by one of the interviewees from the institutional focus group:

*...environmentally friendly clothing [should be made] more visible...*

#### **4.3.2 Financial incentives from the government**

Responding to the question about what government can do to help consumers buy more environmentally friendly clothing, the interviewees emphasised incentives from the government in terms of grants, lower taxes, namely value added taxes, and other sorts of subsidies for the stores that are selling environmentally friendly clothing as well as for the second-hand clothing stores. The discussion revolved around whether there is enough support from the government, whether the prices of such clothing will go down and that more people would prefer and purchase environmentally friendly clothing or second-hand clothes if prices were lowered. For example, the interviewees from the institutional focus group mentioned some of the following:

*...government has a regulatory tool and also incentives like financial incentive...*

*...leveraging the sale of second-hand clothes...*

*...excluding second-hand clothing from value added tax...*

The consumers' focus group interviewees also paid much attention and discussed ideas about government helping stores, those ideas mainly revolved around how the government can help reduce the cost of the environmentally friendly clothing, the interviewees suggested that:

*...the government [should] help reduce the price...*

*...a discount or something from the government...*

*...the government should lower the taxes*

*...the government [should] subsidise the small businesses...*

*...the government should give free space and a section (for second-hand stores) in well-known places...*

In the interview with the institutional expert, the interviewee highlighted that there are high taxes in the country for licensing and operation and emphasised that the government could help reduce the tax as well as help new start-up businesses. The interviewee explained:

*...we have (in Iceland) actually high taxes here for licenses...*

*...lower the taxes on environmentally friendly clothing...*

*...[create a] support system for start-up businesses...*

Similar responses can be seen from the focus group interview with students from the master's programme in Environment and Natural Resources. Those interviewees also

suggested that the government could lower the import taxes for the brands importing environmentally friendly clothing, along with a suggestion that the government should help these brands with the rent in some way, and encourage them to produce clothing locally, they said for example:

*...I think they should lower import taxes of environmentally friendly clothes...*

*...create incentives for people to encourage them to do more local production...*

*...help stores with [the] rent...*

While discussing this question with the focus group of second-hand store owners, the interviewees paid much attention to this question, and suggested other ideas along with tax reduction. They also suggested that there should be more grants for stores which are solely charities (not-for-profit) and not making any profit on selling the second-hand clothes. Nonetheless, tax reduction remained the most popular point of view:

*...there are the same taxes (for second-hand stores) as new clothing stores...*

*...give out grants for the stores that are 100% charity...*

*...change a little bit in the tax law...*

An interviewee from the second-hand store owner interview also had similar ideas to contribute, but a new point was raised that included the suggestion that the government should help the second-hand clothing store or the stores selling environmentally friendly clothing, with the operating cost and give out some grant/fund. It was highlighted that:

*...grants for the operating costs...*

*...[not] only tax reduction...*

### **4.3.3 Public education and awareness**

During the focus group interview sessions, one thing that appeared repeatedly was that there is not much information about environmental issues especially related to clothing, second-hand clothing stores and environmentally friendly clothing. There is therefore a dire need to launch some sort of marketing and/or awareness campaign, that should include information about clothing and promoting second-hand stores and culture of buying and selling used clothes to reduce environmental impact. One participant from the consumer group underlined the promotion of culture of second-hand goods. The interviewee suggested that the government should promote this culture at the national level and encourage people to give used clothes away and also buy second-hand clothes as much as possible, by saying:

*...the government should encourage local people to give away clothes...*

*...the government also can work on the cultural aspect of this subject...*

It was also suggested to start environmental education in schools at different levels and include such information in the curriculum in schools and universities. One interviewee from the focus group with the students of the master's programme in Environment and Natural Resources claimed that:

*...there should be more education knowing there are universities; it is a process but a great awareness for the students...*

The interviewees from the institutional focus group also gave similar comments, and suggested to educate citizens on issues including the impact of textiles on the environment as well as on humans, promoting the use of second-hand clothes, as well educating on how to take care of a piece of clothing they own, the interviewee said:

*...education might be something that the government can do they can go collaborate with schools or decide like on some curriculum...*

*...how they are supposed to take care of their clothing, I think could help...*

In the interview with the individual from the second-hand store, a similar comment was made upon asking what the government should do, that will encourage consumers to buy more environmentally friendly clothing, the interviewee said:

*...I think first and foremost it's education, educate the country, start early out with children...*

Similar comment was offered by one of the interviewees from the second-hand focus group, that focused upon marketing in the country that should promote the culture of buying used clothes, and said:

*...marketing towards the Icelandic people that you should buy second-hand...*

## **5 Discussion**

The aim of this study was to explore the barriers consumers face when shopping for environmentally friendly clothing in Iceland. This thesis aims to fill this gap by conducting the research in Iceland and providing insight into the views of the consumers themselves, experts, second-hand clothing store owners and officials from different institutions, about the barriers faced by the public in Iceland, in terms of becoming pro-environmental consumers of clothing. This section provides insights about the characteristics of environmentally friendly clothing in Iceland, barriers faced by the consumers in order to be pro-environmental consumers, and lastly the suggestions on how the government and stores can encourage consumers to buy more environmentally friendly clothing in Iceland.

### **5.1 Characteristics of environmentally friendly clothing**

As far as the characteristics of the environmentally friendly clothing are concerned, most interviewees were more or less consistent with their answers, except for the consumer group, that was the only group that emphasized a low carbon footprint as the main characteristic of environmentally friendly clothing.

Four sub-themes emerged, and an overview of answers given by all the discussion sessions is provided in Table 4 below.

**Table 4: Overview of the answers provided by interviewees on characteristics of environmentally friendly clothing**

	<b>ENR Students</b>	<b>Consumers</b>	<b>Second-hand clothing stores</b>	<b>Institutions</b>
Low carbon footprint		x		
Recycled and recyclability	x	x	x	
Long lasting		x	x	x
Sustainable production	x			

The characteristics of environmentally friendly clothing that emerge from the focus group sessions as well as from the individual interviews, are the ability to reuse and recycle, long lasting, and sustainably produced. Only the consumer group stressed a low carbon footprint as well as other components, as compared to other groups as shown above in Table 4. It seems that a lay person is generally thinking that the clothing is environmentally friendly when the item has a lower carbon footprint as compared to other items, mainly the attention was given on less emissions during the production of the clothing. This aligns with the discussion on emissions from the textile industry, but this industry is one of the biggest polluters when it comes to carbon emissions, it is estimated that this industry contributes 4-5 billion tonnes of CO<sub>2</sub> annually, which is 8-10% of total emissions (Niinimäki et al., 2020).

Another characteristic that was discussed by all the groups, except for the institutional one, is the reusability of clothing material. The answers were more about the clothing material being made out of biodegradable, organic, recycled material and/or the clothing that can be recycled or reused at the end of the life. More specifically, the students from the master's programme in Environment and Natural Resources emphasized the environmental and human aspects; they mostly talked about the production method, that during the production there should not be any toxic chemicals released in the environment and it should be in a way that it doesn't affect humans, specifically the

hands of the people dealing with the fabric. This aligns with the discussion on effects on humans from the textile industries, but this industry uses number of chemicals, which pose a risk while using and disposing of them, and an estimated 10% of such chemicals are recognized to have negative effects on humans (Niinimäki et al., 2020).

On the contrary, the students from the master's programme in Environment and Natural Resources did not mention anything related to the third sub-theme of durability (long lasting), as compared to the other groups. The interviewees in all sessions stressed the fact that if the clothing is made out of good quality material, that will last longer resulting in less consumption of new clothes.

Another characteristic of the environmentally friendly clothing that was not discussed in any group other than the students from the master's programme in Environment and Natural Resources, was that for them the clothes are environmentally friendly if the production method takes into account efficient chemical, water and energy use, and reduction in pollution discharged into the environment during and after the production. The responses not only included environmental issues but also highlighted the social impacts from the production. They more specifically discussed that for them, the environmentally friendly clothing also takes in account good working environment and conditions for the workers, good wages, and facilities during and after the production, such as in the transportation, sales processes, and facilities. Such characteristics if adopted in the production can really help improve the environmental impact since this industry is heavy user of water and energy and emits high amount of pollution in the environment (Hasanbeigi, & Price, 2015). It is estimated that whole fashion industry is responsible of discharging approximately 20% of total wastewater from industries after dyeing and other textile treatments (Niinimäki et al., 2020).

## **5.2 Barriers faced by the consumers while shopping for environmentally friendly clothing**

The aim of the study is to explore the barriers consumers face when shopping for environmentally friendly clothing. The consumers groups that included the general population and the students from the master's programme in Environment and Natural Resources, were asked if they buy environmentally clothing, on the contrary, the second-

hand store owners and institution sessions were directly asked about their opinion on what are the barriers that consumers face.

Six sub-themes emerged, and an overview of the answers given by all of the discussion sessions about the barriers are provided below in the Table 5.

**Table 5: Overview of the answers provided by interviewees on barriers hindering pro-environmental consumption**

	<b>ENR Students</b>	<b>Consumers</b>	<b>Second-hand clothing stores</b>	<b>Institutions</b>
Lack of information on products		x		
Buy as little as possible but higher quality	x	x		
High cost of environmentally friendly clothing	x	x		x
Limited number of stores available	x	x		
Non-availability of sizes, style and other choices		x	x	x
Credibility and transparency of the brands				x

The results show that consumers find that there is a lack of information about the clothes sold in Iceland if they are environmentally friendly or not. It was more elaborated that the clothes are hard to identify and don't know if the product is sustainably sourced. This response was provided by the consumers group only, which indicates that consumers

are aware that there is a lack of information, or possible that the consumers themselves are not informed about where to find such clothing. These results are consistent with literature where such kind of barrier is categorised as an external barrier. This physical barrier is described as when the necessary infrastructure is limited (Gifford et al., 2011). Recent studies have also found that store-related attributes such as insufficient supply of environmentally friendly clothing and stores design contributes a lot and acts as a barrier (Chan & Wong, 2012). The findings also show that consumers in Iceland find it easy to go to the groceries stores and find food products that have labels specifying whether food is vegan, organic or gluten free. However, in terms of clothing the consumers are not able to quickly distinguish and identify if the clothing item is environmentally friendly or not.

Table 6 present the barriers identified in this study comparing to the barriers in literature faced by the consumers in order to be pro-environmental consumers.

**Table 6: Barriers identified in study compared to the barriers in literature**

<b>Barriers identified in the study</b>	<b>Barriers coinciding with literature</b>	<b>References</b>
Lack of information on products	Lack of necessary infrastructure and store related attributes	Gifford et al., 2011; Chan & Wong, 2012
Buy as little as possible but higher quality	Rebound effect	Hertwich, 2005
High cost of environmentally friendly clothing	High cost of green products	Thøgersen, 2014
Limited number of stores available	Time and convenience barrier, Lack of necessary infrastructure	Heung, 2003; Gifford et al., 2011; Chan & Wong, 2012
Non-availability of sizes, style and other choices	Time and convenience barrier	Heung, 2003
Credibility and transparency of the brands	Eco-labels in effective in changing consumer behaviour	Horne, 2009

Only the consumers group and the group of students from the master's programme in Environment and Natural Resources provided information that how they try to buy as little as possible, and when they buy, they are buying higher quality clothing, so it helps them reduce the amount of new clothes they buy. Here this kind of response can be related to the rebound effect, where behaviour reducing the consumption or environmental impact helps offsetting the harm caused before (Hertwich, 2005). As a result of reducing the consumption of low-quality fast fashion clothing items and buying higher quality long-lasting clothing instead can help in the rebound effect or even the backfire effect.

It was found in the study that the price for the clothing is generally very high and for the environmentally friendly clothing it is even higher and even if clothes are bought from the second-hand stores, those are also not so low in terms of prices. On the other hand, if one decides to go for the second-hand clothes, the style is not according to the taste of consumers. These findings come from all the group and mentioned a lot in the discussion, except from the discussion sessions conducted with the second-hand stores. The interviewees did mention not much variety and sizes being available, but the high cost was not mentioned. These findings are accordance with the literature, and it is categorised as an internal barrier, where green products for example organic food, green electric solution like solar panel are expensive and require higher capital investment, hence lack of the resource contributes and hinders pro-environmental consumption (Thøgersen, 2014). The findings in this study also indicate that not only is new environmentally friendly clothing expensive, but that even second-hand clothing can be too expensive according to the interviewees in this study. Since Iceland is an expensive country when it comes to cost of living, that also influences the quality of life and purchasing power, overall products sold in Iceland are costly including the environmentally friendly clothing as well as the second-hand clothing (see more data from Numbeo.com <https://www.numbeo.com/cost-of-living/in/Reykjavik>).

Another barrier that emerged in this study is that there are not many stores offering sustainable or environmentally friendly clothing in Iceland. This issue was raised both in the consumer group and the group of students from the master's programme in Environment and Natural Resources. It was also brought to the attention that it would be

much more environmentally friendly if there were more stores and brands which were making clothes locally. This again comes under the category of external barrier, when the physical barrier is hindering consumers to be a pro-environmental consumer in Iceland (Chan & Wong, 2012; & Gifford et al., 2011).

Adding to the physical barrier of there being a limited number and availability of stores, the findings show that even if there are stores selling environmentally friendly clothing or if the consumers are shopping at the second-hand store, they always face an issue related to availability of specific sizes, colours, and specific style. This barrier also makes consumers spend a lot of time looking for the ideal clothing item for themselves, that wastes a lot of time and hence acts as barrier. This response can be seen coming from the all the groups except for the group of students from the master's programme in Environment and Natural Resources. The second-hand store group especially emphasized this issue and were very much aware of this barrier. The literature suggests that time is a key component when it comes to consumers' convenience, as in a study about using the internet to book international travel, and the time saving along with convenience came up to be the main reasons to use internet for travel (Heung, 2003).

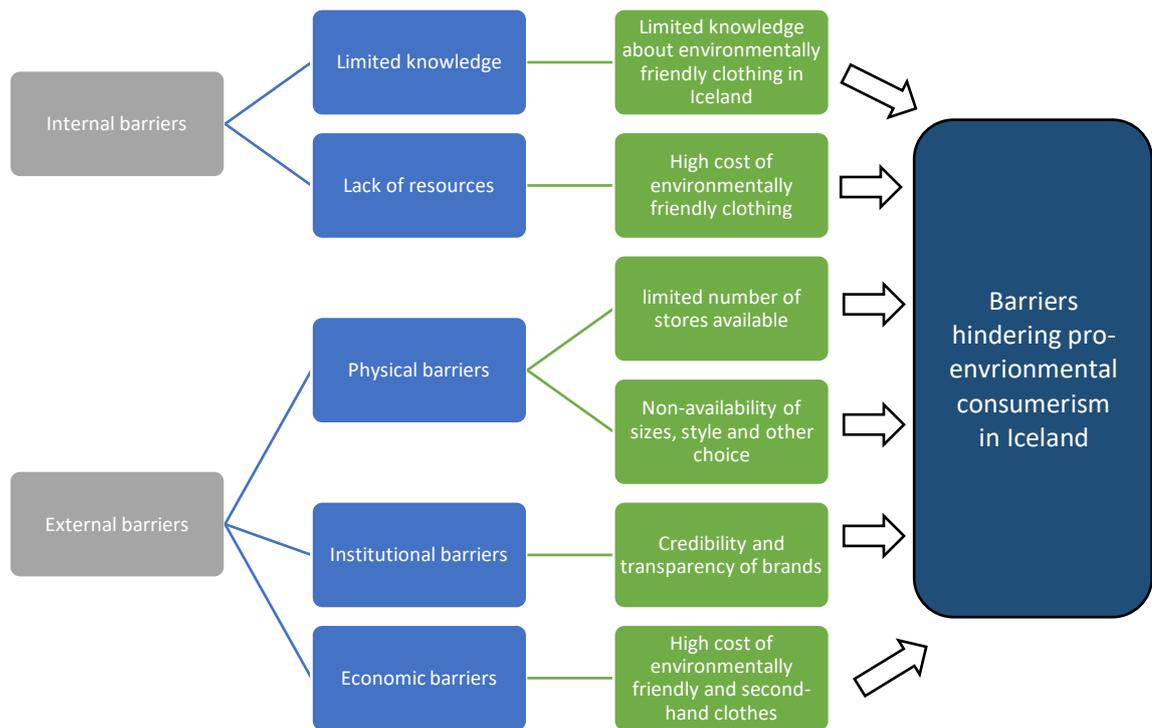
This finding also shows how looking for the ideal item from the second-hand stores requires time, additionally the participant explains how the market is small. It was described that there is an issue that in Iceland there is a small market for the second-hand clothing, also such clothing not being fashionable enough to the consumers was described as one of the barriers. This barrier is not aligned with the literature reviewed earlier and it is something new that surfaced, that explains how the small population of the country, acts as a barrier for the second-hand stores to operate. Not only for the second-hand stores, since it is a small market, there are not many types and sizes of the clothes given away, resulting in small variety of sizes and style being available in the second-hand stores.

Despite these barriers, the interviewees also pointed out that they are shopping more at second-hand stores and that the culture of buying second-hand clothes is becoming more popular in Iceland. There is a growing number of such stores across the country as informed by the second-hand store owners, and more and more people are avoiding fast fashion brands and are coming to second-hand clothing stores. Fast fashion items are

discarded within several years after they were produced, making it 22% of total world waste, and have been estimated to increase to 40% of landfilled textile in 10-year period in the US (Niinimäki et al., 2020).

Another point that emerged from the findings is how it would help consumers to a great extent if the clothes were labelled by some eco-label. On the contrary, discussion turned towards how there is confusion caused by so many eco-labels available and so many brands claiming to be environmentally friendly. The themes of trust and transparency emerged related to whom to trust and who not, which products or brands are environmentally friendly, and which are not. This can mainly be seen coming from the sessions conducted with the institutions. It was discussed that how would the consumer know that from where this recycled item is coming from or how it was recycle/produced. This barrier of trust is something new surfaced, it is also related to the fear of brands greenwashing, and concerns were raised that there is need of transparency and measuring sustainability when it comes to the environmentally friendly clothing, that complies with environmental indicators such as Sustainable Development Goal (SDGs) developed under the United Nations or Life Cycle Assessment (LCA). However, in literature it is discussed that the eco-labels provide clear information, but they are not very effective in changing behaviour and choice of the consumer, and government involvement for example, product bans, brand responsibilities, repairing options, take-bake options, and taxes, help improve consumer consumption actions (Horne, 2009).

Figure 3 depicts an overview of the barriers hindering pro-environmental consumerism in Iceland based on the findings of the study.



**Figure 3: Model of the barriers hindering pro-environmental consumerism in Iceland**

### 5.3 Government and stores encouragement of consumption of environmentally friendly clothing

For the practical contribution of the study, the interviewees were also asked about what government and the stores (brands) can do to encourage people to consumer environmentally friendly clothing more. Three sub-themes emerged, and an overview of the answers given by the all the discussion sessions about the role of government and stores in encouraging consumers to buy more environmentally clothing, are provided in the Table 7.

**Table 7: Overview of the answers provided by interviewees on role of government and stores**

	ENR Students	Consumers	Second-hand clothing stores	Institutions
Labelling on clothes	x	x		x
Financial incentives from the government	x	x	x	x

Public education and awareness	x	x	x	x
--------------------------------	---	---	---	---

Except for the second-hand stores, all the groups responded that the stores should put obvious labels or banners in the sections as well as on the clothes. Some also argued that if the labels are not there, consumers won't even know that these clothes fall into the environmentally friendly clothing category and it would help if the labels were clear and precise, not only on the clothing, but it would also be helpful to have such information clearly posted online, on the website or the social media that consumers can research before buying. It was also suggested that an eco-label can be international, from the Nordic countries or just from Iceland. An example was also given of certification active in Iceland for the tourism companies called Vakinn. Research conducted for an eco-labelled Whale Watching Tour operator in Iceland was found that most tourists were not particularly aware of the Blue Flag eco-label and didn't choose the operator based on the label but the price, since the certified operator was linked with higher prices (Lissner, & Mayer, 2020).

When it comes to what government can do to help consumers, it was emphasised that there should be incentives from the government. This response can be seen coming from the all the groups and in all the session this was the most stressed responses received in this study. The grants should in terms of lower taxes, namely value added taxes, and other sorts of subsidies for the store that are selling environmentally friendly clothing as well as for the second-hand clothing stores. More emphasise was given on the high cost for licensing and operation and highlighted that government could help reduce the tax as well as help the new start-up businesses. Local production, helping stores with rent, grants for the charities (not-for-profit) stores, are also some of the important suggestions that surfaced.

Another suggestion that surfaced for the government is to launch some sort of marketing and/or awareness campaign, that should include information about clothing and promoting second-hand stores and culture of buying and selling used clothes to reduce environmental impact. As found in the literature that culture affect the consumption choices in the society (Swim et al., 2011). Here the suggestion can be seen

coming from all the groups and much stressed was giving on promoting and nurturing the culture and consumption activities like buying and giving away used clothes, which can help consumer develop this life choices as lifestyle (Arnould & Thompson, 2005).

Also, it was also suggested to start environmental education in schools at different levels and include such information in the curriculum in schools and universities, that will educate citizens on issues including the impact of textiles on environment as well as on humans, promote use of second-hand clothes, as well educate on how to take care of a piece of clothing they own. This can be seen coming from the notion that people do not completely understand the seriousness of environmental problems like climate change (Leiserowitz, 2005), or impacts of textiles on the environment and humans (Hasanbeigi, & Price, 2015; Cervellon & Wernerfelt, 2012).

On the contrary, where education and awareness raising programmes are suggested, in the literature it can be seen clearly that relationship between knowledge and attitude about environmental issues to pro-environmental behaviour was found not to be so strong (Hines et al., 1987). The studies have shown that the after the much awareness and education, behaviours are not translated into action while shopping for environmentally friendly products, but it is bound by other limitations that consumers face (Singh & Verma, 2017). The limitations are the barriers that are mentioned before, and this was the aim of this study to find out the barriers and role of government and stores in removing those barriers.

## 6 Conclusion

The study provides information about the experience of the consumers in becoming more pro-environmental in Iceland and what kind of barriers they may face in doing so. The study contributes to the literature by exploring different kinds of barriers that hinder pro-environmental consumption in Iceland, an issue that has not been well-studied in Iceland when it comes to the textile and fashion industry. The study shows that most barriers are aligned with the literature but when it comes to the size of the population, the processes are a bit more difficult for the consumers as well as for the brands. The findings show that along with other barriers, the small population is another barrier faced in Iceland, since the market is small, there are not many stores available alongside there are very few varieties of clothes. The sizes, styles and other choices are limited, because of limited number of stores, and on the top of it, the consumers find such clothing to be expensive as compared to the big famous fast fashion brands.

The results show that there is much that the stores and government can do, that would encourage consumers to buy more environmentally friendly clothing. The stores can help by putting proper labelling that distinguish such clothing from the regular one and place it in a special designated section in the store that would help consumers know that the section only contains environmentally friendly clothing. On the other hand, the government is expected to help such stores in a way that will reduce the amount of taxes being paid by the environmentally friendly clothing stores and by the second-hand clothing stores. The government can also help in this regard by introducing some kind of grant scheme for the second-hand clothing stores, especially the ones that are not-for-profit and solely run for charity purposes.

Due to COVID-19, most of interviewees for the study found it difficult to join the time and date selected for the focus group interviewees. First, it was difficult to find a time frame that would suit everyone's time schedule, and later unforeseen commitments made it difficult for them to join. Those interviewees were later interviewed on an individual basis. The other point is the focus group interviews were conducted online and

the non-verbal cues were hard to gauge as the internet connectivity and other technical issues made it difficult for the interviewees to be fully engaged in the discussion sessions.

It is recommended that in the future studies, the focus group interviews should be conducted by meeting interviewees personally and increase the number of interviewees partaking in the study. Conducting this study on a bigger scale with more interviewees will surely help in gaining deeper insights through discussion on the topic.

## References

- Arnould, E. J., & Thompson, C. J. (2005). Consumer culture theory (CCT): Twenty years of research. *Journal of Consumer Research*, 31(4), 868-882. Retrieved from: <https://academic.oup.com/jcr/article/31/4/868/1812998>
- Austgulen, M. H. (2016). Environmentally Sustainable Textile Consumption—What Characterizes the Political Textile Consumers? *Journal of Consumer Policy*, 39(4), 441-466. Retrieved from: <https://link.springer.com/article/10.1007/s10603-015-9305-5>
- Ballew, M. T., Leiserowitz, A., Roser-Renouf, C., Rosenthal, S. A., Kotcher, J. E., Marlon, J. R., ... & Maibach, E. W. (2019). Climate change in the American mind: Data, tools, and trends. *Environment: Science and Policy for Sustainable Development*, 61(3), 4-18. Doi: <https://doi.org/10.1080/00139157.2019.1589300>
- Barrios, E. X., Bayarri, S., Carbonell, I., Izquierdo, L., & Costell, E. (2008). Consumer attitudes and opinions toward functional foods: A focus group study. *Journal of sensory studies*, 23(4), 514-525. Doi: <https://doi.org/10.1111/j.1745-459X.2008.00169.x>
- Bitner, M. J. (1992). Servicescapes: The impact of physical surroundings on customers and employees. *Journal of marketing*, 56(2), 57-71. Doi: <https://doi.org/10.1177/002224299205600205>
- Blake, J. (1999). Overcoming the 'value-action gap' in environmental policy: Tensions between national policy and local experience. *Local environment*, 4(3), 257-278. Doi: <https://doi.org/10.1080/13549839908725599>
- Cervellon, M. C., & Wernerfelt, A. S. (2012). Knowledge sharing among green fashion communities online: Lessons for the sustainable supply chain. *Journal of fashion marketing and management: An international journal*. Doi: <https://doi.org/10.1108/13612021211222860>
- Chan, T. Y., & Wong, C. W. (2012). The consumption side of sustainable fashion supply chain: Understanding fashion consumer eco-fashion consumption decision. *Journal of Fashion Marketing and Management: An International Journal*. Doi: <https://doi.org/10.1108/13612021211222824>
- Choi, S., & Kim, I. (2021). Sustainability of nature walking trails: Predicting walking tourists' engagement in pro-environmental behaviours. *Asia Pacific Journal of Tourism Research*, 26(7), 748-767. Doi: <https://doi.org/10.1080/10941665.2021.1908385>

- Chrysochou, P. (2017). Consumer behavior research methods. In *Consumer perception of product risks and benefits* (pp. 409-428). Springer, Cham. DOI: [https://doi.org/10.1007/978-3-319-50530-5\\_22](https://doi.org/10.1007/978-3-319-50530-5_22)
- Cline, E. L. (2013). *Overdressed: The shockingly high cost of cheap fashion*. Portfolio. Retrieved from: <https://books.google.is/books?id=yYzzFyBQ72oC&lpg=PT8&ots=EIXZjA36cK&lr&pg=PT8#v=onepage&q&f=false>
- Connell, K. Y. H. (2010). Internal and external barriers to eco-conscious apparel acquisition. *International Journal of Consumer Studies*, 34(3), 279-286. DOI: <https://doi.org/10.1111/j.1470-6431.2010.00865.x>
- Corry, O. (2020). Nature and the international: towards a materialist understanding of societal multiplicity. *Globalizations*, 17(3), 419-435. DOI: <https://doi.org/10.1080/14747731.2019.1676587>
- Courault, B. (2004). *Les modeles industriels de la mode: une confrontation USA, Italie, France (Industrial models for fashion: a comparison of the USA, Italy, and France). Une économie de la créativité et du patrimoine: la mode (An economy based on creativity and heritage: fashion)*. La Documentation française, Paris.
- Crompton, T., & Kasser, T. (2010). Human identity: A missing link in environmental campaigning. *Environment*, 52(4), 23-33. DOI: <https://doi.org/10.1080/00139157.2010.493114>
- Deschamps, T. C., Carnie, B., & Mao, N. (2017). Public consciousness and willingness to embrace ethical consumption of textile products in Mexico. *Textiles and Clothing Sustainability*, 2(1), 6. DOI: <https://doi.org/10.1186/s40689-016-0017-2>
- Dickson, M.A. (2000). Personal Values, beliefs, knowledge, and attitudes relating to intentions to purchase apparel from socially responsible businesses. *Clothing and Textiles Research Journal*, 18(1), 19-30. DOI: <https://doi.org/10.1177/0887302X0001800103>
- Ding, Z., Jiang, X., Liu, Z., Long, R., Xu, Z., & Cao, Q. (2018). Factors affecting low-carbon consumption behavior of urban residents: A comprehensive review. *Resources, Conservation and Recycling*, 132, 3-15. DOI: <https://doi.org/10.1016/j.resconrec.2018.01.013>
- Ding, Z., Wang, G., Liu, Z., & Long, R. (2017). Research on differences in the factors influencing the energy-saving behavior of urban and rural residents in China—A case study of Jiangsu Province. *Energy policy*, 100, 252-259. DOI: <https://doi.org/10.1016/j.enpol.2016.10.013>
- Domina, T. & Koch, K. (1998). Environmental profiles of female apparel shoppers in the Midwest, USA. *Journal of Consumer Studies and Home Economics*, 22(3), 147-161. DOI: <https://library.wur.nl/WebQuery/titel/1019116>

- Domina, T. & Koch, K. (2002). Convenience and frequency of recycling: Implications for including textiles in curbside recycling programs. *Environment and Behavior*, 34, 216. DOI: <https://doi.org/10.1177/0013916502342004>
- Donaghey, J., & Reinecke, J. (2018). When industrial democracy meets corporate social responsibility—A comparison of the Bangladesh Accord and Alliance as responses to the Rana Plaza Disaster. *British Journal of Industrial Relations*, 56(1), 14-42. DOI: <https://doi.org/10.1111/bjir.12242>
- Eryuruk, S. H. (2012). Greening of the textile and clothing industry. *Fibres & Textiles in Eastern Europe*, (6A (95)), 22-27. Retrieved from: <https://www.infona.pl/resource/bwmeta1.element.baztech-article-BPW7-0024-0009>
- Eurostat. (2018, February 27). A closer look at clothes and footwear in the EU. *Products Eurostat News - Eurostat*. Retrieved from: <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/EDN-20180227-1>
- Follows, S.B. and D. Jobber, 2000. Environmentally responsible purchase behaviour: a test of a consumer model. *European Journal of Marketing.*, 34(5/6): 723-746. DOI: <https://doi.org/10.1108/03090560010322009>
- Geissler, G. L., & Zinkhan, G. M. (1998). Consumer perceptions of the World Wide Web: An exploratory study using focus group interviews. *ACR North American Advances*. Retrieved from: <https://www.acrwebsite.org/volumes/8183/volumes/v25/NA-25>
- Gifford, R., & Nilsson, A. (2014). Personal and social factors that influence pro-environmental concern and behaviour: A review. *International journal of psychology*, 49(3), 141-157. DOI: <https://doi.org/10.1002/ijop.12034>
- Gifford, R., Kormos, C., & McIntyre, A. (2011). Behavioral dimensions of climate change: drivers, responses, barriers, and interventions. *Wiley Interdisciplinary Reviews: Climate Change*, 2(6), 801-827. Retrieved from: <https://wires.onlinelibrary.wiley.com/doi/pdf/10.1002/wcc.143>
- Girod, B., Mayer, S., & Nägele, F. (2017). Economic versus belief-based models: Shedding light on the adoption of novel green technologies. *Energy Policy*, 101, 415-426. DOI: <https://doi.org/10.1016/j.enpol.2016.09.065>
- Goldsmith, E. B. (2015). *Social influence and sustainable consumption*. Cham, Switzerland: Springer. DOI: <https://doi.org/10.1007/978-3-319-20738-4>
- Grunert, S. (1993). Everybody seems concern about the environment but is this concern reflected in consumers' food choice? *European Advances in Consumer Research*, 1, 428-433. Retrieved from: <https://www.acrwebsite.org/volumes/11481/volumes/e01/E-01/full>
- Hasanbeigi, A., & Price, L. (2015). A technical review of emerging technologies for energy and water efficiency and pollution reduction in the textile industry. *Journal*

- of Cleaner Production, 95, 30-44. DOI:  
<https://doi.org/10.1016/j.jclepro.2015.02.079>
- Hawley, J. (2006). Digging for diamonds: A conceptual framework for understanding reclaimed textile products. *Clothing and Textiles Research Journal*, 24, 262-275. DOI: <https://doi.org/10.1177/0887302X06294626>
- Hertwich, E. G. (2005). Consumption and the rebound effect: An industrial ecology perspective. *Journal of Industrial Ecology*, 9(1-2), 85-98. DOI: <https://doi.org/10.1162/1088198054084635>
- Heung, V. C. (2003). Internet usage by international travellers: reasons and barriers. *International Journal of Contemporary Hospitality Management*. Doi: <https://doi.org/10.1108/09596110310496015>
- Hiller Connell, K. Y. (2011). Exploring consumers' perceptions of eco-conscious apparel acquisition behaviours. *Social Responsibility Journal*, 7(1), 61-63. DOI: <https://doi.org/10.1108/17471111111114549>
- Hines, J. M., Hungerford, H. R., & Tomera, A. N. (1987). Analysis and synthesis of research on responsible environmental behaviour: A meta-analysis. *The Journal of environmental education*, 18(2), 1-8. DOI: <https://doi.org/10.1080/00958964.1987.9943482>
- Horne, R. E. (2009). Limits to labels: The role of eco-labels in the assessment of product sustainability and routes to sustainable consumption. *International Journal of consumer studies*, 33(2), 175-182. DOI: <https://doi.org/10.1111/j.1470-6431.2009.00752.x>
- Horska, E., & Sparke, K. (2007). Marketing attitudes towards the functional food and implications for market segmentation. *ZEMEDELSKA EKONOMIKA-PRAHA-*, 53(8), 349. Doi: <https://doi.org/10.17221/1148-AGRICECON>
- Hyllegard, K. H., Ogle, J. P., & Dunbar, B. H. (2006). The influence of consumer identity on perceptions of store atmospherics and store patronage at a spectacular and sustainable retail site. *Clothing and Textiles Research Journal*, 24(4), 316-334. Doi: <https://doi.org/10.1177/0887302x06293021>
- Kamberelis, G. (2010). *Focus Groups: Contingent Articulations of Pedagogy, Politics, and Inquiry*.
- Kim, Y. and S. Choi, 2003. Antecedents of pro-environmental behaviours: An examination of cultural values, self-efficacy, and environmental attitudes." Paper presented at the annual meeting of the International Communication Association.
- Kim, Y. and S.M. Choi, 2005. Antecedents of green purchase behaviour: An examination of collectivism, environmental concern and PCE. *Advances in Consumer Research*, 32: 592-59. Retrieved from: <https://www.acrwebsite.org/volumes/9156/volumes/v32/na->

- Kim, Y., 2002. The impact of personal value structures on consumer pro-environmental attitudes, behaviours and consumerism: A cross-cultural study. Doctoral Dissertation, College of Communication Arts and Sciences, Michigan State University. Retrieved from <https://www.proquest.com/dissertations-theses/impact-personal-value-structures-on-consumer-pro/docview/305512035/se-2?accountid=135705>
- Kitzinger, J. (1994). The methodology of focus groups: the importance of interaction between research participants. *Sociology of health & illness*, 16(1), 103-121. Doi: <https://doi.org/10.1111/1467-9566.ep11347023>
- Kollmuss, A., & Agyeman, J. (2002). Mind the gap: why do people act environmentally and what are the barriers to pro-environmental behaviour? *Environmental education research*, 8(3), 239-260. Doi: <https://doi.org/10.1080/13504620220145401>
- Lebas, A B (2017). Is consumer behaviour the same in word and deed? Consumer behaviour and the purchase of sustainable fashion products (Doctoral dissertation). Retrieved from: <http://hdl.handle.net/1946/27214>
- Lee, S. (2011). Consumers' value, environmental consciousness, and willingness to pay more toward green-apparel products. *Journal of Global Fashion Marketing*, 2(3), 161-169. Doi: <https://doi.org/10.1080/20932685.2011.10593094>
- Leiserowitz, A. A. (2005). American risk perceptions: Is climate change dangerous? *Risk Analysis: An International Journal*, 25(6), 1433-1442. Doi: <https://doi.org/10.1111/j.1540-6261.2005.00690.x>
- Lissner, I., & Mayer, M. (2020). Tourists' willingness to pay for Blue Flag's new ecolabel for sustainable boating: the case of whale-watching in Iceland. *Scandinavian Journal of Hospitality and Tourism*, 20(4), 352-375. Doi: <https://doi.org/10.1080/15022250.2020.1779806>
- Mainieri, T., E. Barnett, T. Valdero, J. Unipan, and S. Oskamp, 1997. Green buying: The influence of environmental concern on consumer behaviour. *Journal of Social Psychology*, 137(2): 189-204. Doi: <https://doi.org/10.1080/00224549709595430>
- McDonald, S., Oates, C., Alevizou, P.J., Young, W., & Hwang, K. (2006). Communication strategies for sustainable technologies: Identifying patterns in consumer behaviour. In *Integration and Communication: A Clear Route to Sustainability?* Proceedings of 13th Greening of Industry Network Conference, Cardiff.
- Micheletti, M., Follesdal, A., & Stolle, D. (Eds.). (2004). *Politics, products, and markets. Exploring political consumerism past and present*. New Brunswick: Transaction Press. Doi: <https://doi.org/10.1111/j.1944-8287.2008.tb00400.x>

- Micheletti, M., Stolle, D., & Berlin, D. (2012). Habits of sustainable citizenship: The example of political consumerism. Retrieved from: <http://urn.kb.se/resolve?urn=urn:nbn:se:su:diva-78589>
- Mora, E. (2004). Introduzione. Moda e societa. Questioni italiane (Introduction: Fashion and Society, Italian Questions). Crane, D., Questioni di moda (Fashion Questions), FrancoAngeli, Milano, 9-24.
- Mostafa, M.M, 2007. Gender differences in Egyptian consumers' green purchase behaviour: The effects of environmental knowledge, concern and attitude. *International Journal of Consumer Studies*, 31: 220-229. Doi: Mostafa, M.M, 2007. Gender differences in Egyptian consumers' green purchase behaviour: The effects of environmental knowledge, concern and attitude. *International Journal of Consumer Studies*, 31: 220-229.
- Nagarkoti, B. (2014). Factors influencing consumer behaviour of Smartphone users. Retrieved from: <https://urn.fi/URN:NBN:fi:amk-201402052040>
- Niinimäki, K. (2010). Eco-clothing, consumer identity and ideology. *Sustainable development*, 18(3), 150-162. Doi: <https://doi.org/10.1002/sd.455>
- Niinimäki, K., Peters, G., Dahlbo, H., Perry, P., Rissanen, T., & Gwilt, A. (2020). The environmental price of fast fashion. *Nature Reviews Earth & Environment*, 1(4), 189-200. Doi: <https://doi.org/10.1038/s43017-020-0039-9>
- Peñaloza, L. (1998). Just doing it: A visual ethnographic study of spectacular consumption behavior at Nike Town. *Consumption, markets and culture*, 2(4), 337-400. Doi: <https://doi.org/10.1080/10253866.1998.9670322>
- Shamdasani, P., G. Chon-Lin and D. Richmond, 1993. Exploring green consumers in an oriental culture: Role of personal and marketing Mix. *Advances in consumer Research*, 20: 488-493. Retrieved from: <https://www.acrwebsite.org/volumes/7504/volumes/v20/NA-20/full>
- Singh, A., & Verma, P. (2017). Factors influencing Indian consumers' actual buying behaviour towards organic food products. *Journal of cleaner production*, 167, 473-483. Doi: <https://doi.org/10.1016/j.jclepro.2017.08.106>
- Soutar, S.N., B. Ramaseshan and S.M. Molster, 1994. Determinants of pro-environmental consumer purchase behaviour: Some Australian evidence in Asia Pacific *Advances in Consumer Research*, eds. Joseph A. Cote and Siew Meng Leong, Provo, UT: Association for Consumer Research, 1: 28-35. Retrieved from: <https://www.acrwebsite.org/volumes/11303>
- Stávková, J., Stejskal, L., & Toufarová, Z. (2008). Factors influencing consumer behaviour. *ZEMEDELSKA EKONOMIKA-PRAHA-*, 54(6), 276. Doi: <https://doi.org/10.17221/283-AGRICECON>

- Stolle, D., & Micheletti, M. (2013). *Political consumerism. Global responsibility in action.* Cambridge: Cambridge University Press. Doi: <https://doi.org/10.1017/CBO9780511844553>
- Swim, J. K., Clayton, S., & Howard, G. S. (2011). Human behavioral contributions to climate change: Psychological and contextual drivers. *American Psychologist*, 66(4), 251. Doi: <https://doi.org/10.1037/a0023472>
- Thøgersen, J. (2014). Unsustainable consumption. *European Psychologist*. Doi: <https://doi.org/10.1027/1016-9040/a000176>
- Tilikidou, I., 2006. The effects of knowledge and attitudes upon Greeks' pro-environmental purchasing behaviour. *Corporate Social Responsibility and Environmental Management.*, 14(3): 121-134. Doi: <https://doi.org/10.1002/csr.123>
- Toprak, T., & Anis, P. (2017). Textile industry's environmental effects and approaching cleaner production and sustainability, an overview. *J Textile Eng Fashion Technol*, 2(4), 429-442. Doi: <https://doi.org/10.15406/jteft.2017.02.00066>
- UNEP. (2020). *Emissions Gap Report 2020*. Retrieved from: [https://www.unep.org/resources/emissions-gap-report-2021?\\_cldee=bmRIY29vcG1hbkbjMmcyLm5ldA%3d%3d&recipientid=contact-ecd2390327e8e81181465065f38a3ba1-b91824f65e3d49c9b5a32c23e390fbfd&esid=a361a8b3-8d38-ec11-b6e6-002248242f47#:~:text=DOWNLOAD%20THE%20FULL%20REPORT](https://www.unep.org/resources/emissions-gap-report-2021?_cldee=bmRIY29vcG1hbkbjMmcyLm5ldA%3d%3d&recipientid=contact-ecd2390327e8e81181465065f38a3ba1-b91824f65e3d49c9b5a32c23e390fbfd&esid=a361a8b3-8d38-ec11-b6e6-002248242f47#:~:text=DOWNLOAD%20THE%20FULL%20REPORT)
- Ward, P., Davies, B., & Kooijman, D. (2004). Ambient smell and the retail environment: Relating olfaction research to consumer behaviour. *Journal of Business and Management*, 9(3), 289-302. Doi: 10.1080/0267257X.2003.9728228
- Wells, V. K., Ponting, C. A., & Peattie, K. (2011). Behaviour and climate change: Consumer perceptions of responsibility. *Journal of Marketing Management*, 27(7-8), 808-833. Doi: <https://doi.org/10.1080/0267257X.2010.500136>
- Wiklund, G., Voog, H., & Kjellberg, S. (2017). It's all about keeping quiet—using focus group interviews to understand the everyday life of researchers in order to support their research. *Qualitative and Quantitative Methods in Libraries*, 3(1), 253-261. Retrieved from: <http://qqml-journal.net/index.php/qqml/article/view/135>
- Yuan, Y., Liu, G., Dang, R., Lau, S. S. Y., & Qu, G. (2021). Architectural design and consumer experience: an investigation of shopping malls throughout the design process. *Asia Pacific Journal of Marketing and Logistics*. Doi: <https://doi.org/10.1108/APJML-06-2020-0408>

## Appendix A

For Consumers (incl. ENR students):

Main questions	Theme explored	Example probe
<p><b>How would you define environmentally friendly clothing?</b>  <b>Or what is your definition of environmentally friendly clothing?</b></p>	<p>Defining environmentally friendly clothing</p>	<p>How would you define environmentally friendly clothing?            What do you think are the main characteristics of environmentally friendly clothing?            Quality of clothing, so it lasts longer.            Production method? Like water less technique?            Should have reusing and recycling possibilities?</p>
<p><b>Do you usually purchase environmentally friendly clothing?</b></p> <p><b>And</b></p> <p><b>What makes it difficult for you to purchase environmentally friendly clothing?</b></p>	<p>Barriers related to clothing</p>	<p>Do you purchase environmentally friendly clothing regularly?            Why or why not?            Would you be more like to buy more environmentally friendly clothing if there were more stores in Iceland selling environmentally friendly clothing?            Would you be more like to buy more environmentally friendly clothing if it were cheaper?            Would you be more like to buy more environmentally friendly clothing if the brands have dedicated section in store for such clothing?</p>
<p><b>What can businesses/government can do that would encourage you to buy more environmentally friendly clothing?</b></p>	<p>Motivation to change</p>	<p>Is there anything <b>businesses</b> could do that would encourage you to buy more environmentally friendly clothing?            Social media promotion?            Advertisement?            Is there anything <b>government</b> could do that would encourage you to buy more environmentally friendly clothing?</p>

For experts and people from institutions:

Research questions	Theme explored	Example probe
<p><b>How would you define environmentally friendly clothing?</b></p> <p><b>Or what is your definition of environmentally friendly clothing?</b></p>	<p>Defining environmentally friendly clothing</p>	<p>How would you define environmentally friendly clothing?            What do you think are the main characteristics of environmentally friendly clothing?            Quality of clothing, so it lasts longer.            Production method? Like water less technique?            Should have reusing and recycling possibilities?</p>
<p><b>Are there any barriers faced by the consumers while shopping in order to be pro-environmental consumers?</b></p>	<p>Barriers related to clothing</p>	<p>Do you think consumers purchase environmentally friendly clothing regularly?            Why or why not?            Do you think consumers would buy more environmentally friendly clothing if there were more stores in Iceland selling environmentally friendly clothing?            Do you think consumers would buy more environmentally friendly clothing if it were cheaper?            Do you think consumers would buy more environmentally friendly clothing if the brands have dedicated section in store for such clothing?</p>
<p><b>What can businesses/government can do that would encourage consumers to buy more environmentally friendly clothing?</b></p>	<p>Motivation to change</p>	<p>Is there anything <b>businesses</b> could do that would encourage consumers to buy more environmentally friendly clothing?</p> <p>Is there anything <b>government</b> could do that would encourage consumers to buy more environmentally friendly clothing?</p>

For second-hand store owners:

Research questions	Theme explored	Example probe
<p><b>How would you define environmentally friendly clothing?</b></p> <p><b>Or what is your definition of environmentally friendly clothing?</b></p>	<p>Defining environmentally friendly clothing</p>	<p>How would you define environmentally friendly clothing?</p> <p>What do you think are the main characteristics of environmentally friendly clothing?</p> <p>Quality of clothing, so it lasts longer.</p> <p>Production method? Like water less technique?</p> <p>Should have reusing and recycling possibilities?</p>
<p><b>Are there any barriers faced by consumers while shopping in order to be pro-environmental consumers?</b></p>	<p>Barriers related to clothing</p>	<p>Do you think consumers purchase environmentally friendly clothing or second-hand clothes regularly? Why or why not?</p> <p>Do you think consumers would buy more environmentally friendly clothing if there were more stores in Iceland selling environmentally friendly clothing?</p> <p>Do you think consumers would buy more environmentally friendly clothing if there were more second-hand stores in Iceland?</p> <p>Do you think consumers would buy more environmentally friendly clothing or second-hand clothes if it were cheaper?</p> <p>Do you think consumers would buy more environmentally friendly clothing if the brands have dedicated section in store for such clothing?</p>
<p><b>What can businesses/government can do that would encourage consumers to buy more environmentally friendly clothing?</b></p>	<p>Motivation to change</p>	<p>Is there anything <b>businesses</b> could do that would encourage consumers to buy more environmentally friendly clothing?</p> <p>Is there anything <b>government</b> could do that would encourage</p>

		consumers to buy more environmentally friendly clothing?
--	--	--