IIIEE Theses 2016:30

Influence of consumer behaviour on the circular economy application.

The case study of a revival strategy for home textiles at IKEA

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Thesis for the fulfilment of the
Master of Science in Environmental Management and Policy
Lund, Sweden, September 2016

iiiee
THE INTERNATIONAL INSTITUTE FOR
INDUSTRIAL ENVIRONMENTAL ECONOMICS

Published in 2016 by IIIEE, Lund University, P.O. Box 196, S-221 00 LUND, Sweden,
Tel: +46 – 46 222 02 00, Fax: +46 – 46 222 02 10, e-mail: iiiee@iiiee.lu.se.

ISSN 1401-9191

Acknowledgements

First of all, I would like to acknowledge my supervisor, Prof. Oksana Mont, for her support, patience, and extremely generous and helpful guidance during every single phase of this thesis. She pushed me to confidently take this challenging topic and give the maximum I could. Thank you so much for keeping me focused and motivated during the stressful times with the survey data collection and analysis!

A special thank you goes to the IKEA Textile Revival Project team: Peter Abrahamsson Lindeblad, Lina Fogelberg, Gustav Falkå, Yngvill Ofstad and others. Thank you so much for involving me as a team member since the very first day and for the amazing work together. It made my thesis writing experience really pleasant and enriching. My acknowledgements also go to the Transformator Design team, for helping with the preparation and data analysis of consumers interviews, and to the Apsis team for supporting me with the administration of the survey. Thank you Agneta Nevell for working with me throughout the entire summer! My work would not have been so extensive and valuable without your support.

Findings from this study would not be as relevant and rich without the contribution by all the interviewed representatives, who showed great support and interest in my research. Special acknowledgments go to Prof. Luis Mundaca for supporting me with designing the survey, and to Prof. Naoko Tojo, for providing me insights into the discussion on EPR policy for textiles in Sweden.

Thank you all my batch mates for such a learning and exciting experience! I felt like having an enlarged international family, and I will keep all the group projects, the trips and the thesis panic attacks in my heart. A special thank you goes to my special friends: Marta, Nash and Lexie. Thank you so much for always being there for me. You are the reason I could stay strong and get to the end of this Master Programme.

The biggest thank you goes to my boyfriend, Federico. Notwithstanding the distance, you have always been there for me, through the pleasant moments and the most challenging ones. Thank you for spending your summer in Sweden with me while I was sitting endless hours in front of my computer writing.

Last but not least, a special thank you goes to my family, for always being there for me and encouraging me to do my best. Life far away from home can be tough sometimes, but seeing you so proud of me and my achievements is one of the greatest rewards I am receiving from this experience.

I want to dedicate this work to my mother, Stefania, who passed away on October 6th 2015. I know you've been next to me throughout the entire course of this program and that you will be watching over me with what will be coming next. I love you.

Abstract

Notwithstanding the increasing environmental awareness among consumers, researchers do not witness a substantial shift in consumption and disposal behaviour of textiles. Since research on disposal behaviour of home textile products is currently limited, it is relevant to explore consumers' decision-making when handling no-longer-wanted home textiles. This thesis aims to better understand consumers' disposal behaviour with home textiles and factors that influence it and thereby contribute to the process of devising a closed-loop system in Sweden. The thesis employs psychological theories and attempts to unveil relationships among observable variables and behaviour. Both qualitative and quantitative data are gathered through desk research of existing literature, interviews with 24 randomly-selected consumers, interviews with 4 projects'/companies' representatives and 1 EPR expert, and a survey involving 238 IKEA FAMILY subscribers. Findings demonstrate that donation and reusing are the two most preferred handling options, followed by repair, discard and resell. The analysis identifies a large number of factors potentially influencing textiles disposal behaviour, including personal variables, product characteristics, and situational variables. Additional external factors identified by this research are: incentives for returning, transparency of the system, number and characteristics of involved players, and trust in the collector. Incentives to participate in circular schemes for textiles are: financial rewards; public recognition; co-creation of solutions; transparency; and trust in players handling the system. Major obstacles are identified both at the individual and the societal level. Overall, there is no strong driver for consumers to sort or return textiles, requiring education and guidance by policy makers and companies in adopting sustainable habits. Directions for further research include observing consumers' disposal behaviour with home textiles, studying correlations between demographic variables and behaviour, an in-depth study on internalization of social norms and its impact on disposal of home textiles, as well as analysis of strategies for companies and policy makers.

Keywords: consumers' disposal behaviour, home textiles, waste handling strategies, drivers and barriers for circular systems, environmental awareness.

Executive Summary

As the world population is growing, so does the associated consumption increase and consequently environmental impacts. The linear economic model (take-make-dispose) is responsible for extensive depletion of natural resources, volatile prices and unsustainable waste production. This is relevant for the textile sector - the second most polluting industry in the world after the oil industry. Purchasing second hand textile products is one way to reduce environmental impacts of textiles. For example, a life-cycle assessment study by Farrant et al. (2010) demonstrates that purchasing eleven used garments could save the production of 60-85 garments from virgin materials. Several textile and fashion businesses are currently starting to implement closed-loop systems for textiles. Recent years have seen a significant number of published reports on the importance of developing sustainable strategies for resource use (e.g. Ellen MacArthur Foundation, 2012 and McKinsey, 2011). In December 2013, *Naturvardsverket*, the Swedish environmental protection agency, set ambitious goals for managing textile waste in Sweden.

However, circular business models cannot be developed and operationalized without the involvement of consumers. The European Commission identifies textile waste as a priority issue and consumers as key economic actors for driving the process from a linear economy to a circular one. The EC especially recognizes that, through their purchasing, use and disposal choices, consumers can support or hinder the spreading of the circular economy. These choices are shaped by the information consumers have access to, the range and prices of existing products, and the regulatory framework (European Commission, 2015).

Textile consumption in Sweden has steadily increased by almost 40% between 2000 and 2009 (Ekström and Salomonson, 2012). In 2010, Swedish citizens consumed 131,830 tons (15 kg per citizen) of textiles. Circa 36,130 tons were home textiles (Tojo et al., 2012). Textile recycling levels in Sweden are relatively low at the moment, partly due to the lack of a national collection system, the small amount of textile waste produced, and residents' low involvement in sorting and returning textiles (Ekström & Salomonson, 2014). Notwithstanding this, producers and retailers in Sweden acknowledge the large potential of the second hand market for textiles. Indeed, Swedish consumers are already highly aware and experienced with sorting and recycling different materials. This implies that the introduction of a textile collection scheme in Sweden would meet positive reactions and lead to effective implementation.

Notwithstanding the increasing environmental awareness observed among consumers, researchers do not witness a substantial shift in consumption of home textiles and disposal behaviour. In order for circularity in the textile sector to expand, it is important to involve consumers at an early stage of business solutions design. This requires additional research on what consumers' needs are, the factors influencing their consumption and disposal choices, and most importantly, effective ways to involve them in closed-loop systems. Consumers tend to have a different degree of emotional and economic attachment to home textiles compared to clothes, but most of the available research focuses on disposal of garments. Since research on consumers' disposal behaviour of home textile products is currently limited, it is important to explore consumers' drivers and barriers when making decisions on how to handle no-longer-wanted home textiles.

The goal of this research is to understand consumers' motivations and needs when disposing of home textiles, and to identify ways to stimulate them to reuse and recycle. This knowledge is vital for companies like IKEA when they devise a textile revival scheme. Consequently, this research assesses the point of view of the consumers in relation to unwanted home textiles and best solutions to dispose of them. The analysis inevitably includes psychological factors, such as emotional attachment and feelings about the product, sense of guilt and responsibility, as well

as the influence of routines and habits.

This thesis aims to provide input to the process of devising a closed-loop system for home textiles in Sweden by analysing consumers' disposal behaviour of home textiles and factors that may influence it to enable and support a closed-loop scheme. In order to reach this goal, the following research questions are investigated:

RQ1: What disposal strategies for home textiles do Swedish consumers employ?

RQ2: Which factors influence consumers' disposal behaviour?

RQ3: What are the main drivers and barriers for consumers to engage in a closed-loop scheme?

The focus of the research is on Swedish consumers' behaviour and factors that affect them when disposing of unwanted home textiles. Data collected through this research is included in the pre-study phase of the IKEA Textile Revival Project. An in-depth analysis of existing literature on Circular Economy (CE) applied in the textile sector and an overview of consumers' behaviour literature is carried out. Research is based on three relevant theories: Theory of Reasoned Action (TRA) together with Theory of Planned Behaviour (TPB) by Fishbein & Ajzen (1975); the Altruistic Behaviour Model (ABM) by Schwartz (1977); and the Cognitive Dissonance Theory (CDT) by Festinger (1975). Since these theories analyse different but complementary aspects of human behaviour, they are merged to constitute the analytical framework of this research. Both quantitative and qualitative data are collected through five semi-structured interviews with companies and municipality representatives and an expert on EPR policy; twenty-four face-to-face interviews with randomly-picked consumers; an online survey involving 238 IKEA FAMILY members residing in Sweden; communication through phone and emails with IKEA staff in Sweden.

Findings from both the survey and the interviews with consumers confirm the textile waste handling categorization developed by Jacoby et al. (1977), with donation and reusing being the two most preferred textile waste handling options, followed by repair, discard and resell. Most interviewees have their own waste hierarchy in the house, supporting findings by Domina and Koch (2002). Clustering of information collected from interviews allows the identification of four major behavioural profiles of consumers: Trendy/Updater, Good to Have, Downshifter, and Nostalgic. Several consumers participating in interviews are familiar with closed-loop schemes and many purchase second hand textiles. However, this trend is not common for home textiles. Major reasons could be concerns about hygiene and sense of aesthetics and fashion. A general lack of concern for and awareness about sustainable consumption is also observed.

The literature analysis identifies a large number of factors potentially influencing textiles disposal behaviour. These are personal variables (i.e. age, gender, income, education, social class, environmental awareness, personality characteristics, attitude about personal control and recycling importance); product's characteristics (i.e. economic, functional and emotional value) and situational variables (i.e. absence of infrastructure for textile waste sorting and collection, difficulty in identifying charity collection points, and lack of means of transportation to reach a collection point/store). Overall, the most influencing factors driving consumers' behaviour are knowledge of issues, perceived behavioural control, knowledge of action strategies, convenience, habit, moral obligation and influence from others (e.g. partner, children, parents etc.). Interviews for this research identify additional external factors influencing behaviour not mentioned in the literature: incentives for returning textiles, transparency of the system, number and characteristics of participants involved, and trust in the collector. Regarding norms, a direct connection between social norm and actual behaviour cannot be identified in the survey. Notwithstanding this, overall the application of TRA is a promising approach for predicting

Swedish consumers' behaviour with home textile waste handling. Participants' responses reflect the necessity to counterbalance a sense of guilt experienced when getting rid of textiles, as Schwartz's (1977) Altruistic Behaviour Model argues.

Consumers' participating in interviews highlight the following incentives to participate in circular schemes for textiles: financial rewards; feedback and public recognition for doing 'good'; knowledge on what their efforts can lead to and how they can co-create solutions together with policy makers and companies; transparency and control; and trust in the companies/agencies/organizations handling the system. Major obstacles to pro-environmental behaviour are identified both at the individual (i.e. responsibility, interest, attitudes towards consumption, education, income, value priorities and complexity of a consumer's actions and environmental issues) and the societal level (i.e. legislation, family education, influence from friends and neighbours, injunctive and descriptive norms, incentives, infrastructure). Lack of awareness about impacts from textile waste and individual responsibility prove to be highly influential in disposal patterns both in the literature and in conversations with consumers. A major factor that arises during interviews is that when consumers do not perceive any functional value in the product, they think that the textile cannot be reused or donated and they discard it. Companies and charity organizations are therefore missing large quantities of textiles. Convenience and practicality are also identified as important factors for the involvement of consumers in closed-loop systems.

Last, the interesting finding that summarizes communications both with consumers and representatives of companies and projects is that there is no strong consumer need to sort or return textiles back. This indicates the necessity for consumers to be educated and guided by policy makers and for companies to adopt sustainable habits with textiles management. Many interviewees recognize this necessity, as they express a clear sense of guilt. Consequently, IKEA has a window of opportunity as a big retail company in influencing sustainable consumption and disposal behaviour. Consumer information and education are key factors in the process of taking responsibility for home textile waste. It is fundamental for them to understand the importance of textile recycling, as well as to feel the moral obligation about it. Both retailers and policy makers can therefore focus on education-related barriers and stimulate more sustainable behaviour.

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Abbreviations

ABM: Altruistic Behaviour Model.

AC: Awareness of Consequences.

CDT: Cognitive Dissonance Theory.

CE: Circular Economy.

EC: European Commission.

EPA: Environmental Protection Agency.

EPR: Extended Producer Responsibility.

MS: Member State.

PBC: Perceived Behavioural Control.

PCE: Perceived Consumer Effectiveness.

RD: Responsibility Denial.

SBI: Sustainable Brand Index.

TPB: Theory of Planned Behaviour.

TRA: Theory of Reasoned Action.

WFD: Waste Framework Directive.

1 Introduction

1.1 Background and problem statements

As the world population and its middle class consumption increase at a constant pace, the pressure on the environment increases. The linear economic model "take-make-dispose" is responsible for extensive natural resources depletion, volatile prices, and unsustainable waste production. Prices of cotton have especially risen in the last two decades, with a peak to 150 year high in June 2011 (Buttle, Vyas & Spinks, 2013). This is relevant when looking at the textile sector, considered the second most polluting industry in the world after the oil industry. The production of cotton is currently responsible for the world consumption of 25% of insecticides and 11% of pesticides. Between 7.000 and 29.000 litres of water are required for the cultivation of 1 kg of cotton, while wet processing of the fibres is highly water and chemical intensive (Hemkaus, 2016). Purchasing second hand textile products is a way to tackle this problem. For example, a life-cycle assessment study by Farrant et al. (2010) demonstrates that purchasing eleven used garments could save the production of 60-85 garments from virgin materials. Considering these environmental challenges, several textile and fashion businesses are currently starting to implement textile closed-loop systems. Clothes collection schemes by popular companies like H&M are an example. Since 2013, the Swedish fashion brand is running a take-back scheme for all kinds of textiles. Customers can go to any store and get a discount voucher on new purchases for each bag of textiles returned. Other brands, like Marks&Spencer, Esprit, Hemtex, KappAhl etc. offer similar services with the help of I:Collect, a company responsible for the handling of returned textiles. Other smaller companies opt for a hands-on approach, being directly responsible for take-back and repair services. An examples is the Swedish company Nudie Jeans.

The need for a shift toward sustainability is surely here. Recent years have seen a significant number of published reports on the importance of the development of sustainable strategies for resource uses (e.g. Ellen MacArthur Foundation: Towards the Circular Economy: Economic and business rationale for an accelerated transition, 2012. McKinsey: Resource Revolution: Meeting the World's Energy Materials, Food and Water Needs, 2011). In December 2013, *Naturvardsverket*, the Swedish environmental protection agency, set ambitious goals for the management of textile waste in Sweden. Targets are set for the year 2020 and include 40% of reused textiles introduced to the market and 25% should be recycled (Johnsson & Selin, 2015). However, circular economy business models cannot be developed and operationalized without the involvement of consumers. This has an inevitable impact on their purchasing and disposal behaviour. A widely-used definition of consumer behaviour is the one by the American Marketing Association Dictionary: "The dynamic interaction of affect and cognition, behaviour, and the environment by which human beings conduct the exchange aspects of their lives".

The European Commission identifies textile waste as a priority issue and consumers as key economic actors in driving the process from a linear economy to a circular one. It especially recognizes that, through their purchasing, use and disposal choices, consumers can support or hinder the spreading of the circular economy. These choices are shaped by the information they have access to, the range and prices of existing products, and the regulatory framework (European Commission, 2015). European consumers are currently producing 5.8 million tons of textile waste yearly. Circa 1.5 million tons (25%) are recycled by charity organizations and businesses. The remaining 4.3 million tons are either incinerated or discarded in a landfill. Since December 2008, a revised Waste Framework Directive (WFD) is in place. The main requirement of Directive 2008/98/EC for all Member States (MSs) is the management of waste according to the hierarchy presented in Figure 1-1 without endangering human health and harming the environment. Considering the fact that textiles are almost completely recyclable, waste

prevention, repairing, and recycling are easily reachable outcomes. This can have a positive impact on the environment, considering the avoided textiles being incinerated or ending up in the landfill, as well as the saved raw resources, chemicals, and energy needed for the production of new products.

Figure 1-1. EU Waste Hierarchy

Source: European Commission (2016)

Textile consumption in Sweden is experiencing a steady increase, almost reaching 40% between 2000 and 2009 (Ekström and Salomonson, 2012). In 2010, Swedish citizens consumed 131,830 tons (15 kg per citizen) of textiles. Circa 36,130 tons were composed by home textiles (Tojo et al., 2012). As Figure 1-2 shows, circa 74,000 tons of textiles are thrown away. Textiles collected for donations are usually accumulated and sorted in a central storage area and later distributed, partly at the national level and partly abroad. Circa 26,000 tons (3 kg per citizen) go to the second hand market, handled mostly by Non-Governmental and Charity Organizations authorized by the Swedish municipalities. Major players are *Myrorna*, *Erikshjälpen*, *Röda Korset*, *Läkarmissionen*, *PMU Intertrade*, *Stockholms stadsmission*, *Humana Sverige* and *Emma's Björkå*. Around 70% of the textile collected by organizations (19,000 tons, 2.1 kg per citizen) is shipped outside of Sweden, especially to Eastern Europe, Germany, Holland, and the Baltic States (Ekström, 2015). Only 3,000 tons of textiles are redistributed to consumers by second hand stores and thrift shops inside Sweden. The remaining 70,000 tons from users and 4,000 tons from the second hand market end up in the waste management system and are incinerated (Johnsson & Selin, 2015). The Swedish Environmental Protection Agency (EPA) has estimated that circa 60% of incinerated textiles are unworn or in good conditions to be reused or recycled. Around 58% of the products incinerated are composed by pure cotton; while only 10% falls in the category of products with higher risks to contain dangerous substances, such as textiles with plastic printing, outdoor textiles, and working clothes (Forsberg, 2016).

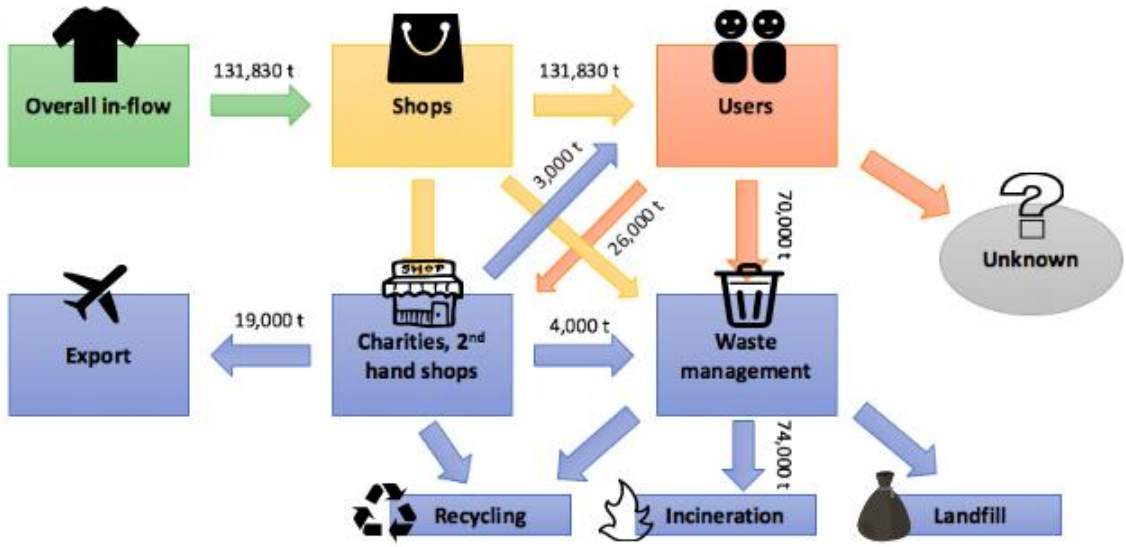

Figure 1-2. Textile flow in Sweden (2010)

Source: Porse (2014), numbers by Tojo et al. (2012)

Mistra Future Fashion defines disposal without redistribution as "throwing away unwanted garments which go directly to the landfill" (Gwozdz et al., 2013, p.56). According to Domina and Koch (2002), this usually happens with unwanted textiles that are considered not suitable for donation to charities. Table 1-1 shows the different redistribution channels textiles can go through.

Table 1-1. Overview of textile redistribution channels.

	Direct Redistribution	**Indirect Redistribution**
With Remuneration	Garage sales, flea markets, or dassified ads.	Second-hand retailers, auctions, consignment shops, pawn shops etc.
Without Remuneration	Hand-me-downs: the passing on of unwanted items to individuals.	Any form of charity that takes over the task of passing the item further on without gaining a profit, or using a potential profit for charitable acts.

Textile recycling levels in Sweden are relatively low at the moment, partly due to the lack of a national collection system and the small amount of textile waste produced. In addition to this, residents might see the time and distance invested in traveling to a recycling centre as a too high trade-off (Ekström & Salomonson, 2014). A survey among young Swedish consumers show that circa 60% of them never use a repair service by a tailor shop, while 90% declare that a tailor shop is not a solution they opt for when they need to repair textiles (Tojo et al., 2012). Notwithstanding this, producers and retailers in Sweden are acknowledging the large potential for the second hand market for textiles. Indeed, Swedish consumers are already highly aware and experienced with sorting and recycling different materials. This implies that the introduction of a textile collection scheme in Sweden would meet positive reactions and lead to effective implementation. A survey by the Municipality of Gothenburg in 2012 highlights 3 major factors for a successful textile collection and recycling scheme in Sweden: 1) the proximity of collection

points; 2) the need for more information about the environmental benefits of reusing clothes; and 3) more confidence in the collecting organizations. An obstacle identified by the Swedish Trade Style organization is the currently unclear Swedish legislation on textile waste limiting business opportunities. Swedish municipalities currently have no responsibilities over textile collection and recycling. However, when textiles are discarded into the trash can, they are labelled as waste, and therefore are legally under the ownership of the municipality (Tojo et al., 2012). A clarification on the roles played by different bodies is therefore needed. Swedish Trade Style suggests that consumers and businesses should have the freedom to choose which body should take care of the textiles. A survey by Ungerth (2011) among 1,000 Swedish consumers concludes that 70% of respondents positively comment on a more regulated collection system for used textiles. Regarding the nature of the collection system, answers to the survey are highly diverse: 27% express their preference for a collection points system, 28% want a deposit refund system; whereas 15% have no clear preference between the two options (Tojo et al., 2012).

Notwithstanding the increasing environmental awareness observed among consumers, researchers do not witness a substantial shift in consumption and disposal behaviour, showing relevant gaps in values-action as well as knowledge. In order for circularity in the textile sector to expand, it is important to involve the consumers at an early stage of business solutions design, for assessing their preferences and being able to tailor offerings and communication accordingly. This requires additional research on what consumers' needs are, the factors influencing their consumption and disposal choices, and most importantly, effective ways to involve them in closed-loop systems. Consumers tend to have a different degree of emotional and economic attachment to home textiles compared to clothes, but most of the available research focuses on disposal of garments. Since research on consumers' disposal behaviour of home textile products is currently limited, it is important to explore consumers' drivers and barriers when making decisions on how to handle no-longer-wanted home textiles. The goal is to understand consumers' motivations and needs when disposing of home textiles, and to identify ways to stimulate consumers to reuse and recycle. This knowledge is vital for companies like IKEA when they devise a textile revival scheme. Therefore, this research assesses the point of view of the consumers in relation to unwanted home textiles and best solutions to dispose of them. The analysis inevitably includes psychological factors, such as emotional attachment and feelings about the product, sense of guilt and responsibility, as well as the influence of routines and habits.

1.2 Aim and research questions

This thesis aims to provide input to the process of devising a closed-loop system for home textiles in Sweden by analysing consumers' disposal behaviour of home textiles and factors that may influence it to enable and support a closed-loop scheme. In order to reach this goal, the following research questions are investigated:

RQ1: What disposal strategies for home textiles do Swedish consumers employ?

RQ2: Which factors influence consumers' disposal behaviour?

RQ3: What are the main drivers and barriers for consumers to engage in a closed-loop scheme?

The intended outcomes of this study are: 1) to understand the current situation for home textile recycling schemes in Sweden and the actors involved; 2) to analyse consumers' decision-making process and behaviour when they want to dispose of home textile products; 3) to identify factors that influence consumers' disposal behaviour; and 4) to understand drivers and barriers. A brief look at the changing Swedish policy context is provided as well in the discussion, considering the imminent implementation of an EPR policy for textiles.

1.3 Limitations and scope

The focus of the research is on Swedish consumers' behaviour and factors that affect them when disposing of unwanted home textiles. The research focuses exclusively on the Swedish sample, as it has high priority in the project and this author has direct access to it. The following items are included in the category of home textiles for the analysis:

- rugs;
- bedroom textiles: bed linen, comforters, bedspreads, blankets & throws, pillows, mattress & pillow protectors, canopies & bed tents, sleeping bags for babies;
- curtains & blinds;
- fabrics;
- cushions & cushion covers;
- kitchen textiles: kitchen towels, aprons, pot holders, and oven mitts;
- table linen: place mats, coasters, table cloths & runners, chair pads; and
- bathroom textiles: towels, bath mats, shower curtains.

Items such as carpets and textiles that are integrated parts of other products, such as furniture, are not included in this study for simplicity purposes.

1.4 Ethical consideration

This research is being conducted under the scope of the IKEA pre-study for the Textile Revival Project. Initial communication with stakeholders involved and experts on the literature is monitored and facilitated by the supervisor, Professor Oksana Mont, and the project contacts at IKEA, Peter Abrahamsson Lindeblad and Lina Fogelberg. All stakeholders contacted for the primary data collection provide their consensus in being recorded during the interviews and having their names and information provided mentioned in this paper after revising the content of the quotes. A large quantity of data is collected from publicly available reports and official websites. Sensitive data provided by IKEA is treated only internally and not mentioned in this paper.

1.5 Intended audience

This thesis is written for the completion of the Master of Science Programme in Environmental Management and Policy held at the International Institute for Industrial and Environmental Economics (IIIEE), Lund University. Staff and students of the Institute have open access to it. The data presented is included in the pre-study phase of the IKEA Textile Revival Project and further expanded by IKEA staff involved in the research. Access is also granted to interviewed representatives and contacts mediators: Selma Österöm, Projektledare FixaTill, Lund Kommun; Lena Wallin, kommunikatör, Lunds Renhållningsverk; Connor Hill, Sustainability Manager at Adidas Group; Fredrika Klarén, Sustainability Manager at KappAhl; and Harsha Vardhan, responsible for closed-loop system at H&M.

1.6 Disposition

Chapter 2 provides an in-depth analysis of some of the existing literature on Circular Economy (CE) applied in the textile sector and an overview of consumers' behaviour. Considering the wide variety of theories and approaches used by scholars to analyse consumption and disposal behaviour, this research is applying the three most used theories: Theory of Reasoned Action (TRA) together with Theory of Planned Behaviour (TPB) by Fishbein & Ajzen (1975); the Altruistic Behaviour Model (ABM) by Schwartz (1977); and the Cognitive Dissonance Theory (CDT) by Festinger (1975). Since these theories analyse different but complementary aspects of human behaviour, they are merged to constitute the analytical framework of this study. The

model is designed to compensate for the limitations presented in previous research, and to make the analysis of the case study on Swedish consumers' home textile disposal habits more complete. The data collection and analysis method is also presented in this chapter.

Chapter 3 presents the research methodology, the definitions guiding the research, the secondary and primary data collection methodology, and its analysis approach.

Chapter 4 presents the context of the IKEA Textile Revival Project and summarises the findings of the research. Four semi-structured interviews with companies and municipality representatives; twenty-four face-to-face interviews with randomly-picked consumers; an online survey directed to IKEA FAMILY members residing in Sweden; communication through phone and emails with IKEA staff in Sweden, as well as desk research are used to collect both quantitative and qualitative data.

Chapter 5 presents an analysis of the findings collected through the lenses of the analytical framework. The section includes a comparison of the results of the literature analysis with the data collected as well as an analysis of the contribution of this study both for IKEA and for the research field.

Chapter 6 presents the discussion. Here the author takes a step back from the immediate subject of the study and critically analyses what has been done: the methods, the theory, and the final results. A further analysis of how the application of the framework influences the results, the formulation of the research question, and what could be done in a different approach is inserted as well.

Chapter 7 provides the major conclusions of the analysis, checks if the research questions have been answered and explains the contribution this paper is making in light of the IKEA Textile Revival Project and the existing literature. Further questions for future analysis and limitations of the research are presented as well.

2 Literature analysis

The focus of the literature analysis is on two fields. Since the textile disposal behaviour is analysed in the scenario of the IKEA Textile Revival Project, this section starts with a review of the context of Circular Economy (CE). Thereafter, the analysis goes on with a review of consumers' decision-making and disposal behaviour. Theories and previous research in the field of textile disposal are analysed with the intention to gain insight on what is already known, the gaps in the literature, and the general ambiguity due to studies presenting different findings. Due to the limited availability of research on disposal behaviour of home textiles, this research provides an overview of literature regarding disposal of clothing. The author is aware about the fact that clothes are emotional products for consumers, while home textiles are more functional products, which has inevitable implications for consumers' disposal behaviour. Specific focus is on decision-making phases individuals go through, the concepts of attitude, intention, and behaviour, as well as the internal and external factors influencing them. Three psychologically based theories: Theory of Reasoned Action (TRA); Altruistic Behaviour Model (ABM); and Cognitive Dissonance Theory (CDT) are used to shape the theoretical framework guiding this research in the analysis of the case study. They are used as analytical lenses to categorize and understand the findings from the interviews with projects' and companies' representatives, consumers, and the online survey with IKEA FAMILY members. Both analysis of previous research and the analytical framework highlight the importance of psychological themes influencing disposal behaviour, such as norms/moral obligation, needs, guilt etc.

2.1 The context of Circularity

2.1.1 Definition & Drivers

According to the Ellen MacArthur Foundation (2015), CE has the following characteristics: it is systemic by design, close-looped, restorative, waste-free, based on effectiveness, and runs on renewable energy. Literature research and the case study of IKEA identify the following major factors stimulating circular economy:

- the price and supply risks of raw materials for the production of new products due to increasing droughts and social issues in producing countries in politically and economically unstable areas;
- natural systems degradation due to rising population, with consequent increase in product demand and production;
- regulatory trends, starting from the amendment of several EU directives including CE in Member States (MSs) policies; and
- advances in technology, which permit the reintegration of both pre- and post-consumer waste (so-called by-product) back in the production chain.

Major opportunities arising from the implementation of circular business models are sustainable economic growth for businesses; net material cost savings in the production of products; increased price stability and security of supply; new demand for services; increased interaction with consumers and consequent higher loyalty; reduced obsolescence of products; opportunities for the creation of new job positions; reduced consumption of raw materials; reduced water and air emissions.

2.1.2 The EU strategy and implications for circularity

The European Commission (EC) has recently updated its Circular Economy Package, in which an overview titled Closing the Loop and a non-binding EU Action Plan for the Circular Economy are presented. The goal of the new package is to encourage resource efficiency in the EU through new eco-design standards, strategic applications on chemicals and plastics, targeted

waste management, consumption, and public procurement. The document proposes amendments of the following directives: Directive 2008/98/EC on waste; Directive 94/62/EC on packaging and packaging waste; Directive 1999/31/EC on the landfill of waste; Directive 2000/53/EC on end-of-life vehicles; Directive 2006/66/EC on batteries and accumulators and waste batteries and accumulators; and Directive 2012/19/EU on waste electrical and electronic equipment.

Special attention is reserved to the incentivizing of repair levels/durability and disassembly of products. Recycling targets are set to achieve 60% by 2025 and 65% by 2030 (defined by the weight of the waste inputted into the recycling/reuse system). In 2017, the EC will publish an Eco-design Working Plan, starting from electronic products and later applying to the rest of products groups. The package is expected to include an EPR scheme applicable in all MSs on the basis of the end-of-life costs of products as a financial tool incentivizing companies to make their products more durable, easier to repair/reuse/recycle. Other financial tools, such as consumption taxation based on the environmental footprint of products, are included in the package as a tool to encourage an efficient application of the EU Waste Hierarchy. Regarding the market for secondary raw materials, the EC is designing specific quality standards to be applied in all MSs with the goal to encourage secondary market expansion. A real game-changer in the amendment of the Waste Directive is the use of the term "waste". MSs are required to make a clear difference between waste and secondary materials that could be reused, in order to guarantee more efficiency. The EC is recognizing that waste management has the highest priority, and it is expecting to provide EUR 5.5bn in project financing.

2.1.3 Circular Economy within the textile sector

Increased legislative focus on circularity in the textile sector aims at making textile collection and recycling the new social norm. This inevitably implies investments in education and raising awareness among consumers. CE is not a new concept to consumers. Swedish citizens are particularly familiar with sorting and returning different materials, such as batteries, aluminium cans, and plastic bottles. However, when it comes to textiles, both legislation and society's norm fall slightly behind. Figure 2-1 is a representation of the Gartner Hype Cycle, generally used to illustrate different stages of societal awareness about a specific concept. Here the concepts of CE and CE in the textile industry are placed on the curve according to data presented by Johnsson and Selin (2015). The graph shows that after going through the phases of Innovation Trigger and the Peak of Inflated Expectations, in which the new business model is at the centre of media coverage and in the focus of many businesses, the concept of CE within the textile industry is now slowly experiencing the Trough of Disillusionment phase. This implies a series of adjustments from the side of companies and legislators, as *ad hoc* solutions are designed in order to push circularity in textiles towards the Slope of Enlightenment and the Plateau of Productivity, in which it becomes the new norm.

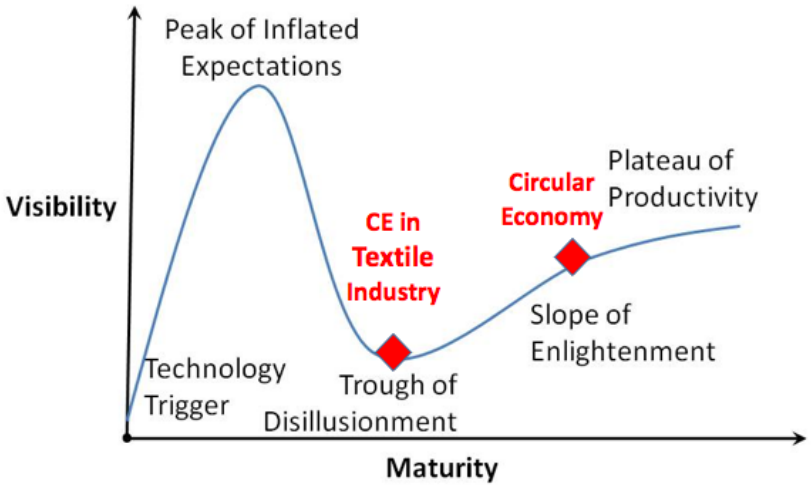

Figure 2-1. The Gartner Hype Cycle

Source: Johnsson & Selin (2015)

The aim of this section is to provide an overview of the concept of CE, the developing legislation, and the societal level of awareness. This provides the framework for the core analysis of this research: consumers' behaviour with disposal of home textiles in the context of circularity. Section 2.2 presents an overview of theories and existing research on consumers' decision-making and behaviour.

2.2 Consumers' decision-making and behaviour

2.2.1 State-of-the-art on consumer behaviour

As stated in the beginning of Section 2, there is limited amount of research on home textile disposal behaviour (Koch & Domina, 1999). However, general research on consumer disposal behaviour of clothing and textiles is large and varied. Major factors previously analysed in understanding disposal behaviour are individual characteristics (Harrell and McConocha, 1992), individual perception of obsolescence that lead to product discarding (Cooper, 2004); psychological reasons for disposal (Lastovicka and Fernandez, 2005); and the link between environmental awareness and disposal behaviour (Bagozzi and Dabholkar, 1994). This demonstrates that the research field on consumers' disposal behaviour is highly diverse and complex, as the analysis requires a large number of individual, object-related, and situational factors to be included.

Before starting this analysis, it is important to clarify what the author identifies as consumer's behaviour. As Jacoby (1976) defines, the analysis of consumer's behaviour includes the purchase, use, and disposal of goods and services by consumers. Researchers, marketers and politicians find the study of individual behaviour extremely helpful in shaping businesses and policies, as well as understanding the mysteries of the human mind. Past decades show a growing attention of researchers on the final stage of consumption: the disposal of the product. Disposal can be defined as the individual's act of getting rid of an unwanted product for different personal reasons. Hanson (1980) analyses consumers' disposal behaviour through the decision-making process. Figure 2-2 shows a prototypical judgment and decision-making process as presented by Ekström (Ed., 2010). The graph demonstrates that, based on knowledge from past experiences, the individual goes through specific phases in the present time when making a decision. Different courses of actions are available, and each one of them has inevitable consequences in the future time. Even though Figure 2-2 depicts an internal process, several external factors might influence it. Examples are situational factors, product-related factors, and

the presence of other individuals in the household taking joined decisions. This may inevitably end with the individual's beliefs and values not being fully represented in the final decision and/or behaviour.

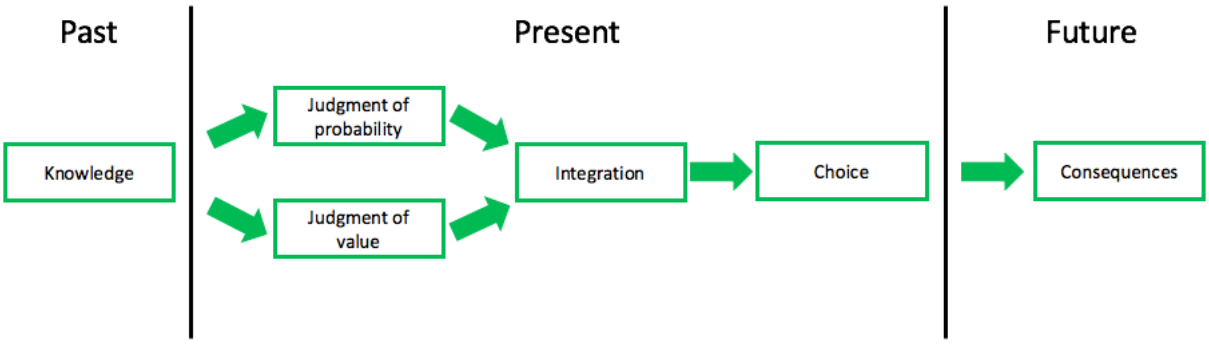

Figure 2-2. Judgment and decision-making process

This analysis focuses on the reasons why consumers decide to get rid of their textiles. Looking at garments disposal behaviour, Klepp (2001) identifies 6 most common reasons: 1) technical or quality related reasons; 2) psychological reasons; 3) situational reasons; 4) "never worn-used" phenomenon; 5) functional; and 6) sentimental reasons. After having decided to get rid of the textile, individuals face different disposal options, as identified by Jacoby et al. (1977): 1) keeping the textile stored until a suitable option to dispose of it is available or using it for other purposes; 2) getting rid of it temporarily by lending or loaning it; and 3) getting rid of it permanently by donating it, selling it, giving it away or discarding it in the trash.

2.2.2 Contested field of study

Most researchers reach the conclusion that identifying specific common characteristics determining recycling behaviour is a difficult challenge (Vining & Ebreo, 1990; Gamba & Oskamp, 1994). According to Vining & Ebreo (1990), there are three potential differences between an individual who recycles and one that does not: 1) knowledge on environmental problems, societal impacts and local recycling programs information acquisition; 2) perception of the importance of recycling; and 3) social influence from family, friends, neighbours etc. Generally speaking, individuals who engage in regular waste sorting and recycling programs are more likely to participate in textile recycling systems. Individuals with a higher environmental awareness and sensibility for charitable issues also exhibit a higher likeliness of engaging in textile donations or recycling activities (Hemkaus, 2016). This is not necessarily the case in all circumstances. A study by Ha-Brookshire & Hodges (2009) concludes that consumers are triggered by self-oriented reasons, such as the need to create more storage space to purchase new products. Disposal is therefore strongly connected to purchasing needs. This might cause feelings of guilt and anxiety to consumers, who attempt to compensate them by donating their old textiles for a good cause. This behaviour reflects therefore the satisfaction of both utilitarian and hedonic beliefs. Andreoni (1990) defines it as "warm-glow", adding that some individuals might contribute to recycling and donating used items for the sake of appearance and respect in their community.

Considering the large number of options consumers have when disposing of a product, prediction of disposal behaviour is fundamental in the designing circular business models. Many scholars have attempted to predict consumers' disposal behaviour over the last thirty years and came up with contrasting results. Several studies (Gamba & Oskamp, 1994; Lansana, 1993; Oskamp et al., 1991; Vining & Ebreo, 1990) conclude that demographic variables alone are not effective in predicting behaviour. On the other hand, the combination of psychographic variables with environmental awareness, attitudes, values, and goals prove to be highly relevant

in disposal behaviour analysis (Bagozzi & Dabholker, 1994; Berger & Corbin, 1992; McCarty & Shrum, 1993; Oskamp et al., 1991). Some authors (Shrum et al., 1994; Martin & Simintiras, 1995) agree that specific recycling attitudes are effective predictors of behaviour, whereas general environmental attitudes are less reliable. A definitive and well-developed model is still not available. Table 2-1 provides an overview of the individual characteristics studied as disposal behaviour predictors and the contrasting conclusions reached by researchers.

Table 2-1. Overview of individual characteristics as predictors of disposal behaviour

Individual characteristic	**Relation to disposal behaviour**	**Author (year)**
Age.	Not proven to be a reliable predictor. Older consumers are more likely to donate textiles to charity organizations.	Tucker (1980). Hibbert et al. (2007).
Gender.	Women are generally more sensitive to environmental issues and adopt sustainable habits more easily.	Iyer & Kashyap (2007).
Income.	Not proven to be a reliable predictor. Contradiction: higher income stimulates pro-environmental behaviour and recyding.	Tucker (1980). Jacoby et al. (1977); Schwartz & Miller (1991); Vining & Ebreo (1990); Domina & Koch (1999).
Education.	Higher education stimulates pro-environmental behaviour. Contradiction: no relevant correlation between level of education and pro-environmental behaviour could be proven.	Schwartz & Miller (1991). Vining & Ebreo (1990).
Social dass.	Effective influence over responsible disposal behaviour. The higher the dass level, the more responsible the behaviour.	Tucker (1980); Iyer & Kashyap (2007).
Environmental awareness.	Positive influence on sustainable consumption and disposal practices. Koch and Domina (1997) found the same correlation with textile disposal.	Arcury (1990); Ellen, Wiener, and Cobb-Walgren (1991); Ramsey & Rickson (1976); Koch & Domina (1997).
Personality characteristics (e.g. altruism, materialism, motivation etc.).	Effective predictors of ecological concern and disposal behaviour.	Kinnear et al. (1974); Hopper & Nielsen (1991).
Attitude about personal control (perceived-effectiveness) and recyding importance/inconvenience.	Affects environmental responsibility feelings of the individual and predicts behaviour. Contradiction: no relationship between attitude and behaviour was proven.	Tucker (1980); Ellen, Wiener & Cobb-Walgren (1991). Oskamp et al. (1991).

Table 2-1 depicts only part of a vast literature body focused on disposal behaviour and the large number of personal factors influencing it. The prediction of behaviour becomes more challenging when situational and product-related factors are included in the analysis. Indeed,

people do not make decisions based exclusively on personal factors, but also on the function of the object that is being disposed of and the situation surrounding the individual. Situational variables can sometimes hinder personal ones. For instance, someone who is committed to environmental causes may still not be able to sort waste and recycle due to lack of time, storage space in the house or the difficulty to reach a designated recycling station. Some cities/neighbourhoods might not provide adequate services for waste sorting and collection, limiting the possibilities for the individual to turn his/her attitude and motivation into behaviour. Local legislation and information provided are other fundamental factors influencing and predicting disposal behaviour (Ekström, 2010). In some instances, the surrounding situation can trigger a new behaviour, such as when extensive awareness campaigns and financial incentives/taxes are applied (Iyer & Kashyap, 2007). In other cases, as stated in 2.2.1., other individuals can influence the single person's behaviour. This is especially the case when spouses and children are present. It is therefore important, when studying people's behaviour, to comprehend the setting of the observed behaviour, in order to better identify correlations. Notwithstanding the difficulties in predicting consumers' behaviour when disposing of textiles, several theories are developed with the aim to identify the correlation among specific factors and behaviour. Four major theories are applied in most publications. Even though none of them can be considered complete in terms of variables considered in the analysis, their straightforward nature permits a more feasible observation of variables in empirical research. For this reason, they are selected for this analysis. Section 2.2.3 provides an extensive overview of all models together with major strengths and weaknesses.

2.2.3 Theories of Consumer Behaviour

This section explores four major theories widely applied in consumer behaviour research. They are presented here with the intention to analyse their contribution to research, which factors are taken into consideration, and how they apply in the case study of the IKEA Textile Revival Project. The review starts with the most popular theory, the Theory of Reasoned Action later expanded with the Theory of Planned Behaviour.

Theory of Reasoned Action

The TRA is the most applied theory in the field of attitude-behaviour research and it is based on the concept of individual's intention to perform a given behaviour. Most studies apply it for the prediction of consumers' behaviour in the purchase phase, but latest research sees an increase in applications in the disposal phase. As Figure 2-3 shows, intentions are associated to the motivational factors that influence a behaviour; showing the level of intention to perform a specific behaviour. In other words, behaviour is determined by the individual's intention. This is influenced by the individual's attitude toward the behaviour, such as the "positive or negative evaluation of the consequences of performing the behaviour" (Park, 2000, p. 163). A person's attitude is influenced by his/her personal beliefs about the consequences of a specific behaviour and the impact of these consequences on the individual. The feedback flow refers to the learning process the individual goes through experience, which influences his/her beliefs about an object, and consequently changes his/her attitude and intention (Fishbein & Ajzen, 1975).

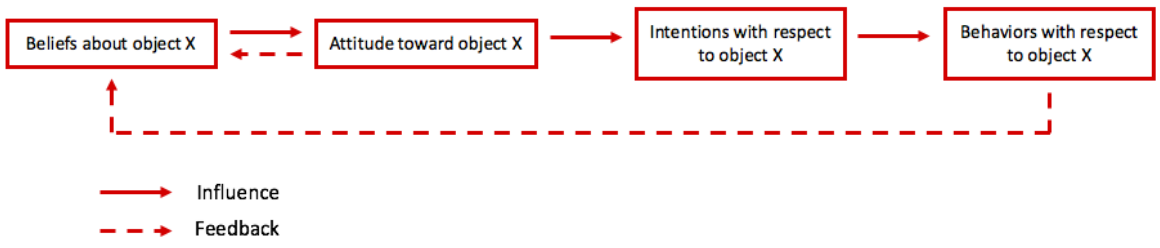

Figure 2-3. Conceptual framework on beliefs, attitudes, intentions and behaviours with respect to a given object

The concept of attitude is particularly relevant in this theory. In fact, Fishbein & Ajzen (1975) argue that it can be effective in the prediction of an individual's behaviour. They define attitude as a "learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object … a general predisposition that does not predispose the person to perform any specific behaviour. Rather, it leads to a set of intentions that indicate a certain amount of affect toward the object in question. Each of these intentions is related to a specific behaviour, and thus the overall affect expressed by the pattern of a person's actions with respect to the object also corresponds to his attitude toward the object.". They continue by stating that an individual's reaction to a specific stimulus is mediated by his/her attitude about the specific stimulus, which could be an object, an action, a legislation etc. Individuals have different reactions that can be categorized into three different groups. 1) Cognitive, which consists of a person's beliefs or knowledge about a stimulus. This perception could be inaccurate, but this does not influence the result of the analysis, since the focus is the individual's attitude and not the objective situation. 2) Affective, which covers an individual's feelings and emotions (both positive and negative) about a stimulus. 3) Behavioural/Conative, which includes the active part of the individual; what he/she would likely do in response to a specific stimulus (Evans, Jamal and Foxall, 2006). As Figure 2-4 shows, each response group has a corresponding, measurable component of attitude. This implies that by observing a specific action, it can be aligned to a specific component of attitude. However, research shows that this is highly difficult to demonstrate.

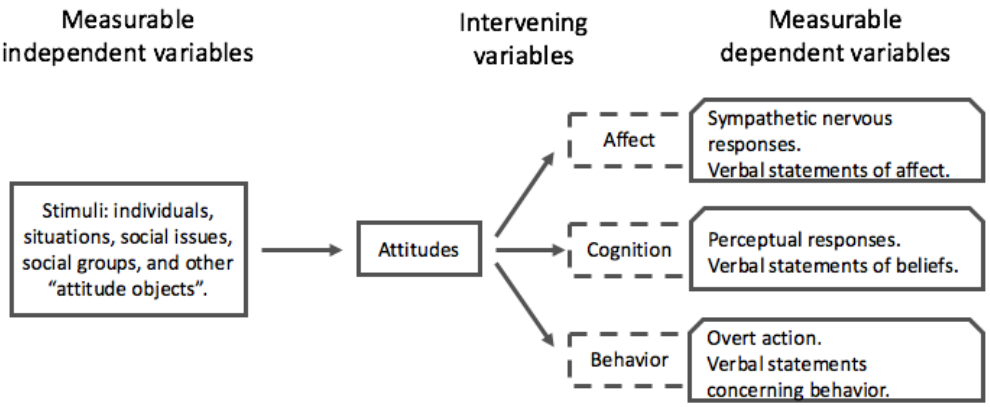

Figure 2-4. Schematic conception of attitudes

Figure 2-5 shows three possible versions of attitude creation (all applicable and depending on the stimulus/object under analysis). Version 1 indicates that attitude derives from information processing. In Version 2, attitude is a result of the behavioural learning process. Finally, Version 3 shows attitude in relation to emotions.

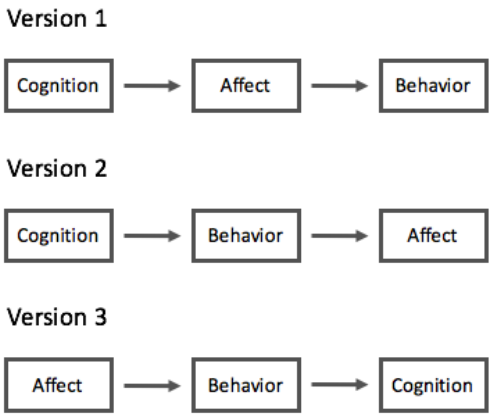

Figure 2-5. Attitude formation options (Evans, Jamal and Foxall, 2006)

Regarding the effectiveness of attitude in predicting behaviour, Foxall (1997) identifies an interesting pattern in the attitude-behaviour correlation based on the way attitude is formed. He argues that the correlation is stronger when the individual goes into a feedback loop process, learning from previous experience. The sequence that is most reliable in representing decision-making process is therefore 'behaviour-to-attitude-to-behaviour'. On the other hand, researchers agree that finding a direct and exclusive connection between attitude and behaviour is not feasible. This leads to the so-called 'other variables' approach, which argues that attitude falls in the picture as one of the factors predicting behaviour. Examples of other variables are: other attitudes, competing motives, verbal, intellectual, and social abilities, individual differences, actual or considered presence of other people, normative prescriptions of proper behaviour, alternative behaviours available, expected and/or actual consequences of various acts, and unforeseen extraneous events. There are two major schools of thought regarding the role played by other variables in relation to attitude. 1) Moderating effect: other variables are moderating the correlation between attitude and behaviour. 2) Independent effect: other variables co-exist with attitude and they predict behaviour independently from attitude (Fishbein & Ajzen, 1975).

As Figure 2-6 shows, behavioural intention is also influenced by social norms. These result from the person's beliefs about the norms and expectations of significant others, such as family and friends, neighbours, society, and the person's motivation to comply with these expectations. The higher is the individual's perception on the person providing the example for a specific behaviour, the more the individual will be willing to comply (Oskamp et al., 1991).

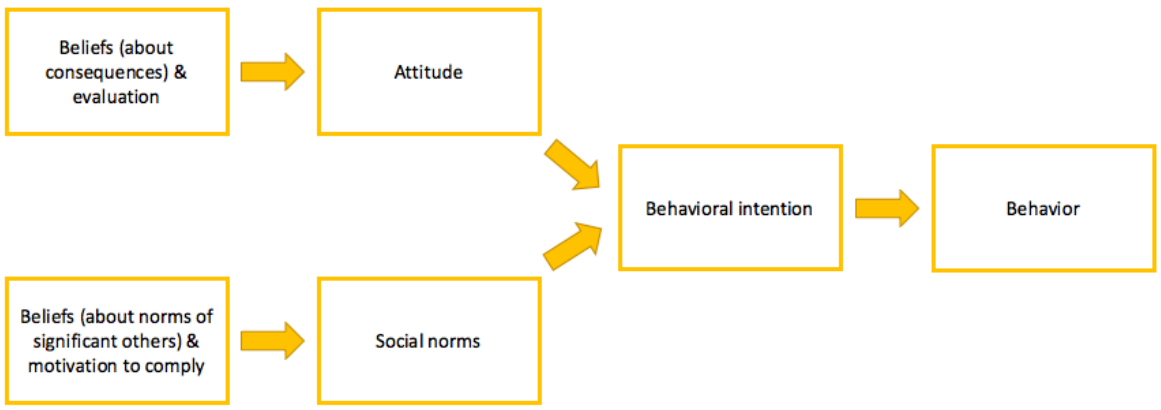

Figure 2-6. Theory of Reasoned Action

The TRA is therefore based on two major factors predicting behaviour: attitude and social norms. Generally speaking, the stronger the behavioural intention, the more likely it is that the behaviour will be carried on. Fishbein & Ajzen (1975) argue that knowing an individual's attitude and norms is not sufficient to predict a person's behaviour. The behavioural intention, which is a result of a person's beliefs related to the behaviour itself, is therefore the only concrete predictor. Fishbein & Ajzen (1975) define behavioural intention as a "person's subjective probability that he will perform some behaviour". Intention is composed by four interrelated elements: 1) the behaviour; 2) the target object at which the behaviour is directed; 3) the situation in which the behaviour is to be performed; and 4) the time at which the behaviour is to be performed. These four elements clearly show that individual differences can potentially impact behaviour, and that a change in any of these four elements has consequently impact on the person's behavioural intention. A person's attitude toward a specific behaviour is therefore influenced by the person's belief that the behaviour in question will have specific and unavoidable consequences that may be more or less important to the individual. This holds true only when the behaviour in question is under volitional control. There are indeed specific factors (e.g. money, time, skills etc.) that influence the capability of the individual to actually carry the behaviour. Another important factor is that the behavioural intention needs to stay the same in the time interval between its assessing and the observation of behaviour. Indeed, the longer the time, the harder it is to identify a positive correlation between the two, as unexpected factors might influence the behaviour.

The issue of time span between behavioural intention and actual behaviour highlights the first important criticism scholars have on TRA: its effectiveness in predicting behaviour from intention is limited to situation in which the correlation between the two is strong and easy to identify. Most research applying this theory uses self-report by interviewees, who might be influenced by this association and provide biased answers. Foxall (1997) has three major critiques to TRA. First, important personal factors that do not relate to attitude and situational factors that are not connected to norms are not included in the model. Examples of these factors that are proved to be effective in predicting behaviour are personal norms; self-identity; past behaviour/habit; amount of reasoning during intention formation; and affect. Second, TRA is focused on prediction of behaviour, and not the actual outcomes. Third, the degree of intention formation is determinant in influencing how attitude affects behaviour. TRA also receives criticism on its categorization of attitude and social norms when observing behaviour. Several scholars argue that it is very hard to keep the two factors well separated when doing empirical research. Park (2000) tries to assess this issue by looking at the nature of the two factors. He argues that the two clearly assess two completely different influence components, as attitude is internal to the individual, while social norms are external factors. He adds that TRA implies that behaviour is a personal achievement resulting from the individual's engagement into behaviour.

Notwithstanding this criticism, different scholars opt for TRA as a model to assess consumers' behaviour with disposal of products. Most relevant is the research by Goudeau (2014) on apparel disposal behaviour of young American consumers. The TRA is used as core of the analytical framework and for the designing of the survey questions. This author takes several aspects of that model, as described in Section 2.3.

Theory of Planned Behaviour

The TPB is later designed by Ajzen (1985) and follows the same logical flow as the TRA, with a third factor included in the analysis: Perceived Behavioural Control (PBC). It is further expanded in collaboration with Madden in 1986 in order to respond to the criticism towards TRA regarding behaviours not completely under volitional control. In the past 20 years it has taken the place of TRA in major studies. Ajzen and Madden (1986) define PBC as "the person's belief as to how easy or difficult performance of the behaviour is likely to be" (p. 457). As Figure 2-7 shows, PBC has a direct impact on behaviour, but also an indirect one, as it influences

behavioural intention (Chaisamrej, 2006). PBC is affected by different factors, both internal (e.g. skills, abilities, knowledge, and adequate planning) and external (e.g. time, opportunity, and dependence on cooperation of others). It therefore improves the predictability function of the model. There are two major ways to operationalize PBC: by directly asking interviewees how much control they feel they have over a specific behaviour, or by identifying people's perception of the presence or lack of specific factors that may make the behaviour in question possible to apply.

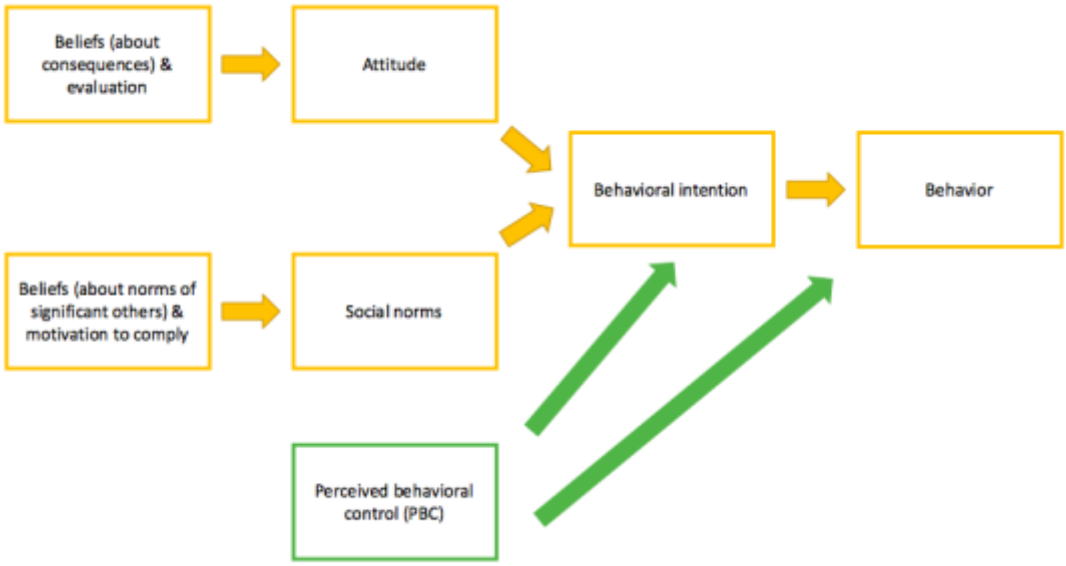

Figure 2-7. Theory of Planned Behaviour

Exactly like TRA, TPB effectiveness in predicting behaviour is dependent on the time interval between behavioural intention and the act. Another relevant issue is the difficult measurement of PBC and its direct link to intention, which assumes that individuals engage in behaviour because they are positive they will be able to achieve it. This is connected to the concept of perceived consumer effectiveness, in which an individual believes his/her efforts can make a difference. Last, the addition of PBC to the model does not meet the criticism regarding missing variables not included in TRA, such as habit.

One of the major weaknesses of both models is the fact that they assume that people make a rational behavioural decision based on consideration of pros and cons, consequences of an individual's actions, and information collection (Chaisamrej, 2006). This is not always necessarily the case, and it therefore makes the predictive function of the models weaker. However, their straightforward nature pushes many scholars to apply them in behavioural analysis, assuming that rational behaviour is the ideal outcome consumers have when taking decisions (Thøgersen, 1996). Another critique presented by scholars is whether social norms are effective in predicting behaviour. Godin & Kok (1996) conclude that social norms are relevantly weak in predicting intentions with both TRA and TPB. However, a publication by Hines, Hungerford and Tomera (1986) uses the TPB for the analysis of factors influencing behaviour collected through 128 pro-environmental behaviour studies and achieves more optimistic results.

Even though both TRA and TPB keep social norms into consideration into the analysis, it is important here to analyse the different stages individuals go through when developing social norms. The Altruistic Behaviour Model by Schwartz (1977) focuses exclusively on the development of social norms and their impact on behaviour. Considering the large applications of this model for the analysis of disposal behaviour, the next section provides a full overview.

The Altruistic Behaviour Model

A definition of subjective norms is provided by Planing (2015). They "represent the perceived social pressure to perform or not to perform a given behaviour. This social pressure is generally associated with two normative components: injunctive norms, which represent the perceptions concerning what should be done, and descriptive norms, which represent the perceptions that others are or are not performing the behaviour in question" (p. 8). As the term subjective clearly implies, each individual develops a specific set of norms since young age throughout his/her lifetime. Individuals form injunctive norms by observing the normative prescriptions of different individuals and social groups, of which the most salient and readily accessible ones will influence the individual's subjective norm. Fishbein & Ajzen (1975) define beliefs as: "a person's subjective probability judgments concerning some discriminable aspect of his world; they deal with the person's understanding of himself and his environment. Beliefs about an object provide the basis for the formation of attitude toward the object, and attitudes are usually measured by assessing a person's beliefs" (p. 131). Normative beliefs can be separated into two groups: internal normative beliefs (i.e. family and household influence) and external normative beliefs (i.e. neighbours and friends) (Taylor & Todd, 1995). The more important and influential to the individual people already performing a specific behaviour are, the most likely the individual will be willing to adopt that new behaviour. This kind of norms is generally socially-driven, and cannot be imposed by authorities.

The Altruistic Behaviour Model (ABM) is designed by Schwartz (1977) and is considered very effective in predicting recycling behaviour, since perceived moral obligation is taken into account. As Figure 2-8 shows, Schwartz's social-psychological model of altruistic behaviour is a five-part model. The first part of the model, (1) social norms, represents what a society generally agrees upon as moral behaviour. These behaviours are what we expect others to follow and they expect us to follow, but they are vague and very general (e.g. neighbours leaving their containers for collecting in the streets, signalling to other neighbours or visitors that recycling is a social norm in the area). The next step, (2) personal norm, is when a person chooses to internalize the social norm into his/her definition of moral behaviour. This internalization process occurs when the individual is introduced to a new activity. At first, social norms are used by the individual to apply the activity into his/her own behaviour. In case the activity is recurrent, the individual will internalize it into personal norms. This explains why individuals who are familiar with sorting and recycling materials have a faster transition into recycling a new material than individuals with no familiarity with a recycling system. If the person does not act according to their personal norm they feel guilty (vice versa if a person acts according to their personal norm they feel at ease and proud.). As Schwartz (1977) states: "Anticipation of or actual conformity to a self-expectation results in pride, enhanced self-esteem, security, or other favourable self-evaluations; violation or its anticipation produce guilt, self-deprecation, loss of self-esteem, or other negative self-evaluations" (p. 231). This is not enough to create behaviour. The next two steps, (3) awareness of consequences (AC) and (4) ascription of responsibility are crucial in making moral attitude into (5) behaviour. AC refers to the individuals feeling and having knowledge of what happens if they act accordingly or not accordingly to the norm. People with high AC weight their decisions based on the potential consequences for others around them. Ascription of responsibility is when the individual recognizes that she/he has the responsibility and that the consequence will occur even if only one person does not act according to the norm. This model is tested by Hopper & Nielsen (1991), who confirm that recycling behaviour is strictly correlated to social and personal norms, holding true that the individual is highly aware about consequences. However, how personal norms turn into behaviour is a step hard to test in empirical research.

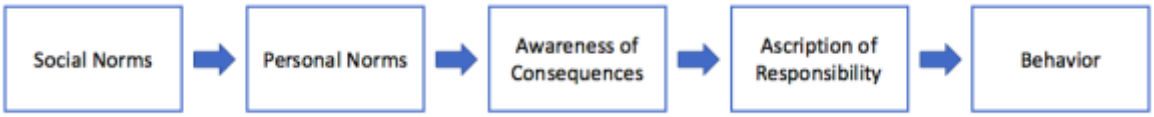

Figure 2-8. Schwartz's Altruistic Behaviour Model

The weakness of this model is the fact that individuals might find the costs of implementing a specific behaviour too high, and therefore social norms does not turn into behaviour. Researchers discover that when this dilemma occurs, individuals tend to post-rationalize the situation through denial of consequences and of personal responsibility. This neutralizes the sense of guilt for not adapting to the social norm. The attitude-behaviour relation is therefore very weak when only personal considerations are weighted (Thøgersen, 1996). In addition to this, Schwartz & Howard (1980) conclude in their study that individuals with high responsibility denial (RD) have less predictable behaviour when using this model. This is due to two factors: 1) carelessness: people with high RD are less accurate in defining the level of obligation they feel about a specific behaviour; 2) groundlessness: having an undeveloped moral value structure pushes the individual to give less weight to the consequences of their behaviour. When these two cases are in place, people's responses to interviews and the questionnaire may be error-driven, and they therefore require careful analysis.

Since scholars normally associate recycling behaviour with pro-environmental behaviour, it is important to analyse if and how values on environmental issues can reflect into actual behaviour. Schwartz (1994) argues that people's prioritization of values is strongly influential over behaviour. He develops a categorization based on three universal requirements: 1) needs of individuals as biological organisms; 2) requisites of coordinated social interaction; and 3) requirements for the smooth functioning and survival of groups. Out of these three requirements, ten motivationally distinct value types classified in two dimensions are derived, as shown in Figure 2-9. The first dimension goes from self-enhancement (i.e. selfish values of the individual) to self-transcendence (i.e. values oriented towards the impacts on others). The second dimension falls between conservation (i.e. willing of the individual to keep the status quo) and openness to change (i.e. willingness to adopt new behaviour). Wherever the individual is positioned in this wheel of values, his/her behaviour can be predicted as being more or less sustainable (Ekström, 2010).

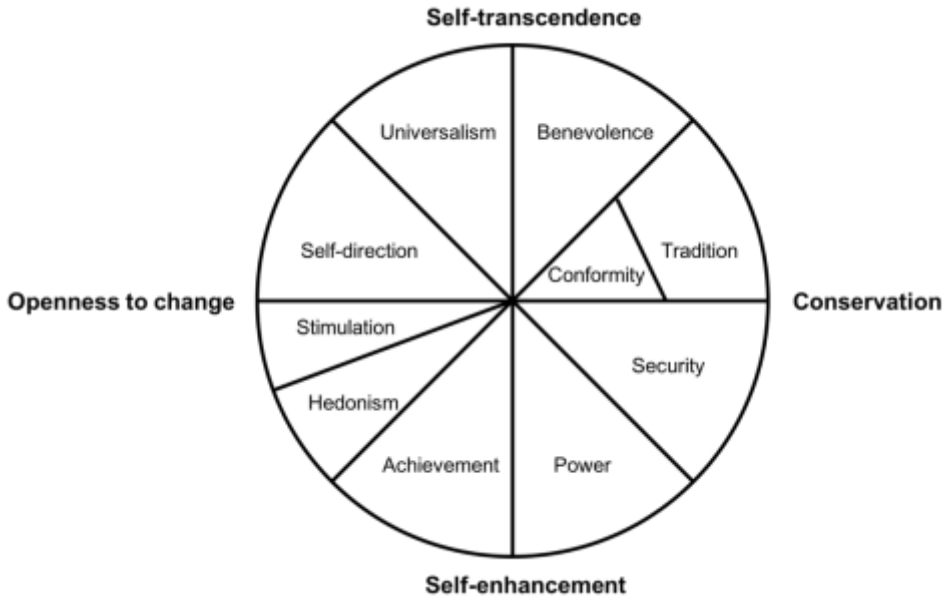

Figure 2-9. 10 Motivation Domains – Schwartz's Value Theory

Jonette (2013) takes a different categorization approach and classifies values into three different orientations:

1. Egoistic Value Orientation: also called self-interest values. The individual would take pro-environment choices only when in line with personal interests. An example could be selling textiles to second-hand shops for economic reasons, and not sustainable disposal;
2. Altruistic Value Orientation: the individual is concerned about the impact of his/her behaviour on other human beings and the environment. Considering this responsibility, the individual would opt for donation and recycling rather than discarding; and
3. Biospheric Value Orientation: the individual is concerned about the entire living surrounding. He/she would therefore opt for sustainable textile disposal solutions.

To summarize, norms are activated through values and beliefs. Even though values are not always directly translated into behaviour, scholars believe that individuals' disposal choices are subconsciously driven by them. It is important to add that when an action is repeated over and over in an extended time period, consumers develop habits and routines that they are hardly willing to change (so-called passive resistance to the status quo). Habits are normally based on three major factors: convenience, visibility, and reward. For this reason, modification of behaviour cannot be triggered exclusively by information on the benefits of a circular economy model, since people's habits are often unconscious and based on beliefs that are hard to observe empirically (Planing, 2015). However, habits could turn into potential drivers under specific circumstances. Indeed, a study by Lansana (1993) shows that people experienced with recycling materials are more likely to adopt recycling behaviour with new materials. Considering several studies stating that Schwartz' model is better at predicting recycling behaviour than TRA and TPB, ABM is combined with TRA to make the analytical framework for this thesis research more complete.

Cognitive Dissonance Theory

One of the major take-home messages from research on people decision-making process and behaviour is that choices have consequences for the environment and surrounding people. Most opinion polls, surveys, and market research show an increasing trend in consumers' concern about the environment when making purchasing and disposal decision. However, this concern is not equally reflected in the actual behaviour. Most common criticism to the three theories mentioned above is the fact that attitude does not always translate into behaviour, provoking a so-called "Attitude-Behaviour Gap" or "Value-Action Gap". Blake (1999) defies the concept of rational decision-makers and identifies several barriers to pro-environmental behaviour, such as individual, social, and institutional constraints. Three major obstacles are presented: 1) individuality; 2) responsibility; and 3) practicality. A study by Barkman (2014) highlights the presence of so-called thresholds provoking an attitude-behaviour gap. These thresholds can be classified into two categories, as shown by Table 2-2.

Table 2-2. Thresholds Levels

Individual Level	**Societal & Institutional Level**
Responsibility, interests, attitudes on consumption, education, income, value priorities, and complexity of a consumer's actions and environmental issues.	Legislation, family education, influence from friends and neighbours, injunctive and descriptive norms, incentives, infrastructure.

The concept of Cognitive Dissonance is coined by Festinger (1957) as a psychological

explanation of occurring contrasting values and beliefs in consumers' minds when translating decision into behaviour. Fishbein & Ajzen (1975) define dissonance as "the contradictory relationship between two variables, X and Y, in which X does not follow from Y" (p. 39). As a clarification of the term 'follow from', Fishbein & Ajzen (1975) specify that it refers to the violation of expectancy of an action, such as expecting someone to sort waste in the house knowing that he/she has the space and service, but he/she does not. Festinger's (1957) CDT suggests that human beings have an inner drive to hold all attitudes and beliefs in harmony and avoid disharmony (or dissonance). The theory asserts that a person has certain cognitive elements, which are knowledges about himself, his environment, his attitudes, his opinions, and his past behaviour. If one cognitive element follows logically from another, they are said to be consonant to each other. They are dissonant to each other if one does not follow logically from the other. Dissonance may be provoked 1) after making an important and difficult decision, 2) after being coerced to say or do something, which is contrary to private attitudes, opinions, or beliefs, and 3) after being exposed to discrepant information. Despite the fact that most consumers state that their behaviour is affected by attitudes and values, research tends to show that these two factors do not certainly need to correlate (Gregory-Smith et al., 2013). Guilt is identified as the most negative of the self-conscious emotions. Consumers tend to use ignorance or justification to appease their guilt, which is an act of cognitive dissonance. CDT is designed to explain and predict post-decisional behaviour, but in most instances it is not adequate to explain consumer behaviour before a purchase or disposal decision, so this research applies it with the intention to simply identify cognitive dissonance and sense of guilt in the interviews with consumers. Studies like the one from Engström & Nicklasson (2015) use it as a complement to Schwartz's ABM to further explain the behaviour-attitude gap. An example could be the case in which a person discards textiles to make space in his/her closet for new products, but he/she experiences a sense of guilt because of the environmental impact deriving from it.

The following section presents an overview of existing research in which the mentioned theories are applied to study consumers' behaviour when disposing of textiles. Most studies have ABM as central model combined with one or more other models as analytical tool. As Section 2.2.4 further explores, the influence of social norms on behaviour is considered central in this field of research, as sorting and recycling are considered environmentally friendly acts done for the benefit of society, and not for the individual's interests.

2.2.4 Existing research on textile disposal behaviour

Several scholars address sorting and recycling as a prosocial behaviour, due to its benefits to society and the environment. As Thøgersen (1996) states: "In affluent industrial societies, environmental behaviours like recycling are typically classified within the domain of morality in people's minds. Attitudes regarding this type of behaviour are not based on a through calculation, conscious or unconscious, of the balance of costs and benefits. Rather, they are a function of the person's moral beliefs, that is, beliefs in what is the right or wrong thing to do" (p. 537).

The discussion starts with Jacoby et al. (1977), who identifies three general options consumers face when they want to get rid of a product, as mentioned in Section 2.2.1. These handling options are driven by three categories of factors that might sometimes overlap: 1) psychological characteristics of the individual (e.g. personality, attitudes etc.); 2) product's characteristics (e.g. conditions, use etc.); and 3) situational factors extrinsic to the product (e.g. storage space, financial situation etc.). An overview of different studies (e.g. Klepp, 2001; Ha-Brookshire & Hodges, 2009) shows a general predisposition for consumers to avoid clothing discarding, opting for more sustainable alternative. Most interviewees opt especially for donations and handling down to friends and families. However, observed numbers in Sweden and other countries show that the reusing and recycling rates are still pretty low and large quantities of

textiles are thrown in the bin. As Domina & Koch (2002) observe in their study, this issue is usually provoked by the lack of knowledge about differences between recycling and reusing, as well as the lack of awareness about alternative disposal options. However, some interviewees declare to have their own waste hierarchy in the house, as they are usually trying to reuse their textiles in different ways or store them for very long time before definitely disposing of them. These findings clearly reflect the disposition taxonomy designed by Jacoby et al. (1977).

Another influential factor from previous research on disposal behaviour is the individual's familiarity with the disposal mean. A publication by Morgan & Birtwistle (2009) on fast fashion consumers highlights the fact that consumers' lack of awareness about textile waste impact and individual responsibility is highly influential in their disposal patterns. Similar results are reached by Joung (2013). Studies by Engström & Nicklasson (2015); Shim (1995); Koch & Domina (1997); Domina & Koch (1999, 2002); Ha-Brookshire & Hodges (2009); Morgan & Birtwistle (2009) conclude that the most influencing factors driving consumers' behaviour are convenience, habit, and moral obligation. This is coherent with the literature and theories mentioned in the previous sections. Domina & Koch (2002) identify the lack of storage space and the perception that the amount of textiles disposed of is not that large as a reason to discard textiles. Finally, Lee et al. (2013) identify emotional attachment to the textile product as a factor strongly influencing the choice of the disposal method. Due to this, many consumers gradually divest from the product, making it easier for them to discard it. Others opt for disposal means that can compensate their sense of guilt. Textile disposal tends to happen during clearing out of closets and cabins, due to a moving out or seasonal change for example.

A publication by Hines, Hungerford and Tomera (1986) collects 128 pro-environmental behaviour studies in which the TPB was applied. The following patterns influencing behaviour are identified in this overview:

- knowledge of issues: the individual needs to be well-informed about environmental issues and causes;
- knowledge of action strategies: the individual needs to know how to act to assess his/her impact;
- locus of control: the individual needs to be able to perceive whether he/she has the capacity to stimulate change through behaviour;
- attitudes: individuals with stronger environmental attitudes are more likely to engage in sustainable behaviour;
- verbal commitment: people's verbal communication of the intention to take action is determinant in understanding pro-environmental behaviour;
- individual sense of responsibility: people with a greater sense of social responsibility feel obliged to adopt sustainable behaviour; and
- situational factors: e.g. economic constraints, social pressure, and opportunities to choose different actions.

Finally, another factor that arise from research as influencer of people's disposal decision-making and behaviour is the context of the family and the different influence each member can have in the household. The dynamic between husband and wife is especially under focus, and several studies observe that wives are generally more involved in sustainability decision-making (remember the gender factor at the beginning of Section 2). It appears that there is a curvilinear relationship between the family's social class and the joint involvement of partners in the decision-making process, showing that middle-income families take more decisions together. This is especially true with younger couples (Evans, Jamal and Foxall, 2006).

Research on textile disposal in Sweden

Since this thesis looks at consumers' behaviour with home textiles in Sweden, special attention is given to studies located in this geographical area. Gwozdz et al. (2013) conduct a survey of 1.175 young Swedes (between 16 and 30 years old). Focus of the research is finding more about young Swedish consumers' awareness and disposal behaviour of clothing. The study concludes that notwithstanding the surprisingly high environmental and social issues awareness respondents demonstrate, this knowledge does not reflect on their disposal habits. Women tend to have more positive attitude towards donation and passing clothes on to friends and families; whereas men show disinterest in the discarding process.

An overview by Ekström (2015) concludes that consumers' socialization and familiarity with responsible textile and clothing disposal behaviour through contact with role models at early age are fundamental factors influencing sustainable behaviour in the adult age. The study adds that secondary socialization (i.e. the process of learning what is the appropriate behaviour as a member of a smaller group within the larger society) can be determinant in stimulating sustainable consumption and disposal behaviour among adults. However, the communication approach needs to differ depending on the target generation, since studies show that there are large differences in values prioritization between older and younger generations.

Most studies focus on consumers' behaviour and their role in collecting and recycling textile waste. However, a central question arising in the discussion is: do Swedish consumers have the full responsibility for the disposal of unwanted textiles? Porse (2014) explores this issue by interviewing experts, legislators, and companies' representatives in the Swedish waste sector. Her findings show a relatively complex system in which multiple actors are playing and holding responsibility for textiles in an ambiguous grey zone. Six out of the seven interviewees declare that consumers should not have the responsibility for disposal of textiles, since an effective infrastructure and collection system is currently not in place in Sweden. This is especially true when the textiles are relevantly ragged. Considering the complexity of the issue and the large number of variables influencing consumers' behaviour when disposing of home textiles, Section 2.3 presents a combination of multiple factors forming the analytical model of this research.

2.3 The Analytical Framework

This section presents the analytical framework of this research as a result of the literature analysis presented in Section 2. The three behavioural theories mentioned above are merged in Figure 2-10. These are: 1) TRA by Fishbein & Ajzen (1975), here marked in yellow; ABM by Schwartz (1977), here marked in green; CDT by Festinger (1975), here marked in red.

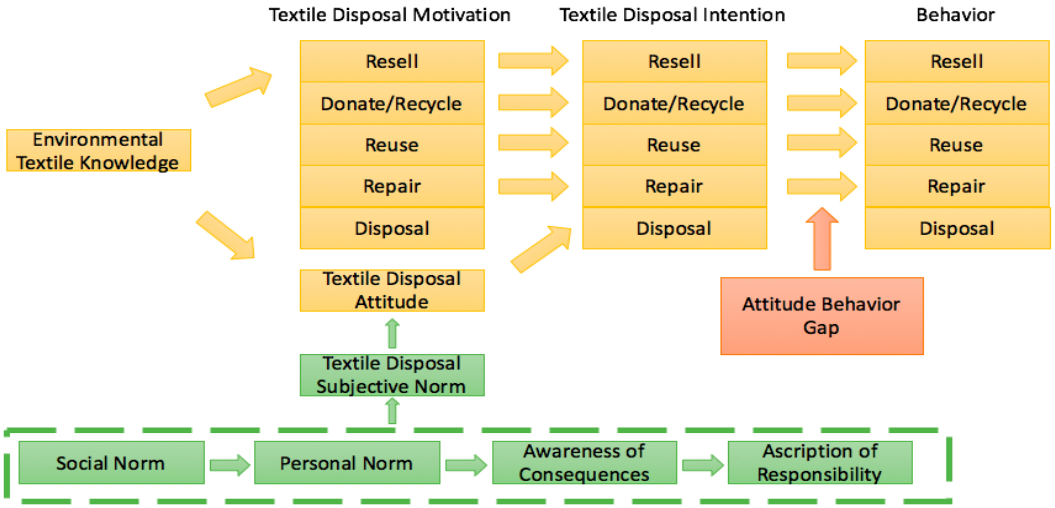

Figure 2-10. The Theoretical Framework Model

The goal of this research is to use these psychological theories as lenses for the analysis of the primary data. Data is collected through the survey and analysed through the lenses of TRA. TRA is chosen over TPB for two major reasons: 1) to be able to conduct a comparison with the study by Goudeau (2014) and 2) the limited focus of the survey cannot include perceived behavioural control as a factor for the analysis. Additionally, data from the survey is complemented with primary data collected through interviews with experts and consumers. ABM and CDT are inserted in the analysis in order to test the validity of primary data from interviews. A review of the literature presented in this chapter highlights that the principal observable variables that are determinant in influencing disposal behaviour are: environmental knowledge, motivation, attitude, subjective norm, and intention. Situational factors are also influencers kept in consideration for the designing of the survey. Due to time constraints and to better understand the thinking of respondents, this study is based on self-reported behaviour. This can make findings less reliable, as respondents might state what they feel will be the correct answer. For this reason, questions are designed in order to check for possible contradictions and respondents are given situational cases to test the correlation between environmental knowledge, motivation, attitude, norm, intention, and behaviour. Data from the survey is complemented by data collected through random interviews with consumers and companies' and projects' representatives to check for common behaviours arising.

3 Methodology

This thesis research contributes to the pre-study phase of the IKEA Textile Revival Project. The terms take-back and collection are deliberately omitted from the research in order to avoid biased answers from consumers, who might respond to interviews and survey while thinking about already existing schemes, such as the very popular one by H&M. The preliminary research phase is conducted in collaboration with Transformator Design,[1] a company specialized in communication with consumers for the development of targeted service businesses. Their collaboration is particularly relevant in the preparation for both the improvised and planned surveys, as well as for the analysis of the data collected. Multiple data collection means are used for this phase of the project, including an internal IKEA research, an external benchmarking analysis, interviews to get consumers' insight, a literature analysis, and a survey targeting IKEA FAMILY members in Sweden. The last two are conducted by the author of this thesis. The goal of the project is to get a clear understanding of textile disposal needs of consumers in four IKEA markets: Sweden, Norway, Germany, and Spain. This thesis focuses exclusively on the Swedish sample, as it has high priority in the project and this author has direct access to it.

Figure 3-1 describes the structure and approach of this thesis research. Using the concept of circular economy, the Swedish waste management situation, and the EU waste legislation together with classic behavioural theories as background, this thesis focuses on home textile disposal behaviour in Sweden. The case study used for the research is the Textile Revival Project recently launched by IKEA. Together with the secondary data from a literature analysis, primary data are collected through interviews with companies'/projects' representatives and an EPR expert, interviews with Swedish consumers, and an online survey sent to IKEA FAMILY members. A study states that IKEA consumers and non-IKEA consumers in Sweden have an equal level of interest for sustainability issues, so the IKEA panel can be regarded as being representative of the Swedish population, at least with regard to sustainability issues (Gullstrand Edbring, Lehner and Mont, 2016). The goal is to understand customers' decision making process, related to motivations, attitude, and the norm, as well as their perception of "doing the right thing" with textiles.

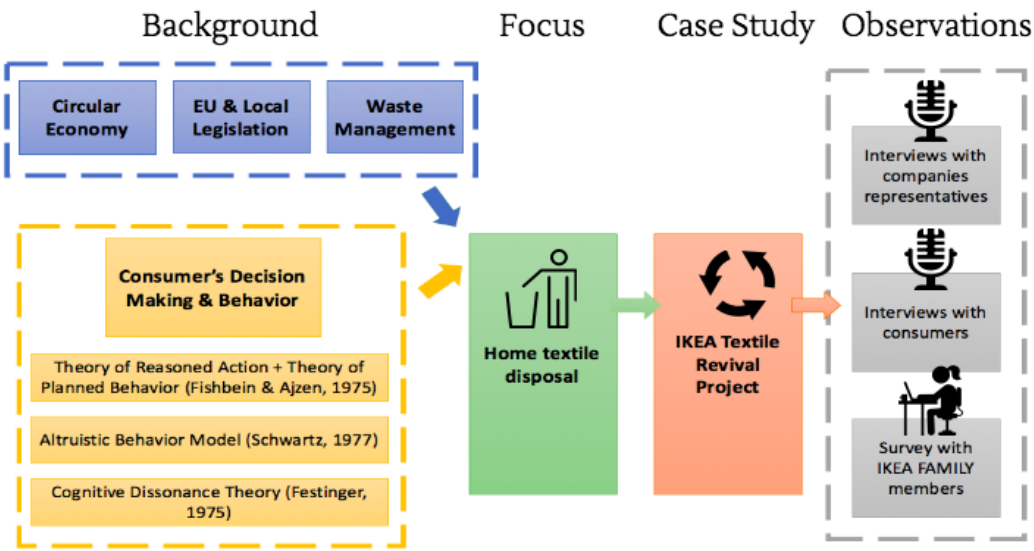

Figure 3-1. Methodology graph by author

This research applies the following definitions:

[1] http://transformatordesign.se/

Post-consumer textile waste: "all types of garments or household articles made of textiles that the owner no longer needs and decides to discard" (Council for Textile Recycling, 1998).

Disposal of home textiles: "occurs when the textile leaves the possession of an individual in a manner of handling down, throwing away, selling, exchanging, using for rags, making over, or simply abandoning" (Shim, 1995).

Textile recycling: "the process of reclamation and use of products made from textile fibres. It occurs when a product made from a textile fibre is donated to a charity organization; sold to a thrift shop or a consignment shop; sold at a rummage sale; or passed down to another person for use. Yet, this does not preclude textiles from ending in the waste stream" (Daneshvary, Daneshvary and Schwer, 1998).

The approach of this study is to look at consumers' perspective in order to understand their needs and behaviour when they are disposing of no-longer wanted home textiles. The goal is to understand the factors influencing the decision-making process and behaviour. Focus is on consumers in Sweden. Since secondary data is collected only through literature analysis, a more in deep report on primary data collected is presented here.

3.1 Primary data

Both qualitative and quantitative primary data are collected through interviews (face-to-face and on the phone) and a survey designed by the author. Both impromptu and planned interviews with consumers are carried out by IKEA staff. A total of 24 consumers are interviewed, a little more than half of them are women. 16 of them are in Malmö and 8 are located in Stockholm. This author contributes with the designing of the questions as well as the data processing and clustering to identify patterns in behaviour. However, due to time constraints, it is not possible to be present during the interviews. While all the interviews in Malmö are spontaneous and never last more than 20 minutes, the ones in Stockholm are scheduled with volunteers and last circa 1 hour each, sometimes reaching 1 hour and a half. Both approaches have pros and cons. While the impromptu survey avoids potential biases, interviewees on the street may not be willing to invest too much time talking, and might omit important information. On the other hand, planned interviews can go more into details and highlight relevant information, but participants may be tempted to say things they expect the interviewer might want to hear.

This author also conducts individual interviews with a circularity expert and representatives of companies and projects already applying closed-loop schemes in order to assess their understanding of customers' needs and how they incentivize returning of products. The following people are interviewed: Selma Öström, Projektledare FixaTill; Lena Wallin, kommunikatör, Lund Kommun; Connor Hill, Sustainability Manager; Fredrika Klarén, Sustainability Manager; and Naoko Tojo, Associate Professor[2]. Tojo is interviewed exclusively as an expert on EPR legislation in Sweden, which is analysed in Section 6.6.

A structured online survey is selected for primary data collection for the following tactical reasons: the topic is large and relatively complex to be measured; a high degree in standardization of responses makes the data analysis more straightforward; the guarantee for anonymity could push respondents to be honest with their answers; respondents can take their time to fill the survey in and do it at their earliest convenience; it requires relatively minimum administration; and it is a cost efficient mean for the collection of large quantities of data. On the other hand, emails can be easily ignored and can lead to a low response rate. To avoid this, a financial incentive is provided to respondents. IKEA provides a prize consisting in two

[2] See complete list in Appendix I.

discount vouchers of SEK 200 each. The winner of the prize is selected through a raffle from the list of email addresses voluntarily provided by participants. The survey is inspired by the reviewed literature and previous studies (Goudeau, 2014; Engström & Nicklasson, 2015; Gwozdz et al., 2013; Joung & Park-Poaps, 2013; Shim, 1995). It starts with an introductory section, in which participants are provided a definition of home textiles together with examples of products. Since according to Fishbein & Ajzen (1975) people's attitudes are based on the most recent experience lived, participants in the survey are asked if they handled unwanted home textiles in the past twelve months. Five disposal options (resell, donate or recycle, reuse, repair, and discard) are provided. The survey follows with seven sections[3] corresponding to the different steps of the analytical framework and participants' demographic information. Although the questionnaire is relatively long, questions are designed with tick boxes to enable participants to fill it in without difficulty and in an average time of ten minutes. A brief overview for each section is here provided.

3.1.1 Section 1: Environmental Impact of Textiles

This section consists of five close-ended questions related to the environmental impact of textiles. It reflects the first step of the analytical framework (Environmental Textile Knowledge) based on TRA, and its goal is to get insight into participants' general knowledge on the impact textiles have and consequent environmental issues.

3.1.2 Section 2: Home Textile Disposal Motivation

This section reflects the second step of the analytical framework (Textile Disposal Motivation) based on TRA and attempts to identify the reasons driving participants to get rid of unwanted textiles. The section analyses answers to twelve close-ended questions.

3.1.3 Section 3: Home Textile Disposal Attitude

This corresponds to a separate section parallel to Textile Disposal Motivation based on TRA and influenced by individuals' subjective norms on textile disposal. The analysis is on answers to five close-ended questions that aim to understand participants' attitudes toward disposal channels of home textiles.

3.1.4 Section 4: About Home Textile Disposal

This section aims to understand participants' subjective norm and the influence from external factors. It analyses answers to two close-ended questions. This data is complemented by the data collected through interviews with consumers, as four questions in the interview guide focus on the sense of responsibility and influence individuals receive in the house[4].

3.1.5 Section 5: Home Textile Disposal Intention

This section corresponds to step three of the analytical framework based on TRA. It analyses answers to five close-ended questions and aims to understand participants' intention when disposing of home textiles and how this intention stems from their motivations, norms, and attitudes.

3.1.6 Section 6: Home Textile Disposal Behaviour

This section corresponds to the final step of the analytical framework according to TRA: the actual behaviour. It analyses answers to six close-ended questions. Questions are phrased reflecting specific situations in which participants need to make a practical decision. This is done

[3] See Appendix VI.

[4] See Responsibility Section in Appendix VII.

with the goal to identify connections and/or potential contradictions between the previous steps (i.e. environmental knowledge, motivation, norm, attitude, and intention) and behaviour.

3.1.7 Section 7: Demographic Information

This is the concluding section of the survey. It is located at the end in order to not intimidate consumers and let them start thinking about the core questions of the survey with a fresh definition of home textiles in mind. Questions in this section cover gender, age, nationality, number of adults living in the house, number of children in the household, education level, and income. An open-ended section is inserted to let participants add extra comments that might not be covered by close-ended questions.

3.2 Data Collection and Analysis.

The survey is designed using a 5-Point Likert Scale (1 – strongly disagree; 2 – disagree; 3 – neutral; 4 – agree; and 5 – strongly agree)[5]. In order to operationalize participants' responses, answers to each question are listed from 1 to 5. The score is then reversed for unfavourable items: the higher the score, the most favourable a person's response is. Consequently, it can be assumed that favourable environmental knowledge, motivations, attitudes, norms, and intentions can turn into positive behaviour. The Likert Scale is optimal for this research, as it permits the collection and classification on a scale of large quantitative data. The method is considered highly reliable according to the reported reliability coefficients by Shaw & Wright (1967) and Robinson & Shaver (1969). Notwithstanding this, a relevant limitation is the so-called bandwagon effect, which consists of people clicking the answers they think the researcher might want to find. In addition to this, as the literature analysis highlights, a gap between knowledge, norm, motivation, attitude, intention, and behaviour might occur, making the findings of the survey less reliable. Due to this, survey questions are designed to test behaviour in actual situations and Cognitive Dissonance Theory is applied to validate the data. Several previous studies define the Likert Scale as a good tool for the measurement of attitude and intention, and it therefore falls in the scope of this research.

From the communication with Louise Wihlborg, IKEA FAMILY Manager, on the 27th of May, the following information regarding the population size for the analysis is collected:

- there are 2.7 million IKEA FAMILY members in Sweden;
- 1.2 million (ca. 44%) have provided email addresses; and
- ca. 40.000 subscribers have agreed on receiving emails and surveys from IKEA. This could guarantee the selection of a sample willing to respond to the survey. However, the time of the thesis completion over the months of July and August could be limiting participation, due to summer holidays in Sweden.

Considering the following parameters[6]:

- margin of error = 5%;
- confidence level = 90%;
- population size: 40.000; and
- response distribution: 50%.

The recommended sample size for the survey is 269 people. Knowing that the response rate is usually between 10%-15% (L. Wihlborg, Pers. Comm.), there is the need to reach around 2.000

[5] See Appendix VI.

[6] http://www.raosoft.com/samplesize.html

people to make sure the data is representative. Making sure that half of the sample would be males and half females is the only restriction in the sample selection among IKEA FAMILY subscribers. Age categories are kept homogenous to avoid overrepresentation of a specific age group and get a more complete picture of the different behaviours among generations. This selection is possible thanks to the database of IKEA FAMILY mailing list.

Questions are tested both among classmates and with few members of the IKEA staff. The survey was sent to IKEA FAMILY members on July 14th at 11:30 in collaboration with Apsis[7], a private company experienced with designing and distributing surveys for IKEA. The survey stayed open for three weeks. Since the first round resulted in 112 complete responses and 72 uncomplete ones, a reminder was sent on August 9th at 10:00 to members who did not open the email or clicked on the survey link and an additional week was provided. Apsis' tool guarantees the monitoring of responses and the sending out of reminders to those people who did not fill the survey in.

The quantitative data from the survey is already in electronic form, while the qualitative data from the interviews is transcribed and analysed. The goal of this analysis is to apply TRA to test the correlation and/or contradiction between the following observable variables: environmental knowledge, motivation, attitude, norm, intention, and behaviour. Data from the survey is later complemented with data collected through interviews with consumers and companies' and projects' representatives. ABM is used to identify specific factors influencing and justifying consumers' disposal behaviour, like the handling of textile waste, feelings of guilt and pride, the importance of convenient solutions, and the possibility of creating a new habit. CDT is applied to dig deeper into the sense of guilt consumers experience when their personal norm is not translated into behaviour. Results are presented in Chapter 4.

[7] http://www.apsis.com/?gclid=CObT-63Euc4CFcL3cgod2QIMdQ

4 Findings

Communication with IKEA staff identifies the following drivers (also mentioned in Section 2.1.1) for the application of circularity solutions to home textiles:

- the emerging scarcity of raw materials and consequent rising prices;
- the possibility to reduce climate impact;
- the possibility to accelerate the transition to using recycled materials the right way; and
- the possibility to develop competencies related to full recyclability and optimal recycling practices.

IKEA staff starts this project with the assumption that consumers do not necessarily want to take textiles back to the retailer, and for this reason it is important to design the research around the consumers' experiences and needs. The desired outcomes for this project is to make textile revival an active part of people's everyday habit and to find a way to make IKEA an active actor in offering services and information. Last April, a textile take-back event was held in Malmö as collaboration between IKEA, which took the home textiles, and Human Bridge, which kept clothes and shoes. For each IKEA blue bag filled with textiles returned, a voucher of SEK 200 to be spent inside IKEA on the very same day was provided. People could bring maximum two bags each. The event was a success, with over 1 ton of textiles collected in one day. People participating were asked a few questions and interesting findings came up. The majority of them were women over 55 years old, this was probably due to the way the event was advertised, reaching that specific gender and age category. In some cases, it was clear that people wanted to get rid of the textiles for financial reasons, as some showed up with several bags of textiles multiple times during the day. However, the vast majority of participants were not there for the financial incentives and declared to be relieved to have the opportunity to get rid of textiles they did not know how to dispose of. Several seemed positive about giving them to a company they trusted would handle them responsibly. Many textile products were still in good shape and high quality, they were simply taking too much space in the house and throwing them away felt wrong to consumers. They wanted to do the good thing, and they felt that by giving them to IKEA someone else could benefit from it. However, sustainability was not mentioned as a reason. Notwithstanding the high participation during the take-back event, IKEA feels that this is only scrubbing the surface of the problem, as there are large groups of consumers that do not have the time or the mean to go all the way to the retailer and hand in the textiles. It is therefore important to look at the actual needs of consumers in order to design a service system that could guarantee high participation and maximum textile collection. Previous research shows that pick up and financial incentives are optimal solutions for textile collection and recycling. Here results from this research are presented in the following order: IKEA FAMILY members online survey as quantitative data, interviews with consumers and with representatives as qualitative data. Overlaps and contradictions between findings are also highlighted.

4.1 Results from IKEA FAMILY Online Survey.

The starting sample derived from the IKEA FAMILY members list counts 2.105 people. As Figure 4-1 shows, the group of participants aged between 36 and 45 is over represented, with 600 people contacted. Other two large age categories are the ones of respondents between 46 and 55 (516 people contacted) and between 26 and 35 (476 people contacted). 269 people aged between 56 and 65 are contacted; 202 over 65, and 42 aged between 18 and 25. These numbers reflect the proportions of age categories in the total sample of 40.000 IKEA FAMILY subscribers. In terms of gender distribution, 1.088 of the subscribers contacted are females, while 1.017 are males.

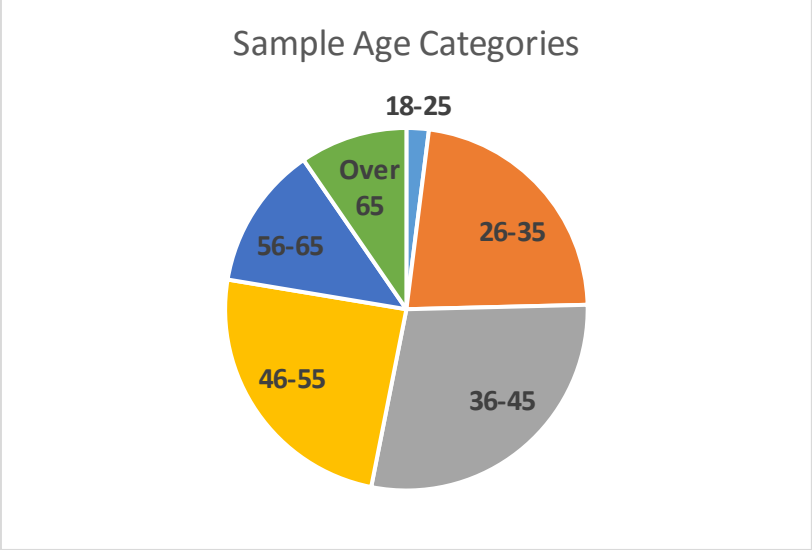

Figure 4-1. IKEA FAMILY Sample: age category distribution

The survey registers a total of 404 responses, for a response rate of 19,19%. Unfortunately, only 238 are complete and can be used for the analysis. Consequently, the sample used is not confidently large to be considered representative for the population of IKEA FAMILY subscribers in Sweden, since 31 answers are missing. The average time for the completion of the survey is 10 minutes and 37 seconds. Out of 238 respondents, people between 46 and 55 are the largest group (62 people), followed by people between 36 and 45 (56), people between 26 and 35 (47), people between 56 and 65 (44), people over 65 (26), and lastly people between 18 and 25 (3). The two largest age categories from the sample are therefore also the two with the largest responses in inverse order, since the second largest category has the highest number of responses. Notwithstanding this, the age category with the highest response rate is another one: people between 56 and 65 have a response rate of 16,36%. Regarding gender categories, 150 respondents are females, with a response rate of 13,79%; while 86 respondents are males, with a response rate of 8,46%.

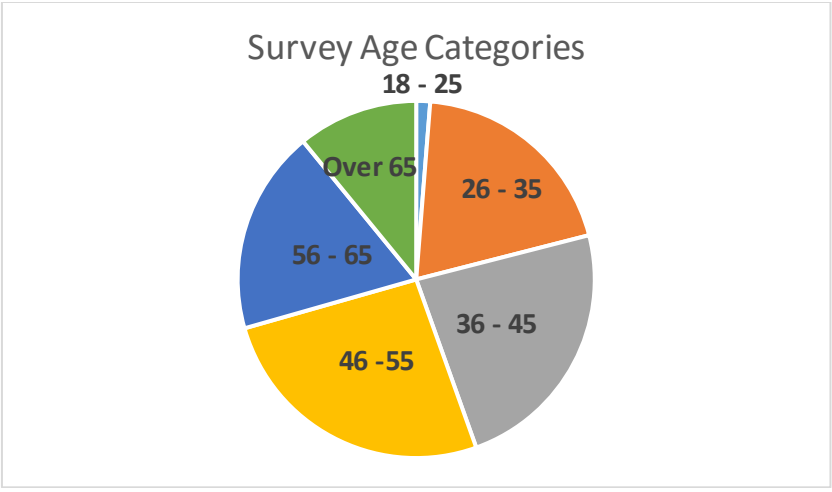

Figure 4-2. Respondents' age category distribution

Most participants (221) are of Swedish nationality. The remaining respondents are American (2), German (2), Polish (1), Danish (2), French (1), Dutch (1), British (1), and Croatian (1). The nationality of 6 respondents is unknown. The largest majority of respondents (160) declares to live in a house with at least two adults. 67 respondents report to live alone, and the remaining 10 people live in a house with three adults and above. 147 participants do not have children in

the house. The majority of participants (161) has a post-secondary education level; while 71 people have completed the gymnasium and 6 people have completed elementary school. Most participants (127) have a monthly income between SEK 20.000 and 40.000; 42 people declare an income below SEK 20.000; 31 people earn over SEK 40.000; 4 people share a household income; and 34 people prefer to not answer to the question.

4.1.1 Introduction: Textile Waste Handling

In this section respondents are allowed to select more than one textile waste handling method. The most common one is "donate and recycle", with 183 (76,89%) respondents declaring to have used it to dispose of home textiles in the last twelve months. Second most preferred disposal method is "discard", used by 132 (55,46%) people. Following methods are (in order of number of observations): "reuse" (122 – 51,26%), "repair" (84 – 35,29%), and "resell" (58 – 24,37%). It is interesting to observe that the two most commonly used methods involve permanent disposal of the textiles at the minimum effort possible. This might be due to factors related to convenience, habit, time, and storage space. This is also supported by Engström & Nicklasson (2015); Shim (1995); Koch & Domina (1997); Domina & Koch (1999, 2002); Ha-Brookshire & Hodges (2009); and Morgan & Birtwistle (2009). However, they are not fully in line with Klepp (2001), who finds a general predisposition for consumers to avoid clothing discarding, opting for more sustainable alternative, such as donations and handling down to friends and families.

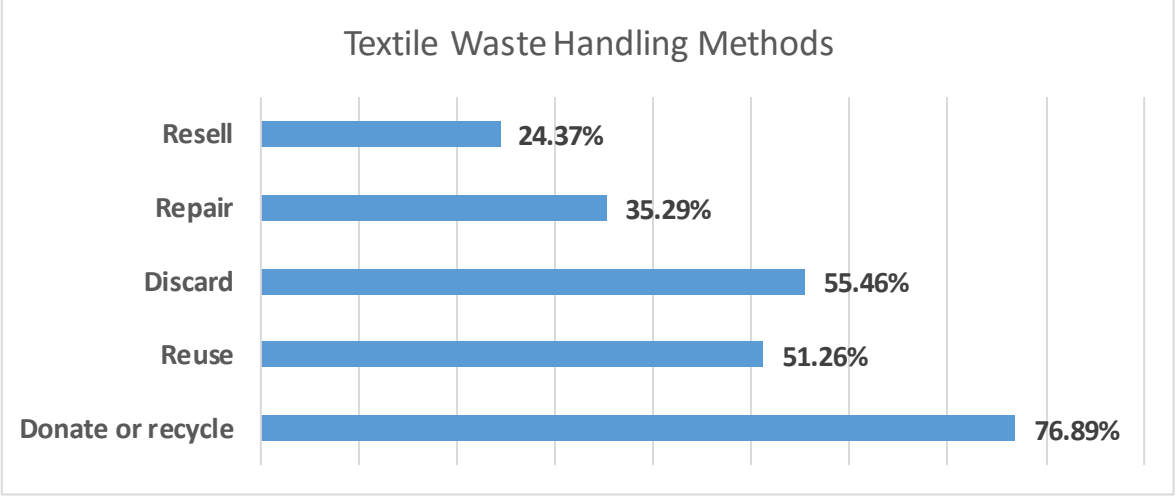

Figure 4-3. Textile waste handling methods

4.1.2 Section 1: Knowledge on Environmental Impact of Textiles

Questions for this section are reported here with respondents' answers and summarized in Figure 4-4.

Q1. Textile manufacturing is responsible for the release of chemical pollutants in the water.

The largest majority of respondents (166 – 69,75%) strongly agrees to this statement. 48 (20,18%) participants agree to the statement by clicking on number 4 of the Likert Scale. 21 (8,82%) respondents stay neutral; 1 (0,42%) respondent disagrees; and 2 (0,84%) respondents strongly disagree.

Q2. Air pollution can occur during some common dye processes of textiles.

Here again the majority of respondents (119 – 50%) strongly agrees to this statement. 57 (23,95%) people agree; 52 (21,85%) people stay neutral; 5 (2,10%) respondents disagree; and 5

(2,10%) strongly disagree.

Q3. The manufacturing process is highly water-intensive.

145 (60,92%) respondents strongly agree with the statement; 46 (19,33%) agree; 43 (18,07%) remain neutral; 2 (0,84%) disagree; and 2 (0,84%) strongly disagree.

Q4. All kinds of textiles are recyclable.

Here the majority (76 respondents – 31,93%) agrees to the statement; 65 (27,31%) people strongly agree; 66 (27,73%) remain neutral, clearly showing uncertainty over the topic; 16 (6,72%) people strongly disagree; and 15 (6,30%) disagree.

Q5. Disposing of home textiles in a responsible way does not help with the reduction of raw materials use for new products.

76 (31,93%) respondents strongly agree with this statement; 64 (26,89%) agree; 51 (21,43%) remain neutral; 28 (11,76%) strongly disagree; and 19 (7,98%) disagree.

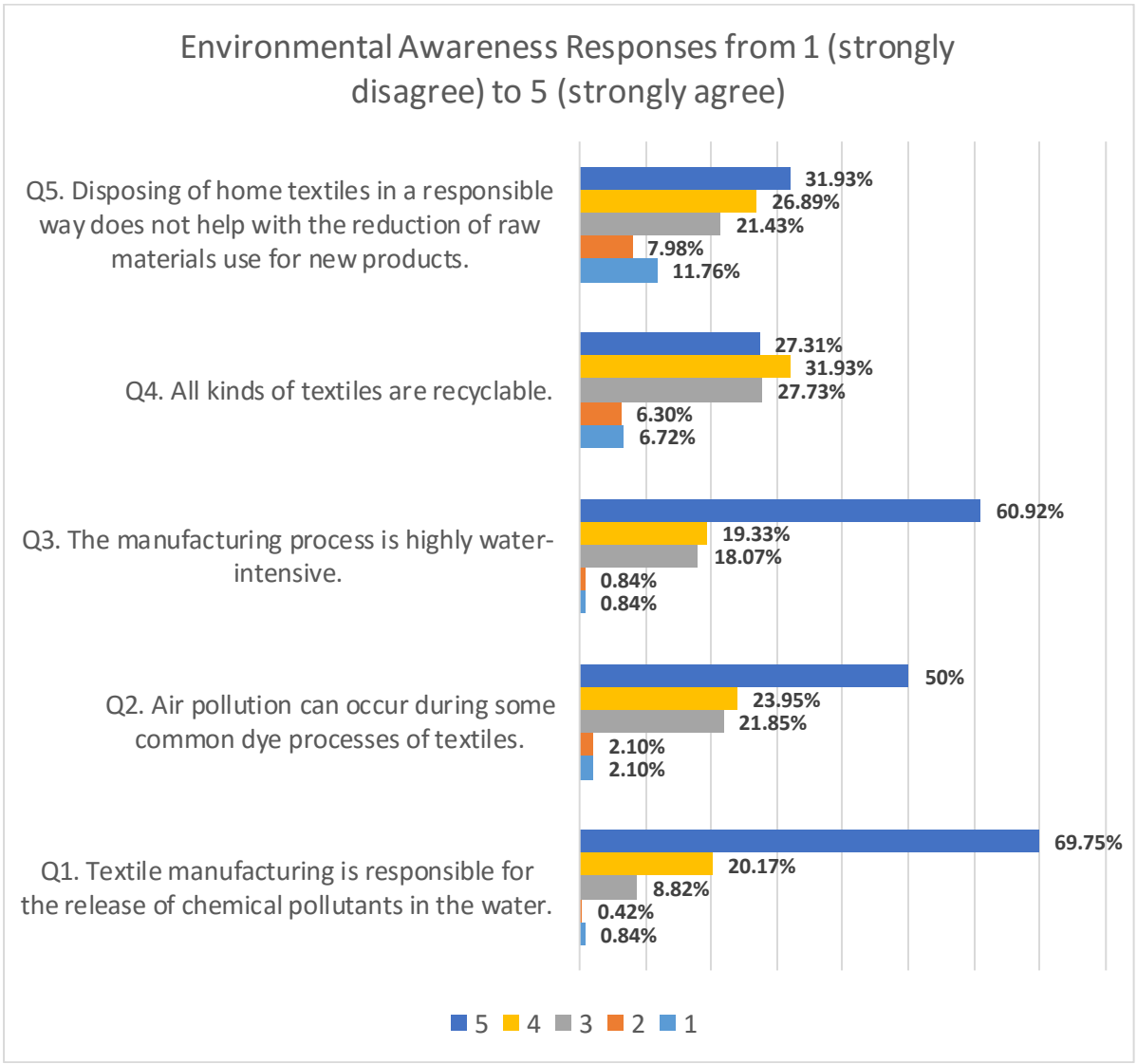

Figure 4-4. Textile environmental impact awareness

4.1.3 Section 2: Home Textile Disposal Motivation

Responses show that the most common home textile disposal motivation is donation to charity organizations for people in need (Q1). Indeed, 138 (57,98%) respondents locate this motivation in a point 5 (strongly agree) of the Likert Scale. Second most popular motivation is "I donate my home textiles to charity to do my part in decreasing the environmental problems" (Q5), as it is ranked a 5 (strongly agree) by 92 (38,65%) respondents. Other highly common motivations are:

- (Q2) "I often reuse home textiles for other purposes for economic reasons", ranked a 4 (agree) on the Likert scale by 86 (36,13%) respondents;
- (Q9) "I try to repair my old home textiles because throwing away can significantly contribute to environmental problems", ranked a 4 (agree) by 83 (34,87%) respondents;
- (Q6) "I reuse home textiles because it can significantly benefit the environment", ranked a 4 (agree) by 79 (33,19%) people; and
- (Q10) "I find it convenient to throw away unwanted home textiles", ranked a 4 (agree) by 66 (27,73%) people.

These findings are more in line with the ones by Klepp (2001) and Ha-Brookshire & Hodges (2009). Reasons for the slight contrast with the introductory question could be several, including no particular textile handling activity in the past twelve months, difficulty of the respondents in remembering past actions, general agreement to the statements, a gap between motivations and actual behaviour, lack of honesty etc.

The remaining disposal motivations are not supported, as they are all ranked a 1 (strongly disagree) on the Likert Scale by the majority of respondents. These are:

- (Q3) "I don't reuse home textiles because it is a hassle to me";
- (Q4) "I sell most of my home textiles for economic reasons";
- (Q7) "It is time-consuming to donate my home textiles to charity";
- (Q8) "To reduce environmental problems, I sell my unwanted home textile rather than throwing it away";
- (Q11) "I never reuse home textiles because I don't know how to"; and
- (Q12) "I never repair home textiles because I don't know how to".

Figure 4-5 provides an overview of participants' responses to the twelve combinations. These combinations are selected as variables from the study by Goudeau (2014) and they are common behaviours observed by Gwozdz et al. (2013).

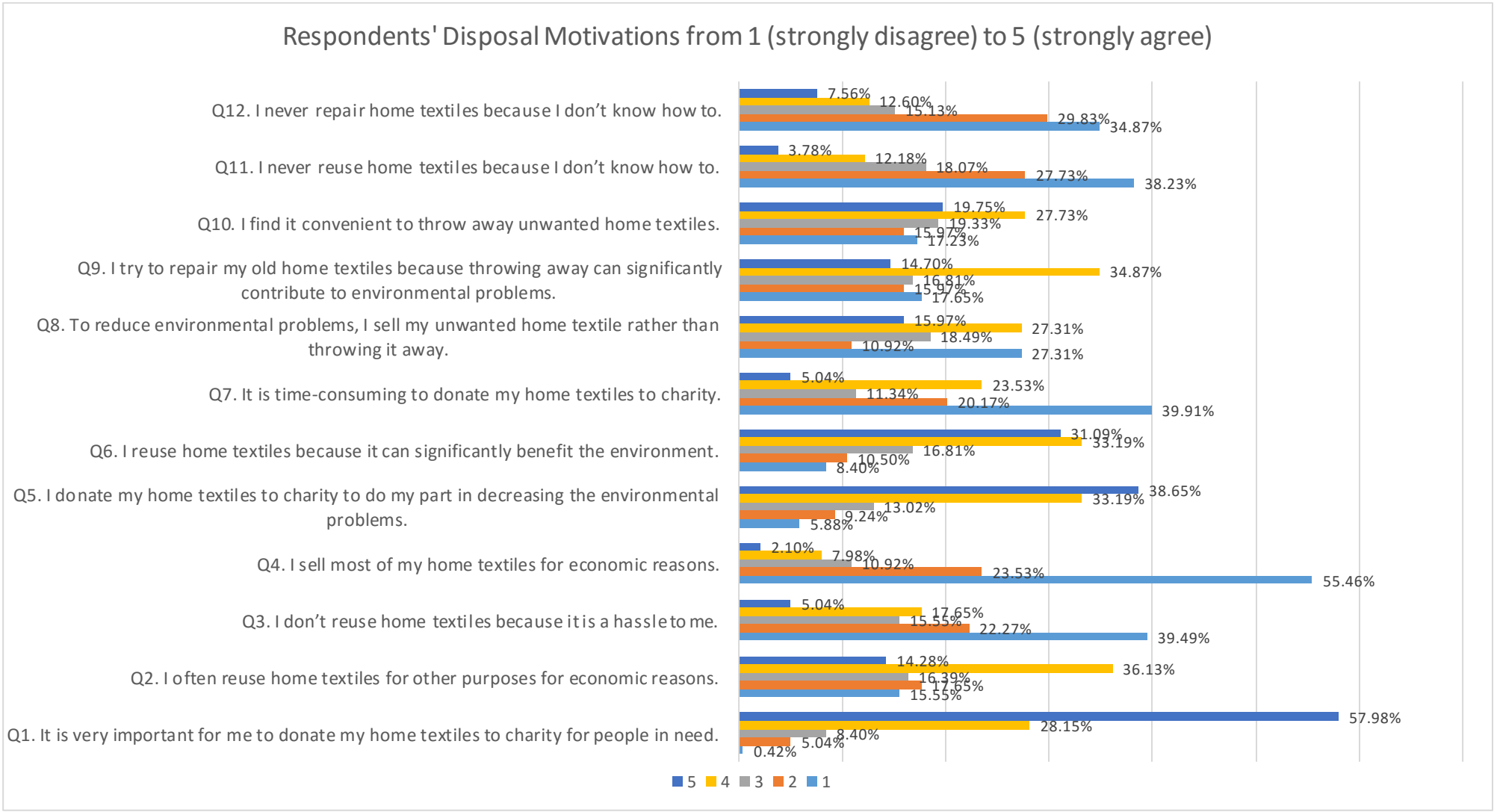

Figure 4-5. Overview of responses ranking disposal motivations on the Likert Scale

4.1.4 Section 3: Home Textile Disposal Attitude

Overall, respondents show a positive attitude towards sustainable textile handling methods and education of consumers. As answers to the following statements show:

Q1. Reselling, donating, and reusing home textiles are good ideas.

The largest majority (213 people – 89,49%) strongly agrees to this statement. 19 (7,98%) respondents agree and 6 (2,52%) remain neutral.

Q2. I am willing to spend time to resell, donate, and reuse my old home textiles.

106 (44,54%) respondents strongly agree to this statement; 88 (36,97%) agree; 26 (10,92%) remain neutral; 14 (5,88%) disagree; and 4 (1,68%) strongly disagree.

Q3. More information about ways to resell, donate, and reuse home textiles should be made available.

145 (60,92%) respondents strongly agree to this statement; 58 (24,37%) agree; 28 (11,76%) remain neutral; 4 (1,68%) strongly disagree; and 3 (1,26%) disagree.

Q4. Reselling, donating, and reusing home textiles are more trouble than they are worth.

124 (52,10%) strongly disagree to this statement; 71 (29,83%) disagree; 19 (7,98%) remain neutral; 16 (6,72%) agree; and 8 (3,36%) strongly agree.

Q5. People should be encouraged to resell, donate, and reuse home textiles.

184 (77,31%) participants strongly agree to this statement; 42 (17,65%) agree; 10 (4,20%) remain neutral; 1 (0,42%) disagree; and 1 (0,42%) strongly disagree.

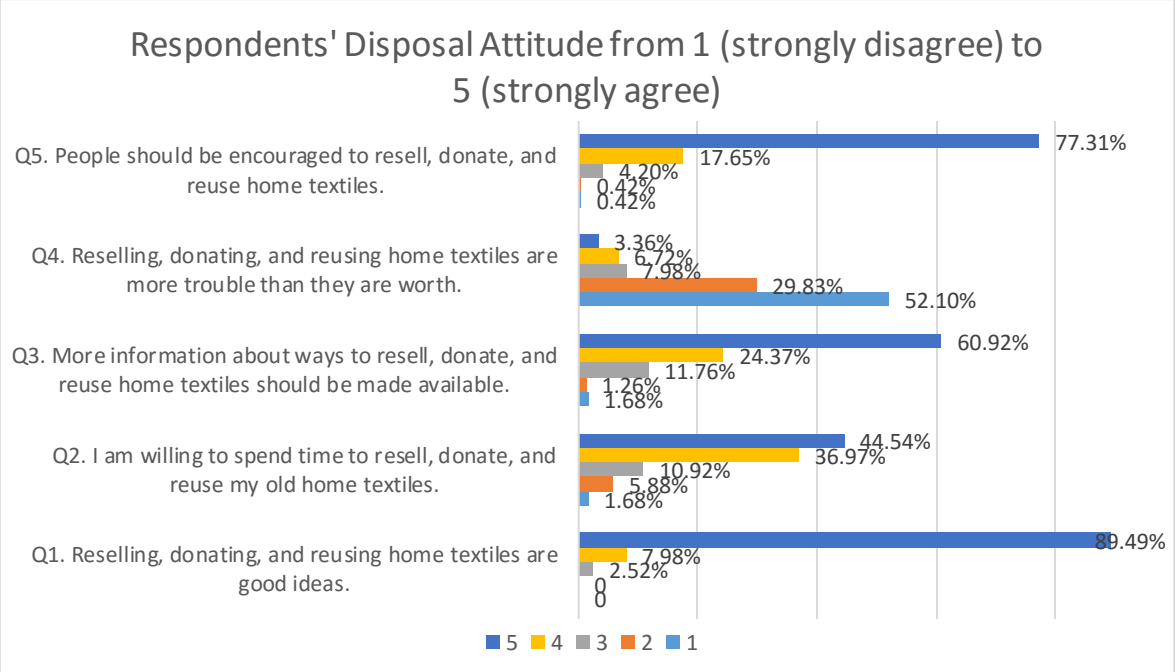

Figure 4-6. Overview of responses ranking disposal attitude on the Likert Scale

4.1.5 Section 4: About Home Textile Disposal

Here responses are contrasting. The majority of participants show a positive attitude when responding to *Q1: People important to me think that I should resell, donate, or reuse home textiles,* with 91 (38,23%) people agreeing and 61 (25,63%) strongly agreeing. However, when it comes to the statement testing the influence of the social norm over participants: *Q2. Generally speaking, I want to do what my friends think I should do*, the majority (75 people – 31,51%) strongly disagrees to it, 43 (18,07%) disagree, and 47 (19,75%) remain neutral. This finding is not in line with the ones by Engström & Nicklasson (2015), who identify an internalization of social norms in the interview they conduct with Swedish students.

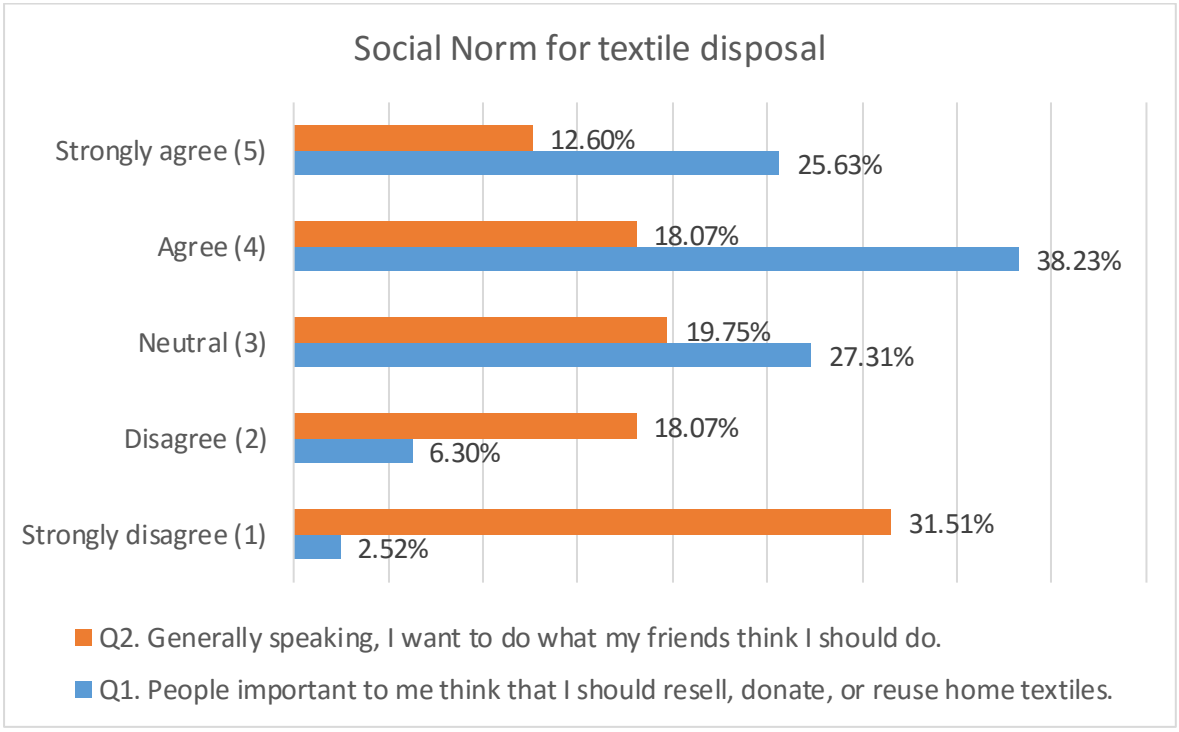

Figure 4-7. Responses on social norm

4.1.6 Section 5: Home Textile Disposal Intention

The most common textile disposal intention selected by respondents is donation of home textiles to a charity organization for a good cause. Indeed, 145 participants rank it a 5 (strongly agree) on the Likert Scale and 66 rank it a 4 (agree). Other two common intentions are "reusing textiles for other purposes" (ranked a 4 by 100 people and a 5 by 72) and "repairing home textiles when damaged" (ranked a 4 by 90 people and a 5 by 60). Both the "resale" and "discard" options raise mixed responses, as summarized in Figure 4-8.

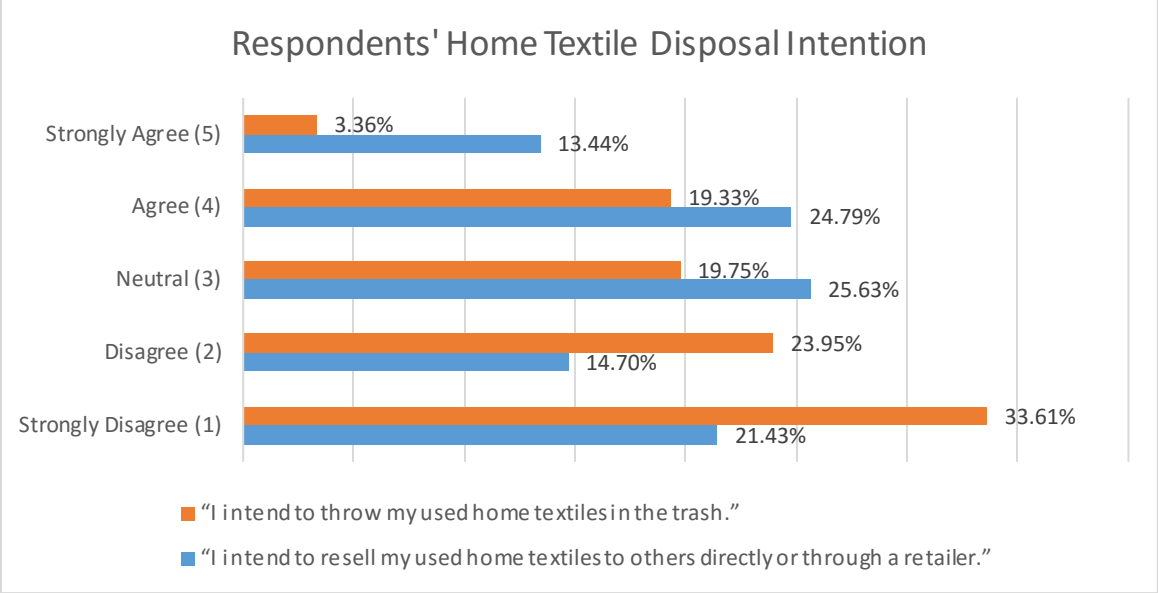

Figure 4-8. Overview of responses ranking disposal intentions on the Likert Scale

4.1.7 Section 6: Home Textile Disposal Behaviour

In this section of the survey, respondents have the possibility to select more than one home textile disposal option. Responses are summarized in Table 4-1.

Table 4-1. Overview of responses ranking disposal behaviour

Disposal Behaviour/Situations	"Your bed linens have a hole."	"The curtains in the living room are in good conditions but you want to change them."	"The table cloth has a stain that doesn't go away."	"The colour of the chair pads in the kitchen is faded."	"There are towels taking space in the cupboard that have never being used."	"The furniture in the bedroom has been changed and you need to get rid of the old pillow covers and blankets."
Donate or recycle	7,14%	64,70%	18,07%	29,41%	61,34%	66,39%
Reuse	56,72%	29,41%	52,94%	35,71%	35,71%	31,93%
Discard	30,67%	5,04%	38,65%	36,13%	5,88%	11,34%
Repair	22,69%	0,42%	2,52%	10,92%	0,42%	0%
Resell	0%	21%	2,52%	4,20%	15,13%	19,33%

4.2 Results from interviews with consumers in Malmö and Stockholm.

This section summarizes the results of the 24 interviews with consumers in Sweden (8 in Stockholm, 16 in Malmö)[8]. The sample of people between 20 and 39 years old is over-

[8] See Appendix VII.

represented (14 out of 24). Of the remaining age categories, 1 person is below 19; 2 people are between 40 and 49; 4 people are between 50 and 59; 1 person is between 60 and 69; and finally 2 people are over 70. Clustering of information collected from interviews allows the identification of four major behavioural profiles: Trendy/Updater, Good to Have, Downshifter, and Nostalgic. These categories are not absolute, but they vary for each consumer depending on the specific product in mind when making decisions on disposal options. Some behavioural categories also change depending on the typology of textile. The sample is not big enough to identify patterns connecting behaviour with demographic information. Notwithstanding this, people over 50 mostly fall in the "nostalgic" behavioural category; while most of respondents below 25 can be located in the "trendy" category. Women from 30 on are generally more concerned about environmental impacts of textiles and sustainable consumption; while younger women show lower awareness and/or no interest. Men in all ages are generally less concerned, as they declare textile waste not to be a relevant issue in the house and/or something someone else in the family would take care of. Generally speaking, men below 30 are more confused regarding what to do with textile waste; while men above that age show to have a well-established waste hierarchy in the house. Transformator Design created the matrix in Figure 4-9 to provide an overview of the four behavioural profiles, together with common and contrasting characteristics. Table 4-2 presents major factors associated to each behavioural category as a result of consumers' interviews analysis. These are presented with a summarizing quote from similar multiple comments, the two variables the behaviour category is associated to on the matrix and a list of behavioural trends.

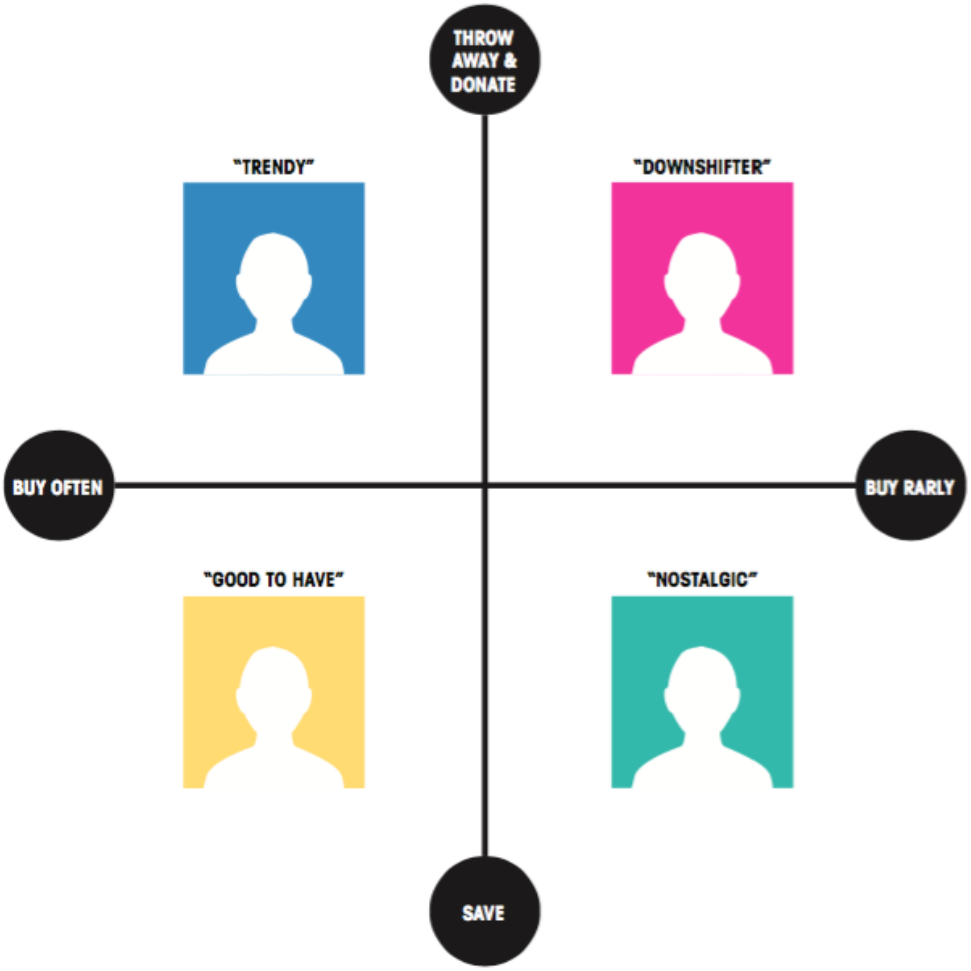

Figure 4-9. Behavioural Profiles

Source: Transformator Design

Table 4-2. Consumers' Behavioural Categories

Trendy - Updater *"I just want to get rid of it, so I can buy a new one".* *Buys often – Throws away and donates.* • Wanting is a stronger driver than needing; • buys new products; • identifies with the products; • seeks confirmation through the products; • sensitive to trends and brands; • looks for constant improvement; • buys quality if finances allow; • high threshold to buy second-hand; and • makes room for new things.	**Downshifter** *"I might as well subscribe on home textiles".* *Buys rarely – Throws away and donates.* • Not important to own; • no emotional bonds to the products; • consume services rather than products; • not owning gives a sense of freedom; • mass-produced is OK; • no overflow; • function is important; • buys when the need arises; • precise about why each product enters the home; • prolongs the life of products; and • buys quality if finances allow.
Good to Have *"2 Kr for a tea towel! Let's buy 100".* *Buys often – Saves.* • Likes a good deal; • "good to have" mentality; • likes the mass-produced; • low emotional value to products; • low price is important; • quantity instead of quality; • lives with an overflow; • does not prolong life of products; and • disposes when broken/no function.	**Nostalgic** *"Oh, they don't make them like this anymore".* *Buys rarely – Saves.* • High emotional value in products; • does not like mass production; • keeps for a long time; • precise about why each product enters the home; • likes to buy second-hand, flea markets and vintage; • important that the product has a story; • likes the unique; • likes quality; and • price is not important, it's the opportunity.

As Figure 4-10 shows, when it comes to textile purchase and disposal, people go through specific life stages. Examples of moments in life when the inflow of textile in the house increases are when a young adult moves out of his/her family house to live alone, transfers somewhere as a student, moves in with a partner, and reaches a peak of inflow when there are kids in the house. Examples of outflow of textiles are moving out stages, such as in case of divorce, children growing up and leaving the house, and cleaning after someone's death. This finding reflects the study by Lee et al. (2013). Supporting Domina & Koch (2002), conversations with consumers for this research confirm the trend to create a personalized waste hierarchy. Indeed, several people declare that, before definitely getting rid of home textiles, they first find alternative ways to prolong their lifetime (e.g. some use them as rags, some move them to holiday houses, some lend them to family and friends, some store them until they find a proper way to dispose of them). Similar comments are collected with the survey, as some participants describe different strategies they apply to reuse and recycle home textiles. Several consumers declare to have a basic knowledge on textile production and its consequent impact on the environment. Many consider social issues, fair-trade, and quality when purchasing textiles. Some are experienced with textile return schemes and second hand products. A young man (27 years old) purchases home textiles for his son on credit, but the purchase choice is made based on colours and materials, not the environmental benefit. A similar comment is made by a couple of participants to the survey, who purchase for fashionable reasons and discard when they cannot find a close person to hand the textiles to. Some interviewees do not pay too much attention to textile waste, since they believe they do not throw away that much. Others justify their lack of involvement in textile recycling systems stating that they do not have the time, collection centres are too far

away or they are simply not interested. These are findings in line with comments in the survey and other findings mentioned in different publications, such as Engström & Nicklasson (2015); Shim (1995); Koch & Domina (1997); Domina & Koch (1999, 2002); Ha-Brookshire & Hodges (2009); Morgan & Birtwistle (2009).

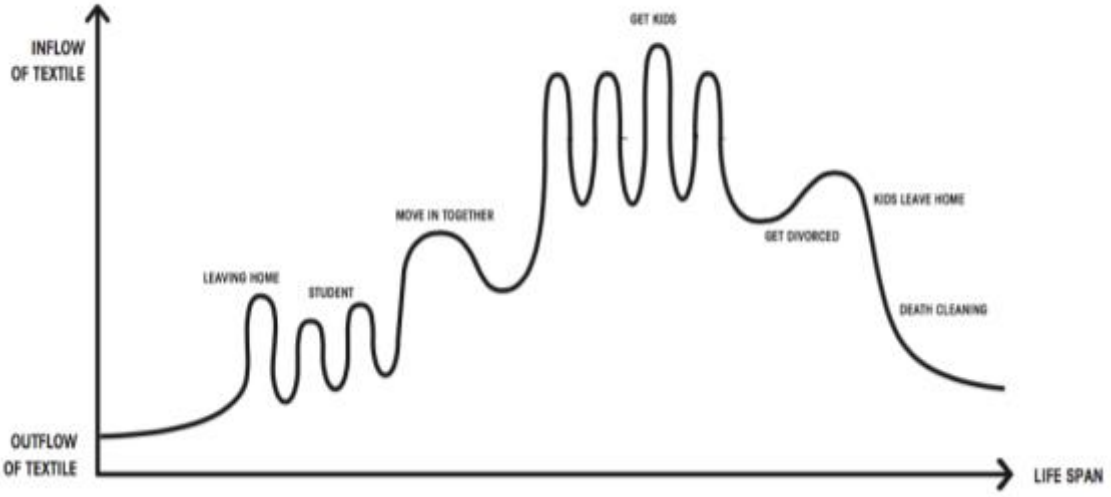

Figure 4-10. Textiles inflows and outflows

Source: Transformator Design

Another important aspect arising from the interviews is the confusion some individuals have on what could be done with no longer wanted textiles. Citing a young girl aged 19: "We throw away textiles. What should we do with them?" Other interviewees do not see a clear connection between consuming textiles and having an impact on the environment. Last but not least, several people do not donate or recycle their ragged textiles because they do not see any functional value in them. These points (i.e. knowledge of issues and of action strategies) are highlighted by Hines, Hungerford and Tomera (1986) and Morgan & Birtwistle (2009) as factors influencing pro-environmental behaviour. This highlights a problematic lack of knowledge on environmental issues and on the different options consumers have before opting for discarding textiles in the trash. There is therefore the necessity to intervene with awareness campaigns targeting especially young generations.

Regarding decision-making for the management of textiles, several interviewees leave the choice to another member of the family (i.e. usually the wife or the mother). Here again another concept from the literature analysis is observed: the important decision-making role specific individuals in the household play, and the fact that when it comes to purchase and disposal of products the choice is typically left to a woman (Evans, Jamal and Foxall, 2006; Iyer & Kashyap; 2007; Gwozdz et al., 2013). The fact that several interviewees give the full responsibility to another member of the family not present during the interview could be a way to counterbalance the sense of guilt arising from acknowledging the lack of awareness on the interview topic, as argued by Schwartz (1977). Some consumers admit they have no knowledge on what to do with their unwanted textiles; however, they refuse to throw them away since they feel that "it is not the right thing to do". As a result, textiles are kept stored for years as consumers wait for the optimal solution to take care of them.

When it comes to drivers and motivational factors for decision-making and disposal of textiles, several key points arise from different interviews:

- the major factor stimulating the disposal of unwanted textile is the necessity to get rid of them in order to create additional space. Consumers opt for donation and hand-out disposal in order to mitigate their social and environmental bad conscience;
- consumers see financial rewards as a good incentive to participate in circular schemes for textiles. When returning textiles, they want to receive feedback and public recognition for doing 'good';
- consumers need knowledge on what their effort can lead to. They believe policy makers should step in to drive and enable substantial changes in the market for textiles;
- several people think both companies and society have responsibility for the handling of unwanted textiles;
- consumers want to co-create and feel included in the collection system and solutions. Several participants to the survey comment that a pick-up system would be an optimal solution to incentivize consumers to sort and recycle textile waste;
- consumers need transparency and control to know how the textile is being used and for what purpose. They want to know that the donated textile is actually supporting others and it is being reused in some way; and
- several interviewees declared the necessity to know who financially benefits from it as a major concern. They trust companies that have earned credibility by partnering with charity organizations with a perceived high reputation. Some interviewees prefer to have municipalities take care of unwanted textiles rather than private companies.

The major learning from these points and backed up by Jacoby et al. (1977) and Lee et al. (2013) is that emotion is the major component of consumer purchase, use, and disposal experience with a product. Emotion can guarantee loyalty to a brand. To better understand the emotional attachment, some interview questions[9] aim to uncover the value consumers give to home textiles. An interesting finding is the fact that consumers separate home textiles into two different categories, as Table 4-3 summarizes with examples and major characteristics.

Table 4-3. Home Textile Value to the Consumers

Private	**Personal**
Need to have – Little relation	Nice to have - Relation
Examples: sheets, towels etc.	Examples: carpets, cushions, curtains, tabledoths etc.
• They are present in every house and most of the time they have an exclusively functional value; • they have individual value, except for when the material used is high quality; • they are usually kept for very long time, and when ruined they are used for different purposes (e.g. rags); and • they are considered private textile for single use, consumers are sceptic about 2nd hand consumption.	• They are purchased to add value to the house, most of the time emotional value added to the functional value. Consumers are willing to invest more money on these kinds of textiles; • 2nd hand market is an option, since the products have a value for others as well. They have a history and this makes them unique; • women make the purchasing and disposal decision most of the time; and • the textiles are personalized, but not necessarily private.

[9] See Appendix VII.

A relevant finding from the interviews not mentioned in the literature analysis is the strong correlation consumers have between perceived value of textiles and price. During the interviews, several consumers express their impression that if a textile product has a low price, then the quality is probably low and they can dispose of it more frequently. Other factors influencing consumers' perception of value are brand, material, design, and heritage. The sum of these perceived value factors provides a consumer's total perceived value for a textile product. These five perceived value factors can be divided in three overlapping value categories for textiles: 1) Functional Value; 2) Economic Value; and 3) Emotional Value. As shown in Figure 4-11,

- Material and Design factors fall under the Functional Value Category;
- Price, Brand, Material, and Design fall under the Economic Value Category; and
- Brand, Material, Design, and Heritage fall under the Emotional Value Category.

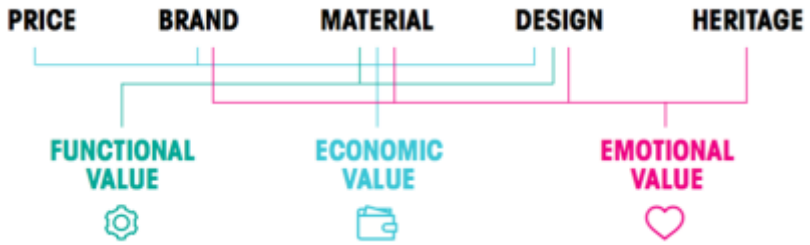

Figure 4-11. Textile Value Categories

Source: Transformator Design

The value attributed to textile products inevitably influences the way they are disposed of, as it is summarized in Figure 4-12. A major factor that arise during interviews is the fact that when consumers do not perceive any functional value in the product, they think that the textile cannot be reused or donated and they throw it away. Companies and charity organizations are therefore missing large quantities of textiles. This finding is also supported by Porse (2014) and by interviews with representatives conducted for this research, as Section 4.3 further discusses.

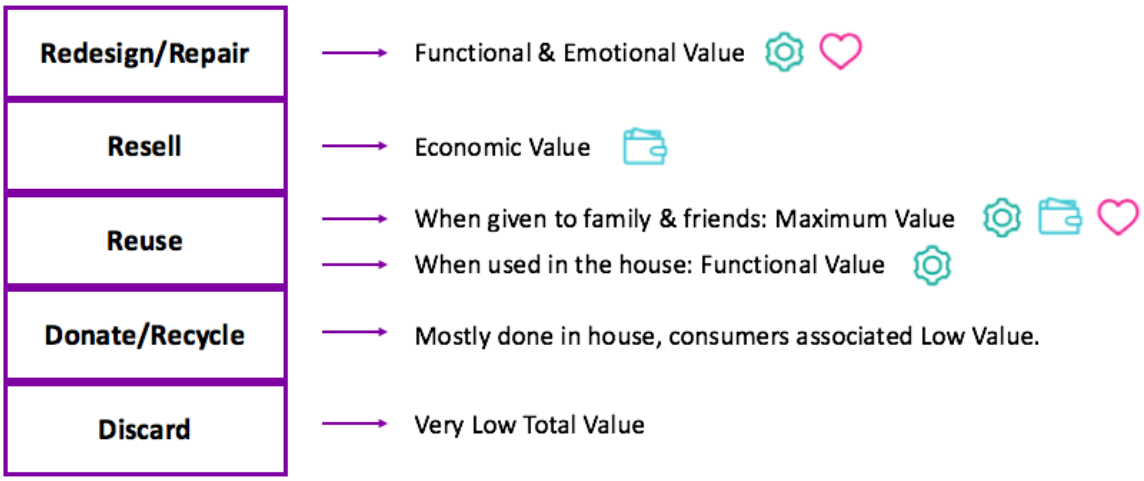

Figure 4-12. Textile disposal means based on perceived value

Lastly, face-to-face interviews identify the presence of other external factors that, together with perceived value, can influence consumers' decision-making and disposal behaviour with textile products. These factors are: incentives, knowledge, transparency, social context, opportunity, identity, availability, awareness, participants, and trust in collector. This finding corresponds to

data reported in Jacoby et al. (1977), Hines, Hungerford and Tomera (1986), Evans, Jamal and Foxall (2006), Ekström (2010) and Iyer & Kashyap (2007).

4.3 Results from interviews with projects' and companies' representatives.

This section presents the insights from face-to-face and phone interviews with projects and companies' representatives.[10] The goal of these interviews is to collect information about consumers' experiences from companies already applying closed-loop schemes for textiles. Major points covered involve the drivers pushing companies to adopt circular models, how companies build their business case and communicate to the consumers, and what is their experience with the quantities of textiles returned and general consumers' participation. Major findings and reference to conversations are reported here.

4.3.1 Trends & Habits

A general finding in each interview is the widespread trend to purchase second hand clothes. For many Swedish consumers this already is a habit. Textiles donation and recycling are also largely widespread, as consumers start questioning the origin of purchased products and gain interest in the topic of sustainable consumption. This is a finding supported by Ekström (2010). However, the same trend cannot be observed among purchasing patterns for home textiles. Major reasons could be concerns about hygiene and sense of aesthetic (S. Öström[11], personal communication, June 2nd, 2016; C. Hill[12], personal communication, June 7th, 2016; F. Klarén[13], personal communication, June 13th, 2016). When it comes to repairing textiles, the experience from the Fixa Till project shows that this trend is still not widely used, since consumers are not confident with the sewing and other types of machines one might need for repairing or upcycling (S. Öström, Pers. Comm.).

4.3.2 Necessity to get rid of textiles

The experience from the Fixa Till project shows a relevant trend that potentially occurs with in-store collection schemes: most people come in to get rid of textiles in order to make more space for new products to purchase or take in exchange. When directly asked about the reasons for participating in a take-back scheme, most consumers declare that simply throwing them away feels wrong (S. Öström, Pers. Comm.). This is also a finding from interviews with consumers presented in Section 4.2.

4.3.3 Trusting the collection service

Communications with all interviewed representatives highlight that most consumers are enthusiastic about having a trustworthy system they can rely on for the handling of unwanted textiles. Many of them feel a sense of relief about having a good disposal option for textiles, since they do not know what to do with them. This is especially justified by the fact that some of the returned textiles have emotional value to them (S. Öström, Pers. Comm.; F. Klarén, Pers. Comm.). This is a finding supported by interviews with consumers in Section 4.2.

4.3.4 Barriers to recycling textiles

The biggest barrier identified by interviewees is the fact that a large share of the textile flow is lost. Consumers tend to throw away textiles that are damaged, stained and/or do not have

[10] See interview guide in Appendix V.

[11] See Fixa Till Description in Appendix II.

[12] See Adidas description in Appendix III.

[13] See KappAhl description in Appendix IV.

perceived functional value anymore. This is a finding supported by interviews with consumers, all representatives and Porse (2014). Another major barrier is the lack of time and the inconvenience of selling textiles, especially when people have only a couple of items to dispose of. Convenience and practicality are important factors mentioned several times by all interviewees and mentioned by Engström & Nicklasson (2015); Shim (1995); Koch & Domina (1997); Domina & Koch (1999, 2002); Ha-Brookshire & Hodges (2009); and Morgan & Birtwistle (2009). Some consumers think collection points are too far away or not easy to spot (S. Öström, pers. comm.; F. Klarén, pers. comm.). Last but not least, the conversation with Federica Klarén raises other two relevant barriers to recycling of textiles: 1) the lack of awareness consumers have about the impact of textiles consumption and disposal, as mentioned by Hines, Hungerford and Tomera (1986); and 2) the low demand for collection services from the consumers' side. This inevitably results in companies providing financial incentives in the form of discount vouchers to stimulate consumers to return their textiles to retailers (F. Klarén, Pers. Comm.).

4.3.5 Retailers' responsibility

Overall, both representatives from Adidas and KappAhl recognize the important role big retailer companies have in influencing responsible purchasing and disposal behaviour among consumers. Education is a fundamental strategy to stimulate the adoption of new habits and to assure a reliable, transparent, and easy to access collection service. This is confirmed by feedbacks companies receive from several consumers satisfied about the service (S. Öström, Pers. Comm.; C. Hill, Pers. Comm.; F. Klarén, Pers. Comm.) as well as comments in the survey and during interviews about the necessary EPR responsibility and about making textile recycling in Sweden mandatory by law.

5 Analysis

5.1 IKEA FAMILY Survey Analysis

This section presents an analysis of the findings collected through the lenses of the analytical framework, which is presented again. The section includes a comparison of the results of the literature analysis with the data collected.

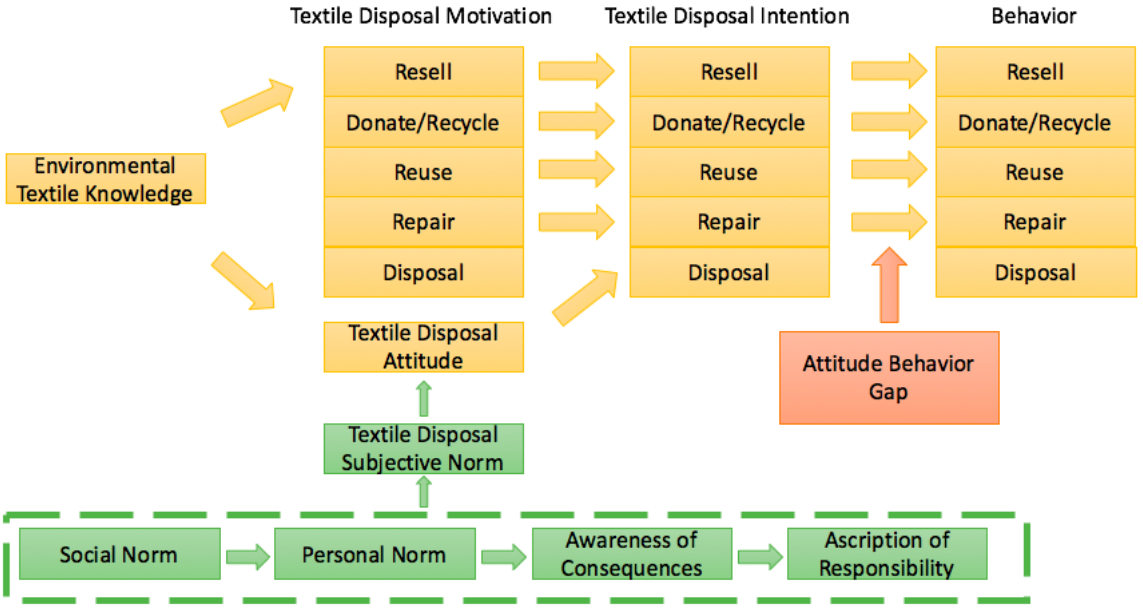

Figure 5-1. Analytical Framework taken from Section 2.3

The presented analytical framework is created merging the Theory of Reasoned Action (yellow colour), the Altruistic Behaviour Model (green colour), and the Cognitive Dissonance Theory (red colour). The framework is a re-adaptation of the one applied by Goudeau (2014). The TRA is used in this section to analyse the primary data collected through the IKEA FAMILY survey. The primary data from interviews with consumers and projects' and companies' representatives is analysed through the lenses of ABM and CDT. Major observable variables influencing disposal behaviour that are highlighted are: environmental knowledge, motivation, attitude, social norm, and intention.

Section 5 starts with the analysis of findings from the IKEA FAMILY survey through TRA. Since the core of the theory is based on the assumption that consumers are rational decision makers, this analysis looks at the rationality and consistency among participants' answers and reported behaviour. A careful look at specific trends and contradictions as compared to findings from previous research is also carried out. The analysis is structured following the same structure of the survey.

5.1.1 Section 1: Knowledge on Environmental Impact of Textiles

This section of the survey consists of five close-ended questions related to the environmental impact of textiles, as indicated by the first step of the TRA. The goal of these questions is to get insight into participants' general knowledge on the environmental impact the textile sector has. Questions are designed based on an environmental impact awareness scale, as shown in Figure 5-2. Responses are used to allocate participants on the awareness scale. Environmental knowledge is the basis for the analysis of responses throughout the whole survey.

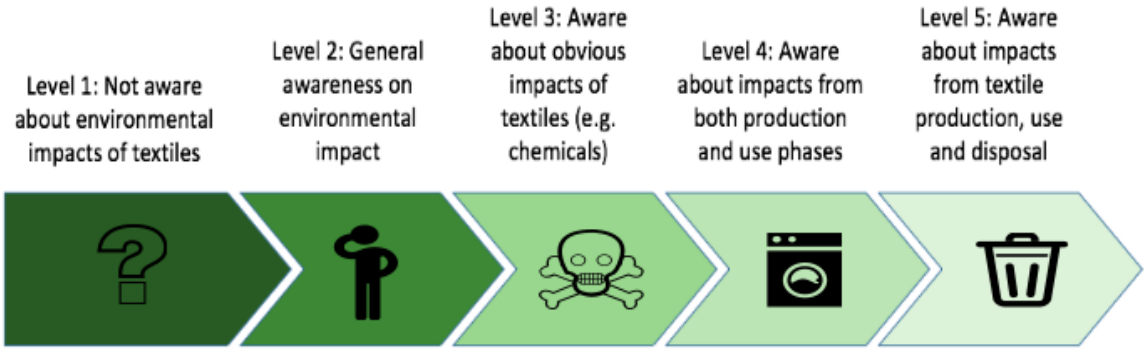

Figure 5-2. Awareness levels about environmental impacts of textiles

Responses from the Likert Scale are allocated on the Environmental Impact Awareness Scale according to the topic of each question. Findings and comments by the author are hereby presented.

Q1. Textile manufacturing is responsible for the release of chemical pollutants in the water.

Figure 5-3. Awareness levels on obvious environmental impacts from production

Q2. Air pollution can occur during some common dye processes of textiles.

Figure 5-4. Awareness levels on obvious environmental impacts from production

Q3. The manufacturing process is highly water-intensive.

Figure 5-5. Awareness levels on obvious environmental impacts from production

The largest majority of respondents shows a good level of awareness on obvious environmental impacts deriving from textile production. On average, 183 participants are located between 4 and 5 points of the Likert Scale, and they are therefore located on Level 3 of the environmental awareness scale by this author. An average of 31 respondents are on point 3 of the Likert Scale. Therefore, they are located on Level 2 of the awareness scale, showing a general awareness of environmental impacts with no specific opinion/idea or examples in mind. Lastly, an average

of 4 people locates between 1 and 2 points of the Likert Scale. These individuals show low or non-existent awareness of environmental impacts of textiles production, and are therefore located on a Level 1 of the environmental awareness scale.

Q4. All kinds of textiles are recyclable.

Figure 5-6. Awareness levels on obvious environmental impacts from production and use

The majority of respondents shows a good level of awareness on obvious environmental impacts deriving from textile production and use phases. 132 participants are located between 4 and 5 points of the Likert Scale, and they are therefore located on Level 4 of the environmental awareness scale. 61 respondents are on point 3 of the Likert Scale. Therefore, they are located on Level 2 of the awareness scale, showing a general awareness on environmental impacts with no specific opinion/idea or examples in mind. Lastly, 31 people are located between 1 and 2 points of the Likert Scale. These individuals show low or non-existent awareness on environmental impacts of textiles production and use, and are therefore located on a Level 1 of the environmental awareness scale.

Q5. Disposing of home textiles in a responsible way does not help with the reduction of raw materials use for new products.

Figure 5-7. Awareness levels on obvious environmental impacts from production, use and disposal

This question is deliberately phrased by the author to test respondents' actual awareness and attention while completing the survey. Keeping in mind the possibility of bandwagon effect and/or participants automatically clicking on high points of the Likert Scale, the question is phrased as a negative statement. This strategy is effective in showing that the majority of respondents do not give the correct answer. 140 participants are indeed located between 4 and 5 points of the Likert Scale. Therefore, they are located on Level 1 of the environmental awareness scale, showing low or non-existent awareness about environmental impacts of textiles production, use, and disposal. 51 respondents are on point 3 of the Likert Scale. Therefore, they are located on Level 2 of the awareness scale, showing a general awareness on environmental impacts with no specific opinion/idea or examples in mind. Lastly, 47 people locate between 1 and 2 points of the Likert Scale, showing a high awareness level and major attention to the content of questions while filling the survey. They are therefore located on a Level 5 of the environmental awareness scale. The following sections analyse consumers' responses in relation to the general position on the environmental awareness scale.

5.1.2 Section 2: Home Textile Disposal Motivation

This section reflects the second step of TRA and attempts to understand the reasons pushing participants to dispose of unwanted textiles. To achieve this, twelve close-ended questions

presenting different combinations of motivations are used. As stated in Section 4.1.3, the most common home textile disposal motivation is donation to charity organizations for people in need. The second most popular motivation is: "I donate my home textiles to charity to do my part in decreasing the environmental problems". Figure 5-8 shows the ranking of disposal motivations in terms of popularity. Presented statistics are obtained summing respondents located on points 4 and 5 of the Likert Scale.

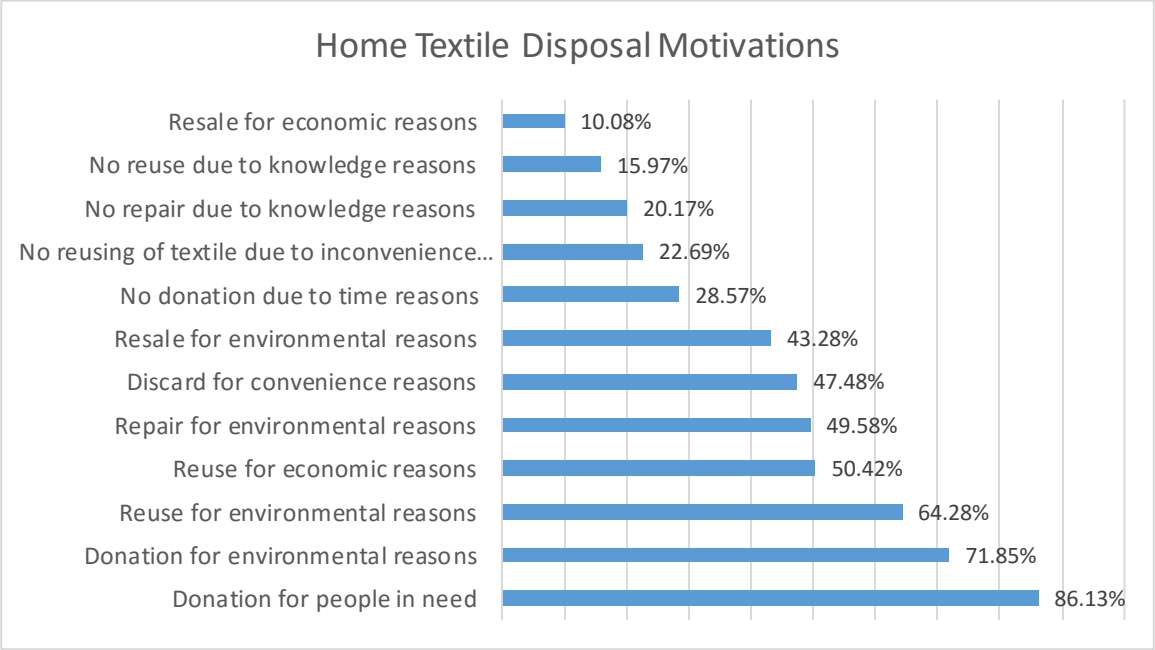

Figure 5-8. Ranking of home textile disposal motivations

It is possible to observe here a strong preference among participants of the survey for donation and reusing home textiles. Environmental reasons are highly considered for both disposal strategies, as well as economic reasons. However, these methods could also be connected to the necessity to do something good that could counterbalance the act of getting rid of unwanted textiles. This finding confirms both Schwartz's (1977) ABM and the findings from interviews with consumers. The fifth most used disposal motivation is repairing due to environmental reasons. Generally speaking, this ranking does not reflect the participants' allocation on the environmental awareness scale, as only a small part of the sample reached level 5. This confirms the author's theory that some respondents filled the environmental awareness section of the survey by automatically clicking on high values on the Likert Scale. This is also supported by the fact that 113 respondents declared that they discard unwanted textiles due to convenience reasons. Resale both for environmental and economic reasons is not common among the respondents. This finding reflects conversations with both consumers and Selma Öström from the Fixa Till project. It is therefore possible to spot here a connection between knowledge on environmental impact of textiles and disposal motivation for the options of donation, reuse, and repair. A slight connection to resale can be observed as well, with 103 respondents stating that they resale for environmental reasons; however, this is less evident in comparison to the other factors. Similar findings are reached by Goudeau's (2014) research on apparel disposal applying TRA on the same observable variables. Goudeau concludes that a relationship between environmental knowledge about apparel and disposal motivation can be supported for all variables, except resale. Generally speaking, individuals with higher environmental awareness tend to be drawn towards donation and reusing, which in this case are confirmed to be the most preferable options from consumers' perspective. The same cannot be said about resale. The reason could be, as identified by Shim (1995) and supported by Goudeau (2014), the fact that consumers who decide to resell their garments are usually driven by motivations different from

the environmental impact. However, since in this research resale for environmental reasons is confirmed by 103 respondents and resale for economic reasons only by 24, it could be concluded that consumers in Sweden consider the environmental factor more than the American consumers analysed by Goudeau (2014).

5.1.3 Section 3: Home Textile Disposal Attitude

This section corresponds to a step of TRA parallel to Textile Disposal Motivation and influenced by individuals' subjective norms. Five close-ended questions are used to understand participants' attitudes toward disposal options for home textiles. Figure 5-9 provides an overview of the findings from this section of the survey. Presented statistics are obtained summing answers by respondents located on points 4 and 5 of the Likert Scale.

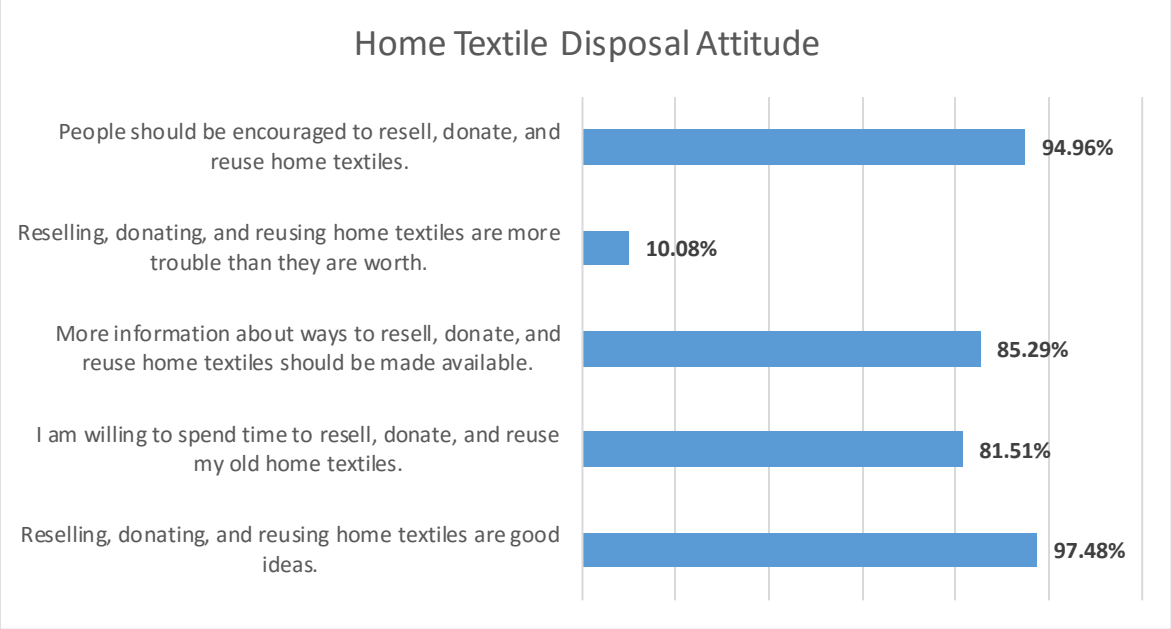

Figure 5-9. Home textile disposal attitude

Findings show that there is a general positive attitude from almost all respondents about responsible ways to handle home textiles. In this case participants show careful attention when filling the survey in, as the statement phrased negatively has low responses between 4 and 5 points on the Likert Scale. These findings are compatible with the ones by Goudeau (2014), who concludes that there is a positive relationship between knowledge about environmental impacts of apparel and attitudes toward donating, reselling, and reusing textiles.

5.1.4 Section 4: About Home Textile Disposal

The aim of this section is to understand participants' subjective norm and the influence from external factors. Two close-ended questions are used to test the presence of social norm and the influence on an individual's behaviour. The graph from Section 4.1.5 is presented here.

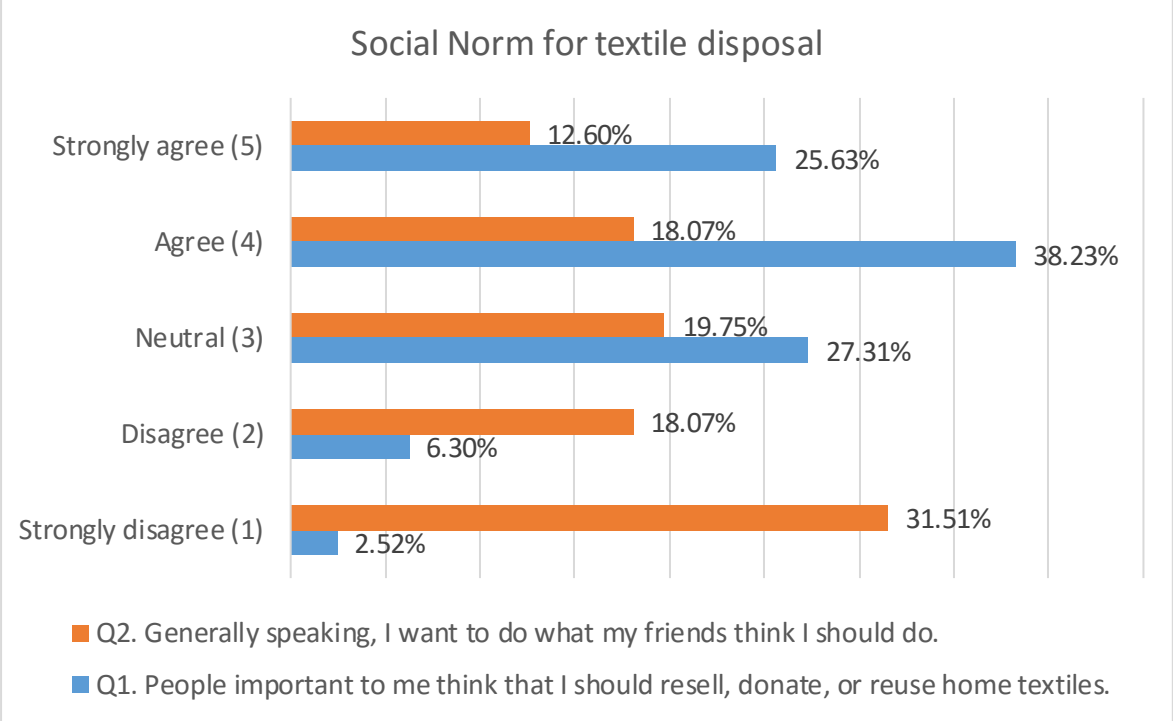

Figure 5-10. Responses on social norm

Responses clearly show the presence of a social norm about the handling of textile waste, as a large number or participants allocate the statement "People important to me think that I should resell, donate, or reuse home textiles" between 4 and 5 points on the Likert Scale. However, when it comes to the active influence over an individual's subjective norm and behaviour, participants to this survey do not show particular perceived duty to internalize the norm into their actions. Indeed, the statement "Generally speaking, I want to do what my friends think I should do" is allocated by the majority between 1 and 2 points of the Likert Scale. These findings are not in line with the ones by Engström & Nicklasson (2015), who identify the internalization of a social norm in young students. However, interviews with consumers and companies' and projects' representatives highlight the presence of an internalized social norm, as Section 5.2.1 further discusses.

5.1.5 Section 5: Home Textile Disposal Intention

This section reflects step three of TRA. It consists of five close-ended questions with the goal to understand participants' intention when disposing of home textiles and how this derives from motivations, norms, and attitudes. As stated in Section 4.1.6, the most common textile disposal intention selected by respondents is donation of home textiles to a charity organization for a good cause. Other two common intentions are "reusing textiles for other purposes" and "repairing home textiles when damaged". Both the "resale" and "discard" options raise mixed responses. These findings are coherent with the ones reported in Section 4.1.3 and reflect findings about home textile disposal motivation and attitude, in which the three most preferable handling methods are donation, reuse, and repair. Similar conclusions are reached by Goudeau (2014), who observes direct connections between disposal solutions motivation and intentions to apply them. Goudeau concludes that the inclusion of motivation variables in the TRA model positively improve its capacity to predict consumers' intention and therefore behaviour.

5.1.6 Section 6: Home Textile Disposal Behaviour

This section corresponds to the final step of TRA: the actual behaviour. Six close-ended questions presenting specific situations in which participants have to make practical decisions are provided. The goal of this section is to identify connections and potential contradictions

between the previous steps (motivation, norm, attitude, and intention) and behaviour. Overall, responses seem coherent with previous sections. Indeed, donation and reuse are again the two most preferred textile waste handling methods. Donation or recycling receives the highest scores in the following situations:

- "The curtains in the living room are in good conditions but you want to change them."
- "There are towels taking space in the cupboard that have never been used."
- "The furniture in the bedroom has been changed and you need to get rid of the old pillow covers and blankets."

According to findings from Section 4.2, consumers tend to consider curtains as personal products. Interviews conducted for this research show that consumers usually invest more time and money on this kind of products. They are indeed purchased to add both emotional and functional value to the house, as they are personalized purchases. This kind of textiles is easily replaced as fashion and aesthetic taste change. However, they usually keep functional value, and this could explain why most respondents opt for donation. On the other hand, interviews with consumers identify towels and blankets as private products, which are fundamental in every house due to their exclusively functional value, with the exception of cases in which highly valuable materials are used for these products. This kind of products is usually used for a very long time until they are damaged and reused for other purposes or discarded. However, in this case these textiles are presented in good conditions, since they are hardly used, but they have no longer functional value to the consumer (i.e. unused towels are taking storage space and blankets do not fit with the new furniture in the bedroom). This could be an explanation why the majority of respondents opts for donation rather than reusing or discarding them. Even though textiles have lost their functional value to them, they could still have functional value to another consumer. Last but not least, it is important to keep in mind that in all three situations textiles are considered obsolete due to the desire to make more space in the house or to purchase something new. Therefore, participants' responses reflect the necessity to counterbalance a sense of guilt experienced when getting rid of the textiles, as Schwartz's (1977) Altruistic Behaviour Model argues.

Reuse is the most preferred method in the following situations:

- "Your bed linens have a hole."
- "The table cloth has a stain that doesn't go away."

Both groups of textile products are generally considered private by consumers. In both cases, responses show that even though textiles are damaged, they can still keep their functional value and are therefore reused. This is coherent with findings from interviews with consumers.

Discard as an option gets a slight majority only in the following case: "The colour of the chair pads in the kitchen is faded". However, as shown in the table in Section 4.1.7, donation or recycling and reusing score right after it. Since in this case the textile product is generally considered to be personal, it is possible to assume that once the product loses its colour, all perceived values (i.e. emotional, functional, and economic) are lost as well. Consequently, discarding seems the only available options to most consumers. Some consumers still perceive the functional value of the product, and they therefore try to recycle it by donating or reusing it. Even though Goudeau uses a different approach, she reaches similar findings (2014), and confirms a positive correlation between a positive attitude and intention about sustainable disposal options and actual behaviour.

5.2 Analysis of Data from Interviews with Swedish Consumers Analysis

Altruistic Behaviour Model is used to identify parameters that influence and justify disposal behaviour. Here the model is presented again to help guide the analysis of data from interviews with 24 Swedish consumers located in Stockholm and Malmö. The model is especially used to identify common patterns among interviewees and follows the same analytical approach for interviews as Engström & Nicklasson (2015). Major patterns identified are moral obligation, knowledge of textile waste produced and its impact, convenience and habit, responsibility, senses of pride and guilt. The analysis follows the four steps leading to behaviour as designed by Schwartz (1977).

Figure 5-11. Schwartz's ABM from the Analytical Framework in Section 2.3

5.2.1 Social Norm

Social norms represent what a society agrees upon to be a moral behaviour. The existence of a social norm regarding textile disposal is proved by several interviewees being influenced by people close to them in their families when disposing of textiles. Additionally, several consumers declare that, even though they cannot think about best solutions to definitely dispose of home textiles, they believe throwing them in the trash is wrong. Therefore, they resolve by storing them in the house for very long time. Citing a 22-year-old man: "I have never thrown away any textile. I am not sure why. I keep even the broken ones. Maybe because I don't know where to throw them. But I know you should not throw textiles in the garbage". Other consumers would like governments and companies to step in and provide clearer guidelines on what should be done and how. These observations indicate a clear external influence and sense of duty consumers receive and integrate into their personal norms. Findings confirm the ones by Engström & Nicklasson (2015) and mentioned by Shim (1995); Koch & Domina (1997); Domina & Koch (1999, 2002); Ha-Brookshire & Hodges (2009); and Morgan & Birtwistle (2009).

5.2.2 Personal Norm

Personal norm is when a person chooses to internalize the social norm into his/her definition of moral behaviour. All interviewed consumers sort and recycle their waste in their houses. This clearly demonstrates that the social norm is internalized into personal norm, turning it into a habit. However, when it comes to home textiles, disposal behaviour falls in a grey zone. Several consumers internalize the social norm by handling textiles in a responsible way. Others know that they are not supposed to throw them away, but they are not sure about what to do with them, and they therefore store them in the house for long years. Some decide to ignore the social norm and not internalize it. Similar findings can be found in conversations with Swedish students presented in Engström & Nicklasson (2015) and Gwozdz et al. (2013).

5.2.3 Awareness of Consequences

Awareness of consequences refers to the individual feeling and having knowledge of what happens if he/she acts accordingly or not accordingly to the norm. Findings are relatively contrasting here. While several interviewees are well aware of the environmental impact of textile production and incorrect disposal, others lack the knowledge or are not interested in textile waste handling and impacts. Some consumers cannot identify a correlation between textiles and environmental impact. These findings are not consistent with Engström &

Nicklasson (2015), since all interviewees involved in their study show a basic awareness of consequences. Locus of control is a concept connected to awareness of consequences and a factor influencing pro-environmental behaviour mentioned by Hines, Hungerford and Tomera (1986). It comprises consumers' perception on whether they have the capacity to stimulate change through behaviour. The lack of it inevitably blocks the connection between social norm and actual behaviour.

5.2.4 Ascription of Responsibility

Ascription of responsibility is when the individual recognizes that she/he has the responsibility and that the consequences will take place even if only one person does not act according to the norm. This factor is also mentioned by Hines, Hungerford and Tomera (1986). Some consumers internalize textile disposal at the level of ascription of responsibility and are well aware of the difference between what they should do as responsible consumers and how they actually act. They therefore recognize their responsibilities when purchasing and disposing of home textiles. However, their actual behaviour does not necessarily reflect their awareness, causing cognitive dissonance. In some interviews, consumers do not see textile waste as a relevant issue, since they believe they do not produce as much textile waste as others. This is a finding also reported in Domina and Koch's (2002) study. In other cases, the responsibility for the handling of textile waste is given to someone else in the family, such as the mother in the case of a 19-year-old girl or the wives in the cases of a 30 years old man and a 75 years old one. The trend to have a single person in charge of handling textile waste in the household is mentioned by Evans, Jamal and Foxall (2006). These are clear strategies to relieve some of the responsibility from oneself by allocating it to others, as argued by Schwartz (1977). Some consumers feel an obligation towards others; however, they do not see particular connections between sustainability and textile disposal and they usually get rid of their unwanted textiles in order to make more space for new products. In other cases, awareness turns into responsible behaviour, as several consumers have their own waste hierarchy, as presented in Section 4.2 and supported by Lee et al (2013), while others have experience with purchasing second hand textiles.

Senses of guilt & pride

According to Schwartz's (1977) model, when an internalized norm does not translate into behaviour, individuals experience an inevitable sense of guilt that they need to appease. This is a pattern observed during some interviews. As one interviewee states: "I believe consumers have responsibility for handling textile waste. I need to know I am doing the right thing". This finding is supported by Engström & Nicklasson (2015), who observe clear presence of feelings of guilt and pride while conducting interviews with Swedish students. Other consumers opt for transferring the responsibility to someone else, as another interviewee says: "Home textiles? Ask my wife", as already observed by Evans, Jamal and Foxall (2006). Furthermore, as stated in Section 2.2.3, sometimes consumers may find the costs of applying a social norm too high. For this reason, social norms do not necessarily turn into behaviour. This is the case, in which ABM is no longer effective in predicting behaviour and an attitude-behaviour-gap occurs. Barkman (2014) highlights the presence of so-called thresholds provoking the attitude-behaviour gap, as presented in Table 2-2. Most common barriers at the individual level that arise during this research are interest, education, and value priorities. Most common societal and institutional barriers are family, education, incentives, and infrastructure. Some interviewees declare that they would like to donate and recycle textiles, but they do not have the means and time. Other participants have difficulties in finding collection points, while several do not have the necessary knowledge. Similar excuses are presented in the interview with Selma Öström (Pers. Comm.). As Festinger (1975) states in his CDT, usually when this occurs individuals tend to post-rationalize the situation through denial of consequences and personal responsibility, thereby neutralizing the sense of guilt. The opposite happens when consumers act according to the internalized social norm. A feeling of pride for doing the right thing is experienced. This is

observed in some responses, such as when participants declare "I bought my home textiles on lease"; "I work as a tailor at H&M and I return my textiles there"; and "I purchased second hand textiles for my child". Similar comments arise from the survey, as some respondents participate in second-hand initiatives for textiles and/or they borrow from relatives. In addition to this, conversations with all participants demonstrate well-established habits with textile disposal, reflected in the creation of personal waste hierarchies and handling in automated ways. Examples are statements like: "Every time I want to get rid of a textile product I throw it in the trash. It's the easiest way. But before I take out all the valuable parts, like the buttons"; "All unused textiles go into our summer house and stay stored there for many years"; and "I only give textiles away to people I care about". This is a finding widely supported by Domina and Koch (2002) and Lee et al. (2013).

5.3 Interviews with Projects' and Companies' Representatives Analysis

Interviews with projects and companies' representatives present very similar findings to the ones from communication with consumers and the study by Engström & Nicklasson (2015). The presence of a social norm is proved by the fact that sustainability in textile consumption is slowly spreading. This is also confirmed by consumers declaring to bring their textiles to collection points because they feel that simply throwing them away is wrong (C. Hill, Pers. Comm.; F. Klarén, Pers. Comm.). Notwithstanding this, generally speaking consumers seem to have low awareness of consequences when it comes to the environmental impact of textile production and waste (F. Klarén, Pers. Comm.), as observed in Section 1 of the survey.

Regarding the norm internalization at the ascription of responsibility level, it is reported that consumers feel relief knowing that they can give unwanted textiles to a trustable service handling them. Therefore, responsibility of the service is given to an agent (S. Öström, Pers. Comm.; F. Klarén, Pers. Comm.). Even though second hand consumption of clothes is widespread, it is not the case for home textiles (S. Öström, Pers. Comm.). This means that there is a gap between what consumers know they should do and what they actually do. Reasons for this are mostly hygiene concerns and the fact that consumers classify textiles like beds and sheets as personal items. Additionally, since consumers' demand for a closed-loop service is not high enough, financial incentives are fundamental (F. Klarén, Pers. Comm.). In some cases, attitude does not turn into behaviour due to infrastructural limitations, such as when collection points are difficult to spot. Convenience and practicality are therefore important factors for the involvement of consumers in closed-loop systems (S. Öström, Pers. Comm.).

5.4 Conclusions and answers to research questions

To conclude this analysis, a brief review of findings is presented to answer the three research questions from Section 1.2.

5.4.1 RQ1: What disposal strategies for home textiles do Swedish consumers employ?

Findings from both the survey and the interviews with consumers confirm the textile waste handling categorization by Jacoby et al. (1977): 1) keeping the textile stored until a suitable option to dispose of it is available or using it for other purposes; 2) getting rid of it temporarily by lending it or loaning it; and 3) getting rid of it permanently by donating it, selling it, giving it away or discarding it in the trash. Indeed, the survey identifies donation and reusing as the two most preferred textile waste handling options, followed by repair, discard, and resell. Generally speaking, findings are consistent in all survey sections for the analysis of consumers' environmental awareness, motivations, attitudes, norms, intentions, and behaviour. The interviews with consumers identify a more elaborate reality, as most interviewees declare to have

their own waste hierarchy in the house; therefore, supporting findings by Domina and Koch (2002). Clustering of information collected from interviews allows the identification of four major behavioural profiles of consumers, as presented in Section 4.2, highlighting the large number of variables in place when designing circular systems. Several consumers participating in interviews are familiar with closed-loop schemes, and many purchase second hand textiles. However, as interviews with both consumers and Selma Öström highlights, this trend is not common for home textiles. Major reasons could be concerns about hygiene and sense of aesthetics and fashion. The experience from the Fixa Till project highlights the trend for consumers to bring their textiles to in-store collection services to get rid of textiles they do not know where to put in order to make more space for new products. There is therefore a general lack of concern and awareness for sustainability consumption big retailers and policy makers need to assess in order to shape more sustainable consumption and disposal habits.

5.4.2 RQ2: Which factors influence consumers' disposal behaviour?

The literature analysis identifies a large number of factors potentially influencing textiles disposal behaviour. The term "potentially" is used since previous research by scholars presents different and sometimes contrasting results, while a clear-cut method to identify a connection between a specific factor under analysis and behaviour is not yet developed. Some of the major factors mentioned in the literature analysis are individual characteristics (Harrell and McConocha, 1992), individual perception of obsolescence that lead to product discarding (Cooper, 2004); psychological reasons for disposal (Lastovicka and Fernandez, 2005); and the link between environmental awareness and disposal behaviour (Bagozzi and Dabholkar, 1994). Personal variables tested by scholars with the goal of predicting disposal behaviour are: age (Tucker, 1980; Hibbert et al., 2007); gender (Iyer & Kashyap, 2007); income (Tucker, 1980; Jacoby et al., 1977; Schwartz & Miller, 1991; Vining & Ebreo, 1990; Domina & Koch, 1999); education (Schwartz & Miller, 1991; Vining & Ebreo, 1990); social class (Tucker, 1980; Iyer & Kashyap, 2007); environmental awareness (Arcury, 1990; Ellen, Wiener, and Cobb-Walgren, 1991; Ramsey & Rickson, 1976; Koch & Domina, 1997); personality characteristics (Kinnear et al., 1974; Hopper & Nielsen, 1991); attitude about personal control and recycling importance/inconvenience (Tucker, 1980; Ellen, Wiener & Cobb-Walgren, 1991; Oskamp et al., 1991).

In addition to this, it is evident from the analysis that consumers making decision on disposal options are also influenced by the product's characteristics and situational variables around them. These could either foster or hinder the individual's intentions, and are therefore fundamental when predicting disposal behaviour. Regarding product-related characteristics, communication with consumers identifies a clear categorization based on functional, economic, and emotional value, as presented in Section 4.2. This inevitably influences the way home textile products are disposed, and it is a connection identified both in the interviews and the survey responses. Regarding situational variables, comments from participants to the survey and interviews with both consumers and representatives highlight the absence of infrastructure for textile waste sorting and collection, difficulty in identifying charity collection points, and lack of means of transportation to reach a collection point/store as major factors influencing consumers' choices when disposing of textiles. This is in line with findings by Engström & Nicklasson (2015); Shim (1995); Koch & Domina (1997); Domina & Koch (1999, 2002); Ha-Brookshire & Hodges (2009); Morgan & Birtwistle (2009), Hines, Hungerford and Tomera (1986) and Evans, Jamal and Foxall (2006), who conclude that the most influencing factors driving consumers' behaviour are knowledge of issues, perceived behavioural control, knowledge on action strategies, convenience, habit, moral obligation, and influence from surrounding close individuals (e.g. partner, children, parents etc.). Additional external factors influencing behaviour not mentioned in the literature that this research identifies in interviews with consumers are: incentives for returning textiles, transparency of the system, number and characteristics of participants involved, and trust in the collector. Furthermore, Lee et al. (2013)

identify emotional attachment to the textile product as a factor strongly influencing the choice of the disposal method. This is confirmed by conversations with consumers with their categorization of home textile products and the associated value presented in Section 4.2. Regarding norms, a direct connection between social norm and actual behaviour cannot be identified in the survey. Notwithstanding this, overall the application of TRA is a valuable approach to attempt to predict behaviour of Swedish consumers with handling home textile waste.

Results from the survey identify a connection between knowledge about environmental impact of textiles and disposal motivation for donation, reuse, and repair, as Goudeau (2014) observes as well. Donation to charity organizations for people in need is also the most common home textile disposal motivation, followed by donation for environmental reasons, reuse for economic reasons, repair for environmental reasons, reuse for environmental reasons, and discarding for convenience reasons. Interviews with consumers add further information, identifying specific life stages for home textiles inflow and outflows, as discussed by Lee et al. (2013). Regarding consumers' attitude on textile disposal, findings from the survey demonstrate that there is a general positive attitude about responsible ways to handle home textiles. These findings are compatible with the ones by Goudeau (2014), who concludes that there is a positive relationship between knowledge about environmental impacts of apparel and attitudes toward donating, reselling, and reusing textiles. However, when it comes to the active influence over an individual's subjective norm and behaviour, participants of the survey do not show particular perceived duty to internalize the norm into their actions. These findings are not in line with the ones by Engström & Nicklasson (2015), who identifies the internalization of a social norm among young students. However, interviews with consumers and representatives highlight the presence of an internalized social norm. Another interesting factor identified in the analysis of responses to the behaviour section of the survey is the fact that participants' responses reflect the necessity to counterbalance a sense of guilt experienced when getting rid of textiles, as argued by Schwartz's (1977) Altruistic Behaviour Model. Indeed, Schwartz (1977) mentions senses of guilt and pride as important factors influencing disposal behavior. This is also confirmed by Engström & Nicklasson (2015).

5.4.3 RQ3: What are the main drivers and barriers for consumers to engage in a closed-loop scheme?

From the point of view of consumers, the major factor stimulating the disposal of unwanted textile is the necessity to get rid of them in order to create additional space. Involvement in a circular system is not an automatic solution to the need. Notwithstanding this, interviewed consumers see financial rewards as good incentives for participation in circular schemes for textiles. When returning textiles, consumers want to receive feedback and public recognition for doing 'good'. In addition to this, consumers are driven towards circular schemes for textiles when they have knowledge on what their effort can lead to and how they can co-create solutions together with policy makers and companies. Transparency and control are other two factors driving consumers towards circularity. They indeed want to know that the donated textile is actually supporting others and it is being reused in some way. Consumers also want to know who is in charge and earns from the revival of textiles. Several interviewees declare the need to know who benefits from it as a major concern. They trust companies that have earned credibility by partnering with charity organizations with a perceived high reputation. Some interviewees prefer to have municipalities take care of unwanted textiles rather than private companies, as they have more trust in the public system.

Blake (1999) identifies three major obstacles to pro-environmental behaviour: 1) individuality; 2) responsibility; and 3) practicality. A study by Barkman (2014) adds to this highlighting the presence of so-called thresholds provoking an attitude-behaviour gap at both the individual (i.e.

responsibility, interest, attitudes on consumption, education, income, value priorities and complexity of a consumer's actions, and environmental issues) and the societal level (i.e. legislation, family education, influence from friends and neighbours, injunctive and descriptive norms, incentives, infrastructure). A publication by Morgan & Birtwistle (2009) on fast fashion consumers concludes that individuals' lack of awareness about impacts from textile waste and personal responsibility is highly influential for their disposal patterns. Similar results are reached by Joung (2013) and Gwozdz et al. (2013). Some interviewees involved in this research declare to not pay too much attention to textile waste, since they believe they do not throw away relevant quantities. Others justify their lack of involvement in textile recycling systems stating that they do not have the time, collection centres are too far away or they are simply not interested.

A major factor identified during interviews is the fact that when consumers do not perceive any functional value in the product, they think that the textile cannot be reused or donated and they therefore throw it away. Companies and charity organizations are therefore missing large quantities of textiles. This is a finding observed in interviews with consumers and by other researchers, such as Joung (2013), Gwozdz et al. (2013), and Porse (2014). Another major barrier from comments in the survey and conversations with consumers is the lack of time and the inconvenience of re-selling textiles, especially when it consists of only a couple of items. Furthermore, the conversation with Federica Klarén raises other two relevant barriers to recycling of textiles: 1) the lack of awareness consumers have on the impact of textiles consumption and disposal as mentioned by Hines, Hungerford and Tomera (1986); and 2) consumers' low demand for collection services. Generally speaking, there is a gap between what consumers know they should do and what they actually do. Reasons for this are mostly hygiene concerns and the fact that consumers classify textiles like beds and sheets as personal items. Additionally, since consumers' demand for a closed-loop service is not high enough, financial incentives are fundamental (F. Klarén, Pers. Comm.). In some cases, attitude does not turn into behaviour due to infrastructural limitations, such as when collection points are difficult to spot. Convenience and practicality are therefore important factors for the involvement of consumers in closed-loop systems.

The interesting finding that summarizes communication both with consumers and companies'/projects' representatives in this research is the lack of strong consumers' need to sort or return textiles back. Many interviewed participants express this in the following ways: 'I never thought about it'; 'I don't know what to do with it'; 'Is IKEA thinking about it? Great!'; 'Crazy they didn't do anything before'; 'I just throw it in the trash, textiles are not valuable to me' etc. Consumers need to be educated and guided by policy makers and companies in adopting sustainable habits with textiles management. Many interviewed consumers recognize this necessity and experience a clear sense of guilt. Consequently, IKEA has a window of opportunity as a big retail company able to influence sustainable consumption and disposal behaviour. The findings presented show interesting trends that could guide retailers and policy makers into action to shape sustainable consumption and disposal habits. Discussion about how these findings are obtained is presented in Chapter 6.

6 Discussion

The aim of this chapter is to critically analyse the findings, analytical framework, methodology, and theories used and developed in this thesis. The focus of the research is on Swedish consumer behaviour and factors that affect it when disposing unwanted home textiles. The following items are included in the category of home textiles for the analysis and are clearly presented to consumers participating in the research in order to avoid confusion with clothing products:

- rugs;
- bedroom textiles: bed linen, comforters, bedspreads, blankets & throws, pillows, mattress & pillow protectors, canopies & bed tents, sleeping bags for babies;
- curtains & blinds;
- fabrics;
- cushions & cushion covers;
- kitchen textiles: kitchen towels, aprons, pot holders, and oven mitts;
- table linen: place mats, coasters, table cloths & runners, chair pads; and
- bathroom textiles: towels, bath mats, shower curtains.

Items such as carpets and textiles, which are integrated parts of other products, such as furniture, are not included in this study due to simplicity reasons.

Overall, findings from this research thesis support the literature analysis in the field of textiles disposal, e.g. Goudeau (2014). The PhD dissertation by Goudeau (2014) was particularly determinant in the choice of the analytical framework, data collection, and survey design. It is important to remind here that since there is no substantial literature and research on consumers' behaviour when disposing of home textiles, most of the studies analysed in this research are focused on literature on apparel and garments disposal. This highlights a relevant gap in the research literature on home textile disposal behaviour this thesis addresses. Even though the product under focus is home textiles, interviewed consumers and survey participants present behavioural responses relatively similar to the research on clothing disposal. The focus of this research is exclusively on analysing the influence environmental awareness, motivation, social norms, attitude, and intention have on consumer behaviour when disposing of home textiles. Since TRA is applied in designing of the survey and data analysis, the major focus is on looking at the influence of the five aforementioned observable variables over behaviour; while interviews with consumers and companies' representatives aim at identifying personal, product-related, and situational factors. The chosen methods for the data collection only permit self-reported data. Observation of actual behaviour is not possible to be included in the methodology due to time and resource constraints. However, empirical observation would be an interesting expansion for this thesis in future research, and it is an approach IKEA staff could take to complement data collected during the pre-study phase of the Textile Revival Project. A critical analysis of the formulation of the research questions and research methodology is discussed below.

6.1 Discussion on Research Questions and Analytical Framework

This thesis aims to provide input to the process of devising a closed-loop system for home textiles in Sweden by analysing consumers' disposal behaviour of home textiles and factors that may influence it to enable and support a closed-loop scheme. To guide this research, three short and straightforward questions are investigated:

RQ1: What disposal strategies for home textiles do Swedish consumers employ?

RQ2: Which factors influence consumers' disposal behaviour?

RQ3: What are the main drivers and barriers for consumers to engage in a closed-loop scheme?

The intended outcomes to these questions are: 1) to understand the current situation for home textile recycling schemes in Sweden and the actors involved; 2) to analyse consumers' decision-making process and behaviour when they want to dispose of home textile products; 3) to identify factors that influence consumers' disposal behaviour; and 4) to understand drivers and barriers for the application of closed-loop schemes for textiles in Sweden.

Overall, it can be concluded that this research is able to respond to all three research questions and that the intended outcomes are achieved. Clearly, the way questions are phrased guides this research in a specific direction; thus several other factors are not explored, leaving room for future research. Examples of the potential research directions are an analysis on what consumers' actual needs and wants are when handling unwanted home textiles and ways for companies and policy makers to shape them towards more sustainable behaviour.

6.2 Discussion on Behavioural Theories

This research uses three psychological theories as lenses for the analysis of primary data. The Theory of Reasoned Action is chosen over Theory of Planned Behaviour for two major reasons: 1) to be able to conduct a comparison with the study by Goudeau (2014) and 2) the limited focus of the survey cannot include perceived behavioural control as a factor for the analysis. A review of the literature highlights that the principal observable variables that are determinant in influencing disposal behaviour are: environmental knowledge, motivation, attitude, subjective norm, and intention. For this reason, TRA is deemed to be a valuable tool for the analysis of the collected data. Situational factors are also considered in the design of the survey and in analysis of data collected through the survey. Altruistic Behaviour Model and Cognitive Dissonance Theory are also employed in the analysis in order to test the validity of primary data from interviews. A critical review of the theories used for this study is presented below.

6.2.1 Theory of Reasoned Action

Considering that the effectiveness in predicting behaviour is dependent on the time interval between behavioural intention and the actual behaviour, this research first asks participants of the survey to specify textile disposal means in the past twelve months. Perceived behavioural control (PBC) is another factor mentioned in the literature, but since it does not fall into the TRA framework, it is not used for this specific research. However, future research on consumers' disposal behaviour of home textiles could be enriched by considering this factor. It is important to specify that the major weakness of this model is the assumption that people make rational decisions when disposing of textiles. This limitation is considered during the analysis of the survey data. Another important limitation is the fact that behaviour has to be under volitional control. There are indeed specific factors (e.g. money, time, skills etc.) that influence the ability of the individual to actually carry the behaviour.

6.2.2 Altruistic Behaviour Model

As Schwartz & Howard (1980) conclude, some of the survey and interviews respondents could have high responsibility denial. This results in a less predictable disposal behaviour when using this model, as individuals' responses may be error-driven. This model is tested by Hopper & Nielsen (1991), who confirm that recycling behaviour is strictly correlated to social and personal norms, holding true that individuals are highly aware about consequences of their actions. However, how personal norms turn into behaviour is a step hard to test in empirical research. Therefore, results from this research cannot be generalized.

6.2.3 Cognitive Dissonance Theory

Since CDT is designed to explain and predict post-decisional behaviour that in some instances does not necessarily apply to disposal of products, this research applies it exclusively with the intention to identify the attitude-behaviour-gap and sense of guilt in the interviews with consumers. This application as a complementation of ABM is already used in other research, such as the one from Engström & Nicklasson (2015). This justifies its use in this study.

6.3 Discussion on Methodology

During the data collection process, the terms take-back and collection are deliberately omitted in order to avoid biased answers from consumers, who might respond to interviews and the survey while thinking about already existing schemes, such as the one run by H&M. The collaboration with Transformator Design is particularly helpful in the preparation of the interviews and during the critical analysis of the collected data. The use of multiple data collection methods allows for triangulation of data and offers a more complete picture of patterns and behaviours among Swedish consumers, making the findings of this research more valuable to IKEA and academia. This author recognizes that the used psychological theories and several references mentioned in this thesis are relatively old. This partly constitutes a limitation of the study. However, it is possible to observe the application of these theories and references in recent studies (i.e. Engström & Nicklasson, 2015; Goudeau, 2014), showing ongoing valifity in their applications.

6.4 Discussion on Survey Design

A structured online survey is selected for primary data collection for the following tactical reasons: the topic is large and relatively complex to be measured; a high degree of standardization of responses makes the data analysis more straightforward; the guarantee for anonymity could push respondents to be honest with their answers; respondents can take their time to fill the survey and do it at their earliest convenience; it requires relatively minimum administration; and it is a cost efficient mean for the collection of large quantities of data. On the other hand, emails can be easily ignored and can lead to a low response rate. To avoid this, a financial incentive is provided to respondents. Due to time constraints and to better understand the thinking of respondents, this study is based on self-reported behaviour. This can make the data collected less reliable, as respondents might state what they feel would be the correct answer. For this reason, questions are designed to check for possible contradictions and respondents are given situational cases to actually test the correlation between environmental knowledge, motivation, attitude, norm, intention, and behaviour.

The major limitation of the survey is the fact that it does not reach the required number of respondents to make the sample representative of the population. More specifically, the required sample for this research is of 269 IKEA FAMILY subscribers. Even though the survey has a total response of 404 people, only 238 responses are complete and can be used for the analysis. Even though the sample is short of 31 respondents, data presented can still hold value for IKEA and the academic field of disposal behaviour with home textiles. The fact that so many respondents started but did not complete the survey indicates a potential defect in the design of the questions and/or the length of the survey. Open comments by four participants identify that questions are sometimes too difficult to read and/or there are not enough options provided as answers. On the other hand, five people are enthusiast about the survey and give positive feedback on IKEA investing resources to inform consumers. One participant declares this survey make he/she think more about how much textiles are actually consumed in the house. Even though the survey is relatively long, the use of a Likert Scale is effective in saving time to answer all sections. Other factors that might provoke incomplete answers could be a general disinterest in this specific topic and the time of the year in which the survey is sent out coinciding with Swedish summer holidays.

Even though testing of the survey and multiple comparisons with previous research is conducted keeping in mind the limitations of TRA, several aspects could influence participants while filling the survey out. A band-wagon effect could make responses biased, as well as the possibility of some participants to automatically fill in answers on the highest points of the Likert Scale, as it is observed in Section 4.1. Another limitation of the survey is the fact that close-ended questions inevitably direct respondents towards specific answers. For this reason, an open-ended section is provided for further comments. Due to the issue of having a too long survey, some factors are excluded from the analysis, such as different combinations for textile waste handling and additional questions testing the presence of social norms on a more specific level. Notwithstanding this, an open-ended question is provided to let participants add further comments; while interviews with consumers contribute to filling in missing data. Overall, responses in each section of the survey seem coherent, as donation and reuse are the two most preferred textile waste handling methods and they are confirmed by consumers' reported behaviour. Additional studies for the future could further investigate the aforementioned missing factors. The survey collects demographic variables, but their connection to disposal behaviour falls outside the scope of this research, since TRA, ABM, and CDT do not consider them. However, further analysis can surely bring interesting results for IKEA and the academic field.

6.5 Discussion on Interviews Design

A combination of short, improvised interviews and long, planned ones is determinant in the collection of a sufficiently large quantity of data. Planned interviews are at least one hour long, letting the interviewees go much more into details, as people invest their time to sit down and talk to the IKEA team conducting the interviews. However, responses are less spontaneous than in street interviews. Consequently, there is the possibility that some information might be biased. This could also be confirmed from the fact that people who take part in the longer interviews are expecting to receive an incentive, such as a discount voucher; whereas the interviewees stopped on the street share some basic information without expecting any reward. Another point that is fundamental to raise is the fact that interviewers do not wear any IKEA badge during the interviews, while questions are phrased so that consumers cannot be influenced by their specific experience with textiles from IKEA. As a confirmation of that, when some interviewees find out that the research project is held by IKEA, their body language and the content of some of their answers changes.

6.6 Discussion on EPR Policy in Sweden

Since concerns about upcoming EPR policy for textiles in Sweden are raised in several instances during interviews with all representatives, this section of the thesis is dedicated to the discussion of what is currently occurring in the political agenda and its potential implications for the textile sector. Tojo et al. (2012) define Extended Producer Responsibility (EPR) "as a policy principle to endorse total life cycle improvements. This is done by extending the responsibilities of the manufacturer to several parts of the product's life; particularly to the take-back, recovery, and final disposal of the product stages". Producer is defined as the professional manufactures, to Sweden, or that sells textiles product on the Swedish market for the first time (Swedish Environmental Protection Agency, 2016).

Sweden has a producer responsibility policy as part of the environmental code since 1993. The system comprises the so-called material companies (materialbolag): plastic, cardboards and corrugated, metal, and glass. *Förpacknings-och Tidningsinsamlingen* (the packaging and newspaper collection) is responsible for running the system since 2007 (Porse, 2014). Since 2010 the Nordic Council of Ministers has been interested in the textile waste stream. This happens in connection to EU Member States preparation of waste prevention plans in light of the EU Waste Directive of 2008. As shown in the introduction chapter of this thesis, waste prevention is at the highest

point of the pyramid, but it is also the least developed one in terms of policy. Due to its high environmental impact, the textile sector come into the picture (N. Tojo, personal communication, July 5th, 2016). While, several textile waste monitoring studies have been held in the past years (Shenxun, 2012; Gwozdz et al., 2013; Ekström, & Salomonson, 2014; PORSE, 2014; Tekie et al., 2014; Sitra, 2015), EPR on textile is still a relevantly grey-zone. This is due to the fact that other materials have more visible environmental impacts that require intervention. This is not the case for textiles, as the ones discarded by households enter the waste management system and are incinerated. Textiles burn very easily, and they therefore constitute an important input for the incinerator, with consequent lack of waste problems. The Swedish government is now looking into the textile waste flow with the goal to reduce the impact coming from the production processes. For this reason, textiles waste falls under the EU waste prevention plan. The Swedish Environmental Protection Agency (EPA) is currently charged by the Swedish Ministry for the Environment to put together an EPR policy proposal with the aim to bring textile waste higher up the EU waste hierarchy. A team of experts has the task since December 18th, 2015, and it is currently comparing several policy options together with a socio-economic analysis of the waste management system and the implications for the various actors involved. Four different policy areas are currently being discussed based on the polluter's pay principle (Forsberg, 2016). A consultative meeting with forty major players involved was held on April 18th, 2016. Major tasks for the committee are to:

- develop proposals to improve the textile collection system;
- develop proposals on the responsibility of producers on handling of second hand textiles;
- clearly present requirements on authorities and private producers;
- provide incentives to producers to design more durable and easily recyclable products; and
- develop instruments to encourage sustainable production and consumption of textiles.

The goal is to encourage circular economy and sustainable businesses while reducing the environmental impact of the textile sector (Swedish Environmental Protection Agency, 2016). An analysis of technical challenges and opportunities for textiles recycling as well as a mapping of municipalities' initiatives with textile collection scheme is carried out as well and can be accessed on the EPA official website[14] (Forsberg, 2016). A major issue at the moment is who should be in charge of the textile waste management. Right now municipalities are in charge of the textile thrown in the trash by households and companies; however, most of the textile flow goes through charity organizations, making the system harder to regulate. Most confusion on responsibility falls on the concept of waste. Chapter 15 § 1 of the Environmental Code (1998: 808) defines waste as "any object or substance, which the holder discards, intends or is required to dispose of". This definition also corresponds to the definition of the EU Waste Directive 2008/98/EC (Swedish Environmental Protection Agency, 2016). However, textiles that can be reused/recycled need to be clearly separated in the category of recovered materials (N. Tojo, Pers. Comm.). The application of the new legislation potentially has the following implications: 1) producers are financially responsible for the collection and processing of their waste; 2) municipalities are required to have a separate fraction for the collection of textile waste; and 3) financial producer responsibility is mandatory for all companies selling textile products in Sweden. Other legislative options are being investigated at the moment, such as the possibility of not implementing any EPR legislation or to not have it compulsory (Swedish Environmental Protection Agency, 2016).

According to Porse (2014), there are contrasting feelings about Sweden having an EPR policy

[14] http://www.naturvardsverket.se/Miljoarbete-i-samhallet/Miljoarbete-i-Sverige/Regeringsuppdrag/Hantering-av-textilier/

system in place for textiles. Interviews she holds with experts in the textile sector conclude that a voluntary EPR system would be the best option, as it guarantees flexibility to actors and faster action would guarantee best solutions to be in place. This can happen if all stakeholders are involved and the total flow of textiles recycled increases. Otherwise, EPR legislation with sanctions is necessary in order to guarantee sufficient participation from both big and small companies, as well as transparent monitoring by third parties. This has a positive effect on textile waste prevention, as companies are forced to handle large quantities of textiles for high costs and they are incentivized to produce products with longer durability. This also has a positive impact on the use of chemicals, since an EPR legislation regulates those as well. Surely intervention is necessary at the moment, as the volumes of textiles currently collected by stores are not sufficiently high and consumers do not seem to adopt more sustainable consumption habits, but rather bring textiles back in order to make more space for new ones. This is a behaviour encouraged by the financial incentives stores provide consumers for every bag of textiles returned. However, as demand for recycled fibres gradually increases, companies are starting to invest in new, more sustainable, and profitable solutions. Legislation targeted to optimize reuse before recycling as well as assigning explicit responsibility for the collection system (e.g. to a consortium of companies) could further stimulate this. Consumers currently hold limited responsibility for the handling of damaged textiles, since a public collection system is currently not in place. Notwithstanding this, their lack of interest, as highlighted by interviews with consumers and companies' representatives, is one of the causes hindering a circular scheme for textiles (Porse, 2014). Consumers' education on best ways to prolong textiles life, how to estimate their quality, and to understand that even when functional value is lost the textile can still be recycled for other purposes should therefore be one of the top outcomes the EPR legislation should aim at. This could be done through collaboration of agencies such as *Konsumentverket* (the Swedish Consumer Agency) and the Swedish EPA. By the time this thesis is being handed in and defended, no concrete legislative proposal is submitted to the Ministry yet, as the deadline for submission is scheduled on September 30th, 2016 (Forsberg, 2016). France is currently the only EU member state with an EPR policy on textiles. It is not possible for this research to get further insight into the experience of IKEA with textile collection there. However, it would be interesting for future research to study the case of France and draw lessons for Sweden.

7 Conclusions

This chapter outlines the major conclusions of the analysis, checks if the research questions are answered and explains the contribution this thesis is making in light of the IKEA Textile Revival Project and the existing literature. Recommendations and further questions for future research are presented as well.

In light of the relevant gap between increasing environmental awareness among consumers and textile purchase and disposal behaviour, additional research is required to better understand the field of textile waste handling from consumers' experience. IKEA is currently investing resources in studying best solutions for reusing and recycling home textiles. The Textile Revival Project is launched with the goal to understand consumers' needs, the factors influencing their consumption and disposal choices, and most importantly, what the most effective way is to involve them in circular systems for home textiles. Consumers tend to have a different degree of emotional and economic attachment to home textiles compared to clothes and most of the available research focuses on disposal of garments. Since research on consumers' disposal behaviour of home textile products is currently limited, this research attempts to explore consumers' drivers and barriers when making decisions on how to handle no-longer-wanted home textiles. The goal is to understand consumers' motivations and needs when disposing of home textiles, and to identify ways to stimulate consumers to reuse them and recycle. The analysis inevitably includes psychological factors, such as emotional attachment and feelings about the product, sense of guilt and responsibility, as well as the influence of routines and habits on consumer behaviour. Since the literature on home textile waste handling is currently limited, this research analyses the literature on clothes disposal, keeping in mind the different products and the value associated to them by consumers, which has inevitable implications on the way they are disposed.

This thesis aims to provide input to the process of devising a closed-loop system for home textiles in Sweden by analysing consumers' disposal behaviour of home textiles and factors that may influence it to enable and support a closed-loop scheme. Intended outcomes are to 1) understand the current situation for home textile recycling schemes in Sweden and the actors involved; 2) analyse consumers' decision-making process and behaviour when they want to dispose of home textile products; 3) identify factors that influence consumers' disposal behaviour; and 4) understand drivers and barriers to closed-loop schemes for home textiles. A brief look at the changing Swedish policy context is provided, considering the imminent implementation of an EPR policy for textiles. A summary of answers to the research questions is presented below.

7.1 Research Questions

RQ1: What disposal strategies for home textiles do Swedish consumers employ?

Findings from both the survey and the interviews with consumers confirm the textile waste handling categorization developed by Jacoby et al. (1977), with donation and reusing being the two most preferred textile waste handling options, followed by repair, discard, and resell. Most interviewees declare to have their own waste hierarchy in the house, supporting findings by Domina and Koch (2002). Clustering of information collected from interviews allows the identification of four major behavioural profiles of consumers, highlighting the large number of variables in place when designing a circular system that could involve as many consumers as possible. Several consumers participating in interviews are familiar with closed-loop schemes and many purchase second hand textiles. However, this trend is not common for home textiles. Major reasons could be concerns about hygiene and sense of aesthetics and fashion. A general lack of concern and awareness for sustainable consumption is also identified.

RQ2: Which factors influence home textile disposal behaviour of consumers?

The literature analysis identifies a large number of factors potentially influencing textiles disposal behaviour. Studies on several personal variables (i.e. age, gender, income, education, social class, environmental awareness, personality characteristics, attitude about personal control and recycling importance) influencing disposal behaviour have contrasting results. Furthermore, consumers' decision-making about disposal options are influenced by the product's characteristics (e.g. economic, functional, and emotional value) and situational variables (e.g. absence of infrastructure for textile waste sorting and collection, difficulty in identifying charity collection points, and lack of means of transportation to reach a collection point/store) around them. These could either foster or hinder the individual's intentions, and are therefore fundamental when predicting disposal behaviour. Overall, the most influencing factors driving consumers' behaviour are knowledge of issues, perceived behavioural control, knowledge on action strategies, convenience, habit, moral obligation, and influence from surrounding close individuals (e.g. partner, children, parents etc.). Interviews highlight additional external factors influencing behaviour not mentioned in the literature: incentives for returning textiles, transparency of the system, number and characteristics of participants involved, and trust in the collector. Regarding norms, a direct connection between social norm and actual behaviour cannot be identified in the survey. Notwithstanding this, overall the application of TRA is a valuable approach to attempt to predict Swedish consumers' behaviour with home textile waste handling. Participants' responses also reflect the necessity to counterbalance a sense of guilt experienced when getting rid of textiles, as Schwartz's (1977) Altruistic Behaviour Model argues.

RQ3: What are the main drivers and barriers for consumers to engage in a closed-loop scheme?

Consumers' participating in interviews declare the following factors as good incentives to participate in circular schemes for textiles: 1) financial rewards; 2) feedback and public recognition for doing 'good'; 3) knowledge on what their efforts can lead to and how they can co-create solutions together with policy makers and companies; 4) transparency and control; and 5) trust in the companies/agencies/organizations handling the system.

Major obstacles to pro-environmental behaviour are identified both at the individual (i.e. responsibility, interest, attitudes on consumption, education, income, value priorities and complexity of a consumer's actions, and environmental issues) and the societal level (i.e. legislation, family education, influence from friends and neighbours, injunctive and descriptive norms, incentives, infrastructure). Lack of awareness about impacts from textile waste and individual responsibility proves to be highly influential in disposal patterns both in the literature and in conversations with consumers. A major factor arising during interviews is the fact that when consumers do not perceive any functional value in the product, they think that the textile cannot be reused or donated and they therefore throw it away. Companies and charity organizations are therefore missing large quantities of textiles. Convenience and practicality are also identified as important factors for the involvement of consumers in closed-loop systems. Lastly, there is no strong consumer need to sort or return textiles back. This indicates the necessity for consumers to be educated and guided by policy makers and companies in adopting sustainable habits with textiles management. Many consumers recognize this necessity, as they express a clear sense of guilt during the interviews. Consequently, IKEA has a window of opportunity as a big retail company able to influence sustainable consumption and disposal behaviour.

7.2 Contribution and Recommendations

This thesis is part of the pre-study phase of the Textile Revival project recently launched by IKEA. The research identifies interesting behavioural trends among a large population of consumers in Sweden and the potential influence of specific factors. This provides a good

starting point for IKEA staff to carry out further research and design sustainable solutions that could best meet consumers' behaviour and needs. It is important to state that a successful value co-creation for circular solutions between consumers and retailers requires active management of expectations, communications, and promises from both parties. Consumers need to be seen as active players, and this research clearly shows that the inclusion of their point of view in the analysis is key in determining a successful circular economy business model (Fellesson & Salomonson, 2016). Information and education are key factors in this process for consumers to take responsibility for home textile waste. It is fundamental for them to understand the importance of textile recycling, as well as to feel the moral obligation about it. The take-back experience from IKEA and other companies, as well as direct communication with consumers show that individuals tend to estimate the functional and economic value of a textile product they intend to get rid of, resulting in the loss of large quantities of textiles ending up in the waste management system. Both retailers and policy makers can therefore focus on education-related barriers and stimulate more sustainable behaviour. Overall, this author is optimistic that, for a variety of resons not necessarily connected to sustainability, consumers are gradually shifting towards circular solutions when disposing of textiles. There is therefore high potential for retailers like IKEA to lead the trend on the right path.

7.3 Future Research

This study identifies several gaps in knowledge that could be addressed in future research. One potentially promising direction is to observe consumer behaviour when they dispose of home textiles. Since this thesis is based on interviews and self-reported data, this may limit the final results. The limitations of both methods could be addressed by triangulating the data with data collected by observing consumer behaviour. Other factors that cannot be covered in this research are the correlation between demographic variables and behaviour, as an expansion of research by Tucker (1980); Hibbert et al. (2007); Iyer & Kashyap (2007); Jacoby et al. (1977); Schwartz & Miller (1991); Vining & Ebreo (1990); Domina & Koch (1999); Arcury (1990); Ellen, Wiener and Cobb-Walgren (1991); Ramsey & Rickson (1976); Kinnear et al. (1974); Hopper & Nielsen (1991); and Oskamp et al. (1991). The sample collected in the survey is sufficiently large for identifying potential correlations. Finally, a more in depth study on internalization of social norms and the impact on disposal behaviour for home textiles, as well as strategies for companies and policy makers to influence them, could be an interesting expansion of this research.

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Appendix I: List of interviewees

June 2nd, 2016: face-to-face meeting with Selma Öström, Projektledare FixaTill, Lund Kommun, and phone conversation with Lena Wallin, kommunikatör, Lunds Renhållningsverk.

June 7th, 2016: phone interview with Connor Hill, Sustainability Manager at Adidas Group.

June 13th, 2016: phone interview with Fredrika Klarén, Sustainability Manager at KappAhl.

July 5th, 2016: Skype call with Naoko Tojo, Associate Professor at IIIEE, Lund University, and expert in EPR legislation on textiles. This is classified as an informal conversation in which the author of this thesis collects some general information on the current legislative situation for textiles in Sweden.

Appendix II: Fixa Till Project

Fixa Till is a two-year project launched by the Lund Municipality at the end of March 2016 and located in Linero, Lund (L. Wallin, personal communication, June 2nd, 2016). The project offers two services:

- repairing: people can walk in and borrow different sewing machines to repair textiles by themselves. They therefore rent the function of the tool, rather than owning one;
- exchanging through a points system: consumers can bring unwanted textiles and get points loaded on their cards, they can then use those points to 'purchase' other textiles in the store. No money exchange takes place.

The area of Linero has specific characteristics that make the location of the project highly strategic. It is located in the periphery, mostly populated by a tight community of low-middle income families. However, the area is currently experiencing fast-paced renovations and new services are being launched. This gives a precious opportunity to the Lund Municipality to invest in the education of locals on new textile repairing and recycling habits. The goal of the project is to influence people to adopt more sustainable consumption by avoiding waste through repairing and upcycling. A possible way to appeal people to participate is by turning the service into a social meeting point, helping consumers better adapt to the new behaviour. Education on environmental impacts of textiles and best practices through workshops is also a service offered by the store (S. Öström, personal communication, June 2nd, 2016).

One of the major barriers the project is currently facing is the perceived value people have of things. They are indeed convinced that things nowadays have lost their values. Especially young generations do not have any emotional attachment to textiles, as fast fashion trends are taking over. Notwithstanding this, Fixa Till project is slowly succeeding in its purpose, as the store already has several regulars living nearby (especially elderly people) and circa ten new customers coming in every day thanks to word spreading. Administrators of the project are surprised to see such an enthusiastic participation since the very first day, but this is probably due to the fact that in an area where not much happens on a daily basis, the opening of a new store with social activities involving people of different generations can raise a lot of interest and curiosity. Several customers come in exclusively to chat around, elderly ladies sometimes show up even multiple times during the days. The store attracts especially consumers above 55 and very few young adults. Most of them are customers with children wanting to get rid of old things and looking for used clothes and toys. The majority of customers are women, as they are usually more familiar with second hand shopping, but more men are gradually coming in since the store now separates the clothing section for men from the one for women (S. Öström, personal communication, June 2nd, 2016). The store is currently targeting people who work and earn relevant sums of money they would usually spend on new things. Students and younger generations are especially the group of consumers the project is aiming at, since they are future consumers who will soon get a job and start buying things differently in comparison to older generations. Their goal is educating them on the environmental, social and health benefits of investing in second hand products. For this reason, major communication tools are social networks (i.e. Facebook and Instagram) (L. Wallin, personal communication, June 2nd, 2016).

Appendix III: Adidas

Adidas has recently started to look at the possibility to launch a widespread textile take-back scheme in which consumers can bring textiles back in exchange for a voucher. So far a successful market for the circular scheme is Brazil, but Canada is launching the program and European countries are on the way to follow. There is no available research regarding the consumers' experience at the moment, but Adidas yearly produces millions of garments for the global market, and the company feels responsible for handling it. The average Adidas customers are mostly teenagers and millennials (C. Hill, personal communication, June 7th, 2016).

Appendix IV: KappAhl

Fredrika Klarén is the sustainability manager for KappAhl since two years and she is responsible for the running of the textile take-back scheme. The company started evaluating the idea of a circular scheme for their textiles circa four years ago. The take-back scheme in Swedish KappAhl stores started almost two years ago and it is now expanding to Finland and Norway. In order to make it easy for the consumers to participate, KappAhl stores accept any kind of textiles and shoes, even from other brands. Ruined and stained textiles are also well accepted. For every bag of textiles returned, consumers receive a discount voucher of SEK50 on a SEK300 purchase. The targeted consumers are women with children and a career, around 35-40 and well aware of what they need/want. The company is currently trying to reach out to as many people as possible through marketing channels, stores, social media, webpage, customer platforms etc. Textiles volumes collected so far are highly encouraging and consumers seem to be enthusiast about the service (F. Klarén, personal communication, June 13th, 2016).

Appendix V: Interview Guide (general questions for companies' representatives).

Introductory questions

1. Is it possible to record the interview? Information and names will be treated in full confidentiality.
2. Could you please start by telling me what is your role at Company's name and which tasks does it imply?
3. Could you provide me an overview on the post-consumer take-back collection schemes (e.g. why did it start, what was the goal, drivers, in which countries are they located etc.)?

Consumers involvement

4. How would you describe Company's name typical consumer/customer?
5. Were consumers involved in any way in designing the closed-loop scheme?
6. How are you engaging the consumers to participate in the scheme?

Consumers needs

7. What is Company's name understanding of the average Swedish consumer's needs and behaviour in term of textile disposal?
8. Has Company's name conducted research on consumers' decision-making processes and behaviour on textile disposal before launching the project?

Observed results

9. Could you please provide updated data on the number of people participating in the take-back scheme, the quantity and composition of returned textiles?
10. Do you have statistics on how many people are returning products and what are their demographic characteristics (e.g. males – females, age etc.)?
11. What kind of feedback are you receiving from people returning the products? Has anybody raised specific points to improve/requests/concerns?
12. What kind of issues/barriers to consumers' participation are you facing/might potentially face?
13. Is there anything else you would like to add that was not covered in this interview?

Appendix VI: IKEA Family Members Questionnaire

The online survey is in Swedish.

Greetings!

You are receiving this message because you have been selected to participate in a brief survey on home textiles disposal habits. The responses are anonymous and will be used to support a research project at the International Institute for Industrial Environmental Economics at Lund University. The objective of the survey is to collect basic information on people's disposal habits with home textiles.

Below, and on the indicated link, you will find a short survey that will take approximately 10 minutes to answer. All respondents will be later selected for a raffle and will get a chance to win two discount vouchers of SEK 200 each to be spent in any IKEA store.

Thank you very much for your time and contribution!

For the purpose of this survey, here's a list of home textiles to keep in mind.

- Rugs;
- bedroom textiles: bed linen; comforters; bedspreads; blankets & throws; pillows; mattress & pillow protectors; canopies & bed tents; sleeping bags for babies;
- curtains & blinds;
- fabrics;
- cushions & cushion covers;
- kitchen textiles: kitchen towels; aprons; pot holders; and oven mitts;
- table linen: place mats; coasters; table cloths & runners; chair pads; and
- bathroom textiles: towels; bath mats; shower curtains.

Items such as carpets and textiles which are integrated parts of other products, such as furniture, are not included in this questionnaire.

In the last 12 months, have you used <u>at least one</u> of the following five textile handling methods? (thick boxes will be set next to each option. More than one option can be selected).

1. ***Resell*** *refers to selling textile items directly to other people, through consignment shops, to resale or second-hand shops, through online websites, and at garage sales or flea markets.*
2. ***Donate or recycle*** *refers to giving away textiles to family or friends. Donating can also be done through charitable organizations, thrift stores, curbside recycling programs, retail recycling programs, online companies.*
3. ***Reuse*** *refers to using textiles for a purpose other than for which it was originally intended. For example, old sheets may be used as cleaning rags around the house.*
4. ***Repair*** *refers to the act of fixing the textile either by yourself or by a professional.*
5. ***Discard*** *refers to when textile is thrown away, abandoned, or destroyed.*

Section 1: Environmental Impact of Textile

Please, select your level of agreement for each one of the following statements.

	Question	**Strongly disagree (1) – Disagree (2) – Neutral (3) – Agree (4) – Strongly Agree (5)**
1	Textile manufacturing is responsible for the release of chemical pollutants in the water.	1 2 3 4 5
2	Air pollution can occur during some common dye processes of textiles.	1 2 3 4 5
3	The manufacturing process is highly water-intensive.	1 2 3 4 5
4	All kinds of textiles are recydable.	1 2 3 4 5
5	Disposing of home textiles in a responsible way does not help with the reduction of raw materials use for new products.	1 2 3 4 5

Section 2: Home Textile Disposal Motivation

Please, select your level of agreement for each one of the following statements.

	Question	**Strongly disagree (1) – Disagree (2) – Neutral (3) – Agree (4) – Strongly Agree (5)**
1	It is very important for me to donate my home textiles to charity for people in need.	1 2 3 4 5
2	I often reuse home textiles for other purposes for economic reasons.	1 2 3 4 5
3	I don't reuse home textiles because it is a hassle to me.	1 2 3 4 5
4	I sell most of my home textiles for economic reasons.	1 2 3 4 5
5	I donate my home textiles to charity to do my part in decreasing the environmental problems.	1 2 3 4 5

6	I reuse home textiles because it can significantly benefit the environment.	1 2 3 4 5
7	It is time-consuming to donate my home textiles to charity.	1 2 3 4 5
8	To reduce environmental problems, I sell my unwanted home textile rather than throwing it away.	1 2 3 4 5
9	I try to repair my old home textiles because throwing away can significantly contribute to environmental problems.	1 2 3 4 5
10	I find it convenient to throw away unwanted home textiles.	1 2 3 4 5
11	I never reuse home textiles because I don't know how to.	1 2 3 4 5
12	I never repair home textiles because I don't know how to.	1 2 3 4 5

Section 3: Home Textile Disposal Attitude

Please, select your level of agreement for each one of the following statements.

	Question	**Strongly disagree (1) – Disagree (2) – Neutral (3) – Agree (4) – Strongly Agree (5)**
1	Reselling, donating, and reusing home textiles are good ideas.	1 2 3 4 5
2	I am willing to spend time to resell, donate, and reuse my old home textiles.	1 2 3 4 5
3	More information about ways to resell, donate, and reuse home textiles should be made available.	1 2 3 4 5
4	Reselling, donating, and reusing home textiles are more trouble than they are	1 2 3 4 5

	worth.	
5	People should be encouraged to resell, donate, and reuse home textiles.	1 2 3 4 5

Section 4: About Home Textile Disposal

Please, select your level of agreement for each one of the following statements.

	Question	**Strongly disagree (1) – Disagree (2) – Neutral (3) – Agree (4) – Strongly Agree (5)**
1	People important to me think that I should resell, donate, or reuse home textiles.	1 2 3 4 5
2	Generally speaking, I want to do what my friends think I should do.	1 2 3 4 5

Section 5: Home Textile Disposal Intention

Please, select your level of agreement for each one of the following statements.

	Question	**Strongly disagree (1) – Disagree (2) – Neutral (3) – Agree (4) – Strongly Agree (5)**
1	I intend to resell my used home textiles to others directly or through a retailer.	1 2 3 4 5
2	I intend to donate my used home textiles to a charitable organization or cause.	1 2 3 4 5
3	I intend to reuse my used home textiles for other purposes.	1 2 3 4 5
4	I intend to repair my home textiles when damaged.	1 2 3 4 5
5	I intend to throw my used home textiles in the trash.	1 2 3 4 5

Section 6: Home Textile Disposal Behaviour

Select here the usual solutions to take care of the unwanted home textiles.

		Resell	Donate/Recycle	Reuse	Repair	Discard
1	Your bed linens have a hole.					
2	The curtains in the living room are in good conditions but you want to change them.					
3	The table cloth has a stain that doesn't go away.					
4	The colour of the chair pads in the kitchen is faded.					
5	There are towels taking space in the cupboard that have never being used.					
6	The furniture in the bedroom has been changed and you need to get rid of the old pillow covers and blankets.					

Section 7: Demographic information (almost done!)

- Gender:

  - Male
  - Female
  - I prefer to not answer
- Age:
  - 18-25
  - 26-35
  - 36-45
  - 46-55
  - 56-65
  - Over 65
- Nationality: _____
- Number of adults living in the house: ____
- Number of children living in the house: ____
- Education level (accomplished):
  - Middle School.
  - High School.
  - Bachelor Degree.
  - Master Degreed.
  - PhD.
  - Other: _____
- Monthly disposable Income (SEK):
  - < 5.000
  - 5.000 –10.000
  - 10.000 – 20.000
  - 20.000 – 30.000
  - 30.000 – 40.000
  - 40.000 – 50.000
  - >50.000
  - I have no personal income, but I share a household income.
  - I prefer not to answer

Do you have any additional comments about this survey? Is there anything you want to share with us? You are more than welcome to provide any comment; keep in mind that we will not be able to identify or get in touch with you since the survey is anonymous.

_____
_____
_____
_____

Appendix VII: Interview guide for consumers

Preconditions
This is something that can affect the respondent and is therefore good to understand. The preconditions are often found out if you deepen in the other areas, so these questions might not be asked by themselves (if they do not come in natural). However, for the scheduled this can be a good way to start the conversation.

- Where are you from? Where do you live?
- What is your occupation?
- Who do you live with?
- How do you get around?

Ice-breakers:

- Do you feel that you have enough space at home? (we are looking for how they live and how they perceive their space of living…).
- Do you see textiles as something valuable? (if they see only a functional value or also some emotional).

Recycling of textiles

- What do you do with textile you no longer use?
- What kind of textile do you think of?
- When do you sort textile? When would you like to do it?

Drivers & Motivation

- What would you like to do with your used (home) textiles?
- What is stopping you?
- How do you feel after sorting/recycling (textile)?
- How would you like to feel?

Sustainable lifestyle

- What is a sustainable lifestyle for you?
- What do you think when you hear the word "sustainable" or sustainable life at home"?
- What do you throw away in your regular bin?
- What do you not sort today?
- Is there anything in your home that you do not sort?
- Is there anything that you (would) like to sort?

Consumption habits

- What is important for you when you get new things today?
- When do you get new things?
- How often would you say that you get new things today? (estimate)

Responsibility

- Who is responsible for taking care of textile (that you no longer use)?
- What is your responsibility?
- Who do you think should be responsible for reducing waste in home textiles and why?
- If you knew that…. would you act differently?