

countries the larger part of the salary will be spent on food for the household. In industrial countries in the west more money is spent on consumption other than food, for example clothes. With rising income people afford to eat out more often and have the possibility to eat at more expensive restaurants. Social class is difficult to measure and depends on a number of factors. Distinguishing people from different classes is difficult also because sometimes it is not easy for consumers to place themselves in a certain class. Social class is a term used to describe the overall rank of people in the society. Measuring social class in the past is often not valid today due to the different family constellations in the society today, as opposed to the traditional core family.

Regarding consumer behavior and social class, working-class tends to evaluate products through sturdiness or comfort rather than fashion and style (Solomon, 2006). Working-class is also less likely to try new products or experiment with new styles. People living in suburbs tend to be more concerned with fashion and body image. More affluent people care about their diet and eat and drink more diet products. This means that marketers can segment markets using class, different habits and consumer behavior can be distinguished depending on city/small town/suburb.

4 Background empirics

The background empirics provide a section with previous research results, and brief overview of forces behind clothing consumption and an explanation to the waste hierarchy.

4.1 Previous research results

In the past the Swedish population had a culture of patching and mending clothes when they became worn out or broke (Ungerth, 2011). Today however that culture has been replaced and Swedish consumers throw away clothes prior to the clothes becoming worn out or if they are being out of style. Many consumers perceive the lifetime of clothes to be shorter than before and the throw-away fashion consumption is increasing, especially amongst the younger consumers (Joung & Park-Poaps, 2011). The older generation is better in reusing and recycling clothes than the younger generation of consumers (Ekström *et al.*, 2012). However, the increased awareness amongst consumers of the environmental impact of their consumption has led to more consumers considering and reevaluate their consumer choices (Shaw & Newholm, 2002). Consumer choices that can be reevaluated can for example be to consider whether or not to reduce the consumption levels and purchasing items in secondhand shops.

Consumers claim concern for the environment but their consumption behavior does not reflect awareness or high priority of environmental values (Ekström *et al.*, 2012). This gap between experienced values and consumption is referred to as a “*value action gap*” (Ekström *et al.*, p. 109, 2012). From this finding Ekström *et al.*, (2012) assume that the consumers do not need more information about the environmental impact from the consumption of clothes. Rather the consumers need information about different kinds of actions one can take in order to act more environmental friendly. Information about recycling programs is important as it increases the recycling participation amongst consumers (Joung & Park-Poaps, 2011). The value-action gap is larger amongst younger consumers and an explanation for this can be the difference in the upbringing environment of different generations (Ekström *et al.*, 2012). The older generation was brought up in an environment with more scarce resources and the importance to save was much greater. Younger consumers are more sensitive to different fashion trends and may dispose of clothes even though they are fully usable. Younger consumers purchase more clothes more often, do more impulsive purchases and they are more likely to spend money on fast fashion than older consumers (Pentecost & Andrews, 2010). Younger consumers, especially young females, are more impulsive in their fashion purchases than older consumers. Older consumers care more about the quality of the clothes as opposed to younger consumers and wear them until they are worn out to a greater extent (Ekström *et al.*, 2012). Older consumers purchase clothes less often than younger consumers and by this the older generation is more environmental friendly. The price of the clothes is also a critical factor for consumers when making the purchase decision. Younger consumers are more price sensitive than older consumers who tend to value the quality of the clothes more than the price.

Fashion retailers are introducing new clothing lines every few weeks, offering clothes to a low price, in order to capitalize on impulse purchasing (Bianchi & Birtwistle, 2011). With their fast fashion offerings consumers are encouraged to visit the shops more often as the high turnover makes offerings only appear for a short period. There is also a difference in frequency of shopping between males and females (Pentecost & Andrews, 2010). Females

shop more frequently than males, but males are more likely to spend more money on clothes once they do go shopping.

Through purchasing secondhand items environmental benefits such as reduced greenhouse gas emissions are achieved (Internet, IVL, 2013). Emissions will be saved both from the person purchasing the item as well as from the person who discarded the item. An overall interest for secondhand clothes is growing amongst different consumer groups (Ekström *et al.*, 2012). Environmental concerns is however not one of the main reasons for consumers who purchase secondhand clothes. Younger consumers for example purchase secondhand clothes because they can find fashionable and unique clothes. However, there are also consumers who do not purchase secondhand clothes, who find it unhygienic and have the attitude that it is the consumers with less money who purchase the clothes. Secondhand shops have however become more styled and are not being associated with for example messiness and bad smell to the same extent as before.

Not only is it the manufacturing and the purchasing of clothes that causes negative environmental impacts, the disposal of clothes also affect the environment (Ekström *et al.*, 2012). The condition of the clothes determines to a great extent how consumers choose to dispose of the clothes. Good condition clothes are being sold, traded or given away to friends or family members while worn out clothes are given to charity. To donate clothes to charity is perceived by consumers as a rather easy way to dispose of clothes. The main reasons for donating to charity is not environmental aspects, rather is it to help the less fortunate and a way for consumer to feels better about themselves when clothes can be re-used and thus justify the purchase of new clothes. Unwanted clothes are also being disposed of in the household waste. Low-quality garments often have such a low quality that they are difficult to recycle (Joung & Park-Poaps, 2011).

There is a difference in how consumers recycle different types of products (Bianchi & Birtwistle, 2011). Recycling of, for example, paper and glass varies from textile recycling. The recycling of textiles is associated with donation to charities. If a consumer recycle items such as plastic and paper they are more likely to recycle garments by donating them to charity (Bianchi & Birtwistle, 2011, p. 336) Consumers' awareness of the environment affect the general recycling behavior as well as the likelihood to dispose of clothes in an environmental friendly way, such as donation. People's characteristics, the characteristics of the item and the community characteristics influence the consumer's voluntary disposal behavior (Albinsson & Perera, 2009). An items characteristics such as the economic, sentimental or symbolic value influence the way a consumer disposes of a garment. The items condition also plays a role in how it is disposed of. Individual characteristics of the consumer influence the disposition behavior, examples of this is the consumer's self-concept, experience, values and consumption patterns. Examples of community characteristics are accessibility to secondhand shops, charities and the local infrastructure. The study by Albinsson & Perera (2009) has shown that the items characteristics and the characteristics of the community have greater influence on the disposition than the individual consumer's characteristics.

The post-purchase components of the clothing consumption entails re-use, recycling and discarded (Bianchi & Birtwistle, 2011). Donating clothes to charity, friends or family members is considered by consumers to be the most environmental friendly method (Bianchi & Birtwistle, 2011, p. 336). Even if the main drivers for consumer's disposal behavior are not clear, consumer's environmental attitudes will influence disposal behavior to some extent. Consumer's knowledge of recycling and different disposal options also affects the disposal

behavior. If a community has a recycling program the population is more likely to participate in recycling (Joung & Park-Poaps, 2011). Curbside collection, where the items are picked up, has a higher participation level than drop of sites, where items are left. The convenience access to recycling programs also affects the participation level.

In Sweden the collection of textile waste is carried out by non-governmental actors such as secondhand shops or charity organizations (Tojo *et al.*, 2012). Donations can be left in a secondhand shop or the organization can come and pick up the donations at a person's home (Internet, Myrorna, 2013). The amount of donated textiles in Sweden exceeds the market demand for such clothes (Tojo *et al.*, 2012). As a result a large part of textiles being donated are exported to other countries. Different charity organizations are the biggest actor in facilitating secondhand clothes trade in Sweden. If the textile waste is disposed of in the household waste it is the governments and the municipalities' responsibility to collect and take care of it. The municipalities do not have any responsibilities to recycle the textiles, thus the textiles is most likely to be incinerated. In a survey from 2011 about 1000 Swedish consumers were asked about their attitudes toward a more regulated collection system for clothes (Ungerth, 2011). About 70 percent of the respondents had a positive attitude towards such a collection system. Some 28 percent of the respondents preferred a refund system and 27 percent of the respondents preferred collection with textile containers at the recycling station. Towards both systems 15 percent had a positive attitude.

4.2 Forces behind clothing consumption

Clothing is not a private matter as you are seen by others and present yourself through clothing (Miller, 2005). In many societies there is a strong belief that the possessions you have say something about whom you are, "*to have is to be*" (O'Cass & Julian, 2001, p.2). What possessions you have are how you define yourself and your possessions are key symbols for example interests and personal qualities. Previous research on self-image has focused on brand/product preferences and the relation between individual's image and brand image. Self-image and products are linked and consumers are more likely to be involved with products representing their self-image. In the study by O'Cass & Julian (2001) age, gender, person-product image congruency and materialistic values were identified as significant contributors in fashion clothing of individuals and its consumption.

Consumers today motivate their shopping in several ways (Ekström *et al.*, 2012). Shopping is a way to meet needs; to socialize with friends, reward yourself and a way to keep up with the latest trends. Group identity and desired identity is what consumers signal through the clothes purchased. The two terms conformity and distinction are used to describe group identity and desired identity. Conformity is about the human strive to fit in and be a part of society. Distinction deals with the human strive to be special and separate oneself from other through the way you dress. When fashion is spread the distinctiveness will disappear and become more standardized. *Haute couture* (high dressmaking) in the fashion industry is often commercialized through cheap production and this allows more people, often with lower social status to buy copies.

Today it is more difficult and demanding to signal identity through clothes than earlier, this due to the fact that the fashion industry today can be viewed as post-modernistic (Ekström *et al.*, 2012). The meaning of the clothes occurs in relation to other objects or symbols. The combination of the clothes you wear, your hairstyle and other accessories signals your identity. Environment will affect values and attitudes and is also considered to influence consumption behavior over a lifetime (Noble & Schewe, 2003). External events for example

technological innovations, economic changes and political ideologies define consumer attitudes, values and preferences.

4.2 Disposal of textile- The waste hierarchy

The waste hierarchy

The desired path for waste treatment is presented in the EU-directive from 2008 (2008/98/EC). The waste hierarchy should be followed in order to ensure that discarded products are taken care of in the most environmental friendly way possible. The waste hierarchy has five steps illustrated in figure 4:



Figure 5 Model – The Waste Hierarchy (Internet, SEPA, 2012)

What the waste hierarchy describes is the prioritized order of the best environmental option regarding waste legislation and policy (2008/98/EC). If justified reasons can be provided an exception from the waste hierarchy may be necessary (for example specific waste streams). When applying the waste hierarchy the overall negative environmental outcome is minimized.

The waste policy is intended to lower negative effects on both the human health and the environment (2008/98/EC). A goal for politicians and when forming new legislation should be to make the waste hierarchy easy to practically carry through. If it is followed through in a proper way the amount of waste will decrease. To lower the amount of greenhouse gases is also an incentive to follow the waste hierarchy. For example does one kilogram textile produce about 15 kilogram of CO₂-equivalents (Palm, 2011). Textile waste can be categorized in four general uses according to Palm (2011, p.9):

- ✓ Reuse
- ✓ Recycle
- ✓ Use for energy
- ✓ Landfill

The quality of the textiles as well as the fashion will decide which waste path the clothes will take (Palm, 2011). For many products in Sweden there is a producer responsibility but this does not apply for the reuse and recycling of clothes despite the environmental benefits. To reuse textile can reduce emissions from both production as well as from the waste management. It can also reduce the environmental impact if the textiles are used as a

replacement or substitute for something that has a larger environmental impact such as industrial rags made of reused textiles that replaces paper towels. Depending on the different recycling methods different levels of environmental benefits can be reached and this makes an accurate estimation of the environmental benefits from the textile recycling hard to reach.

4.2.1 Reuse

The first category can be divided into formal, semi-formal and informal reuse (Palm, 2011). Reuse of textiles prolongs the lifecycle of the product and as a result also prolongs the environmental benefit. Formal reuse can for example be second-hand shops and is done mainly by charity organizations. Formal reuse is the most common way for Swedish consumers to get rid of unwanted clothes that are still in good condition (Ekström *et al.*, 2012). Previous research has shown that older consumers (60-74) are more likely to use formal reuse as a way of disposing of clothes than younger consumers (16-29). Examples of semi-formal reuse are textiles that are traded and sold on websites like EBay or Tradera (Palm, 2011). Semi-formal reuse is an area that has grown, but further research needs to be done in order to understand the extent and spread (Ekström *et al.*, 2012). Informal reuse mostly takes place in homes, where clothes are reused by younger siblings or given to friends (Palm, 2011). Regarding informal reuse previous studies have shown that it is the second most common way for consumers to dispose of unwanted clothes (Ekström *et al.*, 2012). Formal and semi-formal reuse is easier to estimate than the informal textile reuse (Palm, 2011).

Reuse can be a part of either the first or second stage of the waste hierarchy, prevention or preparation for reuse (Palm, 2011). To reuse textiles do not only lower the emissions from waste management but can also reduce new production which really has its environmental benefits. However, the environmental benefits can be hard to estimate due to the complex production lines which makes textile production hard to document. Most studies of environmental impact from textile production do not consider the whole life cycle and may include only estimations of environmental impact.

4.2.2 Recycle

Recycled textiles can be made into new textiles or made into other products (Palm, 2011). Depending on the recycling method as well as what material the recycled textiles replace will create a different environmental impact. In Sweden there is no large scale of recycling textiles but in for example the United Kingdom large scale techniques are developed for sound isolation for cars.

4.2.3 Use for energy and landfill

Textiles can be incinerated with energy recovery and it is the second most common form of waste treatment in Sweden, only charity collection is more common (Palm, 2011). Some incinerators do not accept larger quantities of textiles due to safety reasons. Long textile threads can create an unsafe connection between the storage and the incineration. A way to prevent this is by precutting and shredding the textiles. If the textiles are not used for energy they are most likely to end up being landfilled. A big share of the clothes is thrown away in the regular household waste (Ekström *et al.*, 2012). A previous study has shown that about three percent of the total household waste consists of textiles in Sweden.

5 The empirical results

The following chapter is divided into two parts, the *questionnaire* and the *focus group*. In the first part the results from the questionnaire is presented. In total **170** respondents answered the questionnaire through convenience sampling in different places in Uppsala. This chapter starts with an explanation to the improperly completed questionnaire and the remaining part is divided into four sections. The four sections are found in the questionnaire, only presented in a different order in the empirics. The first section is personal information like gender, age and income. Section two is about household waste sorting and section three is buying and disposal of unwanted clothes. The fourth and last part concerns the attitudes of the respondents to purchasing secondhand clothes. The questionnaire can be found in Appendix 1 in the end of this thesis.

In the second part of the chapter the result from the focus group is presented. The focus group had seven participants with different nationalities. The main topics of the discussion were: views on second-hand for garments, buy second-hand and disposal of clothes. The discussion naturally led into other questions. The main questions were formulated to provide a sense of direction for the participants. The result from the focus group is presented in the empirics in three sections, following the same structure as the main questions mentioned earlier. One clarification to avoid confusion is that respondents are the *questionnaire respondents* and participants are the *focus group participants*.

5.1 Results: Questionnaire

Improperly completed questionnaires

Out of the total number of 170 respondents did 53 percent fill out the questionnaire correctly, thus 47 percent of the questionnaires were improperly completed. If the respondent made some kind of mistake in the completion of the questions the questionnaire is considered to be improperly completed. The following scenarios are classified as mistakes: the respondent only filled out part of a question and the respondent answered/did not answer a question that was supposed/not supposed to be answered according to the instructions. Questions that were improperly completed were taken out from the Excel worksheet. In the worksheet the raw data is analyzed.

Four questions were highly represented as being incorrectly completed by the respondents. Three of these questions were number 7, 11, 14 and common for these questions is that all three had multiple choice answers. Question 13 was also highly represented as being incorrectly completed. The questions can be found in Appendix 1 on page 55. Based on previous answers some respondents were not supposed to answer question 13, but still a large number did. If a respondent has filled out a question improperly the answer has been removed from the questionnaire and is not included in the calculations. Number 7, 11 and 14 are though still included in the calculations because a high number of respondents answered these questions improperly and it is considered better to include the answers for the outcome of this study.

Out of the 170 respondents 129 were females and 40 were males, one respondents gender is unknown because the question was not answered. The uneven distribution of gender is considered unfortunate and something that quickly came to awareness by the authors. Efforts were made to include more male respondents but without any greater success. Males were not so interested in participating and filling out the questionnaire, especially older men. Because

of the uneven distribution of respondents it may not be representative when comparing and discussing differences. The same applies for the uneven distribution amongst the respondents and the cultural backgrounds. Since the bigger portion has a Swedish ethnicity and the respondents with a foreign ethnicity come from so many different places, it is difficult to draw general conclusions from this.

5.1.1 Personal information

Age and gender

In total 129 respondents were females, their average age was 29,5 years. There were 40 male respondents, their average age was 30,9 years. Proportionally there were more females than males with a higher age amongst the respondents. Out of the male participant only two were over the age of 56 (5,0%) and regarding women there were 13 respondents over the age of 56 (10,1%). In the table below the respondents age has been divided into different age ranges to further display the age distribution.

Table 1 Age distribution

Age range	Number of respondents
-25	87
26-35	46
36-55	22
56-	14

As can be viewed in the table above, respondents who are 25 years of age and younger are over represented. Respondents between the ages 26-36 years were also a large group represented in this study. Respondents who were 56 years and older were the smallest age segments represented by the respondents.

Household size

The average household size was 2,6 persons per household. Two person households were the most common size, represented by almost one third (31,5%) of the respondents. One person households was the second most common household size (30,4%). About one fourth of the respondents (25,6%) had a household size of four or more persons and only a small number of respondents (12,5%) had a household size of three persons. The high number of participants having a one or two person households can be explained by the young age of the participants. The average age of participants with the household size of one or two persons was 32 years. Almost 40 percent of the respondents with a household size of one or two persons are students with ongoing college/university studies. This can also be an explanation to the high number of small households amongst the respondents.

Upbringing environment

The upbringing environment was even amongst the respondents, with the same number of people growing up in rural areas (36,4%) as in big cities (36,4%). Respondents growing up in small towns were slightly under represented (27,3%).

Education

The average level of highest education was ongoing college/university studies, represented by more than half of the respondents (54,8%) which can be correlated to the young age of the respondents. Almost one fourth of the respondents had completed college/university studies. A little more than one fourth (25,3%) had completed college or university studies.

Income level

More than half of the respondents (63,0%) had an income level after taxes between 0-10 000 SEK. The high number of respondents representing a low income can be explained by the young age of the respondents, which in turn can be correlated to the high number of respondents who still have not yet finished their education. The second most common answer was an income level between 10 000 - 15 000 SEK (12,7 %). Only a few percent of the respondents (6,1 %) had an income level between 15 000- 20 000 SEK while a few more (9,1 %) had an income level 20 000-25 000. A few respondents (7,9 %) had an income level over 25 000 SEK. In the table below the income level related to the age of the respondents is displayed.

Table 2 Income level in relation to age

Income level	0-10 000	10 000- 15 000	15 000- 20 000	20 000- 25 000	> 25 000
Age 0-25	71	6	1	4	1
Age 26-35	29	7	3	4	3
Age 36-55	2	4	4	5	6
Age 56 and older	1	5	2	2	3
7 did not answer					

The income level is lower among young people. For example represent respondents who are 25 and younger almost 70 percent, and people between the ages 26-35 almost 30 percent, the income level 0-10 000 SEK. Many of the young respondents clarified during the filling out of the questionnaire that the student loan was their only income, thus they had an income level of 0- 10 000 SEK.

Ethnicity

Out of the 170 respondents 114 (67,1%) had a Swedish ethnicity. Less than one fifth of the respondents (18,2%) had a foreign background and there were 25 respondents (14,7%) who did not answer the question regarding ethnical background.

21 different kinds of origins are represented in this study. It would be even more interesting have a more even distribution of ethnicities and not such a large proportion of people with a Swedish background. It was noted by the authors that there was a number of consumers who did not want to participate in the study due to their limitations in the Swedish language. The questionnaire was not translated into other languages, had it been could presumably more people with a foreign ethnicity answer the questionnaire.

5.1.2 Waste sorting

The average respondent selected 6,4 items on the question about waste sorting. In the bar graph below it can be viewed that clothes is underrepresented compared to the other kinds of waste sorting.

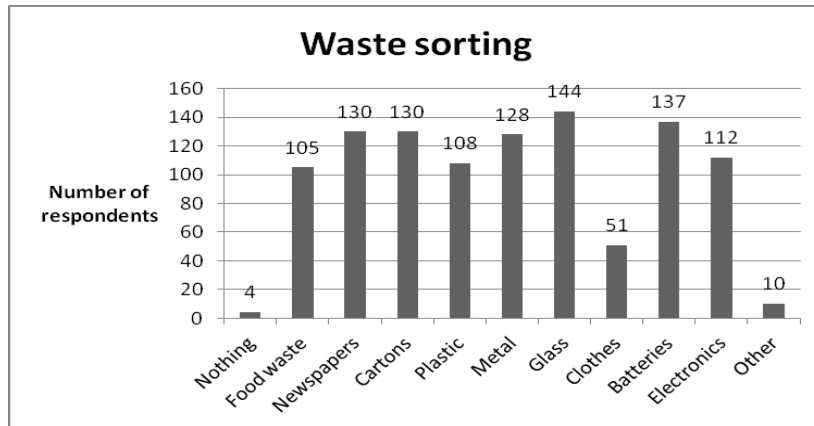


Figure 6 Waste sorting

Women sorted on average almost one item more than men, 6,6 items per female versus 5,9 items per male. There was also a difference in how many items the respondents sorted regarding the different age segments, younger respondents tended to sort less items compared to older respondents. Respondents who were 25 years and younger sorted on average 5,6 items, respondents between the ages 26-35 sorted 6,7 items. Respondents between the ages 36-55 sorted on average 8,2 items and respondents who were 56 and older sorted on average 7 items.

Ten respondents reported that they sorted other items beyond the given choices in the questionnaire. Examples of additional waste being sorted were light bulbs, medicine, PET bottles, construction materials and garden waste.

5.1.3 Purchase and disposal of clothes

Purchase new clothes

The most common answers amongst the respondents were that they were buying new clothes quarterly (40,8 %), the second most common answer was buying new clothes monthly (37,4 %), and thirdly buying new clothes each semester (10,9 %). A few respondents bought new clothes every year (4,6 %) or more seldom than that (4,0 %). Only a few (2,3 %) bought new clothes every week. In the figure below the purchasing frequency of clothes is displayed.

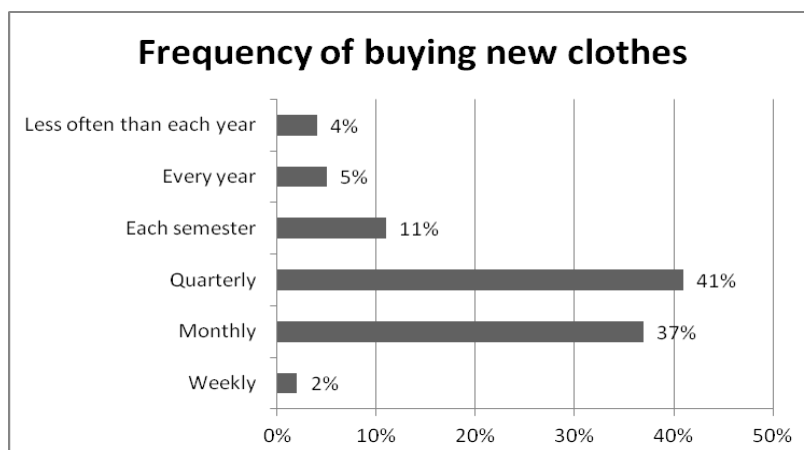


Figure 7 Frequency of purchasing new clothes

Only four respondents answered that they bought new clothes every week, their average age was 22,5 years. Most respondents answered that they bought new clothes quarterly, the average age here was 31,9 years. The second most common answer was to buy new clothes

monthly, the average age was 55,4 years. To buy new clothes each semester was represented by 19 respondents with an average age of 36,3 years. The average age of the respondent who bought new clothes every year or less often than that was 45,5 years.

The most common answer for male participants were that they bought new clothes quarterly and the second most common answer was each month. For female participants the most common answer was that they bought new clothes each month, and the second most common answer was quarterly.

Worn out clothes

Regarding the question of how often the respondents disposed of clothes that were worn out, about one third (29,7 %) answered that they dispose of clothes each year, this was the most common answer. The second most common answer (27,4 %) was that the respondents dispose of clothes more seldom than each year. None of the respondents disposed of worn out clothes on a weekly basis. In figure 8 the respondents answers regarding frequency of disposal of worn out clothes is displayed.

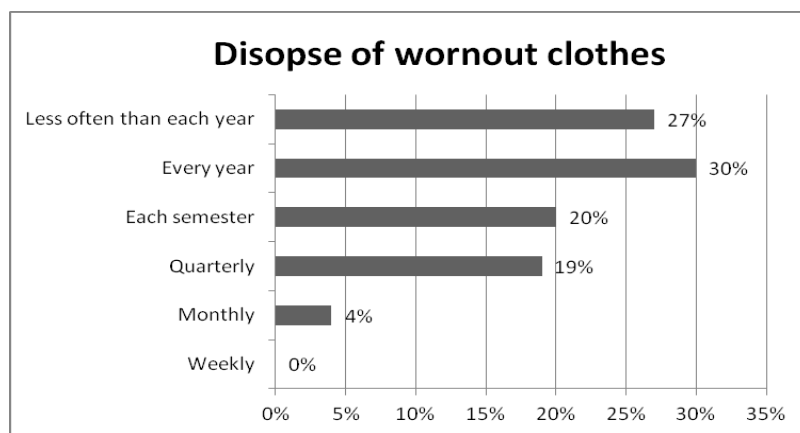


Figure 8 Disposal of worn out clothes

There were a difference between how often male and female respondents disposed of worn out clothes. The most common answer amongst female respondents was disposal of clothes each year (32,1 %). This was followed by disposal of clothes more seldom than each year (25,2 %) and thirdly disposal quarterly (20,6 %). The most common answer amongst male respondents was to dispose of worn out clothes more seldom than each year (34,9 %). To dispose of clothes each semester and each year was both represented by one fifth (20,9%) of the male respondents. For both males and females, to dispose of clothes each month was the least common answer.

There were differences in the average age of the respondents regarding frequency of disposing of worn out clothes. In table 3 the average age of respondents disposing of worn out clothes is displayed.

Table 3 Disposal of clothes

How often respondents get rid of clothes that are worn and/or broken (except socks and underwear)	Average age amongst respondents
Weekly	0
Monthly	41,4
Quarterly	33,8
Each semester	28,1
Every year	30,1
Less often than each year	30,4

Younger respondents tended to dispose of worn out clothes more seldom compared to older respondents. The average age differed more than ten years between respondents who disposed of worn out clothes monthly and less often than each year.

On the questions about what respondents do with worn out clothes, over one fourth (26,6 %) answered that they threw it in the household garbage. At a close second (25,7 %) respondents used the clothes as rags and cleaning material and one fourth (25,0 %) gave the clothes to charity. A few respondents (15,1 %) claimed that they throw it in the combustible waste at the recycling centers. A small number of respondents (7,6 %) answered “other”, examples of this was; to try and repair the clothes, recycle buttons and zippers and use it on other clothes, sew the clothes into something else, keep them in the attic, sell them on a garage sale or give it to friends, family or charity if the quality was good enough.

Whole and fully usable clothes

There was a difference between how often respondents disposed of good quality clothes in relation to the disposal of worn out clothes. In figure 9 one can notice that the most common answer was to dispose of good quality clothes less often than each year.

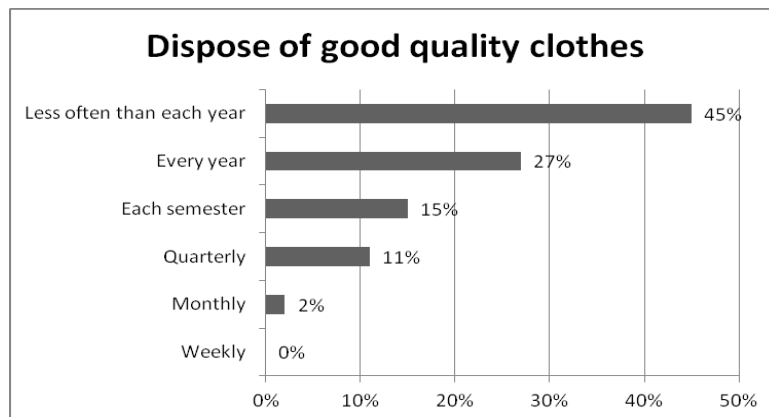


Figure 9 Disposal of good quality clothes

For both male and female, the most common answer concerning how often one dispose of good quality clothes was less often than each year, for women (40,0 %) and men (62,8 %). To dispose of clothes each year was the second most common answer for females (28,5 %) and males (33,3 %). The third most common answer however differed between males and females. For females the third most common answer was to dispose of clothes each semester (18,5 %). For males the third most common answer was to dispose of clothes quarterly (7,0 %).

There were some differences in the average age of the respondents regarding frequency of disposing of good quality clothes. In the table below the average age of respondents is displayed.

Table 4 Disposal of whole and fully usable clothes

How often do respondents get rid of clothes (except socks and underwear) that are not worn out and/or broken	Average age amongst respondents
Weekly	0
Monthly	31,3
Quarterly	37,8
Each semester	30,0
Every year	28,0
Less often than each year	31,0

The average age of the respondents connected to the frequency of disposing of clothes that is not worn out or broken was fairly even. To dispose of clothes quarterly was the answer which had the highest average age amongst the respondents.

The most common answer among the respondents regarding what they do with good quality clothes they no longer want to have was to give them away to charity (31,3 %). The second most common answer was to give them away to friends and family (29,0 %). Respondents also gave clothes away to secondhand shops for them to sell (18,8 %). Not so many respondents (10,1 %) threw the clothes in the trash. Only a few percent sold the clothes online or sold them in another way. Very few percent answered that they kept all their clothes.

Give away to charity

Many respondents gave clothes away to charity. The respondents answered a few statements regarding why they gave clothes to charity where they had to answer “yes”, “no” or “no opinion”. In the table below the respondents answers are displayed.

Table 5 Reasons to give clothes to charity

I give away to charity because:	Yes	No	No opinion
I want to reduce the environmental impact	89	8	9
I want to help the needy	111	2	5
Others might find the clothes stylish	72	18	12
It's an easy way to get rid of unnecessary excess	85	12	9
It's trendy	3	67	20

Many respondents gave clothes away to charity because they wanted to help less fortunate people. That respondents wanted to reduce the environmental impact was also a claim many respondents agreed with. Not many respondents agreed that it was trendy to give clothes away to charity.

Throw away clothes

More than half of the respondents (56,5 %) had thrown clothes away in the household garbage during the past year. Less than half (40,0 %) had not done so and a few (3,5 %) did not know if they had or not.

The most common answer to why the 40 percent of the respondents had thrown clothes away in the household garbage was that the clothes were worn out (40,2 %). The second most common answer was that it was the easiest thing to do with the clothes (19,7 %). Many

respondents also reported that the clothes were stained (12,3 %) and soiled (11,5 %). Some respondents claimed the clothes were ugly and they did not think anybody wanted them (9,0 %), and a few percent of the respondents claimed that nobody wanted to receive them. The most common answer to what would make a respondent not throw cloths away was to have a shorter distance to the submission centers (20, %). Assurance that the clothes come to be recycled was the second most common answer (17,1 %). Also better knowledge on where to submit the clothes (16,4 %), to get a reward such as a pledge (15,0 %) and knowledge that the clothes comes to charity (14,3 %) was reasons that would make less people throw cloths away. A few percent would not throw cloths away if they had better storage possibilities at home (8,6 %). Some respondents (7,9 %) answered “other”, other things that would make less respondent throw clothes away were for example information about how the condition of the clothes must be in order for charity organizations accept them, knowledge about how to repair clothes and better knowledge about where worn out clothes can be turned in, not only good quality clothes and.

Different applications for clothes

The respondents had an overall positive attitude towards different usage of clothes that are whole and usable. A great number of respondents (84,0 %) answers were “yes” to the different suggestions for different applications for clothes given in the questionnaire. Only a few (8,6 %) answered “no” and even less (7,4 %) answered “no opinion” to the different applications. In the table below the answers of the respondents are presented.

Table 6 Different applications for clothes

I can imagine that the whole and perfectly usable clothes...	Yes	No	No opinion
Are sold in a secondhand shop	156	6	0
End up with a charity organization	165	0	0
Are sewn into new clothes	139	14	5
Is used in the production of new clothes	133	14	10
Is used in the production of other textile materials, such as carpets	140	12	6
Is used for the production of ethanol/biogás	113	15	23
Is used as insulation	100	24	28
Is used as filler in e.g. furniture	109	23	21

That the clothes end up with a charity organization was an application many respondents could imagine for good quality clothes. That the clothes were being sold in secondhand shops were also an application many respondents could picture clothes being used for. The applications respondents had the least positively attitudes toward were that the clothes were being used as insulation and fillers in for example furniture, however still more respondents answered yes than no to the two statements as can be viewed in the table above.

5.1.4 Purchase secondhand

Purchase secondhand

Most respondents (59,2 %) answered that they had purchased secondhand clothes during the past 12 months. Less than half of the respondents (38,5 %) had not bought any second hand clothes during the past year and the remaining (2,4 %) respondents answered that they did not know. In the figure below the purchase frequency of secondhand clothes is presented.

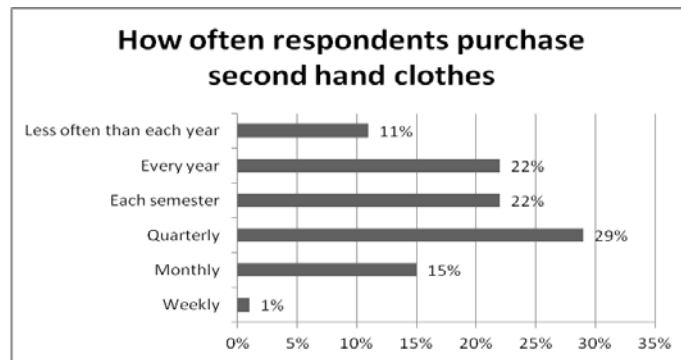


Figure 10 Frequency of purchasing secondhand clothes

Many respondents (28,6 %) who have bought secondhand clothes during the past 12 months bought it quarterly. The second most common answer was a tie between buying secondhand clothes each semester (21,9 %) and each year (21,9 %).

Respondents who purchased secondhand clothes had a lower average age than respondents who did not purchase secondhand clothes. The average age amongst the respondents who purchased secondhand clothes were 50 years, amongst respondents who did not purchase secondhand clothes the average age were 62 years. In the figure below the distribution between the genders regarding who purchases secondhand clothes is displayed.

Table 7 Purchase of secondhand-gender difference

Purchase secondhand clothes	Percentage of male participants	Percentage of female participants
Yes	54,1	62,5
No	45,9	37,5

Slightly more than half of the male respondents (54,1 %) reported to have purchased secondhand clothes during the past twelve months. More respondents amongst the females had bought secondhand clothes during the past year (62,5 %).

There was a difference in behavior regarding different ethnicities and the purchase of secondhand clothes. In the table below the purchase of second hand and ethnicity is displayed.

Table 8 Purchase of second hand-ethnicity difference

Purchasing secondhand	Swedish ethnicity %	Foreign ethnicity %
Yes	66,4	54,8
No	36,6	45,2

Amongst the respondents with a Swedish ethnicity about two thirds (66,4%) had purchased secondhand clothes during the past year. When looking at respondents with a foreign background around half (54,8%) had purchased secondhand clothes.

Regarding the purchase of secondhand clothes and the average income level of respondents, there was a difference in the purchase behavior. In the table below the income level has been connected to the purchasing of secondhand clothes.

Table 9 Purchase and income level

Income level	Yes	No
0-10 000	69	33
10 000- 15 000	11	10
15 000- 20 000	7	2
20 000- 25 000	6	8
> 25 000	8	5

As can be viewed in the table above the income level of 0- 10 000 SEK is overrepresented, 69 respondents of the income level did purchase secondhand clothes while 33 respondents did not. In each of the different income levels more respondents did purchase secondhand clothes than respondents who did not. In the table below the allocation of respondents who did and did not purchase secondhand clothes is displayed for each income level.

Table 10 Purchasing secondhand clothes and income level

Income level	% Yes	% No	% Total
0-10 000	67,6	32,4	100
10 000- 15 000	52,4	47,6	100
15 000- 20 000	77,8	22,2	100
20 000- 25 000	42,9	57,1	100
> 25 000	61,5	38,5	100

Only one income level, 20 000- 25 000 SEK, were there more respondents not purchasing secondhand clothes than respondents purchasing secondhand clothes. In the other income levels more than 50 percent of the respondents had purchase secondhand clothes during the past year.

In the table below an overview is given on a question where respondent who has bought clothes on secondhand had to answer statements, where respondents could answer “yes”, “no” or “no opinion” to the different statements.

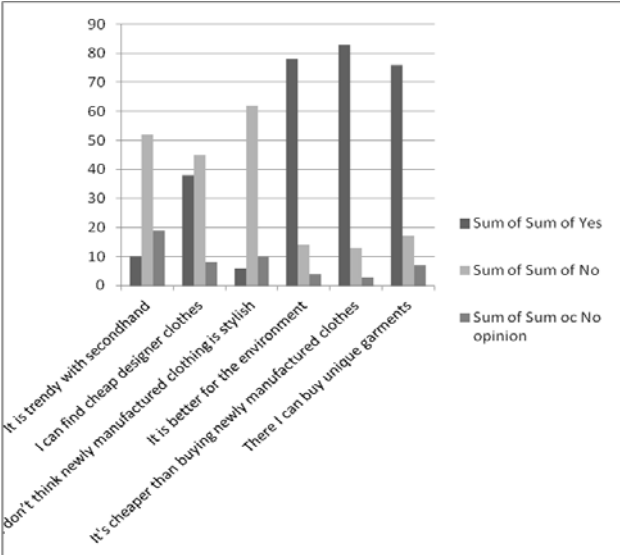


Figure 11 Reasons for purchasing secondhand clothes

One can observe that the top three reasons to why respondents purchase secondhand clothes are that it is cheaper than to buy newly manufactured clothes, followed by that it is better for

the environment and that by purchasing secondhand clothes one can find unique garments. Not many respondents agreed that they purchased secondhand clothes because they did not think that the newly manufactured clothes were stylish. Nor did many respondents agree that it is trendy with secondhand. Regarding the statement that one can find cheap designer clothes a few more respondents did not agree compared to the respondents who did agree.

Respondent who had not purchased secondhand clothes answered to statements in a similar manner as respondents who did purchase secondhand clothes, with the possible answers of “yes”, “no” or “no opinion” to each statement. In the table below an overview is given of the answers to the different statements.

Table 11 Reasons for not purchasing secondhand clothes

I do not purchase secondhand clothes because...	Yes	No	No opinion
Secondhand clothes do not last as long	12	18	16
Secondhand clothing is unhygienic	19	17	11
Secondhand clothing is outdated	10	20	14
It's embarrassing to wear secondhand	3	24	15
It's embarrassing to shop in a secondhand shop	2	25	15

Many respondents did not agree with the different statements as can be viewed in the table above. Most respondents did not find it embarrassing to neither wear secondhand clothes or to be seen in a secondhand shop. Only to one statement did more respondents agree than disagree and this was that they found it unhygienic to purchase secondhand clothes.

Purchase satisfaction

Close to all respondents who had purchased secondhand clothes (95,2 %) stated they felt satisfied after the secondhand purchase. The most common reason to the satisfied feeling was the perceived value for money (39 %), followed by that the clothes were unique (26,8 %), they meet the expectations (19,5 %) and last that it was good quality (12,7 %). A few respondents (2,0 %) answered “other”, but did not specify what that was.

Only a few respondents (4,8 %) who had purchased secondhand clothes reported that they felt dissatisfied. The most common reason for the dissatisfaction was that it had been an impulse purchase (54,5 %). This was followed by bad quality of the clothes (27,3 %), it did not meet the expectations (9,1 %) and lastly that it was not good value for money (9,1 %).

5.1.5 Result t-test

In this section the results of the t-test are presented where six hypotheses have been selected that are considered to be of interest in this study. The hypotheses have been generated from different questions in the questionnaire and the questionnaire can be found in appendix 1. The null hypothesis is that the answers do not differ and the alternative hypothesis is that the answers differ. The following result has been calculated with the significance level of 5 %.

Hypotheses 1: (From question 1 and 19 in the questionnaire)

H₀: There is no difference in the number of waste items that males and females sort.

H₁: There is a difference in the number of waste items that males and females sort.

On average did females sort 6,5 waste items and males sorted 5,9 waste items. The value from the t-test was calculated to 13,4 percent. Since the p-value is over the significance level of 5 percent this means that there is no significant difference. However it is important to note that the distribution between males and females in this study is uneven which can make the t-test

unreliable. Because of this uneven distribution there will be no further t-test completed regarding the gender perspective.

Hypotheses 2: (From question 1 and 20 in the questionnaire)

H₀: There is no difference in how many waste items younger and older consumers sort.

H₁: There is a difference in how many waste items younger and older consumers sort.

Younger respondents are considered to be under the age of 25 and older consumers are over the age of 25. Respondent who were 25 and younger sorted on average 5,6 waste items and respondents over the age of 25 sorted on average 8,2 waste items. The result of the t-test was 0,0135 percent which means that there is a significant difference in the number of waste items younger and older respondents sort.

Hypotheses 3: (From question 2 and 20 in the questionnaire)

H₀: There is no difference in how frequently younger and older respondents purchase new clothes.

H₁: There is a difference in how frequently younger and older respondents purchase new clothes.

In this calculation it has been assumed that younger consumers are the respondents who are 25 and below, older consumers are respondents over the age of 25. The main reason for this age division was so that an even distribution between the populations could be achieved.

First the answers from the respondents regarding the frequency of purchasing new clothes was trans-coded into numbers as following: Weekly (6), Monthly (5), Quarterly (4), Each semester (3), Every year (2), Less often than each year (1). This gave younger respondents an average value of 4,43 and older respondents an average value of 3,79. From the t-test the value of 0,00489 percent was calculated. This value is far below the significance level of 5 percent which means that there is a significant difference between the purchase frequency between younger and older respondents.

Hypotheses 4: (From question 3 and 5 in the questionnaire)

H₀: There is no difference in how frequently respondents dispose of worn out clothes compared with disposal of whole and fully useable clothes.

H₁: There is a difference in how frequently respondents dispose of worn out clothes compared with disposal of whole and fully useable clothes.

In this hypotheses testing just as the one before the answers from the respondents regarding the frequency of disposing clothes was trans-coded into numbers as following: Weekly (6), Monthly (5), Quarterly (4), Each semester (3), Every year (2), Less often than each year (1). This gave the respondents an average value of 2,5 for disposal of clothes that were worn out and the value 1,98 for disposal of clothes that were whole and fully usable. Here a related t-test was carried out since the same respondents are included in the two populations compared. The t-test value was calculated to 0,00000736 percent and this means that there were a significant difference between the frequency of disposing whole and fully usable clothes and worn out clothes.

Hypotheses 5: (From question 12 and 20 in the questionnaire)

H₀: There is no difference between younger and older respondents regarding the frequency of purchasing secondhand clothes.

H₁: There is a difference between younger and older respondents regarding the frequency of purchasing secondhand clothes.

The answers from the respondents regarding the frequency of purchasing secondhand clothes was trans-coded into numbers as following: Weekly (6), Monthly (5), Quarterly (4), Each semester (3), Every year (2), Less often than each year (1). This gave younger respondents an average number of 3,3 and older respondents an average number of 3,0. The t-test result was 21,6 percent which means that there is no significant difference between the two populations.

Hypotheses 6: (From question 12 and 20 in the questionnaire)

H₀: There is no difference between younger and older respondents regarding if they purchase secondhand clothes or not.

H₁: There is a difference between younger and older respondents regarding if they purchase secondhand clothes or not.

The first step in this calculation was to trans-code the answers in the questionnaire regarding if the respondent has purchased secondhand clothes or not, the answers yes was given the number 1 and the answer no was given the number 0. This gave the younger respondents the average number 0,65 and older respondents the number 0,51. The t-test result was 6,18 percent which is a little bit over the significance level of 5 percent which means that there is no significant difference between the two groups.

5.2 The focus group

In this part of the empirics a summary of the focus group discussion is provided. The focus group consisted of seven participants, a mix of Swedish and international students and the discussion lasted about one hour. A focus group can provide depth in a study along with the quantitative data. The qualitative data from the focus group is not statistically tested.

The specific topic discussed during the session was secondhand and on beforehand the topic was divided in three parts: views on secondhand for garments, purchase of secondhand and disposal of garments. These three sub questions were formulated in order to direct the discussion and provide a sense of direction to the participants. The moderators (authors) did not speak much during the discussion, only when asking questions or asking for statement clarification from the participants. What can be derived from the discussion is that in some aspects the participants agreed and had similar views, and in other aspects the opinions diverged. Some opinions were rooted in cultural differences and upbringing factors resulting in opinions passed on from parents to children. Also, some participants spoke more than others, but overall the group dynamics invited everyone to speak and the environment was informal. A summary from the discussion is provided in the following sections, divided in the parts of the three sub questions.

5.2.1 Views on secondhand for garments

Regarding the view on secondhand for garments the opinions were many and different. The clothes are cheap and it is good that the shops exist because it provides options for the consumers. Some secondhand clothes are trendy with a famous brand and these items can be more expensive. When searching for a specific garment it was not popular to go look in secondhand shops. A problem is that when you go shopping you sometimes look for specific type of clothes. For some participants it is hard to find clothes that fit and the colour desired. More time is needed in a secondhand shop compared to a regular clothing shop since you need to browse and look through the offerings systematically in order to find suitable clothes.

Some said that the shops often are disorganized and complained of a bad smell from “old clothes”. Others said that they are not picky when it comes to the colour and size of the clothes. Most agreed that it was best to shop for secondhand clothes when they had time to look around in the shop, without feeling stressed. A male participant from Spain said:

“I never shop for clothes in secondhand shops. In Spain we do not do this and it is a sensitive matter”.

Some participants had a problem with buying secondhand clothes and for others it was not an issue at all. A female participant from Iran said that it is common to give clothes to friends and family but never to buy secondhand clothes, and not many secondhand shops can be found in Iran. The participant from Spain said that he buys secondhand clothes in Sweden but this was not the case with the participant from Iran. Most agreed that they buy an item when it fits and has a reasonable price. But it was said that it is easier to find movies and book in the shops than clothes that fit.

One questions asked by the moderators was if the participants *like/dislike* the secondhand shops. This brought up the hygiene matter and some said that it is a sensitive matter not knowing who used the clothes before them. For others it was enough to know that the item had been washed or they would wash it at home. The shops are not always clean and fresh and often had a distinct smell. Most agreed on that the shops need to be better organized and that their appearance matters. The clothes in the shop could be better organized after size so that not so much energy is needed from the customers when shopping for clothes. The general view among the participants is that it is difficult to find your way in the shops and that improvement is required.

Although it is common to give to family and friends some said that they also sell items on the Internet on websites like EBay and Tradera. Clothes that were bought expensive and with a good quality were sometimes sold online. Few stated that they actually took time to collect clothes they did not want anymore and donate to secondhand shops.

5.2.2 Purchase secondhand

When being asked if the participants knew of any secondhand shops in Uppsala the most common answer was Myrorna, located in Uppsala city center. When being asked if the view has changed regarding purchase of secondhand clothes some answered that it probably has been different during the decades. The 1970’s was the beginning of the environmental era and supposedly during this decade it was trendy to buy clothes on secondhand. It was agreed that shopping for secondhand probably was not trendy during the 1980-90’s. The participant from Spain said the view had not changed very much in his country and that it had never been a trend to buy secondhand clothes. With mass production it is cheaper to buy new clothes with maybe poorer quality than in the old days. The participants agreed that most consumers prefer to purchase new clothes. The view was also that before it was more common to re-use clothes, within the family from siblings or other family members. A female participant from USA said:

“My father always bought clothes from garage sales we had in our neighborhood so as a child we did not wear much new clothes”.

In USA it is common with selective shops, where the owners buy clean clothes and organize them the same way as in a regular shop. It is a good market for teenagers and young adults

and many college students buy clothes in selective shops, low-income consumers buy their clothes there. Also for some consumers it is a necessity and an economic need. In the 1970-80's it was trendy to buy secondhand clothes in USA but today it is not a part of the general population consumption pattern.

Some stereotypes of consumers could be identified during the discussion, for example females are more likely to buy new clothes and dispose unwanted clothes more often than male consumers. Liberals, environmentally concerned consumers and young low-income consumers are more likely to purchase secondhand clothes. Retired consumers have more time on their hands to look for clothes in secondhand shops and they are probably not as sensitive to used clothes compared to the younger consumers.

5.2.3 Disposal of clothes

The last discussion question regarded the disposal behaviour and one participant said that she has a large IKEA-bag with unwanted clothes, only that she does not know what to do with them. Before putting bags with clothes in containers most agreed on that they either sell to shops/Internet or ask friends and family if they want the clothes. The female participant from USA said:

“We can call people who come and pick up bags with clothes we do not want, this way we do not have to drive to containers or disposal stations”

A female from Finland said *“I sometimes sew a new item from clothes I do not want, this way I do not have to throw the clothes”*

For some participants unwanted clothes are used as cleaning rags for floors and windows. Others give clothes to their parents and a male participant from China said *“My parents can keep the clothes in case they need extra clothes”*. In China there is an organization named Hope that collects secondhand clothes and distribute them in poor neighbourhoods.

About giving to charity it was said that if the donation places were more available they would be more likely to give to charity. Collecting the clothes and bringing it on the bus or the bike is not always practical as most shops are located in the centre. Most participants agreed on the fact that giving to charity is a good thing because it prolongs the life of the item and someone else can use it. But they were also sceptical if what you donate comes to proper use. One participant said that some clothes are kept because of sentimental values. Clothes with sentimental value were also more likely to be given to friends or family than donated to a secondhand shop. Another question concerned how the participants dispose of clothes that are whole, and most answered that they get rid of clothes once a year or when they move to another place. Most agreed that they keep clothes they do not use, it might come in handy.

It is considered good for the economy to consume and also better for the factory workers that produce the clothes. A general view in the group is that we Westerns consume more and more and do not care much about sustainability and the future. Companies encourage consumers to consume more although we do not always need what we buy. The newly manufactured clothes do not always have such a good quality, sometimes they only last to be washed a few times.

6 Analysis and discussion

In this chapter the empirics and theoretical ground is analyzed and discussed. It is the last part of the textile industry supply chain, the customers, which is analyzed and discussed with a focus on consumer aspects. The chapter is divided in three parts: In part 1 the purchase of clothes is analyzed, in part 2 it is the usage of clothes and part 3 concerns the disposal of clothes.

6.1 Purchase

The consumer decision process is complex and dynamic. As describe in the theory, consumer behavior has many definitions and interpretations. The subject is broad and covers a wide spectrum, from values to the actual purchase and the post-purchase feelings. The fashion industry is influencing the consumer behavior process with for example their fast fashion (Gardetti & Torres, 2013). With the introduction of new offerings by fashion retailers on an almost weekly basis the impulse purchase is increasing according to previous research by Bianchi & Birtwistle (2011). The value-action gap is here assumed to increase as a result of the upturn of impulse purchases that has characteristics of not-thought through purchases. The value-action gap is discussed further (6.2), as the actual purchase is a use activity in the consumer behavior model.

The attitudes of a consumer influence the purchasing behavior (Solomon, 2006). Affect, behavior and cognition are as presented in the theoretical chapter the components of the consumer attitudes toward an object. There is an increase in the overall interest for secondhand clothes, suggesting a change in the attitude amongst consumers (Ekström *et al.*, 2012). Almost 60 percent of the respondents in our study had during the last 12 months purchased secondhand clothes. The high interest among the respondents is noticed, but we cannot say how the development has evolved over time, if there has been an increase as the study by Ekström *et al.*, (2012) points to, as this study provides a snapshot.

The respondents gave different reasons for the purchasing of secondhand clothes and according to Blackwell *et al.*, (2006) attributes like price, quality and size are important to the consumers. The most common answer amongst the respondent to why they purchased secondhand clothes was the low price. This is consistent with the findings in the study by Ekström *et al.*, (2012) where they found that an important criterion in the selection of clothing is the price. Therefore, it can be argued that secondhand consumers are sensitive to changes in the price and the clothes should not be too expensive in relation to the price in a regular clothing shop in order to maintain the customers. Changes in the attributes such as price might lead to changes in consumption and the consumer can start to question why a change has occurred (Blackwell *et al.*, 2006). Our study suggests that the price level of the clothes should not fluctuate too much because of the sensitivity that many consumers feel regarding the price.

The second most common answer to why respondents purchased secondhand clothes was because it is more environmental friendly than to purchase new clothes. This points to that to be environmental friendly can be seen as something positive. If the consumer has a positive attitude towards purchasing secondhand clothes this attitude is likely to last over time, as described by Solomon (2006). The positive connection between environmental concerns and secondhand clothes could be a factor influencing the increased interest of such clothes amongst consumers as mentioned in Ekström *et al.*, (2012). Shaw & Newholm (2002) argue

that there is an increased awareness amongst consumers of how their consumption affects the environment which may have lead to more consumers reevaluating their consumption decisions. As a result of this, more consumers may select secondhand clothes over newly manufactured clothes as it is more environmental friendly.

Some respondents had a negative attitude towards purchasing secondhand clothes. According to Ekström *et al.*, (2012) the main reason to why consumers do not purchase secondhand clothes is because they find it unhygienic and our findings agree with this. The most common answer among the respondents who did not purchase secondhand clothes was that they found it unhygienic, followed by the clothes not lasting that long. In Blackwell *et al.*, (2006) attributes like quality are important when the consumer make a purchase decision. If the quality of secondhand clothes is perceived as poor this might affect the purchase decision. Even if the consumers have a positive attitude regarding the environmental impact factors such as hygiene might weigh heavier in the consumer decision process model, suggesting that factors like poor hygiene and quality of the clothes can affect the consumption in a negative way.

Different trends can influence the consumer to make a purchase or not. In the study by Ekström *et al.*, (2012) one reason to why younger consumers purchase secondhand clothes is because they can find fashionable and unique clothes in the shops. Regarding the trendiness of secondhand clothes there were more respondents who found it untrendy than trendy. If more consumers find secondhand clothes trendy, the mental responses are positive and this might lead to an increase in the number of customers. When being exposed to information about for example what is trendy the consumption can be affected. In the focus group the link between trendiness and price was discussed and an item with a more famous brand is likely to be more expensive in a secondhand shop according to the participants. The question is if the secondhand consumers search for items with famous brands or if the trendiness lies in that the clothes are bought on secondhand and thus a particular style can be created. As recognized in the study by Ekström *et al.*, (2012) our study suggests that the trendiness lies in the items found in a secondhand shop. Secondhand shops can be an alternative to mainstream clothing style and a personal style can be created.

We argued that the consumption pattern is dissimilar between consumers growing up under different conditions. Conditions we have identified are culture and time. The cultural aspects were brought to attention during the focus group discussion and it was said that secondhand clothes in some cultures are seen as an option for only the poor in the society. Participants from Spain and Iran said that it is a sensitive matter to purchase secondhand clothes because it is seen as you cannot afford to purchase new clothes in regular shops. This finding is also mentioned in the study by Ekström *et al.*, (2012) where consumers do not purchase secondhand clothes as it is perceived as an option for consumers with less money. Time aspects can for example be that the older generation in Sweden is more sparing than the younger generation (Ungerth, 2011). The older generation was brought up in a time with scarce resources where it was important to save (Ekström *et al.*, 2012). In our study it is noticed that older consumers tend to purchase clothes less often than younger consumers, it has also been identified that older consumers tend to sort more waste items than younger consumers. Our study implies that older consumers are more sparing than younger consumers, as also suggested by Ungerth (2011). Older consumers are therefore more environmental friendly than younger consumers.

When comparing the consumption patterns regarding secondhand clothes purchase and looking at different ethnic backgrounds of the respondents there was a difference. A higher percentage of respondents with a Swedish ethnicity purchased secondhand clothes than participants with a foreign background. Important to keep in mind is that out of the total of 170 respondents 114 had a Swedish ethnicity, so the differences in secondhand clothes consumption connected to ethnicity might not be representative. In this study it difficult to draw a general conclusion regarding the difference in the consumption patterns of consumers with different ethnic backgrounds from the questionnaire. However, that the focus group consisted of participants with different ethnic backgrounds contributed as a supplement regarding the cultural perspective.

The secondhand shop

The way a secondhand shop is organized seems to impact the consumers and their purchase behavior according to our findings. During the focus group discussion secondhand shops and the way they were perceived by the participants was discussed. Many participants expressed complaints regarding the organization in secondhand shops. There could for example be confusion when entering a shop as the clothes were not often sorted after size or color. According to Blackwell *et al.*, (2006) too many items in a shop can be confusing for the consumers. This confusion seemed to have a negative impact on the consumer when looking for potential clothes to purchase according to the participants discussion. If a consumer has a need for a specific item the consumer will most likely not look for this item in a secondhand shop according to the participants in the focus group. The participants said that the disorganization in the shops and difficulties in finding the right size and color can result in that they do not shop there. The participants did not think the extra effort in finding suitable, good quality clothes in secondhand shops was worth the extra energy they had to sacrifice. Based on this a suggestion can be that the secondhand shops have to be better organized in order to make the purchase decisions process easier for the consumers and attract more customers. However, the study by Ekström *et al.*, (2012) states that secondhand shops have become more organized as they are not as messy as before. If the organization in a secondhand shop is improved the consumers may perceive the shop in a more positive way and by extension be more likely to visit and purchase items. If previous experiences have been negative the consumer is not likely to re-visit a shop or make another purchase. That the clothes were found to be unhygienic is also a factor identified by Ekström *et al.*, (2012) as to why consumers do not purchase secondhand clothes. Bad smell and unclean shops was brought up by the participants as limiting factors regarding the consumption of secondhand clothes and these factors can enhance the bad experience.

Focus group participants stated that it is difficult to decide on beforehand what to purchase when entering a secondhand shop. A reason for this is that a consumer can never tell what kind of clothing supply the shop offers. Since there is often only one item of each design it is difficult to tell on beforehand if the right design and size can be found. The secondhand shops may not be well organized after for example size or color. This can be connected to what was said in the focus group, that in order to find a unique item you have to search in the shop and put some effort in finding this item. Sometimes there are a few unique items and a consumer may frequently have to visit the shops to see if items of this kind can be found. From the participants discussion it can be concluded that consumers do not have the same expectations when looking for clothes in a secondhand shops as in a regular shop. As a participant highlighted during the discussion a consumer often need more time in a secondhand shop than in regular clothing shop to look through the offerings.

6.2 Use and consumption

Consumers attitudes and the way consumers act is not always consistent with one and other according to Ekström *et al.*, (2012). The same study has identified a value-action gap, a gap between attitude and the actual behavior of the consumer. In our study a value action gap has also been identified. The participants all agreed that environmental concerns are important but still they do not always act in the most environmental friendly way for different reasons. This shows that consumers do not act consistent with their attitudes when it comes to the use activities of consumption. Fast fashion can have affected the decision process of the consumer to some extent. With limited time offerings of fast fashion clothes consumers might feel pressure to make an impulse purchase. Previous studies claim that the environmental concern has led to consumers considering and reevaluate their consumer choices to a greater extent (Shaw & Newholm, 2002). It does not however say how the consumers act after the consideration and reevaluation. In our study we found that even if a consumer is aware of the environmental impacts of a choice it is not always this choice that is acted out. Decisions are made by consumers that are not coherent with the attitudes towards the environment.

Most of the respondents who had purchased secondhand clothes were satisfied with their purchase, which can be seen as an indicator of some level of customer satisfaction. This high number of satisfied consumers is important because these consumers are more likely to make future purchases when being satisfied. The evaluation is stored in memory and useful when making future decisions and it is in the *post-consumption evaluation* stage that the consumer feels satisfied or dissatisfied according to Blackwell *et al.*, (2006). The most common mental responses of respondents after purchasing secondhand clothes were that they felt satisfied with the purchase. The main reasons for the satisfied feeling were the perceived value for money, finding unique clothes and that the clothes met the expectations. As a previous study concludes do younger consumer groups purchase secondhand clothes because they can find fashionable and unique clothes (Ekström *et al.*, 2012). In our study the results is consistent with this previous study results. The main reason why respondents were dissatisfied with their secondhand purchase was because it had been an impulse purchase. When making impulse purchases the steps in the decision making process might be hasted. Impulse purchases of secondhand clothes can be more common due to the low price, and consumers can have the incentive to speed up the decision making process. According to Blackwell *et al.*, (2006) price can influence the decision moment in the shop and just as Ekström *et al.*, (2012) states the price is an important reason to why consumers purchase secondhand clothes.

Gender, age and income

According to Pentecost & Andrews (2010) there is a difference in how often males and females shop for clothes in that females shop more frequently than males. In our study the same result has been identified, female respondents shop for clothes more often than male respondents. Pentecost & Andrews (2010) study also claim that males are more likely to spend more money when they go shopping than females, in our study no such information was collected. Additionally in our study we have connected the purchase frequency to the age of the respondents. It has been calculated that the average age is lower amongst respondents purchasing secondhand clothes than respondents who did not purchase secondhand clothes. The age analysis in this study can also conclude that the average age of the respondents increase with the decline of purchase frequency, younger consumers purchase clothes more often than older consumers. There was one exception however, the second most common answer was to purchase new clothes monthly, and the highest average age was found here. Our findings reveal that younger consumers purchase new clothes more often than older and it is the younger consumers in their early twenties that purchase new clothes on a weekly basis,

and this is also suggested in the study by Pentecost & Andrews (2010). One explanation to why young consumers purchase new clothes more frequently can be that these consumers want to keep up with the latest trends and are more sensitive to brand exposure. As Ekström *et al.*, (2012) states younger consumers are more sensitive to fashion trends than older consumers. According to Miller (2005) is clothing a way to present oneself and in the study by O’Cass & Julian (2001) were age and gender factors identified as significant contributors in fashion clothing of individuals.

The theory states that consumption preferences change with income (Solomon, 2006). In this study we have not recognized and followed the change in consumption preference for consumers, only a snapshot of individual consumers was captured in the questionnaire. The low price of the clothes was a main reason to why respondents purchased secondhand clothes as also concluded by Ekström *et al.*, (2012), however there is no connection between a low income level and purchasing of secondhand clothes. This study reveals that it is not only low-income consumers or students that purchase secondhand clothes. This finding can dismantle any prejudices about who the secondhand consumers are. When looking at the different income levels it can be noticed that in each income level except one (20 000- 25 000 SEK) more than 50 percent of the respondents purchased secondhand clothes than respondents not purchasing. From this finding it can be noticed that the income level does not matter much regarding if the consumer purchase secondhand clothes or not.

6.3 Disposal

The waste hierarchy states that reuse is the second most desirable way to act in order to be environmental friendly (2008/98/EC). From the answers in the questionnaire it can be noticed that all forms of reuse; formal, semi-formal and informal, is represented amongst the respondents. All these forms of reuse were also represented amongst the participants in the focus group. When consumers dispose of clothes in the household waste the bottom of the waste hierarchy is represented (2008/98/EC). The clothes will then be used for either energy or landfill which is the least favorable option from an environmental perspective. To dispose of clothes in the household waste was also something represented by both respondents and participants. Respondents and participants did however engage more frequently in better options of the waste hierarchy.

There were a difference in the ways of disposal between whole and fully useable clothes and worn out clothes amongst the respondents. There were also differences in how often respondents got rid of clothes depending on if the clothes were worn out or not. In figure 12 the frequency of disposal of whole and usable clothes are compared with the disposal of worn out clothes.

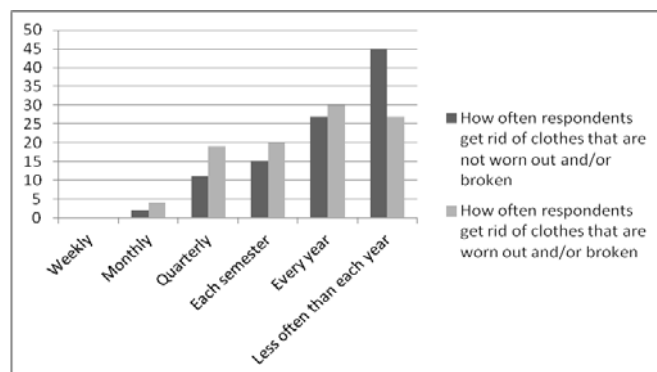


Figure 12 Difference in disposal between whole and worn out clothes

As seen in figure 12, clothes that are worn out or broken were disposed of more frequently than clothes that are whole and fully usable. This is consistent with what could be expected. Clothes that are whole and fully usable can still be used by the consumer and the incentive to dispose of those clothes is not as high as for worn out clothes. For females it was most common to dispose of worn out unwanted clothes more seldom than each year, and for males it was to dispose of such clothes each year or each semester that was the most common answer. The least common answer was the same for males and females, to dispose of such clothes each month. What the difference depends on between males and females cannot be concluded here, more information would be needed in order to make any statements.

The second most common answer regarding disposal of unwanted worn out clothes was reuse as rags for cleaning, reported by over one fourth of the respondents. This can be seen as a form of recycling, which is the step after reuse in the waste hierarchy and the second best option as described in the EU-directive (2008). It is viewed as a form of recycling since the textiles are used in new ways, for example as cleaning supplies. The participants also stated that they used worn out clothes for cleaning. To use clothes for cleaning is positive because the lifetime of the clothes is prolonged. Palm (2011) explains that the prolonging of textiles creates environmental benefits.

Another aspect of the disposal behavior is the throwaway attitude towards items such as clothes. Consumers has gone from a more careful and sparing approach toward a more excessive consumption (Ungerth, 2011). The changed consumer behavior can have been influenced by fast fashion. Because of the bad quality of fast fashion, the clothes get worn out faster than better quality clothes. A previous study by Joung & Park-Poaps (2011) shows that consumers perceive clothes to have a shorter lifetime than before. In the focus group the participants thought that companies are trying to encourage consumers to consume more and more and agree that some newly manufactured clothes can have a bad quality. As Bianchi & Birtwistle (2011) states consumers are encouraged to visit shops frequently as short time offerings are presented. It can be argued that fast fashion clothes are more likely to be worn out and thrown in the household waste, the clothes do not reach the secondhand shops to the same extent as better quality clothes. Thus, fast fashion is a less desirable option from a sustainability point of view.

As stated in the theory, there are different variables shaping the consumer decision process such as values, attitudes and culture, income and social class (Blackwell *et al.*, 2006). The difference in frequency and way of disposal of whole and fully usable clothes versus disposal of worn out clothes can be linked with a previous study and its findings by Albinsson & Perera (2009). In their study it has been concluded that the person, item- and community characteristics play a role in the voluntary disposal behavior. Especially the item- and community characteristics have greater influence on the disposal behavior. In our study results has been found consistent with these findings. In the focus group some participants highlighted the problem concerning accessibility to secondhand shops and other places to dispose of unwanted clothes. Participants discussed that the location of the drop of sites was not always in the most central parts of a city and it could be an inconvenience to visit the drop of sites. The participants also talked about the logistics to take unwanted clothes with them. To bring a big bag of clothes on a bike or the bus was not always convenient. These problems can be related to the characteristics of the community as described in Albinsson & Perera (2009). Thus, it is also important to have the submission centers at a convenient location for the consumers. If the access is easy it could make more consumers perform formal reuse. Most participants agreed that it is good to donate clothes to charity, so that the lifetime of the

clothes is prolonged, even though some participants were skeptical to if the clothes would come to proper use. This can be seen as an indicator that more information is needed for the consumers. Consumers need to know what is going to happen to their clothes, to be sure that what they donate will come to good use. Regarding the items characteristics explained in Albinsson & Perera (2009) some participants agreed that if the clothes had some kind of symbolic or economic value they were reluctant to throw it away or donate it to charity. When clothes had a high value the participants said they would rather give it to friends and family members than charity or secondhand shops. In our study a connection was found between item characteristic and the way consumer dispose of clothes, consistent with the study by Albinsson & Perera (2009). Concerning the person characteristic as described by Albinsson & Perera (2009), the voluntary disposal behavior was difficult to connect to the individual participant in the focus group since no such detailed information was collected. However, from an overall perspective the participants in the focus group agreed that consumers today are more concerned about environmental issues. Therefore consumers are more engaged in recycling and dispose of clothes in a more environmental friendly way. Regarding recycling does the study by Bianchi & Birtwistle (2011) show that if a consumer recycle items such as paper and plastic they are more likely to recycle clothes. On average did a respondent sort and recycle 6,4 items out of the 11 options. The item least recycled by respondents was clothes and one reason to why clothes were the item least recycled can be that there is no particular bin for clothes as it is for plastic and paper. Why females sorted more items than males and why younger respondents tended to sort fewer items than older respondents cannot be concluded here. Gender aspects are not in focus in this study but the difference between females and males willingness to sort and recycle has been evident.

In the study by Ekström *et al.*, (2012) do the authors conclude that information is needed regarding different actions a consumer can take to act more environmental friendly as oppose to information about the environmental impact of the clothing consumption, in order to decrease the value-action gap. Our study supports the notion of making it easy and practical to dispose of garments in an environmental friendly way, in order to decrease the value-action gap. It can for example be made easier for the consumers to donate clothes in order to decrease the amount of clothes that end up in the household waste. As a participant from USA explained, with curbside collection they did not have to go to a disposal site in order to donate clothes. Different organizations in Sweden such as Myrorna, offers to pick up items at a consumers home, the consumer can also visit a shop to drop off items (Internet, Myrorna, 2013). That the clothes will end up with a secondhand shop or a charity instead of in the household waste is better from an environmental point of view, instead of being incinerated the clothes will be reused. The study by Ungerth (2011) concludes that Swedish consumers have a positive attitude toward a regulated collection system for textiles. Our study supports the idea of a more regulated collection system that can make it easier for the consumers to dispose of clothes in a more environmental friendly way. As our study indicates, one of the main reasons to why consumers throw clothes in the household waste is because it was the easiest way to dispose of the clothes. With a more regulated collection system the value-action gap may decrease. In the study by Ungerth (2011) it was also concluded that almost one third of the consumers preferred a form of refund system. In our study only 15 percent thought that a reward would make them throw fewer clothes in the household waste. Why not more respondents liked the idea of a reward could be that the clothes thrown in the household waste is likely to be stained or worn out and consumers might not think anybody would want clothes in that condition. We therefore do not think that such a system would decrease the amount of textile ending up in the household waste.

The most common way to dispose of unwanted whole and fully usable clothes was formal reuse and the most common answer from the participants to why they donated clothes to charities was that they wanted to help less fortunate people in the society. Close to one third of the respondents donated clothes to charity and almost one fifth of the respondents donated to secondhand shops which means that over half of the respondents performed formal reuse for such clothes. Formal reuse was the third most common answer regarding disposal of unwanted worn out clothes and to donate clothes to charity was represented by one fourth of the respondents. According to Ekström *et al.*, (2012) consumers perceive donations to be an easy way to dispose of unwanted clothes. To dispose of unwanted clothes by donating it to charity can be connected to the consumer behavior model and the consumer responses described by Kardes *et al.*, (2011). The emotional responses of donating clothes to charity is according to participants that they feel better knowing that the clothes can come to use for somebody else and that the lifetime of the clothes will be prolonged. The respondents answers can be seen as a further confirmation that a main reason to why consumers donate clothes to charity is to feel better about themselves. From the participants and respondents answers it is noticed that donating clothes creates a positive feeling, and this is supported by previous research results. In Ekström *et al.*, (2012) a major reason to why consumers donate clothes to charity was to feel better about themselves. Since attitudes tends to last over time according to Solomon (2006) we assume that the donating behavior is likely be repeated.

Worn out clothes was the most common answer to why respondents threw clothes away in the household waste and many respondents also reported that it was the easiest way to dispose of the clothes. Respondents said that if the distance to submission centers was shorter they would be more willing to dispose of the clothes there instead of throwing it in the household waste. Participants also reported that the remote location of submission centers was a reason to why they did not turn in more of their unwanted clothes. Participants also said that to have better knowledge about where to submit the clothes would make them more inclined to turn the clothes in there. Also the assurance that the clothes would be recycled or end up with charity would make respondents throw lesser clothes in the household waste. The participants also mentioned their skepticism toward that the clothes would come to proper use when being donated. From our findings we argue that there is a need to inform consumers about how and where to dispose of clothes in an environmental friendly way. Information regarding different actions consumers can take was also a finding in the study by Ekström *et al.*, (2012). Such information may decrease the amount of clothes that end up in the household waste.

The three parts of this chapter are important and needs to be recognized as they are interconnected and impact the environment in different ways. What a consumer purchase effects the disposal behavior as well as the use and consumption behavior. To see the big picture and the relationship between these parts can help in the development of a future established system where clothes are taken care of in the best environmental friendly way possible.

7 Conclusions

This thesis was conducted in order to better understand consumer behaviour and attitudes regarding secondhand clothes. This thesis also contributes to an overall understanding of the last part of the textile supply chain, thus providing a deeper insight to the textile industry sustainability problem. The increased textile waste is an environmental problem and there is a need to investigate the disposal behavior of the consumers as well as the purchase behavior, as these two parts are correlated to each other. The questions of particular interest that we set out to answer were:

- ✓ *Why do consumers purchase secondhand clothes? (or not to do so)*
- ✓ *Why do consumers donate clothes to secondhand shops? (or not to do so)*
- ✓ *In what different ways do consumers dispose of unwanted clothes?*

From our study no general conclusion can be drawn regarding consumer attitudes and behavior in a large scale, this study is geographically limited to Uppsala. What our study contributes with is the consumer behavior and attitudes in a large city setting where different consumer segments can be found.

7.1 Why do consumers purchase secondhand clothes?

Consumers purchase secondhand clothes because 1) It is price worthy 2) Reduce the environmental impact 3) Unique items can be found in a secondhand shop. Most secondhand consumers were satisfied with their purchase because it was price worthy and corresponded to the expectations. Consumers do not purchase secondhand clothes because 1) It is unhygienic 2) The clothes are not as durable as newly manufactured clothes.

A condition that influences the purchasing behavior is the organization of the shop and although the organization of the secondhand shops have improved according to Ekström *et al.*, (2012) it can become even better. In order to keep current customers and attract new ones it is important that the shop has a well thought through structure so that the customers easily can find clothes they are searching for. By having a well-organized shop, for example that the clothes are sorted after color, size or category, the consumers can have a positive experience. It is difficult to influence the behavior of the consumers who do not purchase secondhand clothes because they find it unhygienic. The fact that attitudes tends to last over time supports the assumption that consumers who find secondhand clothes unhygienic are not likely to purchase secondhand clothes in the future since they did not have this purchase behavior in the past.

Although it is not considered to be trendy to purchase secondhand clothes, as the study by Ekström *et al.*, (2012) also identifies can unique items be found in the shops. This suggests that some level of trendiness in creating a unique and own style exists. The majority of the respondents and participants purchased secondhand clothes and this is positive from an environmental point of view as the lifetime of the clothes is prolonged when being reused.

7.2 Why do consumers donate clothes to secondhand shops?

Our study identified that the main reasons to why consumers donate clothes to second hand shops are 1) Help the less fortunate 2) Reduce the environmental impact 3) The easiest way to dispose of unwanted clothes. The number of respondents answering the different reasons mentioned above did not differ considerable much, thus the difference between the numbers of respondents answering 1) was not far from the number of respondents answering 2) or 3).

Another reason behind the donating behavior is that when donating clothes the lifetime of the clothes is prolonged and the environmental impact is reduced, this creates a positive attitude amongst the consumers that donate and they are likely to continue that behavior. Why consumers do not donate to charity and instead throw the clothes in the household waste is because 1) The clothes were worn out 2) It was the easiest way to dispose of the clothes 3) The clothes were stained or soiled. It is also concluded that the location of a drop of site for donations was a major reason to why consumer did not donate clothes to charity. A well functioning system has to be established in order to make it more convenient for consumers to donate clothes so that the amount of textiles ending up in the household waste decreases. According to the study by Ungerth (2011) Swedish consumers have a positive attitude toward a more regulated collection system of clothes, thus an implementation of such a system would most likely be well received by consumers.

7.3 Disposal of unwanted clothes

In our study there is a difference in the disposal behavior depending on the items characteristics just as described by Albinsson & Perera (2009). Clothes with a higher value are more likely to be given to friends or family over charity shops. The difference in disposal behavior also depends on if the clothes are whole and fully useable or if they are worn out and this regards both the disposal frequency and the different ways of disposal. Similar to the findings in the study by Ekstöm *et al.*, (2012) our study has identified that the condition of the clothes affects the disposal behavior. Worn out clothes are disposed of more frequently than clothes that are whole and fully usable. In this study it was found that consumers are more likely to donate clothes that are whole and fully usable than clothes that are worn out which most likely will end up in the household waste. For the environment it is better to donate clothes so that the lifetime is prolonged than to throw it in the household waste where it will become incinerated. It is therefore better from an environmental perspective that consumers decide to purchase better quality clothes over fast fashion clothes as they have a longer lifetime.

As concluded in the section above it needs to become more convenient for consumers who want to donate clothes. Our finding are that if the availability is poor this can cause a value-action gap, even if the consumer has good intentions and is concerned about the environment the easiest option is more likely to be selected. Consumers need to be better informed about different environmental disposal activities, also concluded by Ekström *et al.*, (2012). Information about what happens with the donated clothes is also needed so that the trust in charities becomes stronger.

7.4 Further research suggestions

A suggestion for further research is to conduct a study with a larger sample, where a more even distribution is desirable regarding background factors such as age, gender and cultural heritage. To be able to go more in depth concerning what the differences in mentioned factors are would also contribute to a better understanding in the field. Our study does not include suggestions on how information regarding different consumer actions can be communicated as this requires further research, but suggestions of this kind would be a useful contribution.

Further research is also needed in order to develop disposal policies so that the textile waste decreases, preferably in every larger municipality. There is awareness and willingness amongst the consumers according to our findings to decrease the textile waste and further research can contribute in creating a better system than the current one regarding the disposal of clothes.

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Appendix 1- The questionnaire

Hej!

Detta är en enkät som handlar om klädkonsumtion, om konsumenters attityder och beteende till second-hand kläder. Materialet kommer användas som en del av en masteruppsats som skrivs av två studenter vid SLU i Uppsala.

Enkäten beräknas ta 5-10 minuter att fylla i och ni kommer givetvis att vara anonym. Om något är oklart är det bara att fråga oss här och nu. Om du i efterhand undrar något om studien finns våra kontaktuppgifter på det papper du får med dig som bekräftelse på att du deltagit i studien.

Tack för att ni tar er tid!

Jenny Jönsson & Tina Wätthammar
Sveriges lantbruksuniversitet (SLU), Uppsala

-- Källsortering --

Fråga 1: Vad källsorteras i ditt hushåll? Du får markera flera alternativ.

- 0₁ Ingenting
- 0₂ Matavfall
- 0₃ Tidningar
- 0₄ Kartonger
- 0₅ Plast
- 0₆ Metall
- 0₇ Glas
- 0₈ Kläder
- 0₉ Batterier
- 0₁₀ Elektronik
- 0₁₁ Annat.....

-- Köpa och slänga kläder --

Fråga 2: Hur ofta köper du nya kläder (undantaget strumpor och underkläder)?

- 0₁ Varje vecka
- 0₂ Varje månad
- 0₃ Varje kvartal
- 0₄ Varje halvår
- 0₅ Varje år
- 0₆ Mer sällan än så

Fråga 3: Hur ofta gör du dig av med kläder som är utslitna och/eller trasiga (undantaget strumpor och underkläder)?

- 0₁ Varje vecka
- 0₂ Varje månad
- 0₃ Varje kvartal
- 0₄ Varje halvår
- 0₅ Varje år
- 0₆ Mer sällan än så

Fråga 21: Den här frågan besvaras av dig som kan tänka dig att lämna in kläder för återanvändning/återvinning vid ditt besök på Gekås.

När du tar med gamla kläder till Gekås, kan du tänka dig att sortera dessa kläder i olika inlämningsboxar, t ex "trasigt/bomull", "helt och rent i bomull", "trasigt nylon", "helt och rent i nylon"?

- Ja
- Nej
- Vet inte

Fråga 22: Är du: Kvinna Man

Fråga 23: Vilket år är du född? _____

Fråga 24: Hur många personer ingår i ditt hushåll: _____ person(er)

Fråga 25: Vilken är din högsta utbildningsnivå?

- Grundskola
- Gymnasium
- Eftergymnasial utbildning utanför högskolesystemet
- Högskola/universitet
- Vill inte svara

Fråga 26: Hur långt har du rest för att komma hit till Gekås idag? _____ mil

Fråga 27: Hur har du rest?

- Bil
- Buss
- Tåg
- Annat.....

Fråga 28: I vilken kommun bor du? _____

Tack för att du tog dig tid, har du några frågor är du välkommen att kontakta oss via e-post.

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