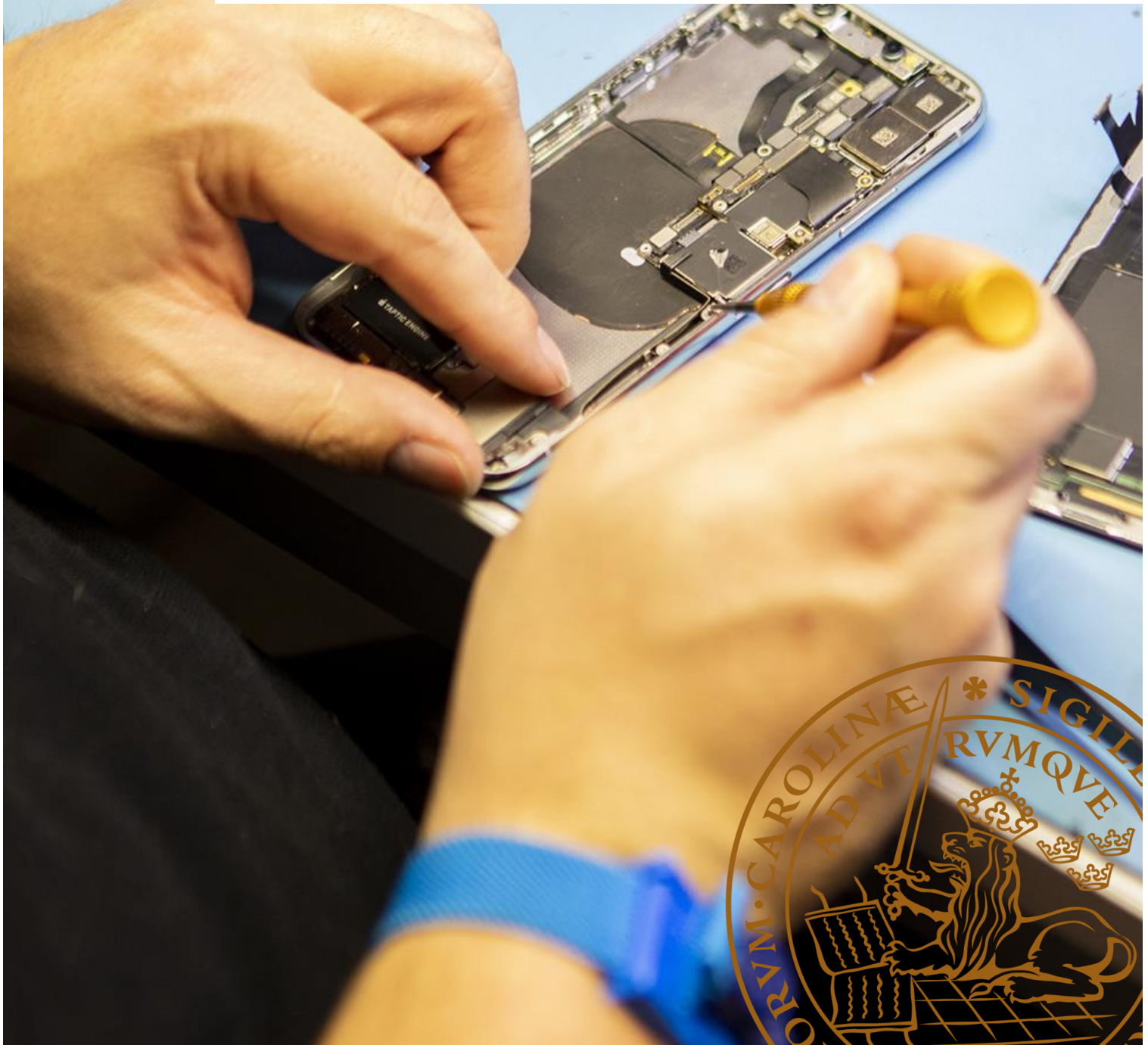


How to mainstream secondhand consumption

- a quantitative case study of a company
in the refurbishment products industry

JOHANNA ANDERSSON 2022
MVEM12 MASTER'S THESIS IN ENVIRONMENTAL SCIENCE 30 CREDITS
ENVIRONMENTAL SCIENCE | LUND UNIVERSITY



How to mainstream secondhand consumption

- a quantitative case study of a company in the refurbishment products industry

Johanna Andersson

2022



LUND
UNIVERSITY

Johanna Andersson

MVEM12: Master's (two years) thesis in environmental science,
30 credits, Lund University

Internal supervisor: Matthias Lehner, IIIIEE, Lund University

External supervisor: Emma Nilsson, Godsinslösen Nordic AB

© Cover image: Peter Jennerheim/Godsinslösen Nordic AB, 2020

CEC – Centre for Environmental and Climate Science

Lund University

Lund 2022

Abstract

The shortage of Earth's limited resources is becoming more evident and our planet's climate system is under immense pressure. To combat these problems, more people investigate the concept of circularity.

This study intended to find out what make consumers motivated to buy used items from a professional refurbisher, thereby replacing purchases of brand-new products, and also identifying barriers. This study focuses on the case company GIAB. In their web shop Returhuset they sell returned, refurbished, and used products. A survey has been carried out among these customers. The study had a four-digit number of participants.

Results show that *price* is the primary reason for their decision to purchase from Returhuset. Solely analysing consumers that otherwise would have purchased brand-new product(s), price is followed by *sustainability, higher trust, simplicity, condition grading system, higher quality, warranty, expired product/model, wide assortment, and joyful activity* (in that order). Respondents' alternative consumer behaviour does have a statistically significant influence on their main reason for purchasing from Returhuset. For most respondents several features influence their decision. To become successful on the market and attract consumers, refurbishment companies ought to fulfill as many of those features as possible because the features affect each other, consumers value these features differently, and product type also matters. Especially features that are usually associated with a purchase of brand-new items should be offered to the customer by the refurbisher. Additionally, the product's functional, hygienic, and visual appearance should preferably be experienced as being in new- or very good condition.

To mainstream secondhand consumption, commercial refurbishment businesses need to more resemblance companies operating on a more traditional business model in terms of the features mentioned above. That is, offering more security, ease, and sufficient information associated to purchases of used products.

Keywords:

Circular business models, Consumer behavior, E-commerce, Industrial refurbishment, Refurbished goods, Reuse, Secondhand products, Sustainable consumption, Used goods

Popular abstract (Swedish)

Tänk om du levde i en värld med ett stabilt klimat där fler företag bedrev sin verksamhet utefter cirkulära affärsmodeller. Ett samhälle som anammat mer hållbara konsumtionsbeteenden, skapat fler arbetstillfällen, och äntligen slutat utarma Jordens naturresurser. Vore inte det en härlig tillvaro? Vill vi förverkliga drömmen bör vi ställa oss frågan vad som krävs för att vi ska komma dit. Mer specifikt, vad som krävs för att skala upp professionellt återbruk och göra andrahandskonsumtion till det nya normala?

Studien visar att fler företag/försäljare av återbrukade prylar behöver tillgodose kunderna med större trygghet, enkelhet och tillräcklig information i samband med köpet. Detta bör göras genom att erbjuda garantier och bra beskrivningar av skicket på varan samt införliva fler liknande egenskaper, i likhet med vad som redan görs idag av företag som säljer nyproducerade prylar. Eftersom det är just dessa egenskaper som verkar särskilja *Returhuset* från de flesta andra aktörer på andrahandsmarknaden och kan förklara deras framgång i att attrahera kunder som annars skulle ha köpt splittrerna produkter.

Företaget *GIAB* agerar här fallstudie. I deras nätbutik *Returhuset* säljs både använda produkter som blivit rekonditionerade/reparerade samt returnerade varor. En enkätundersökning har genomförts bland dessa kunder varav ett fyrsiffrigt antal deltog i studien. *Returhusets* verksamhet kunde med hjälp av enkätsvaren beräknas ersätta nyproduktion med ungefär hälften av deras sålda produkter. De har därmed tagit andelar från den traditionella marknaden.

För att bli framgångsrik inom återbrukssindustrin behöver säljaren uppvisa vissa egenskaper. För en minoritet av konsumenterna är *priset* fortfarande det enda bakomliggande skälet för val av köpställe, men för de flesta av dagens konsumenter är detta inte längre tillräckligt. En kombination av faktorer bidrar oftast (i minst 97% av fallen) till var en kund väljer att inhandla en produkt. Vilka egenskaper som är av betydelse skiljer sig åt mellan enskilda konsumenter, konsumentgrupper samt produktgrupper.

Bland kunder som angett att de annars (om *Returhuset* inte fanns) skulle ha köpt en helt ny produkt, är priset betydligt viktigare än *hållbarhet* även om de båda är påtagligt mer förekommande än övriga skäl. De följs av *högre tillit*, *enkelhet*, *skickgraderingssystemet*, *högre kvalitet*, *garanti*, *utgången produkt/modell*, *brett sortiment* och *nöjes skull* (i den ordningen). De flesta på förhand föreslagna skäl närmar sig eller överstiger 20 procent, vilket igen visar på vikten av att försöka

erbjuda många av de uppräknade faktorerna för att kunna attrahera så många kunder som möjligt. *Pris* och *högre kvalitet* var de två egenskaperna som ökade mest i betydelse när denna konsumentgrupp jämfördes med andra konsumentgrupper. Varför kunder upplever att Returhusets produkter har högre kvalitet än varor från andra säljare av begagnat och upplever en större trygghet har inte undersökts närmare. Men funktion- och kvalitetskontroller, skickgraderingen, garantin, returmöjligheterna, kundtjänsten, och fler uppvisade egenskaper kan utan tvekan ha bidragit till att stärka dessa kundupplevelser. Om återbruksföretagen dessutom kan få produkten att upplevas, i alla aspekter som ny eller åtminstone i mycket gott skick så skulle de flesta konsumenter vara villiga att köpa önskad pryl från andrahandsmarknaden. Med dessa kunskaper och mer därtill är det möjligt att normalisera återbruk.

Table of Contents

Abstract 4

Popular abstract (Swedish) 5

Table of Contents 7

Abbreviations 10

1. Introduction 11

1.1 Objectives and research questions 13

1.2 Case company and scope 14

2. Theoretical framework 16

2.1 The effects of secondhand consumption 16

2.2 General barriers and drivers for secondhand consumption 16

3. Methodology 20

3.1 Advantages and disadvantages of chosen method 20

3.2 The research process 20

3.3 What is statistical significance 22

3.4 How theory has been applied in survey design 23

3.5 Importance of good design 25

3.6 Applied choices of design 25

3.7 Ethical reflection 29

4. Result and analysis 30

4.1 Why customers purchase from Returhuset.se 30

4.2 Alternative customer behavior 36

4.3 Grading system describing product condition 41

4.4 Product types and specifics of previous purchase 41

4.5 Customer base characteristics 44

5. Discussion 46

5.1 Alternative behavior 46

5.2 Key features for mainstreaming secondhand consumption 47

5.3 Product types with appeal in refurbished condition 49

5.4 Customer base characteristics 50

5.5 Ethical reflection 51

5.6 Limitations 52

5.7 Alternative approaches and possible improvements 53

5.8 Challenges and changes needed on a societal level 54

6. Conclusions 55

Acknowledgements 56

References 57

Appendix 1: Survey template in Swedish 63

Appendix 2: Invitation text in Swedish 72

Abbreviations

B2B – Business to businesses

CE – Circular economy

EEA – European Environment Agency

EMF – Ellen MacArthur Foundation

GIAB – Godsintösen Nordic AB i.e., the case company (read about it in 1.2)

1. Introduction

The core in today's economic system is consumption from a linear perspective. We live in a society of wear and tear. The system depends on large amounts of materials and energy, both that must be easily accessible and cheap (EMF, 2015). This is problematic given that Earth's resources are limited (EMF, 2015; Raworth, 2012, 2017; Rockström et al., 2009). If more companies were to switch to *circular business models*¹, the pressure on Earth's limited and already depleted natural resources would be lessened. A transition to a circular economy would, however, affect more than just the resources. It would cut Europe's CO₂-emissions by 50 percent in 2030, compared to 2015's emission levels (EMF, 2015). Circular business models are to be seen as part of a *Circular economy*, CE, a notion that has become popular in recent years. The phrase *circular* has become an umbrella term. The concept is that materials and resources are reused in a circular cycle that in theory should be able to continue forever, without needing to add virgin resources to the flow. But if the concept is examined more in dept, there are some vagueness and disagreements. Some people argue for limited flows while others prefer to see increased flows, though with circular flows of recycled materials. Many believe that products are less circular than services. Although, some believe that services can contribute to increased consumption. For instance, rental leads to lower cost per use and therefore contributes to greater use. The users are also more careless with certain rental products. Consequently, the product faster reaches a worn-out condition (du Rietz, 2019).

With a circular mindset, society can consequently become more sustainable. Today, politicians and companies have begun to sense the lack of resources through increased risks in the supply chain and greater fluctuations in material prices. More and more people are realizing the need of a transition and want to take advantage of the benefits that comes with a circular economy. The number of sharing-platforms and “new” circular products has gained momentum, which indicates that circular business models create value and truly work in practice (EMF, 2015). Even consumers and higher institutions outside the business sector are now realizing the need of circular economy (du Rietz, 2019). The EU has ambitions for a circular

¹ A *business model* could be defined as a tool that helps comprehend how a corporation conducts its businesses. It is used for different reasons such as communication, management, comparison, analysis, and performance assessment (Osterwalder et al., 2005).

economy. Within the framework of the *European Green Deal*, on March 11th 2020 European Commission adopted the *Circular Economy Action Plan*. Current EU regulations involve consumer rights such as having a damaged product repaired within the time of the valid warranty. The new rules within the Ecodesign Directive (2009/125/EC) include, among other things, promises that spare parts must be available for a certain time. There is also new EU legislation underway planned to enter into force during this year carrying the name "right-to-repair". The rules are to deal with the problem of procedures that shorten the life of products and are intended to reduce costs for repairs, not least for the consumer (Šajn, 2022). Dalhammar et al. (2021) emphasizes the importance of implementing national policy instruments for EU rules to have a significant effect in the Member States. Therefore, the Ministry of the Environment, on behalf of the Swedish Government, has developed a strategy for Sweden's transition to a circular economy with an associated action plan (Regeringskansliet 2020; 2021). Additionally, the Swedish government appointed a *delegation for circular economy* in April 2018. Their task is to support the work of transitioning the whole nation to a circular economy (Norén, 2021). Now the challenge is to scale up and bring in the circular thinking at a system level in our society (EMF, 2015).

Research on circular business models and how to apply them successfully in practice is a fairly new area. Geissdoerfer et al. (2017) claim that Circular Economy has risen in popularity as research topic in recent years. However, Liakos et al. (2019) argue it being a lack of research in this subject and explains this by Western world's late (not until the 2010s) exploration and use of the term CE. They claim that awareness of the circular economy is surprisingly low, when compared to the growing environmental awareness among the public. The application of circular thinking in businesses is lagging (Liakos et al., 2019).

This study focuses on the refurbishment industry. *Refurbishment* is when a professional business/operation acquire used products, restore them to good and functional condition and resell them, by that giving the products a new home and longer lives. Refurbishing is seen as a sustainable act with great potential and are enhanced by the concept of circular economy (van Weelden et al., 2016). Some claim it to be necessary for companies to avoid ending up in the situation wherein they compete against their own products, refurbished by third parties, and thereof loosing market shares (Ferguson & Toktay, 2006). According to the European Environment Agency (EEA, 2018) reuse of products are still a niche activity. It is clear to them that the secondary market is smaller than its economic-, social-, and technical potential, but they find it difficult to estimate a number for the overall market share of second-hand products. They have however tried and are able to admit that the European secondary market stands for less than one percent in the total retail sector (EEA, 2018). In addition, there is missing statistics of most product groups, only electronics and a few other groups have official statistics to present (Eurostat, 2022).

Research by van Weelden et al. (2016) shows that most consumers do not even consider refurbished products when they shop. This is due to lack of awareness and misconception of what refurbished goods really entails. Overall, refurbished goods are at most times not preferred due to worries that associated risks are higher than the benefits. Customers though seem to experience professional refurbished products as of better performance quality in general than second-hand products sold by a private individual. A professional infuses a higher level of trust as they are perceived to give a certain baseline in functionality due to the expert restoration and quality checks. It is hence perceived as a more reliable purchase compared to other second-hand options (van Weelden et al., 2016). More and more companies, albeit still in the minority, conduct their business based on a circular business model. But the question is whether they can become the new normal. Perhaps professional refurbishment in an industrial scale would be the key to normalize circular thinking in the retailing sector. This study will hopefully contribute to increased knowledge about circular business models implemented by the business community, why customers consider purchasing used goods, what barriers are preventing increased consumption of used goods, and in the long run contribute to a more sustainable society.

1.1 Objectives and research questions

The purpose of this study is to identify drivers and barriers for increased consumption of refurbished goods. To map which factors motivates customers in general to buy something secondhand from a professional refurbisher and if those factors are the same for customers of refurbished goods that usually purchase brand-new products. This was accomplished by using the company *GIAB* (see 1.2 for more info), more specifically their online store *Returhuset.se*, as a case study and carry through a customer survey. Mapping why customers purchase products from *Returhuset.se* and where else they would purchase them if *Returhuset* was not an existing alternative. Read about scope in 1.2.

- Which factors contributes to consumers purchasing refurbished goods?
- Which factors impedes consumers from purchasing refurbished goods?
- How do these factors differ in importance for a refurbishment company to attract customers?

1.2 Case company and scope

One company with a circular business model is Godsintlösen Nordic AB, abbreviated GIAB. They give new life to damaged, returned, complaint and unsold products from insurance companies, e-commerce, the transport- and logistics industry, and more (GIAB, n.d.c; n.d.e; n.d.f). They offer a service where they take care of transport, separation, condition assessment, economic valuation, refurbishing, and resale (GIAB, n.d.d; n.d.f). Sales to consumers take place in GIAB's own web shop *Returhuset.se*, but also through Tradera, Blocket and CDON marketplace (GIAB, n.d.f). Their original business idea was to refurbish damaged products from insurance cases. This collaboration is still part of today's operations along with other B2B-collaborations and sales to businesses (Emma Nilsson, personal communication, May 20th, 2022). Headquarters are to be found in Staffanstorps, Sweden, along with Returhuset's physical store and the staff of repairers, technicians, sustainability consultants and customer support staff (GIAB, n.d.b). There are also operations in the Stockholm area. Those premises are used as a warehouse, delivery point and logistics center (GIAB, n.d.f).

Their sustainability efforts are a piece in the puzzle to fulfill the United Nations' (UN) 17 global goals for sustainable development (GIAB, n.d.f). In UN's definition, sustainability is considered to consist of three dimensions - the ecological, social, and economic sustainability. All three needs to be fulfilled for an activity to be considered sustainable (UN, n.d.). GIAB have internal sustainability goals connected to all three dimensions of sustainability (Emma Nilsson, personal communication, May 20th, 2022). Here are some examples. In addition to their business model of reusing and taking care of returned goods, they also make efforts to reduce emissions from internal operations such as business travels and educate employees continuously on sustainability issues (GIAB, n.d.f). They work with social sustainability by creating job opportunities for people who are far from the labor market. Lastly, they have an economic profitability (GIAB, n.d.a).

They calculate saved emissions, these are presented in their annual sustainability report (GIAB, n.d.d). Every month, the partners (insurance companies and other companies in their B2B-collaborations) also receive a report with estimations of how much saved CO₂-emissions and prevented waste their purchases have contributed to (Emma Nilsson, personal communication, February 2nd, 2022). The calculations of saved emissions include the assumption that a reconditioned product from GIAB replaces a purchase of a brand-new product (Anderas Anderholm Pedersen, personal communication, December 10th, 2021).

Head of Sustainability assert that GIAB's role is to industrialize refurbishment (Anderas Anderholm Pedersen, personal communication, May 12th, 2022). To succeed with that, they arguably need to establish themselves, and compete, on the conventional market, i.e., have a customer base that stretches

beyond the individuals who was already part of the secondary market before becoming their customer. Otherwise, they would only claim parts of the already existing secondary market and less environmental benefits would be made at a societal level than what is assumed.

After hearing that Returhuset attracts different types of customers from time to time, questions arose concerning customers' underlying reasons for purchasing from them today. What factors influence the customer's choice?

Scope

The study is geographically limited to Sweden. The respondents were customers who have purchased something from Returhuset's Swedish web shop (Returhuset.se). Other parts of the business were not included. There is also a time limitation, only customers who have purchased something from Returhuset.se in the last year (2021's calendar year) had the opportunity to participate in the study. It should be noted that the customer base of the web shop may not represent the other kinds of customers that GIAB do have, such as companies and people from insurance cases, because they operate under different circumstances than a private individual.

2. Theoretical framework

2.1 The effects of secondhand consumption

Greenhouse gas (GHG) emissions generated by energy usage in the trading process on the secondary market are substantially lower than those for production of new goods, hence increased shares for the secondary market would benefit the climate. The emission-saving potential mainly lies in extension of products' lifetime. In a study among eBay traders of used goods, some secondary effects were identified. Two scenarios were presented wherein the traded goods either replaces another used product or preventing a purchase of a brand-new product. By this means, additional environmental harm - originated from the purchase and indirectly the manufacturing of more new goods - are partially avoided (Clausen et al., 2010). Other empirical research showed that reuse was among the best strategies within resource efficiency to reduce GHG-emissions. It stated that an increased reuse of electronics, clothes and households' appliances possibly will manage nearly 10% of UK's needed GHG-emissions reduction up until 2020 (Scott et al., 2009).

There is more to it than climate related benefits. Reuse would bring positive effects for pollution, water consumption and resource shortage. The study concludes that resource efficiency will be essential and entail low costs of transition to a society with less GHG emissions (Scott et al., 2009).

2.2 General barriers and drivers for secondhand consumption

Research have identified existing barriers and drivers for secondhand consumption. A summation of found drivers and barriers are illustrated in table 1, followed by a more detailed description. Most factors could be interpreted as both a driver and barrier, depending on the situation. For instance, a driver if warranty is offered and a barrier if it is not offered by the seller. Another example is quality, some experience that older items have higher quality than newly manufactured while others are afraid that they cannot evaluate or trust the quality of a used product such

as a mobile phone. Hence no overall distinction has been made between these two. How theory has been applied in survey design can be read in 3.4.

Table 1. Summation of identified barriers and drivers for increased secondhand consumption. The order in which the factors are presented below is of no significance, neither does which column they occur in matter.

Price	Uniqueness, expressing one's persona
Environment, sustainability	Transaction losses – the needed energy and time-effort to find the product, keep up contact with seller(s), etc.
Convenience, ease	Familiarity – previous experience of buying things in secondhand
Warranty	Performance characteristics – condition of refurbished product should be similar to new
Hygienic safety	Too little knowledge about electronics/the product
Reliability, trust	Not available on the traditional market anymore
Wide selection	Feeling of ownership and smell of something new
Enjoyable, fun	Looks and traces of previous owner
Functionality, historic use	Consumer's mindset varies greatly between product groups
Quality	Quality standards/certification

Economic reasons seem to be a key factor to buying commodities secondhand and by that replacing the need of newly manufactured goods. Saving money was mentioned in both studies by about a majority, 47% resp. 56%, as reason for purchasing used furniture respective used items in general (Gullstrand Edbring et al., 2016; Wilts et al., 2021). This motive was even more frequent among students (62%), which indicates an *age* aspect that should be considered. Behaviour regarding when products were replaced could also be linked to age, young people tended to replace things more often, long before they were worn out. Likewise, the numbers differ between *genders*; 58% for males in contrast to 46% women (Gullstrand Edbring et al., 2016). Clausen et al. (2010) also states economic reason as key driver for buying secondhand items on eBay. Some people state that they could not afford the product otherwise (Clausen et al., 2010). Researchers have identified contributing factors that has to be manage if prejudices regarding refurbished phones are to be dealt with. Price is one of them (van Weelden et al., 2016).

Besides economic reasons, Wilts et al. (2021) had nearly a majority (42%) mentioning the *environmental benefits*. In the study with focus on furniture, the number were considerably lower, were only 14% had climate change and environment as main argument (Gullstrand Edbring et al., 2016). This is supported by Clausen et al. (2010) that claim environmental reasons to be exceedingly less important than economic reason.

The *wide assortment* (supply of different products) is crucial to why people look for items on eBay (Clausen et al., 2010).

Wilts et al. (2021), Gullstrand Edbring et al. (2016), van Weelden et al. (2016), and Clausen et al. (2010) assert that *warranties* and *return possibilities* can substantially add to motivation for buying second-hand. Especially for product groups within an expensive price range or that are difficult to replace in a situation of malfunction (Gullstrand Edbring et al., 2016).

Additionally, consumers of refurbished mobile phones would find reassurance in a *quality-/standard label that stretches industry wide* (van Weelden et al., 2016).

Another discovered significant driver is how consumers prefer to buy (furniture and items from eBay) second-hand because of better *quality* compared to newly manufactured products from nowadays (Clausen et al., 2010; Gullstrand Edbring et al., 2016).

Another crucial driver appears to be the supply of certain products that are *not available on the traditional market anymore* (Clausen et al., 2010; Gullstrand Edbring et al., 2016; Wilts et al., 2021).

The yearning for something *unique* to expressing one's persona motivates some consumers of furniture (Gullstrand Edbring et al., 2016). Similarly, eBay customers can be found looking for rare items (Clausen et al., 2010).

Transaction losses arise in connection to the collecting, authentication, and managing of information during the purchase process (Yousuf, 2017). It is the time-consuming process of finding the best seller to buy the wanted item from, which could in practice mean checking several platforms and comparing price, quality, and perceive a sense of trust (regarding actual delivery and product quality that corresponds with pre-given information), and at times also communicate with the seller (Wilts et al., 2021; Yousuf, 2017). Similarly, Clausen et al. (2010) conclude that most potential buyers are to a greater amount hindered by uncertainties linked to time investment for validating of given information regarding the product up for sale, than by unwarranted prices. An effect of the transaction losses is greater market shares for newly produced (goods) than should be expected, due to its well-established norms and practices that diminishes transaction costs (Yousuf, 2017). This explains why the market volume for second-hand goods is still small compared to unused products (Wilts et al., 2021).

Additional *experience of purchasing used items* will partly overcome transactions losses. Research verifies that buying used products takes longer time than the buyer process of newly produced, even for experienced second-hand consumers (Wilts et al., 2021). Consumers who have purchased second-hand products previously show more willingness to buy more products second-hand, contrary to they who have not purchased used products in the past year (Wilts et al., 2021). *How familiar the customer already is to refurbished products* lowers the level of perceived risk since they have come to trust the quality and function of refurbished products. Participants in an interview study that considered themselves to have very *little knowledge about electronics* and low confidence in own's ability

to do a fair judgement of the phone's quality reported a higher perceived risk (van Weelden et al., 2016).

Respondents often express worries associated to *reliability* of the seller and *promised functionality and quality* of used products (Clausen et al., 2010; Wilts et al., 2021). Similarly, van Weelden et al. (2016) mentions *performance characteristics* and *characteristics of electronic devices*. Performance characteristics is described to be the most important aspect then assessing a refurbished phone in a potential purchase. These worries can be met with both research studies regarding secondhand products' real endurance and life expectancy and as well detailed *quality tests* (Clausen et al., 2010). What information that is provided matter according to van Weelden et al. (2016). Refurbished phones' *conditions should be similar to new* phones' condition. Participants did not accept phones with major damages (van Weelden et al., 2016). The barrier reliability relates to more factors such as trust of the products promised *appearance* (looks), *historic use*, *hygienic safety*, and *traces of previous owner* (Wilts et al., 2021). Use history and product appearance are also mentioned (van Weelden et al., 2016).

Researchers identified preconception of used products being *unhygienic* as the main barrier for buying furniture second-hand. Also, worries about introducing pests into the home, from used furniture and textiles materials, were expressed by consumers (Gullstrand Edbring et al., 2016).

Convenience in everyday life is a strong motivation for purchasing things online, irrespective of if the items are new or used. Conclusively, in the communication to increase trading of used goods trading additional aspects should be more strongly emphasized, such as quality and saving money (Clausen et al., 2010).

Finally, some consumers find motivation to shop furniture secondhand because it is an *enjoyable activity in itself* (Gullstrand Edbring et al., 2016). Likewise, certain eBay customers like to shop online because it is a fun activity (Clausen et al., 2010). Some furniture consumers find motivation to buy brand-new items because they like the feeling of ownership, alongside the feeling and smell of something newly manufactured (Gullstrand Edbring et al., 2016).

There are however two aspects to be aware of. Gullstrand Edbring et al. (2016) stress that *consumer's mindset varies greatly between different product groups*. The range was broad, everything in between 63% being positive in attitude for buying used chairs and tables to the 67% being negative in attitude for buying used towels, mattresses, or sheets (Gullstrand Edbring et al., 2016). Hence two questions about product types have been included in the survey. In addition, Clausen et al. (2010) found that *attitudes do not always reflect behaviour*. As an example, Price-motivated traders and Used items sceptics present a strong environmentally friendly attitude but in general do not act environmentally aware.

3. Methodology

3.1 Advantages and disadvantages of chosen method

A customer survey is this study's main method. Advantages with surveys compared to interviews are several. There is no need for transcribing because the responses are from the beginning saved in written words. Consciously, with this method, the respondents were given more time to comprehend the questions and formulate their answers. The study becomes more generalizable the larger the proportion of Returhuset.se's customers from which responses can be collected, which strengthens the validity of collected empirical data and the credibility of this study (Ahrne & Svensson, 2015). This opportunity was created through the choice of survey, only a few interviews could have been conducted during the same time period and thereby not have enough of respondents to make collected data representative of the entire population. A disadvantage is the risk of getting a high amount of non-response (Ahrne & Svensson, 2015). Efforts have though been made to minimize the risk of non-response. One example is that the survey was emailed directly to the customers instead of just publish a link to it online.

3.2 The research process

For the choices in methodology (see 3.6), a thorough systematic literature search was carried through in *Web of Science*' all databases, without any filters but sorted by relevance. It generated 176 hits. Abstracts of the first 67 articles were read, then it was decided that enough material was assembled. This is the final search query:

"Response rate" OR "Response frequency" (Title) AND survey* OR questionnaire* (Title) AND Design (Topic) AND increas* OR enhanc* OR gain* OR more (Topic)*

Some additional articles have been added through *snowball sampling*, which is a method based on referral and networking (Parker et al., 2019). In this case have

new articles been found by looking through the reference list of already found articles.

In the literature search for the thesis topic's theoretical framework (see chapter 2) several search engines were used, mainly *Scopus* and *Web of Science*. A systematic literature review of the theory was initially tried but finding a good search query for the subject proved difficult. After editing and adjusting it several times over, most articles in the search results still appeared to be too irrelevant for being useful in this thesis. Therefore, the few good articles found had to be explored. Further articles were then found through these articles with help of snowball sampling and the use of new keywords found in these articles. In addition, this thesis was not meant to be a literature study, therefore systematics was of less importance.

The choice of invitation tool (e-mail) as well as content of the questionnaire, e-mail invitation, likewise the design of other elements, were all chosen in support of previous presented literature (see chapter 2) and methodology (see 3.6). These things - how response rate affects the study's representativeness and potential bias, and how to diminish this by designing the questionnaire, invitation, and send-out-process in the best way, have been continuously revised and discussed beforehand with academic supervisor and personnel from the company.

The survey was sent out around noon on March 21st and via e-mail it reached almost all customers that purchased anything from *Returhuset.se* during 2021. The exact 5-digit number that the survey reached, cannot be published here due to the information being of sensitive nature for the case company. The invitation was sent from the survey tool itself, *Netigate*. The sender presented to the customers receiving the email was though a neutral email address from the case company without any employer's name present, where to the customer could reply with any questions they had regarding the survey. The email included a short description of the study, and the content of the survey was also described and followed by a direct link to the survey, see Appendix 2. Survey was closed at midnight on April 10th.

The empirical material that has been collected in this study is limited to customer responses only. Final version of questionnaire consists of mainly closed questions, with possibilities for elaborating in a few open response options, why this was done can be read more about in section 3.6. Thereby both quantitative and qualitative data have been collected. This is supported by Ahrne & Svensson (2015) who claim that one method could produce both quantitative and qualitative data. Though the analysis of these two types of data is different. Researchers with qualitative data must often develop their own tools and strategies for analysis since models for this rarely exists. Another difference is the higher requirements of generalizability and credibility that qualitative research experience compared to quantitative research that are valued based on a comprehensive statistical mechanism (Ahrne & Svensson, 2015). All questions in the questionnaire were

mandatory, but some follow-up questions were only showed to some respondents depending on their individual previous answers.

In the analysis only responses where the respondent has answered the final question, and thereby completing the questionnaire, were included. All drop-offs were thereby excluded from the presented result and analysis in this study. 70% of the invites/emails were read by the receiver within the three weeks long fielding period and 8%-units of these seventy per cent opened the survey. The total respondents that completed the survey were a 4-digit number. It makes up 7% of the invited population. Size of the drop-offs was 0,77%, calculated from the total amount of people that received the invitation. Invites that got “bounced back” i.e., not received are excluded from the response rate- and drop-off calculations and were very few in relation to how many that was invited (1,23%). Collected quantitative data have been analyzed using the statistical software program *SPSS* to demonstrate how representative the study’s results are and to find significant factors that could explain the palpable difference in frequency between response options. Also, simpler bar and pie charts have been created in excel. Collected qualitative data, though much less than the gathered amount of quantitative data, have been analyzed. This by first overviewing the responses and then assign them to different categories which was created and continuously changed in the process adjusting to what fit each bunch of responses being analyzed. After each bunch had been categorized, they were summarized in the result chapter. The qualitative analyses, and some of the quantitative analyses, have simply been presented in text form in chapter four, along with the results.

3.3 What is statistical significance

Statistical analyses were performed in order to identify patterns and further examine if they could be explained by group affiliation such as age or their typical consumer behavior; new-produced vs more sustainable consumption (secondhand or refrain a purchase when product is not greatly needed).

When using the method of sampling from a population, statistics are often applied to strengthen the validity, that conclusion drawn from gathered data can be generalized for the whole population and merely not a natural random occurrence. This is called *statistical significance*. The P-value needs to be less than 0,05 or any other pre-defined level of significance before data collection occurs. You can be more confident with your findings being correct, the lower value of P your tests show (Britto Figueiredo Filho et al., 2013). To get a value of P, tests need to be performed in statistical software. This study used the software *Statistical Product and Service Solutions*, abbreviated *SPSS*.

Chi-square (X^2) are common for analysis of categorical data. It compares observed and theoretical (expected) frequencies (Quinn & Keough, 2002). Exploring if there are any association between two variables (Warren, 2018). To avoid misleading probabilities the sample size cannot be too small, there is a recommendation about not having more than 20% of categories (cells) with expected frequencies less than five. In my empirical data, age is the only continuous variable. *The analysis of variance* (ANOVA) is useful for analyzing the variation in a continuous response variable. Most often response variable means are compared between groups, thereby separating the variation into categorical factors that may could explain the variation. *T-test* is a simple test that is used when testing hypotheses regarding, for instance, differences between two variables when certain assumptions are fulfilled for the variables (Quinn & Keough, 2002). Read more about which variables these tests were executed for in chapter four.

3.4 How theory has been applied in survey design

Some aspects appearing in the literature have not been asked about in the survey due to several reasons and are therefore not included in table 2. For instance, are societal norms, brand image, and seller image very complex factors to explore and measure. Additionally, some factors were seen as irrelevant to explore in this specific case, such as seller image and unawareness about possibilities to buy something in secondhand/refurbished over newly produced. Since the case company already had knowledge about having a big proportion of one-time customers, seller image then does not seem to play a major role and could not be properly explored in this case. These factors can instead be read more about in the discussion, see 5.2.

Numerous aspects have been combined and/or been included indirectly and sometimes not in the same terms as used in figure 1 & 2. For instance, have *transaction losses* and *convenience/ease* been interpreted as the *simplicity* response option in both questions about reason(s) for purchase. Likewise, have *too little knowledge about electronics*, *historic use/functionality*, *hygienic safety* all been interpreted in the *warranty* response option. Warranty would partly lessen the pressure customers with limited electronics knowledge feel when purchasing used electronics. Hygienic safety is not a relevant factor for all product groups; hence it would be skewed to include as a response option on its own. It could also be construed as part of the question about condition classification system. Functionality is, besides warranty, also embedded in the response options *classification system*, *high quality*, and *higher trust*. This was just a couple examples of how theory have been applied in the survey design. In table 2, and following description of the table's letter scheme, more connections to the

theoretical framework are illustrated, however not all. Age, gender and other demographic data have each been given a separate question in the questionnaire.

Table 2. Summation of identified barriers and drivers for increased secondhand consumption. The order in which the factors are presented below is of no significance, neither does which column they occur in matter. See explanation of letter scheme below the table.

Price ^A	Uniqueness, expressing one's persona ^A
Environment, sustainability ^A	Transaction losses – the needed energy and time-effort to find the product, keep up contact with seller(s), etc. ^A
Convenience, ease ^A	Familiarity – previous experience of buying things in secondhand B,C,H
Warranty ^A	Performance characteristics – condition of refurbished product should be similar to new ^D
Hygienic safety ^E	Too little knowledge about electronics/the product ^A
Reliability, trust ^A	Not available on the traditional market anymore ^A
Wide selection ^A	Feeling of ownership and smell of something new ^F
Enjoyable, fun ^A	Looks and traces of previous owner ^{E,F}
Functionality, historic use ^A	Consumer's mindset varies greatly between product groups ^G
Quality ^A	Quality standards/certification ^{A, E}

Explanation of the table's letter scheme

Each factor has been assigned a letter that corresponds to a question(s) where it either are part of the question itself, occurs as a response option or are indirectly explored.

A = Reasons for purchase at returhuset.se (main + other reasons)

B = Alternative behaviour

C = Previously purchased at returhuset.se in 2021?

D = What condition their purchased product was in

E = How the customer is influenced by the condition classification system

F = Follow-up question to the alternative behaviour, why they would but it new otherwise

G = Which product types they would be willing to buy in secondhand?

H = Have you previously purchased anything from GIAB's other sales channels?

3.5 Importance of good design

The most common safeguard from response *bias* is by many considered to be *high response rates* (Hendra & Hill, 2019; Lagarce & Kuhn, 1995; Paxson, 1995). Web-based surveys have been proven to have lower response rates in comparison with other survey methods (Kaplowitz et al., 2012). In general, 10-11% lower response rate than other methods (Fan & Yan, 2010; Manfreda et al., 2008).

The research community are however still in disagreement on whether response rate plays a major part for a study's bias or not. Hendra & Hill (2019) discovered that the connection between response rates and nonresponse bias are faint. Other studies support this statement, claiming that a low response rate alone is not enough to dismiss the outcomes of a survey (Cull et al., 2005; Fan & Yan, 2010; Nix et al., 2019). Hendra & Hill (2019) reckon responsibility lies on the researcher to describe the methodology with enough transparency and details enabling readers to make their own judgement. They argue it would be better to screen for nonresponse concerns during the fielding than to just aim for a high response rate. They also emphasize that public opinion polls, despite low response rates, have achieved very reliable results. Some with response rates below ten percent (Hendra & Hill, 2019). This study combined the two ways of preventing bias i.e., it aimed for a high response rate while still staying observant for possible sources of bias during the fielding.

Both sides deem good design choices as crucial for making a high-quality study (Fan & Yan, 2010; Hendra & Hill, 2019; Kaplowitz et al., 2012; Lagarce & Kuhn, 1995; Paxson, 1995; Yoshiya & Rossi, 2017). This is why much time and effort have been put to search in the academic literature for information about how to design a survey of high quality.

3.6 Applied choices of design

A list of measures to take for boosting response rate have been put together from the literature and each is followed by applied choice of design. Some active choices of design belong to Dillman's so-called Total Design Method, results suggest that these measures are effective even in low-budget research performed by graduate students (Calahan & Schumm, 1995).

Invitation

Highlight the research purpose and have a legitimate source as sender of the survey (Edwards et al., 2002; Paxson, 1995). In this study, the invite sent by email highlighted the research intention. An email-address from Lund University have

been mentioned in the invitation, though not used as the sender due to research also showing the importance of invitation coming from a familiar sender, in this case from the company itself.

Use incentives to reward participation (Fan & Yan, 2010; Pit et al., 2014). Also, offer to share results with the participant (Paxson, 1995). Many advocated for using monetary incentives (Cunningham et al., 2015; P. Edwards et al., 2002; Paxson, 1995; Pit et al., 2014; Thorpe et al., 2009). Especially for surveys of the common public (Paxson, 1995). In an online environment, lotteries are recommended (Deutskens et al., 2004) and a few larger prizes turned out being most cost effective (Conn et al., 2019; Pit et al., 2014) Gift certificates displays a sense of respect for the respondent's time (Thorpe et al., 2009). Consequently, a lottery and chance to win one of three gift cards, each to a value of 500 SEK, have been communicated three times to the customers. The participants have also been informed about their possibilities to take part of the study's results.

Invitation was received from a familiar sender and an authoritative subject line were used, as advised by found research (Kaplowitz et al., 2012). The chosen subject line did not include the term "survey" and neither the survey's topic nor asked for participation in a survey was accentuated, as recommended by the literature (Edwards et al., 2009; Kaplowitz et al., 2012). The email's subject title was: "Thesis project with Returhuset - 9 minutes for participation in gift cards lottery". For original phrasing in Swedish, *see appendix 2*.

Interesting topic. Since surveys with a more interesting/remarkable topic or a topic they personally care about are returned more often (Edwards et al., 2002; Edwards et al., 2009; Fan & Yan, 2010; Nix et al., 2019; Paxson, 1995), survey topic and content have been summarized and communicated to the potential respondent in the invitation-text, although not mentioned in the email's subject line. Whether it is in fact an interesting topic can however only be decided by each reader.

Length of invitation text. This study has tried to find a good balance of not too short or long invitation text since Kaplowitz et al. (2012) claim that length of invitation text does matters.

URL-link to the survey was placed at the bottom of the invites as recommended by Kaplowitz et al. (2012).

A deadline for last date for participation, 10th of April (exactly 3 weeks after the sent out), was set and communicated to respondent in accordance with research (Edwards et al., 2009).

Consent

In support of the literature **participants have been informed of how the data will be used**, that their answers will only be presented as part of a summation (Paxson, 1995).

Questionnaire

A header was used in this study because Edwards et al. (2009) recommended including a simple description of the survey's content initially.

Questionnaire length affects response rate (Fan & Yan, 2010). The questionnaire was relatively short as some recommends (Deutskens et al., 2004; Edwards et al., 2002; Edwards et al., 2009), but not necessarily too short. This because others deduce it reasonable to perform lengthy surveys over Internet, particularly when suitably rewards are being used as in this study (Deutskens et al., 2004).

Completion time, survey quality and piloting. The questionnaire was piloted as recommended by Fan & Yan (2010) and Paxson (1995). Seven pilot respondents answered to the first questionnaire draft, six of them additionally noted their completion time. Kaplowitz et al. (2012) advised to communicate an as accurate expected completion time as possible to the potential respondents, which was done. Respondents' average completion time was however several minutes shorter than expected. It was also noted beforehand that the survey software allowed downloading of collected data in Excel- and SPSS format and thereby enables for analysis, which was another recommendation from Fan & Yan (2010).

Mainly closed questions. Malhotra (2008) suggests that non-response for internet surveys can be managed by supplying the respondent with response options. Web surveys generate more "don't know" answers than face-to-face surveys (McCluskey & Topping, 2011). Therefore, final version of questionnaire consists of mainly closed questions with no response option named "don't know". Though, a comment section named "other" (sv. "annat") were present in most of the questions. This was done because the respondent should be given the opportunity to reply with response options other than those that were provided to them. Among other things, it exposed the fact that some respondents did not read through the options thoroughly.

Order of response options. Two papers report strong indications that the presentation order of response options impacts what the respondent answer to the question. It stresses the significance of randomized response options order (Malhotra, 2009; Fan & Yan, 2010). Hence implemented on some questions where it seemed sensible to do so. Every response option was given a number, then a

number generator² were used, thereafter changes in the order were made accordingly. The “other”-option was always placed last in the response options order and thereby not part of the randomization (see questionnaire in appendix 1).

User-friendly format. This survey was created in the software Netigate, which subjectively have a seemingly user-friendly format, an important factor according to Lagarce & Kuhn (1995) and Paxson (1995).

Reading level. It is truly essential for surveys to have an easy language (Paxson, 1995; Yoshiya & Rossi, 2017). Having a reading level not higher than what an eighth grader can comprehend is a good benchmark (Yoshiya & Rossi, 2017). The phrasing through-out the questionnaire were hence simplified. No customers that received the survey invitation have complained about the language.

Colourful layout. Use of colour in questionnaires have a positive outcome (Edwards et al., 2002; Lagarce & Kuhn, 1995). Same conclusions were made about attractive layouts (Burkhart et al., 2021; Paxson, 1995). To make it colourful, a green theme was used for the questionnaire. Except for one customer not being able to answer the survey do to not being able to read white text on green background, the colour theme was not mentioned by the respondents.

Pictures and visual elements. A good balance of visual elements in questionnaires increases response rates (Deutskens et al., 2004). Malhotra (2008) argue for using complex visuals. Some recommends adding a picture to the invitation (Edwards et al., 2009). A logo of Returhuset were added to the email invitations header. Additionally, the logo of Lund University and Returhuset were added at the bottom of the survey’s header.

Reminders

Follow-up. Contact participants both before the first send out (Edwards et al., 2002; Fan & Yan, 2010; Keusch, 2012), and after that send out i.e., reminders (Cook et al., 2016; Edwards et al., 2002; Fan & Yan, 2010; Paxson, 1995). To the contrary, Cook et al. (2000) reported that many reminders to web surveys could cause email volume saturation and consequently irritation, and in the long haul a resistance to reminders and a lower response rate. In this study, a thank-you-text have been shown to respondents after completing the survey and could be interpreted as after-contact. Despite initial plan to send out reminders, no reminders were however sent out. Partly because of the disagreement within found literature and partly due to time restraint to analyze more qualitative responses.

² <https://www.random.org>

3.7 Ethical reflection

Email addresses are personal data. It is important that the personal data are managed with care and not shared with people outside the organization. The respondents have beforehand been informed of what the survey is about and that their participation is important but voluntary, *see appendix 2*. The respondents have been informed of how the answers will be used; for research purpose, responses analyzed in summarized form and presented the same i.e., not as individual responses, and published online. They have all given consent to participate in the study and this terms before filling out the questionnaire, *see appendix 1*. A more elaborate reflection can be found in the discussion chapter 5.5.

4. Result and analysis

Questions in this chapter that originates from the questionnaire are translated, see appendix 1 for the original phrasing in Swedish.

4.1 Why customers purchase from Returhuset.se

Main reason behind why shopping at Returhuset.se

In figure 1 it is easy to identify two main reasons that occur considerably more frequent than the rest. Price (43%) seems to attract more than 4 out of 10 customers. It is followed by environmental reasons (30%) that almost a third states as the main reason for their purchase, this despite the possibility to select “other” as main reason, which 4% did. Another salient note was the 7% that had expired product/model as their main reason for purchase.

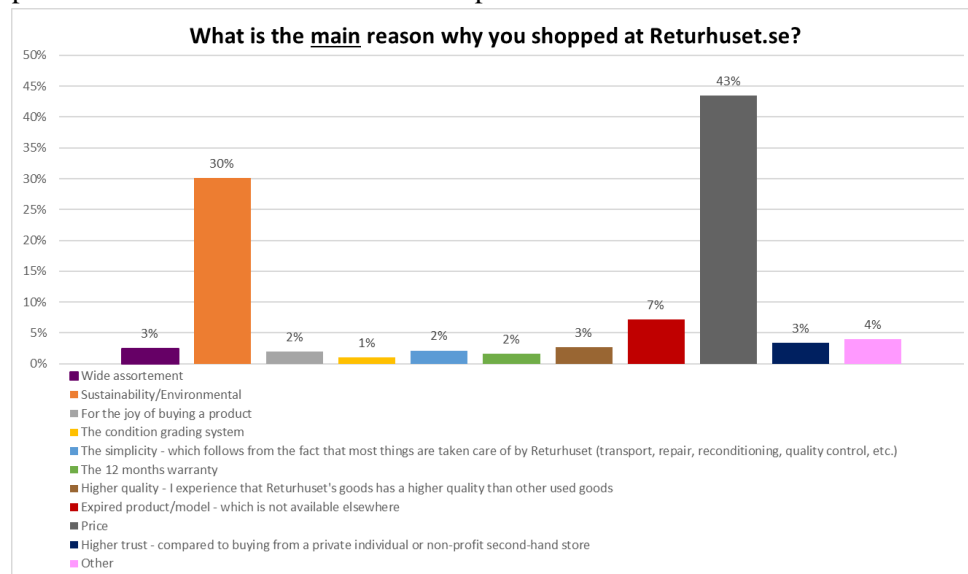


Figure 1. Bar chart showing respondents' main reason for purchase at Returhuset.se

Here respondents could only select one response option, but they were informed about their possibility to list more of their reasons in the next question. In this question the explanation-textbox for “other” did not show up (a fault made in the question design). Therefore, specifications of the “other”-option could be amongst

the responses to the comment section in this question and cannot be separated from them. 21,7% of respondents left a comment. The reoccurring pattern were that people had difficulties restricting their choice to only one main reason, sometimes directly saying that the question should be multi-optional but at most times saying it indirectly by listing and describing several reasons instead of just one, that was requested by the question. This indicate that limiting the main reason to only one factor may not fully represent reality. Therefore, it is more interesting to look at all reasons combined, as we will do later in figure 4. Most comments could be assigned to one or several of suggested response options but were not. Price and environment were most frequent mentioned but often in combination with each other or other factors, especially “found wanted product” and “good price in relation to condition/quality”. The option “Expired product/model” could also be found frequently in the comments. The concept itself appealed to some customers. Some new arguments were geographical closeness, good seller image, ethics, advertisement, quick delivery, online customer reviews, personal connection, employed at GIAB, and good previous experience of the company.

Main reason for purchase separated by alternative behaviour

It is interesting from a perspective of mainstreaming refurbishment, to separate the answers for those that would usually buy a brand-new product from those that would not and find out what motivates the former to buy secondhand, see figure 2.

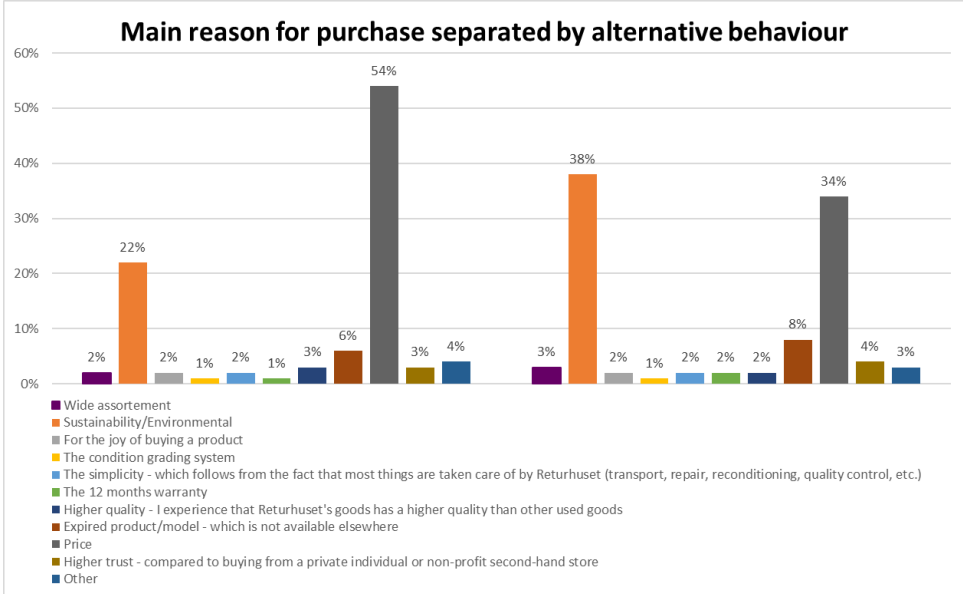


Figure 2. Chart to the left: only responses from those customers that would otherwise buy a brand-new product are included (distinguished from the question about alternative behaviour, see below). Chart to the right: only responses from those customers that would otherwise buy a secondhand product or abstained from the purchase, are included.

This figure shows that those with a preference of brand-new products have a higher tendency to be mainly motivated by price and lesser tendency to be mainly motivated by environmental reasons in their main argument compared to those with a preference to secondhand products or would have abstained from the purchase. The other categories seem to be approximately the same.

Main reason in relation to the other (less important) reasons

After main reason, the next question was: "What other reasons contributed to you shopping at Returhuset.se?". In figure 3 below, main reason and "more reasons" (in question referred to as "other reasons", not to be confused with the response option named "other") are merged, now showing all reasons respondents selected. The response options were the same in both questions, only difference was that the option each respondent had selected in the first question (main reason) was removed from the list of response options in the second question (other reasons) and that it was possible to select several response options in the second question.

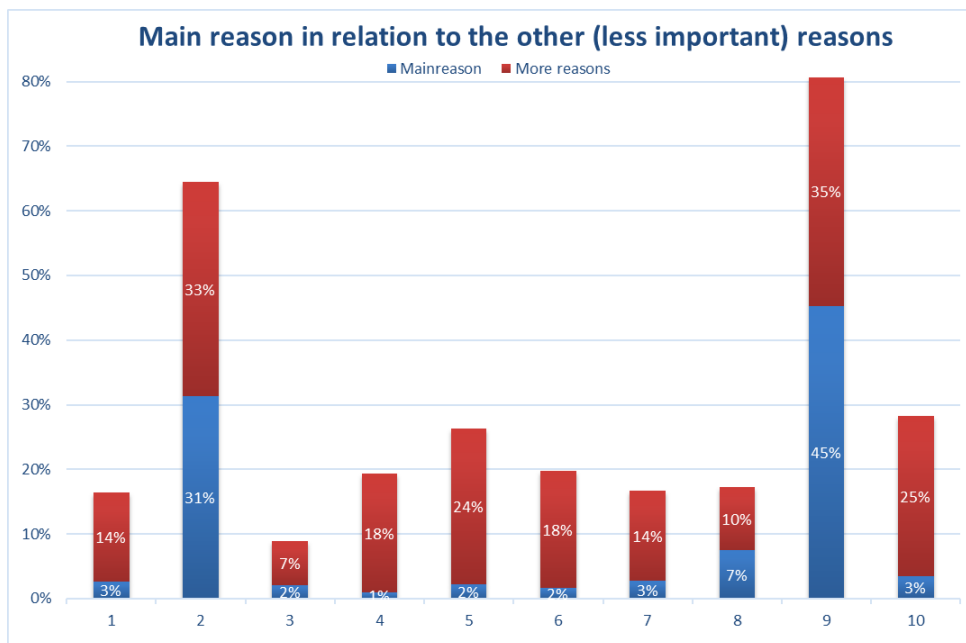


Figure 3. This bar chart visualizes all reasons mentioned by respondents but separates main reason from all the other reasons ("more reasons"). Each number on the vertical axis corresponds to the category in the same order in the previous figures except "other" that are excluded from this chart.

Here again, price and environmental reasons stood out among the other options (see the red part of the bars in figure 3), even though all respondents who chose either of those options in the previous question could not select them here (blue part of the bars). Hence, price and environment are very common motivations even for those who do not have it as main reason.

The option “other” were removed from the chart in figure 3 along with the responses from fifty-two respondents that selected “other” as main reason. Those were also removed from the total and thereby excluded from the quantitative analysis, of two reasons. It would be skewed to include this option in the figure because the same person could have selected the other-option in both questions and because the “other”-option consisted of more than one factor contrary to all other response options. 9,2% of all respondents selected “other” in the second question.

The most interesting conclusion of reading all elaborations to why people selected “other” is that only approximately 1,8% (of all respondents) did not have any other reason for their purchase (whereof a few specified that price was the only thing that mattered) and roughly 1,1% responses were not useful for analysis (did not remember purchasing from Returhuset or stating something unrelated to the question). Meaning that at least 97% of all respondents did have two or more reasons for their purchase. Which supports the pattern of customers having a combination of several factors impacting their decision to shop at Returhuset, as encountered in previous presented results. Many respondents brought up the argument about finding the product they were looking for, which is kind of given then you buy a product or service from someone. Hence a better interpretation could be that Returhuset has a sufficient wide assortment to attract customers with many different needs. Some respondents could not find the product anywhere else, while others appreciated the store’s close location to their home which made it easy to pick-up the product quickly and also avoiding shipping cost. Some mentioned suggested options such as price respective described environmental reasons. A few mentioned a previous good purchase experience at Returhuset as a reason, while a few mentioned this being their first time since they found their way to the company’s website through a search online. These arguments were mentioned by one or two people: advertisement ad, uniqueness, very helpful customer service, a recommendation, like to order online, and in new condition from original manufacturer. Some elaborations were left out from this qualitative analysis because they could not be understood. Less than a third of respondents that previously claimed to not be a customer of Returhuset claimed it here.

There was also an optional comment section that 4,9% of respondents filled out. These comments brought up once again reasons like good experience from past purchase from the company, only place that had the product in stock, wide assortment, and not remember ever purchasing from Returhuset. Many had a combination of reasons. Once again price, environment, wide assortment, and finding the product they were looking for, were brought up by several respondents. New things mentioned were the feeling of safety, the condition grading system, quality, best available option, the warranty, and return possibilities.

All reasons to why the respondent purchased at returhuset.se

Figure 4 are principally identical with previous figure but differentiates itself by not having separated the main reason from the (less important) other reasons.

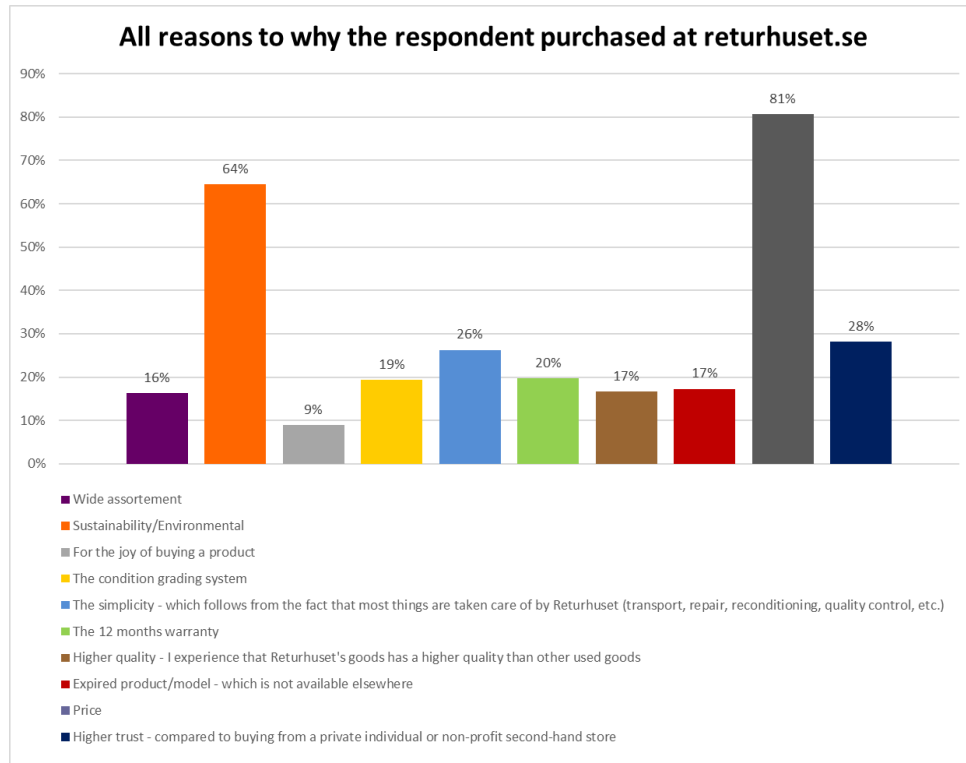


Figure 4. This bar chart is a summation of all reasons mentioned by respondents for their purchase at returhuset.se, included are both main reason and other reasons.

Environmental and economic reasons clearly stand out as the most frequently mentioned reasons (64% respective 81%) for making their purchase at returhuset.se. In comparison with Wilts et al. (2021) numbers, 42% and 56%, these results show an even higher frequency for those two reasons. Wilts study asked about secondhand products in general (no specific product type), similar to this study. All suggested reasons increased in frequency compared to when only one option could be selected in the question about main reason (figure 1), showing that environmental- and economic reasons are far from the only reasons influencing the customer's choice to shop at Returhuset.se.

All reasons for purchase separated by alternative behaviour

Once again, it is interesting to divide the answers according to consumer group, see figure 5. For the former, *price* is the most important feature and secondly *sustainability*. They are followed by *higher trust*, *simplicity*, *condition grading system*, *higher quality*, *warranty*, *expired product/model*, *wide assortment*, and *joyful activity* (in that order).

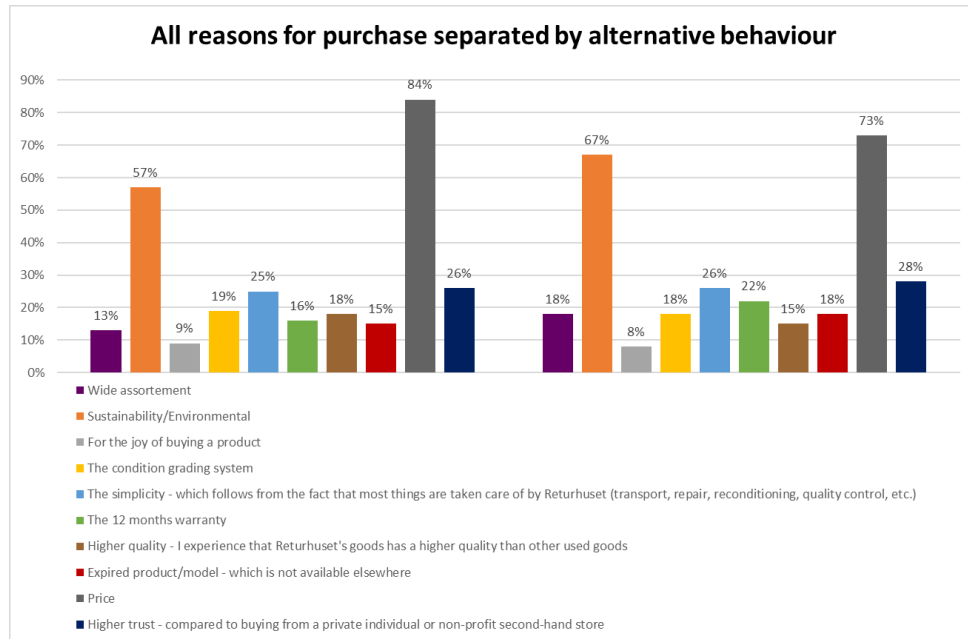


Figure 5. Chart to the left: only responses from those customers that would otherwise buy a brand-new product are included. Chart to the right: only responses from those customers that would otherwise buy a secondhand product or abstained from the purchase, are included.

Looking at all reasons, those that prefer brand-new products have a higher tendency to be motivated by price and lesser tendency to be motivated by environmental reasons compared to those with a preference for secondhand products or would have abstained from the purchase. Despite this difference, both consumer groups have price as most important and sustainability as second important reason. The latter seem to experience a wide assortment, appreciate the warranty, and looking for an expired product/model more frequently than the former. The former seems to more often appreciate the higher quality that Returhuset's offers compared to other sellers of used goods, than the latter. The other categories seem to be approximately the same, only differ with 1-2%-units.

4.2 Alternative customer behavior

46% of the respondents, report that they would have purchased the product new if not from Returhuset.se, showing that Returhuset operations are partly replacing new-production and takes shares from the conventional market, thereby leaving the niche market. Brought to light later in this section, in the follow-up question to those that chose the secondhand behavior response option, more respondents than those part of the number presented above state they would have purchased a newly manufactured product. Indicating that the real number are at least slightly higher than 46 percent. 10% state that they would have refrained the purchase, consequently likely acting in a more sustainable way depending on if they replaced the need with another more/less sustainable product or did not need the product at all. 41% state they would buy it in secondhand from someone else, if this leads to less, equal, or more emissions could not be determined here, see further discussion in 5.1.

3% chose “other”, of which nearly half referred to one, two or all three already proposed response options. About half of those mentioned professional refurbishment specifically, but many were unsure if other businesses with a similar concept exists today and stating that they otherwise would buy it new and emphasizing their zero interest in purchasing it from a private individual. Thereby implying that Returhuset’s services and products are sought after by consumers. One fourth said something like “it depends” or “where I could find the wanted product or a similar one”. One said that they had never bought anything at Returhuset, certainly less than those 3% that earlier expressed that they had never purchased anything at returhuset in 2021 (see 4.5). Even adding the nine people saying “don’t know” or something that did not had to do with the question, does not equal the first number. This question had three follow-up questions, one for each of the first three response options in this question. These are presented further down in this section. All that answered “other” here got no follow-up question.

Statistical testing: Main reason vs Alternative behavior

A chi-square test has been performed with the variables “main reason for shopping at Returhuset.se” and “alternative behaviour”. The first time around “other”-responses were included for both variables. It resulted in a P-value of less than (<) 0,001. A significance was acknowledged since the value was below 0,05. Meaning that a differences between groups were found. Unfortunately, 38,6% of the cells had an expected count less than five which mean a chi²-test are not recommended because more than 20% could lead to false probabilities. For the interested, Pearson Chi-square value were measured to about 160 and degrees of freedom were 30.

In the second try, all “other”-responses were removed from the dataset meaning the fourth response option in the *alternative behaviour-variable* were excluded together with the eleventh response option in the *main reason-variable*.

After removal 6,5% of the population were included in the test, contrary to the 7% that responded to the survey. New results were partly the same, $P < 0,001$ and the expected count less than five was still present in more than 20% of the cells (23,3%). Degrees of freedom was 18 and Pearson Chi-square value 110,488.

In the third and final round, no responses were removed but instead two alternative behaviour response options were merged, resulting in two response options instead of three; brand-new and secondhand/abstained. This time around it generated 9 degrees of freedom, 66,992 in Pearson Chi-square value, $P < 0,001$ and 0% cells with an expected count of less than five. Making the results much more reliable. Conclusively, the difference between the two groups is statistically significant proven to not be caused by chance. Customers that would have bought the product brand-new significant differ in their main reasons for purchasing at Returhuset.se than those customers that would have purchased the product in secondhand or abstained from the purchase all together.

Age

In a study of Gullstrand Edbring et al. (2016) age was mentioned as an explaining factor. Therefore, respondents were asked to write down their age, which had a wide range starting at 13 and going all the way up to 88 years old. Statistical tests in the software SPSS showed that age did not have a significant impact on responses, i.e., the difference in responses could not be explained by the age aspect. Read more details below.

Statistical testing: Age vs Alternative behavior

Age was tested against alternative behaviour with a one-way ANOVA. The value of P was 0,029 i.e., within the significance range ($P < 0,05$), see 3.3 for further information about chosen level of significance etc. It could be assumed (with a 95%-certainty) that two of the mean values differ from each other and this is not due to a random occurrence (chance). Then the Levene's test was executed, since the variance of the dependent variable must be equal over all categories. It was not significant ($P = 0,780$) as it should not be to fulfill one of the required assumptions for performing an ANOVA analysis. Another requirement is normal distribution in the variable's data. Testing this, a Kolmogorov-Smirnov test were executed resulting in $P < 0,001$ meaning the data are not normally distributed. Conclusively, all requirements for an ANOVA are not fulfilled and age cannot be tested this way.

Age was instead tested with an independent samples t-test, after merging two alternative behaviour-options in the same way as explained in the chi-square section (previously in this chapter), 6,8% of the population were included in the test. P -value was far above level of significance and degrees of freedom was 1264. Levene's test showed that equal variances could be assumed, validating the execution of the t-test. Meaning age could not be statistically proven being an explaining factor for the response distribution in the alternative behaviour-question.

Thereby age could not be proven to have a significant influence on the found differences in response between the two groups in the chi-square test.

I would first try to buy the item(s) second hand from...

This is a follow-up question that were only shown to respondents who in previous question selected “second-hand”. Only one response option could be selected.

Table 3. Which seller they would otherwise have turned to, for finding the product in used condition.

Seller	Quota respondents
A private individual	15%
A non-profit secondhand business	14%
Other company with similar operations as Returhuset	69%
Other	2%

In Table 3 it can be interpreted that more than two thirds state that they appreciate Returhuset’s concept since they would rather go to another professional refurbisher than buy it from some other kind of secondhand seller. Indirectly saying that Returhuset offers something that the others do not. What it is more exactly could be seen in the previous figures 1-5, were respondents stated why they purchased at Returhuset. Almost a third (29%) state that they would have bought the product from a non-profit second-hand business or private individual. Without further communication with those respondents, it could not be determined why they responded this way. If it was because they do not know of any other company that has similar concept as Returhuset or if they do not care about the different services, such as warranty and return possibilities, that Returhuset offers. The comments left by 2% of respondents that selected the “other”-option could maybe give us a hint. They had different reasoning, for instance they stated: a similar company, wherever they could find it or “depending”. For some it does not matter, and other do not know. Conclusively, these results shows that Returhuset are filling a need and gap in the market.

I would have abstained from the purchase and not continued to look for the item(s) in new or used condition elsewhere because I...

This is a follow-up question that were only shown to respondents who in previous question selected “abstained”. Only one response option could be selected.

Table 4. Which their alternative behaviour would be to abstain from the purchase.

Explanation/reason	Quota respondents
Will check with acquaintances if anyone has the item(s) and is willing to sell, give away or lend it/them to me	12%
Will manage without the item(s)	59%
Could not afford the corresponding item(s) newly produced	20%
Will rent the item(s)	1%
Other	9%

One fifth of respondents stated that they could not afford the item or corresponding item newly produced, see Table 4. Hence Returhuset partly contributes to decrease the socio-economic gap in a more sustainable way than conventional low-price stores. Very few would rent or lend the product instead, which in most cases would be more sustainable than buying and owning the item. This could be explained by the customers mostly purchasing phones and other electronic devices which rarely (if ever) are possible to rent today and would probably by others be considered odd to lend over a longer time. A majority said they could manage without the items; this is not good in a sustainable perspective. It means that Returhuset in these cases are contributing to increased consumption that would otherwise may not happen. Almost one tenth selected “other” and their specifications are a bit worrying, hopefully they are exceptions and not the norm. A majority responded in a way that indicate they should have answered differently to the past question if telling the truth, most saying they would have purchased it new or looked for the product somewhere else i.e., not abstained from the purchase all together. The rest reporting, they did not recognize they needed it before seeing it at Returhuset’s website or it being too expensive otherwise.

Conclusively, Returhuset’s operation contributes to decrease the socio-economic gap in a more sustainable way but also increasing unnecessary consumption in some regard. These conclusions are though more uncertain than other conclusions drawn in this study.

I would buy the item(s) newly produced because I...

This is a follow-up question that were only shown to respondents who in previous question selected “new”. Only one response option could be selected.

Table 5. Why they otherwise would buy the product in brand-new condition.

Explanation/reason	Quota respondents
Really like the feeling of having an unused item	8%
Really want the item(s)	37%
Really is in great need of the item(s) at the moment and do not see many other options in my situation	48%
Other	7%

Nearly a majority of respondents claimed they really were in great need of the item(s) at the moment and did not see many other options in their situation than to buy the product new, see Table 5. A substantial amount reported really wanting the product(s). It is however difficult to conclude the real number of people that greatly needed or just really wanted the product because this is subjective and not easy to define even within one own’s definition of need and want. Together they make up 85%. Few just really enjoy the feeling of having an unused item. 7% selected “other”, over a third referred to the uncertainty of buying from anyone else than a company whereof many mentions warranty as required for their purchase. They want to be sure they receive a functional product in good quality. Some others talked about how difficult it was to find the specific product on the secondary market and others indicated that the specific product type meant they needed to buy it in new condition (this aspect is being explored further in 4.4). Some claimed that, since it was supposed to be handed over to someone else as a present, it had to be in new condition. Two claimed hygienic reasons for needing it in new condition. Two others described the simplicity. Two meant they would buy it new out of sheer habit and rarely think of buying it in second hand. One wrote “do not know”, another referred to it being job related, and one had replied wrong to the previous question. A couple specifications were unrelated to the question. Lastly, one person reported wanting to select all three suggested options. Conclusively, if refurbishment businesses can make the product be experienced in all aspects (function, hygiene, visual, etc.) to be in new or very good condition then most consumers would be willing to buy it secondhand.

4.3 Grading system describing product condition

More than one third (37%) of customers admit that they would have not shopped at Returhuset if not for the *condition grading system* existing, while the condition grading system does not affect 15% of respondents. Assuming that respondents that chose “no” did not select any other options, it could be concluded that about 85% of purchases are affected by the condition grading in some way but differ in how they are affected. 29% declare that they will wait with the purchase until Returhuset.se receives the same product in better condition if the product they are currently looking for are only found in a too low condition on Returhuset’s website. In the same situation, 33% would buy the product from someone else instead. Note that each category’s percentage is calculated in relation to the total amount of respondents and since it was possible to select several response options here, the total percentage (the percentage of all response options combined) equals more than 100 percent. 5% selected “other”. In summation, most of those that elaborated were positive to a classification system being present. It makes the decision process easier since you know what to expect, enables estimating of the value you get for your money, and can feel more secure in your choice of purchase. Although it is of utter importance that the condition description agrees well with reality and that the price corresponds well with the condition. A majority had used the classification system. Among the rest some did not need to use it, while some could not because of certain product groups did not have a grading e.g., beverages. Conclusively, a big majority of the respondents are affected by the grading system but not always use in the same way. The importance of the system differs between product types.

4.4 Product types and specifics of previous purchase

What type of goods did you buy at your last purchase at Returhuset.se?

What other types of products can you generally also consider buying second-hand?

In figure 6, the responses from these two questions are combined. It was possible to select several response options in both questions and the option(s) they selected in the first question was removed in the second question. The respondent was informed of that these were general questions i.e., the potential purchase does not explicitly need to be from Returhuset. Here, the options “other” and “no other product groups” were removed from the chart. Additionally, responses from eight respondents were removed from the total because they had not selected any of the proposed product categories and are thereby excluded from this analysis all together. 3,6% selected “other/comment” in the second question. Because they could select several options it cannot be ruled out that some of them have selected the most fitting option(s) and in addition to that left a comment. These were a mix

filled with listing of products that could not easily be assign to any of the suggested categories, listing of already existing response options, consumers that could consider all categories or buying almost anything in secondhand. Also, some *do-not-knows*, “depending”-s that mostly referred to the product’s condition, and some replies that do not answer the question.

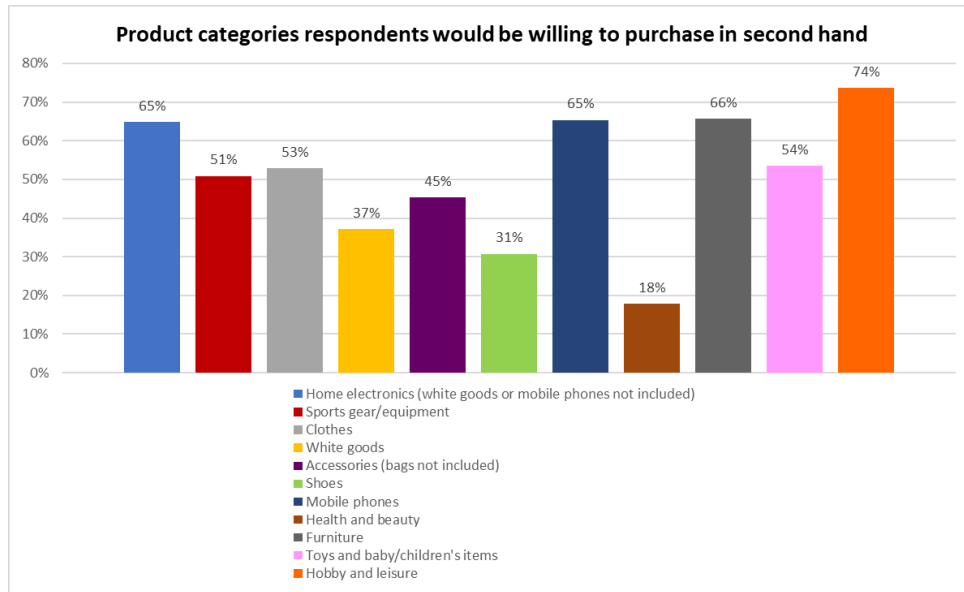


Figure 6. Bar chart showing respondents willingness to buy in secondhand from certain product categories. The suggested categories have been chosen in accordance with the product group headlines at Returhuset’s website.

Among presented categories, respondents are most willing to purchase “hobby and leisure” products in second-hand. Respondents likewise seem to have a high willingness to buy furniture, mobile phones and home electronics in secondhand. A majority were also positive to buy clothes, sports gear/equipment, toys and other baby/children’s items in secondhand. Accessories were not far behind. Only about a third would consider buying white goods or shoes secondhand. Least popular was the category “Health and beauty”, less than one fifth would consider it.

This is interesting because a considerable amount had purchased a mobile phone, see figure 7, and still other products categories were as popular as this one, sometimes even more popular, see figure 6. This could indicate a gap between demand and supply, but not necessarily. A gap that Returhuset could potentially fill with adding more of these kind of products to their assortment. The difference is especially evident for “hobby and leisure”, “furniture” and several other categories. Note that a deeper assessment of this would be needed for being able to conclude with greater certainty that this gap is in fact real. The gap could be explained by many other factors such as respondents did not need furniture or hobby items for the time of their latest purchase and/or that Returhuset is more focused and more

established when it comes to refurbished phones than their other offered products. A third explanation could be cognitive dissonance i.e., that people do not act according to their values and how they think they would act in a certain situation. This study has not attempted to explore this gap further, but a discussion about cognitive dissonance will follow in chapter five (5.1).

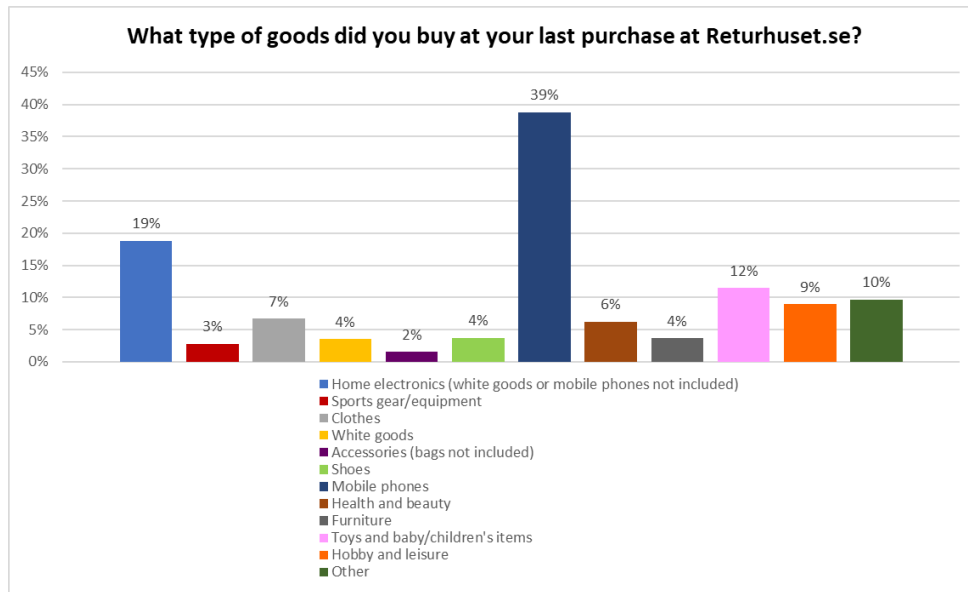


Figure 7. Bar chart showing respondents most recent (in 2021) purchased product type(s) from Returhuset.se

Almost four out of ten (39%) purchased at least one mobile phone in their latest purchase in 2021, similarly nearly 1 of 5 (19%) purchased home electronics (mobile phones excluded). All other categories were found in the range of 12-2%, see details in figure 7. It was possible to select several response options since some could have purchased several items from different categories. 10% selected “other”. A large majority of these just listed the item they had purchased, some of them belonging to suggested categories but most did not. Eight people did not remember being a customer, five did not remember what they had purchased, one had bought a gift card, and a few replies were not understandable.

Condition of purchased product

A large majority of the customers purchased products of very high condition (in new-, perfect- or very good condition). 6,4% selected “other” and three quarters of those did not remember the promised condition. The rest were a mix of not remembering being a customer at Returhuset, customers displeased with received condition, and some replies unrelated to the question.

4.5 Customer base characteristics

3% of respondents did not remember purchasing anything at Returhuset during 2021, while 71% of respondents remember one purchase occasion and 26% remembered two or more purchases made during 2021.

As predicted, figure 8 shows a trend of less and less people responding to the survey the longer back in time their purchase occurred. 16,8% did select “other”. Most common was those that did not remember the exact month of the purchase (14,2% of total). Second most common were those that did not remember purchasing anything from Returhuset (1,5%). The rest reported only purchasing in 2020 or 2022, in December, not in 2021, or something unreadable.

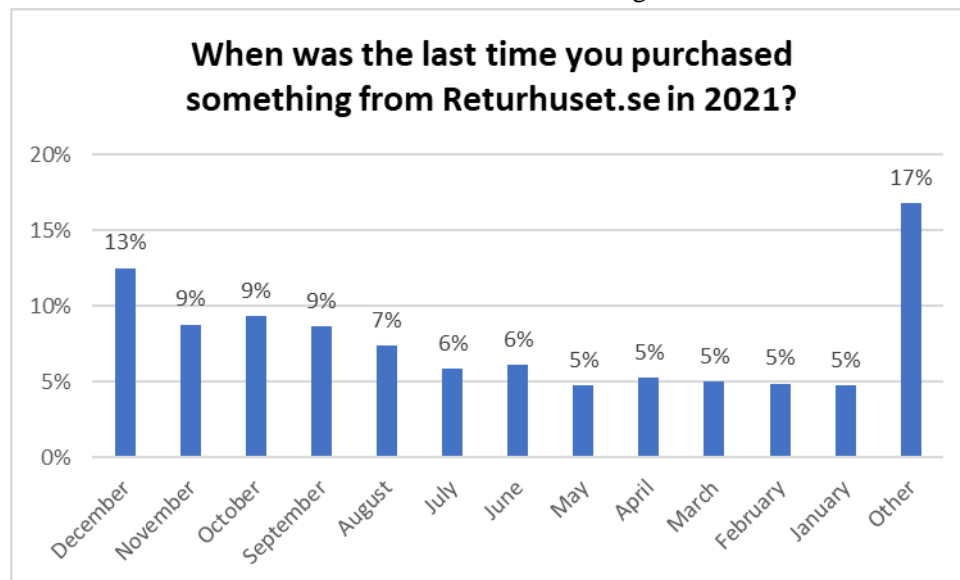


Figure 8. A bar chart displaying when customer’s last purchase (during 2021) did occur.

When asked the question “*Have you previously purchased from GIAB in any of their other sales channels?*” 65% of respondents replied *no*, once again showing that the web shop has a big proportion first-time buyers or perhaps that GIAB/Returhuset are not well known amongst the customers to be the same enterprise even though this was explained in the question. A faulty design makes it hard to tell how many have purchased from GIAB (or another channel) earlier, since there were several yes-options (each which a different sales channel proposed) and respondents had the opportunity to select several options. An improvement would be to add the web shop as response option. All the “other”-responses (2,6%) were either about do not know/remember, listing a sales channel that is not one of GIAB’s or they misunderstood the question.

Geographical distribution

Respondents were asked to write down the name of their municipality. Due to time-constraint no statistical comparisons could be performed, but a qualitative overview of the data shows that respondents represent many parts of the country, both rural and urban areas in 80% of Swedish municipalities. A few respondents seem to live in Denmark, chose to state their region instead, or wrote something that could not be understood or connected to any known municipality.

The gender division among respondents were as follows: women (58,83%), men (40,48%), non-binary (0,48%), do not want to specify (0,21%).

5. Discussion

5.1 Alternative behavior

If customers were to live in a world where Returhuset does not exist, how would they choose to act? Would they buy the same product newly produced, from another secondhand seller or abstain from buying a product at all? It is relevant questions to ask, not least because the alternative decides how much carbon emissions are saved by the purchase, as Clausen et al. (2010) argues.

More than 46% of respondents report they would have bought a newly produced item if Returhuset did not exist. Assuming this number to be a good representative of reality, this shows that GIAB have taken shares from the traditional market and that the corresponding GHG emissions for producing those products from raw materials are prevented. If this number corresponds to reality is difficult to say because of the cognitive dissonance (discussed more below) and could not be verified without adding observation studies. Age was tested as explanatory variable for these results in SPSS and could not be concluded to have an impact on the results.

Some research claim that secondhand consumption in general cause less GHG-emissions than consumption of brand-new products (Scott et al., 2009; Clausen et al., 2010). The secondhand- and abstain behaviors reasonings though needs further in-depth discussion to understand all the different possible effects. See 4.2 for the initial reasoning and exact numbers. In cases then the customer would have purchased it from the secondary market but from another professional refurbisher or non-professional seller, it is likely that the saved emissions would have been less in reality than the estimation that assumes it replaces a brand-new product. Because then Returhuset take claim over a customer from the already existing secondary market, another used product from these other sellers will not find a new owner and faster end up in the trash bin. If the customer refrains the purchase all together, then one would assume that the emissions would be zero. But if one really needed the product and replaced it with another product or service; that solution would have generated emissions as well. Additionally, the saved money contributes to tertiary effects such as increased emissions when the consumer uses the money on other things or services in society. Clausen et al. (2010) estimate that each Euro spent within secondhand trading must contribute to savings of minimum

1,5 kg CO₂ equivalents, otherwise the negative tertiary effects will not be compensated by the positive secondary effects.

Also, the gathered survey answers depend on a subjective thinking of “what if” for each customer. It is not certain that a customer’s thoughts about his or her alternative behaviour corresponds to what that person would have done if that situation was in fact real. Clausen et al. (2010) found that *attitudes do not always reflect behaviour*. Cooper (2007) explains that humans have the ability to hold two contradictory images at the same time, it is called *cognitive dissonance*. This is what makes it possible for us to justify our behaviour then it does not align with our values (Cooper, 2007).

As you may have noticed by now, an alternative behaviour is difficult to argue around and comprehend correctly since its many impacting factors makes it a complex matter of discussion. Arguably it is such a complex issue to untangle that it could be the subject of another thesis paper. Regardless, these results will hopefully be of some value for GIAB and the refurbishment industry.

5.2 Key features for mainstreaming secondhand consumption

Reasonable price and communicating the environmental benefits seem to be important for mainstreaming secondhand consumption. When looking explicitly at responses from people that claim they usually buy brand-new products, price is the key factor with biggest impact on their decision to purchase used items over brand-new. This complies with what is found in the literature (Clausen et al., 2010; Gullstrand Edbring et al., 2016; van Weelden et al., 2016; Wilts et al., 2021). Sustainability is still second most important reason among these consumers, corresponding well with Wilts et al.’s (2021) findings, but less frequent compared to the other consumer groups. Price and higher quality were the two features with most prominent increases in frequency, when compared to the other consumer groups. Why consumers experience Returhuset’s products to have higher quality than other sellers of used goods have not been explicitly explored in the questionnaire, but are found in the literature (Clausen et al., 2010; Gullstrand Edbring et al., 2016). Quality checks, condition grading, warranty, return possibilities, customer support, and other features could arguably have contributed to strengthening this image of high quality. Hence, to succeed in scaling up a refurbishment business the company in question needs to hold several features. Which these features are vary from customer to customer. What can be determined from the results is that a refurbishment company that only display one of these features, will miss out on attracting many potential customer groups. Many

respondents stated in the comment field (see the question about main reason in chapter 4) that they would not have purchased from Returhuset if all their requirements were not met, these requirements were a mix of the features mentioned in the analysis. It also emerged in the next question (about other reasons), that the vast majority (97%) had two or more underlying reasons for their decision to shop at Returhuset.se.

A grading system describing the products conditions seem of importance since an overwhelming majority (85%) have a positive attitude towards it and would use the system if they got the opportunity. This is relatable to Clausen et al.'s (2010) suggestion that worries associated to reliability of the seller and promised functionality and quality of used products, can be met with detailed quality tests among other things. However, in another question only 20% stated that the condition grading system is one of the reasons why they purchased from Returhuset. This could possibly be explained by that the high frequency was attained in a question more directly asking about how the respondent were affected by the condition grading system. How they use the grading system differs between individuals and product types. It acts like a warranty, even though a real promised warranty for secondhand products is even more sought after among consumers. It is of great importance that the condition description corresponds well with reality.

Consumers who have purchased second-hand products previously show more willingness to buy more products in secondhand, contrary to they who have not purchased used products in the past year (Wilts et al., 2021). This have been explored indirectly in my study through several questions about recurring consumption of used products and would be good to explore more in-depth. Especially, one idea about subsidizing the first purchase of a used product. This kind of system³ are already applied in today's Vienna, Austria. These systems have turned out to be incredibly effective. Due to consumers newly acquired knowledge thresholds are lowered, and transaction losses lessened (Wilts et al., 2021).

A quarter of respondents seem to value the higher trust they experience when purchasing from Returhuset. Warranty, condition descriptions, return possibilities, previous good purchase experience at Returhuset or of secondhand items in general, and more of this study's explored features could have contributed to strengthen this trust, convincing the consumer that they will not be deceived in some way when purchasing from them (Clausen et al., 2010; Gullstrand Edbring et al., 2016; van Weelden et al., 2016).

Clausen et al.'s (2010) found convenience in everyday life to be a strong motivation for purchasing things online, irrespective of if the items are new or used. In this study, one fourth claimed simplicity to be an important reason for purchasing, thereby supporting the literature.

³ <https://www.wien.gv.at/umweltschutz/wienerreparaturbon.html>

Some consumers find joy in shopping online (Clausen et al., 2010). If these purchases are fulfilling a need and not just a desire of purchasing something for the fun of it, then having an online shop would increase sustainable transactions. In this regard an online store is advantageous over a physical store. This may be an explanation for GIABs success. This does not exclude the possibility to also have a physical store, like in Returhuset's case, that also enhance consumers attraction (read more below).

All features suggested as response options seem to attract customers to buy refurbished products. All of them, except the "joy"-option, exceed 10% whereof many approaching 20% or even higher. Lastly, a significant difference between the two consumer groups' main reasons have been statistical proven (see 4.2).

Unexplored features

Some features identified in the literature have not been explored in the survey but will however be presented below and then discussed in relation to the case company to some extent. For instance, van Weelden et al. (2016) found that consumers of refurbished mobile phones see the presence of a *physical store* and *service* as a positive characteristic that decreases the perceived risk and acts as a safe point of return. It is of great importance to *use independent recommendations* for strengthening provided information's credibility, such as online customer reviews and *quality certifications/standards*. Study participants also decided with the *seller and brand images* in mind. Unknown seller with bad reputation increases worries for both getting swindled and obtaining low-quality products (van Weelden et al., 2016). Returhuset have a lot of this in place: a physical store, services (performed by their own technicians), return possibilities, online customer reviews, and quality certification (their own created condition grading system). In some survey-comments their good reputation was highlighted, even though a few comments left by disappointed customers claimed the opposite. More though seemed to like their concept and had a positive attitude to the company. All features brought up in previous section aside, these unexplored features could also play an important role in explaining why Returhuset has successfully implemented their circular business model and operates competitively with companies having a more traditional business model. These features could be further explored in future studies.

5.3 Product types with appeal in refurbished condition

Based on the empirical results, there seem to be a great potential for many product types to increase sales on the secondary market today, because the reported willingness is notably higher than the sale numbers. Among presented product

categories, a majority of respondents were willing to purchase these products in used condition: hobby and leisure, furniture, mobile phones, home electronics, clothes, sports gear/equipment, toys and other baby/children's items. This did not correspond well with what customers had purchased most recently from Returhuset's web shop. This could be due to Returhuset's original focus on refurbishing mobile phones and other home electronics, only later expanded their assortment. This focus could still characterize the customer base in some regard. Another reason could be that certain product groups are sold more often in other sales channels, e.g., maybe it is more common to buy furniture and items in bigger size from their physical shop or Blocket.

In the theoretical framework, product types were not the focus, hence not thoroughly explored there. Despite this, some results can be supported by literature. For instance, Gullstrand Edbring et al. (2016) states that 63% of consumers have a positive attitude for buying used chairs and tables, very close to the 66% of respondents in this study willing to purchase used furniture.

5.4 Customer base characteristics

According to GIAB their customer base for the web shop do mainly consists of one-time buyers⁴. This statement corresponds with the results. 71% of respondents reported only purchasing once during 2021 and thereby confirming that a majority of Returhuset's customer seemed to be one-time buyers or at least not frequent returning customers. This could be explained by almost half of customers purchasing a phone, which is a product that in most cases do not need to be exchanged for several years and thereby making the customer's eventual return postponed until then. If it is positive or negative having a big proportion of the customer base consisting of one-timers, will not be speculated about.

Respondents belonged to a good variety of different ages, most likely representing the intended population well in that regard. The geographical distribution represents both rural and urban areas in 80% of Swedish municipalities, though not equally much. The survey had more women (59%) participating than men (41%). If this represents their usual customer base or if women are more prone to participate in surveys, could not be determined.

⁴ Beatrice Lundin, Online Manager Returhuset, email conversation, February 24, 2022.

5.5 Ethical reflection

There may have been direct and indirect influence from GIAB. I have actively tried to stay neutral while collecting data, designing survey questions, or analyzing results. This has been relatively easy, as most of the collected data has been of a quantitative nature and therefore not often exposed to my interpretations. Nor should any of the “other”-specifications or comments from respondents have been overlooked for a subjective reason. These have therefore been analyzed separately in a qualitative analysis and presented after the quantitative results in each section of the result- and analysis chapter. Some comments/specifications could be interpreted to be the same or very similar to suggested response option(s). First thought was to allocate these to the quantitative analysis, more specifically, add them to the frequencies for the different suggested options. However, this was not implemented since many of the comments were too unclear in some regard to not interpret subjectively. Lastly, it is mentioned for transparency reasons that I halfway through the thesis project started working part-time at GIAB, but with other tasks than what my thesis subject is about. This could of course still affect the results in some regard unintentionally.

If the results of this study were to be applied in society, consequently more companies could be encouraged to switch to a circular business model and activities like GIAB's. Hopefully, it will help to change the general consumption pattern in society to a more sustainable behavior with less depletion of virgin resources. It can also lead to more job opportunities being created. This especially for citizens with a low level of education, or for other reasons have difficulties getting employed, given that Returhuset hires people from this group to repair the broken products they bring in. That some workers may need to re-educate themselves if GIAB's concept becomes mainstream could at first sight be perceived as something negative, since less newly produced items lead to a transfer of jobs in industry; from new production to repair workshops. This will probably upset the feelings of the workers who are affected and generate economic and social consequences, both individually and for society. However, much of today's new production takes place abroad, which could mean that more job opportunities are created than what will disappear (EMF et al., 2015). Also, because trading of secondhand items replaces efficient production work with less efficient transaction work (Clausen et al., 2010). In the end, a reduced quantity of jobs does not have to be a rising problem in a circular economy, but instead an opportunity.

This study's conclusions could also affect what GIAB/Returhuset and similar companies communicate to their customers and empathize about their products and services in their advertisement. Possibly the entire refurbishment industry, but it might be stretching my aspirations a little too far.

5.6 Limitations

Reflection on email correspondence with customers

The reoccurring pattern of inconsistencies in the responses regarding respondents claiming not to be customers of Returhuset are concerning. From early on there were 3% of all respondents claiming never to have purchased anything during 2021 from Returhuset, but in the following questions less respondents reported this. If this means that more people remembered about their last purchase while filling out the survey, cannot be said for certain but a possible explanation.

Language of the questionnaire

If some customers from the markets in other countries received my questionnaire, then that could affect the response rate negatively. After examining this, it turned out that 0,7% of invitations were sent out to customers from Denmark and Finland. Note that only two non-Swedish respondents seem to have completed the survey if the municipality responses are to be believed. This is still a source of error, albeit minor.

Chosen incentive and highlighted aspect in invitation

Why the two alternatives *price* and *sustainability* have a higher frequency than other reasons may be partially because a monetary compensation was promised and the environmental purpose appeared in the invitation text, consequently more of these types of customers have perhaps chosen to participate. Whether this is true and how much it affects population's representativeness (all web shop customers from 2021) has not been investigated further. It though seems unlikely that the survey design alone could explain this turnout given that the difference in frequency were substantial in relation to the other options and statistically significant.

Uncertainties in self-assessments

In the study of Wilts et al. (2021) they also used self-assessments and remarked that this approach brought significant uncertainties with it, especially when respondents was asked of something related to an old purchase from years back in time. The respondents of my study are supposed to remember a purchase transacted 3-15 months ago. As predicted, a trend of less and less people responding to the survey

the longer back in time their purchase was found. This may be logical but must still be considered a bias then evaluating this study's representativeness. Maybe even the most influencing factor responsible for the low response rate.

5.7 Alternative approaches and possible improvements

The response rate of my survey could be explained by many factors. One is that customers had entered their "junk email-address", which means that the invitation will remain unopened by the customer within the decided fielding period of my study, as was 30%.

During the test phase, some of the receivers found the invitation mail in their junk-inbox. This possibility was mentioned in literature, saying that the problem with spam emails have made invitation through email less effective (Shih & Fan, 2008). A solution was found but since it would cost both time and money to set up, this measure was not taken.

Some researchers argue for the use of different ways to invite for participation in web survey (Kaplowitz et al., 2012). This have though not been used in this study because several studies stress the importance of taking characteristics of chosen target group into consideration when designing the survey (Conn et al., 2019; Hendra & Hill, 2019; Kaplowitz et al., 2012; Lagarce & Kuhn, 1995; McCluskey & Topping, 2011; Yoshiya & Rossi, 2017). All invited customers are accustomed internet users since all their purchases have been transacted through the website, hence a postal invite or -reminder seemed irrelevant, as well as too costly and time-consuming. Another alternative would be to post a link to the survey on the website. However, since web surveys have been shown to have a lower response rate than other methods this would probably not be an improvement (Kaplowitz et al., 2012; Shih & Fan, 2008).

Kaplowitz et al. (2012) believes that - at the time of their study - web-based survey was not yet well understood, neither the effectiveness nor the appropriate ways to design the invitation to participate. This indicates a lack of research for this approach that may stay true today, a decade later.

The response option "for the joy of buying a product" (sv. "Nöjes skull") could have been better phrased or explained to the respondents. This is however an issue of balance between being enough descriptive and keeping the phrasings and language relatively short and easy, with the intention to encourage more respondents to complete the entire survey.

In future studies it would be interesting to ask respondents to rank their reasons in order of importance. Also letting them put some reasons on the same level of importance if they like to do so since that may better represent reality.

If more time were available, reminders could have been sent out. This may or may not result in more answers since Returhuset previously have had a response rate around 8% in previous surveys, which admittedly touched on another topic (*Trustpilot* surveying customer satisfaction of recent purchase). After all, it may not matter how much time and effort are put into the survey design. Customers may just be a difficult population to investigate.

5.8 Challenges and changes needed on a societal level

Consumers *rely on other people's attitudes* towards refurbished products and possible alternatives. If refurbished products would be more widely used in the market, less suspicion would rise among new buyers and a higher confidence for refurbished mobile phones would take place (van Weelden et al., 2016). In other words, a reinforcement effect would take place after a certain threshold in popularity has been crossed by the common public.

Moreover, it is problematic that *many consumers still are oblivious of the possibility* to buy items in used condition instead of brand-new (Gullstrand Edbring et al., 2016).

Another challenge that the refurbishment industry face is the so-called *planned obsolescence*. How this perceived notion of mobile phones going out of date too fast and palpable planned obsolescence, is a barrier that the industry needs to overcome if more consumers are to dare buy refurbished electronics (van Weelden et al., 2016).

6. Conclusions

This thesis has studied motivations for consumers to purchase from commercial refurbishment companies and to what degree such businesses can replace purchases of brand-new products. Three main conclusions can be drawn from this work.

Firstly, price is the primary reason for why consumers choose refurbished goods. The price must be lower than the price of corresponding unused product and reflecting the condition/quality fairly. Price is followed by *sustainability, higher trust, simplicity, condition grading system, higher quality, warranty, expired product/model, wide assortment, and joyful activity* (in that order).

Secondly, given that 97% of respondents stated two or more motivations for their purchase at Returhuset's web shop, refurbishment companies ought to fulfill a range of these factors to be successful on the market and attract consumers. Preferably as many of those factors as possible because consumers differ in what features they consider important, also the features affect each other. For instance, some consumers experience Returhuset's products to have higher quality than other sellers of used goods. Quality checks, warranty, return possibilities, condition grading or other good condition descriptions, could arguably have contributed to strengthening this image of high quality.

Lastly, consumers appreciate the professionalism and similar feeling to purchasing new products that Returhuset offers. It appears that many consumers prefer the experience and features associated with shopping something new. The product's functional, hygienic, and visual appearance should preferably be experienced as being in new- or very good condition. Although, the level of importance the condition holds varies between different product types and between individual preferences.

Conclusively, it seems possible to mainstream refurbishment and second-hand consumption, implement circular business models in practice, and make society embrace more sustainable consumption behaviours. But only if more refurbishment businesses, and other secondhand establishments, begins to offer more security, ease, and sufficient information thru each purchase in resemblance of companies operating on a more traditional and unsustainable business model. This in terms of warranty, return possibilities, quick delivery, helpful customer service and other features mentioned above. Since this is what seem to distinguish Returhuset from most other actors on the secondary market and could explain their success with attracting customers that would have otherwise purchased brand-new products.

Acknowledgements

I would like to start by thanking my supervisor, associate senior lecturer Matthias Lehner, for good feedback and advise. Along with two sustainability consultants at GIAB - my mentor Emma Nilsson for a good collaboration and Emma Bryngelsson for helpful feedback on my draft.

A big thank you to all the other people from GIAB and Returhuset who have helped me in any kind of way. To all the respondents who have not only chosen to participate but also put their valuable time and energy into answering my survey questions thoughtfully. A big thank you! I would also like to thank the pilot respondents that helped me improve the questionnaire. Additionally, associate professor and researcher Ullrika Sahlin, for your advice regarding the statistical analyses.

Finally, I would like to acknowledge my friends and family. Without you nothing of this would be possible, neither the thesis nor me finishing my university studies and earning a master's degree. A special thanks to Emelia Söderlund and Emma Brodén who have kept me company while writing the thesis.

References

- Ahrne, G., & Svensson, P (editor). (2015). *Handbok i kvalitativa metoder* (2nd ed.). Liber: Stockholm. ISBN: 9789147112241.
- Britto Figueiredo Filho, D., Paranhos, R., da Rocha, E. C., Batista, M., Alexandre da Silva Jr, J., Wanderley D Santos, M. L., & Guiró Marino, J. (2013). When is statistical significance not significant? *Brazilian Political Science Review*, 7(1), 31–55.
<https://www.scielo.br/j/bpsr/a/DhwrWkLLkhHVbdgTZGtMqyD/abstract/?lang=en>
- Calahan, C. A., & Schumm, W. R. (1995). An exploratory analysis of family social science mail survey response rates. *O Psychological Reports*, 76, 1379–1388.
<https://doi.org/10.2466%2Fpr0.1995.76.3c.1379>
- Clausen, J., Blättel-Mink, B., Erdmann, L., & Henseling, C. (2010). Contribution of online trading of used goods to resource efficiency: An empirical study of eBay users. *Sustainability*, 2(6), 1810–1830. <https://doi.org/10.3390/su2061810>
- Conn, K. M., Mo, C. H., & Sellers, L. M. (2019). When Less Is More in Boosting Survey Response Rates*. *Social Science Quarterly*, 100(4), 1445–1458.
<https://doi.org/10.1111/ssqu.12625>
- Cook, C., Heath, F., & Thompson, R. L. (2000). A META-ANALYSIS OF RESPONSE RATES IN WEB-OR INTERNET-BASED SURVEYS. *Educational and Psychological Measurement*, 60(6), 821–836. <https://doi.org/10.1177%2F00131640021970934>
- Cook, D. A., Wittich, C. M., Daniels, W. L., West, C. P., Harris, A. M., & Beebe, T. J. (2016). Incentive and reminder strategies to improve response rate for internet-based physician surveys: A randomized experiment. *Journal of Medical Internet Research*, 18(9), 1–11.
<https://doi.org/10.2196/jmir.6318>
- Cooper, J. (2007). *Cognitive dissonance: in the beginning*. In *Cognitive dissonance: Fifty years of a classic theory* [E-book]. SAGE Publications Ltd.
<https://dx.doi.org/10.4135/9781446214282.n1>
- Cull, W. L., O’connor, K. G., Sharp, S., & Tang, S.-F. S. (2005). Response Rates and Response Bias for 50 Surveys of Pediatricians. *HSR: Health Services Research*, 40(1), 213–226.
<https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1475-6773.2005.00350.x>
- Cunningham, C. T., Quan, H., Hemmelgarn, B., Noseworthy, T., Beck, C. A., Dixon, E., Samuel, S., Ghali, W. A., Sykes, L. L., & Jetté, N. (2015). Exploring physician specialist response rates to

web-based surveys. *BMC Medical Research Methodology*, 15(1).

<https://doi.org/10.1186/s12874-015-0016-z>

Dalhammar, C., Milios, L., & Richter, J. L. (2021). Ecodesign and the circular economy: conflicting policies in Europe. In *Sustainable Production, Life Cycle Engineering and Management* (pp. 187–198). Springer Science and Business Media Deutschland GmbH.

https://doi.org/10.1007/978-981-15-6779-7_14

Deutschens, E., De, K. O., Ni, R. K. D. U., Oosterveld, P., & Ni, P. O. (2004). Response rate and response quality of internet-based surveys: An experimental study. *Marketing Letters*, 15(1), 21–36. <https://link.springer.com/article/10.1023/B:MARK.0000021968.86465.00>

du Rietz, S. (2019). En cirkulär ekonomi: företagsekonomiskt tänkande bortom den linjära värdekedjan. *Organisation & Samhälle*, 2, 38–43.

<https://www.diva-portal.org/smash/get/diva2:1373971/FULLTEXT01.pdf>

Edwards, P. J., Roberts, I., Clarke, M. J., DiGuseppi, C., Wentz, R., Kwan, I., Cooper, R., Felix, L. M., & Pratap, S. (2009). Methods to increase response to postal and electronic questionnaires. *Cochrane Database of Systematic Reviews*, 3. <https://doi.org/10.1002/14651858.MR000008.pub4>

Edwards, P. J., Roberts, I., Clarke, M. J., DiGuseppi, C., Pratap, S., Wentz, R., & Kwan, I. (2002). Increasing response rates to postal questionnaires: Systematic review. *British Medical Journal*, 324(7347), 1183–1185. <https://doi.org/10.1136/bmj.324.7347.1183>

Ellen MacArthur Foundation. (2015). Towards a circular economy - Business rationale for an accelerated transition. <https://ellenmacarthurfoundation.org/towards-a-circular-economy-business-rationale-for-an-accelerated-transition>

Ellen MacArthur Foundation, SUN, & McKinsey Center for Business and Environment. (2015). Growth within: A circular economy vision for a competitive Europe.

<https://ellenmacarthurfoundation.org/growth-within-a-circular-economy-vision-for-a-competitive-europe>

European Commission. (11 mars 2020). *Changing how we produce and consume: New Circular Economy Action Plan shows the way to a climate-neutral, competitive economy of empowered consumers* [Press release].

https://ec.europa.eu/commission/presscorner/detail/en/ip_20_420

European Environmental Agency, EEA. (2018). *Waste Prevention in Europe - Policies, Status and Trends in Reuse in 2017*. EEA Report 4. Copenhagen.

https://circulareconomy.europa.eu/platform/sites/default/files/eea_report_waste_prevention_in_europe_2017_th-al-18-0008-en-n.pdf [Retrieved: 2022-02-24]

Eurostat. (2022). *Computer and Personal and Household Goods Repair Statistics - NACE Rev. 2*. European Union.

https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Computer_and_personal_and_household_goods_repair_statistics_-_NACE_Rev._2 [Last updated: 2022-02-22]

- Fan, W., & Yan, Z. (2010). Factors affecting response rates of the web survey: A systematic review. *Computers in Human Behavior*, 26(2), 132–139.
<https://doi.org/10.1016/j.chb.2009.10.015>
- Ferguson, M.E., & Toktay, L.B. (2006). The Effect of Competition on Recovery Strategies. *Production and Operations Management*, 15, 351-368.
<https://doi.org/10.1111/j.1937-5956.2006.tb00250.x>
- Geissdoerfer, M., Savaget, P., Bocken, N M.P. & Hultink, E-J. (2017). The Circular Economy – A new sustainability paradigm? *Journal of Cleaner Production*, 143, 757-768.
<https://doi.org/10.1016/j.jclepro.2016.12.048>
- Godsinlösen Nordic AB (GIAB). (n.d.a). *Hållbarhet*. [Retrieved: 2022-01-21]
<https://www.giabnordic.se/hallbarhet/>
- GIAB. (n.d.b). *Om oss*. [Retrieved: 2022-01-26] <https://www.godsinlosen.se/home/om-oss/>
- GIAB. (n.d.c). *Om oss*. [Retrieved: 2022-01-21] <https://www.giabnordic.se/om-oss/>
- GIAB. (n.d.d). *Fynda returerna på nätet - Smart för både klimat och plånbok*. [Retrieved: 2022-01-21] <https://www.giabnordic.se/sv/>
- GIAB. (n.d.e). *Re:Commerce*. [Retrieved: 2022-01-21] <https://www.giabnordic.se/recommerce/>
- GIAB. (n.d.f). *Hållbarhetsredovisning 2020*. [Retrieved: 2022-01-21]
https://www.giabnordic.se/wp-content/uploads/2021/04/giab-hallbarhetsrapport_2020.pdf
- Gullstrand Edbring, E., Lehner, M., & Mont, O. (2016). Exploring consumer attitudes to alternative models of consumption: Motivations and barriers. *Journal of Cleaner Production*, 123, 5–15. <https://doi.org/10.1016/j.jclepro.2015.10.107>
- Hendra, R., & Hill, A. (2019). Rethinking Response Rates: New Evidence of Little Relationship Between Survey Response Rates and Nonresponse Bias. *Evaluation Review*, 43(5), 307–330.
<https://doi.org/10.1177/0193841X18807719>
- Kaplowitz, M. D., Lupi, F., Couper, M. P., & Thorp, L. (2012). The effect of invitation design on web survey response rates. *Social Science Computer Review*, 30(3), 339–349.
<https://doi.org/10.1177/0894439311419084>
- Keusch, F. (2012). How to Increase Response Rates in List-Based Web Survey Samples. *Social Science Computer Review*, 30(3), 380–388. <https://doi.org/10.1177/0894439311409709>
- Lagarce, R., & Kuhn, L. D. (1995). The Effect of Visual Stimuli on Mail Survey Response Rates. *Industrial Marketing Management*, 24, 11–18. [https://doi.org/10.1016/0019-8501\(94\)00026-S](https://doi.org/10.1016/0019-8501(94)00026-S)
- Liakos, N., Kumar, V., Pongsakornrungrasit, S., Garza-Reyes, J. A., Gupta, B., & Pongsakornrungrasit, P. (2019). Understanding circular economy awareness and practices in manufacturing firms. *Journal of Enterprise Information Management*, 32(4), 563–584.
<https://doi.org/10.1108/JEIM-02-2019-0058>

- Malhotra, N. (2008). Completion time and response order effects in web surveys. *Public Opinion Quarterly*, 72(5), 914–934. <https://doi.org/10.1093/poq/nfn050>
- Malhotra, N. (2009). Order effects in complex and simple tasks. *Public Opinion Quarterly*, 73(1), 180–198. <https://doi.org/10.1093/poq/nfp008>
- Manfreda, K. L., Bosnjak, M., Berzelak, J., Haas, I., & Vehovar, V. (2008). Web surveys versus other survey modes: a meta-analysis comparing response rates. *International Journal of Market Research*, 50(1), 79–104. <https://journals.sagepub.com/doi/pdf/10.1177/147078530805000107>
- McCluskey, S., & Topping, A. E. (2011). Increasing response rates to lifestyle surveys: A pragmatic evidence review. *Perspectives in Public Health*, 131(2), 89–94. <https://doi.org/10.1177/1757913910389423>
- Nix, J., Pickett, J. T., Baek, H., & Alpert, G. P. (2019). Police research, officer surveys, and response rates. *Policing and Society*, 29(5), 530–550. <https://doi.org/10.1080/10439463.2017.1394300>
- Norén, Ylva. (2021). *Om Delegationen för cirkulär ekonomi*. Tillväxtverket. <https://delegationcirkularekonomi.se/om-oss> [Last updated: 2021-03-16]
- Osterwalder, A., Pigneur, Y., & Tucci, C. L. (2005). Clarifying Business Models: Origins, Present, and Future of the Concept. *Communications of the Association for Information Systems*, 16. <https://doi.org/10.17705/1cais.01601>
- Parker, C., Scott, S., & Geddes, A. (2019). Snowball Sampling. In P. Atkinson, S. Delamont, A. Cernat, J.W. Sakshaug, & R.A. Williams (Eds.), *SAGE Research Methods Foundations*. <https://dx.doi.org/10.4135/9781526421036831710>
- Paxson, C. (1995). Increasing survey response rates: Practical instructions from the total-design method. *The Cornell Hotel and Restaurant Administration Quarterly*, 36(4), 66–73. [https://doi.org/10.1016/0010-8804\(95\)91140-B](https://doi.org/10.1016/0010-8804(95)91140-B)
- Pit, S. W., Vo, T., & Pyakurel, S. (2014). The effectiveness of recruitment strategies on general practitioner’s survey response rates: A systematic review. *BMC Medical Research Methodology*, 14(76). <http://www.biomedcentral.com/1471-2288/14/76>
- Quinn, G., Keough, M. (2002). *Experimental design and data analysis for biologists*. Cambridge University Press.
- Raworth, K. (2012). A safe and just space for humanity: Can we live within the doughnut? https://oi-files-d8-prod.s3.eu-west-2.amazonaws.com/s3fs-public/file_attachments/dp-a-safe-and-just-space-for-humanity-130212-en_0_4.pdf
- Raworth, K. (2017). A doughnut for the anthropocene: Humanity’s compass in the 21st century. In *The Lancet Planetary Health* (Vol. 1, Issue 2, pp. 48–49). Elsevier B.V. [https://doi.org/10.1016/S2542-5196\(17\)30028-1](https://doi.org/10.1016/S2542-5196(17)30028-1)

- Regeringskansliet. (2020). *Cirkulär ekonomi – strategi för omställningen i Sverige*. Miljödepartementet: Stockholm.
https://www.regeringen.se/4a3baa/contentassets/619d1bb3588446deb6dac198f2fe4120/200814_ce_webb.pdf
- Regeringskansliet. (2021). *Cirkulär ekonomi – Handlingsplan för omställning av Sverige*. Miljödepartementet: Stockholm.
<https://www.regeringen.se/48f821/contentassets/561eea8cac114172b993c1f916e86a9b/cirkular-ekonomi-handlingsplan-for-omstallning-av-sverige.pdf>
- Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin, F. S., Lambin, E., Lenton, T. M., Scheffer, M., Folke, C., Schellnhuber, H. J., Nykvist, B., de Wit, C. A., Hughes, T., van der Leeuw, S., Rodhe, H., Sörlin, S., Snyder, P. K., Costanza, R., Svedin, U., ... Walker, B. (2009). A safe operating space for humanity. *Nature*, 461, 472–475.
<https://doi.org/https://doi.org/10.1038/461472a>
- Šajin, Nikolina. (2022). *Right to repair* [Briefing]. European Parliamentary Research Service.
[https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/698869/EPRS_BRI\(2022\)698869_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/698869/EPRS_BRI(2022)698869_EN.pdf)
- Scott, Kate. Barrett, John. Baiocchi, Giovanni. Minx, Jan. (2009). *Meeting the UK climate change challenge: The contribution of resource efficiency* [Final report]. WRAP Project EVA128. Report prepared by Stockholm Environment Institute and University of Durham Business School, WRAP. [Received: 2022-03-01]
<https://wrap.org.uk/sites/default/files/2021-02/WRAP-Meeting-the-UK-climate-change-challenge-The-role-of-resource-efficiency-Report.pdf>
- Shih, T. H., & Fan, X. (2008). Comparing response rates from web and mail surveys: A meta-analysis. *Field Methods*, 20(3), 249–271. <https://doi.org/10.1177/1525822X08317085>
- Thorpe, C., Ryan, B., McLean, S. L., Burt, A., Stewart, M., Brown, J. B., Reid, G. J., & Harris, S. (2009). How to obtain excellent response rates when surveying physicians. *Family Practice*, 26(1), 65–68. <https://doi.org/10.1093/fampra/cmn097>
- United Nations (UN). (n.d.). *Transforming our world: the 2030 Agenda for Sustainable Development*. <https://sdgs.un.org/2030agenda> [Retrieved: 2022-01-29]
- van Weelden, E., Mugge, R., & Bakker, C. (2016). Paving the way towards circular consumption: Exploring consumer acceptance of refurbished mobile phones in the Dutch market. *Journal of Cleaner Production*, 113, 743–754. <https://doi.org/10.1016/j.jclepro.2015.11.065>
- Warren, B. (2018). *Decision Support Using Nonparametric Statistics*. Springer International Publishing. <https://doi.org/10.1007/978-3-319-68264-8>
- Wilts, H., Fecke, M., & Zeher, C. (2021). Economics of waste prevention: Second-hand products in Germany. *Economies*, 9(2). <https://doi.org/10.3390/economies9020074>

Yoshiya, S., & Rossi, M. J. (2017). Editorial commentary: Still miles away from designing high-quality surveys with high response rates. *Arthroscopy - Journal of Arthroscopic and Related Surgery*, 33(5), 1080–1081. <https://doi.org/10.1016/j.arthro.2017.02.016>

Yousuf, A. (2017). Transaction costs: A conceptual framework. *International Journal of Engineering and Management Sciences (IJEMS)*, 2(3), 131–139. <https://doi.org/10.21791/IJEMS.2017.3.13>

© Photo (front page): Peter Jennerheim, photographer. (2020, January 24th). *Title missing* [Reparation of a mobile phone]. Godsinösen Nordic AB.

Appendix 1: Survey template in Swedish

Villkor & Samtycke

Jag medger härmed mitt samtycke till att mina svar används i forskningssyfte och att resultatet från denna undersökning kommer att publiceras på internet i formen av en examensuppsats. Resultatet kommer presenteras som en sammanställning av svaren från enkätundersökningen.

Jag accepterar villkoren

Ja

Nej

I enkäten finner du frågor om köpbeteende som det tar ca 7-10 min att besvara. Tack för att du ställer upp. Du bidrar till ny kunskap om hur cirkulära affärsmodeller används och hur bra/dåligt de fungerar i praktiken, ämnesområden som det idag finns begränsad forskning inom.

Enkätfrågorna avser i första hand webbutiken Returhuset.se, så länge inget annat instruerats i frågan.

Har du någon fråga om något i enkäten? Svara på mejlet med inbjudan dvs. skicka till undersokning@returhuset.se så ska jag se till att svara dig så snabbt som möjligt!



LUNDS UNIVERSITET



Returhuset

1. Demografiska frågor

Ålder:

Skriv ditt svar här...

Namn på kommun:

Skriv ditt svar här...

Kön:

- Kvinna
- Man
- Icke-binär
- Vill ej uppge

Vilken mejladress vill du bli kontaktad på om du vinner ett av presentkortet?

- Samma mejladress som jag mottog enkätinbjudan på
- Vill ej delta i lotteriet
- Denna mejladress:

2. Ditt köp på returhuset.se

Hur många olika tillfällen under 2021 har du handlat på Returhuset.se?

- Inga
- En
- Två eller fler

När köpte du senast något på Returhuset.se under 2021?

- december
- november
- oktober
- september
- augusti
- juli
- juni
- maj
- april
- mars
- februari
- januari
- Annat:

3. Ditt senaste köp på returhuset.se under 2021

Utgå härnäst från ditt senaste köptillfälle under 2021 när du besvarar resterande frågor. Om du handlat mer än en gång under senaste kalenderåret, bortse från de tidigare köptillfällena.

Vad är huvudskälet till att du handlade på Returhuset.se?

Välj endast ett svarsalternativ. Du kommer att få ange fler skäl i nästa fråga, här efterfrågar jag bara ditt viktigaste skäl.

- Brett sortiment
- Miljö & hållbarhet
- Nöjes skull
- Skickgraderingssystemet
- Enkelheten – som följer av att det mesta sköts av Returhuset (transport, lagning, rekonditionering, kvalitetskontroll, m.m.)
- 12 månaders garantin
- Hög kvalitet – upplever att Returhusets produkter har en högre kvalitet än andra begagnade varor
- Utgången produkt/modell - som inte finns att få tag på andra ställen
- Priset
- Högre tillit – jämfört med att köpa från privatperson/ideell second hand-verksamhet
- Annat:

Kommentar till fråga 3 (frivillig):

Skriv ditt svar här...

4. Ditt senaste köp på returhuset.se under 2021

Utgå i dina svar från den vara/varorna du handlat vid ditt senaste köptillfälle (under 2021)

Vilka andra skäl bidrog till att du handlade på Returhuset.se?
Möjligt att kryssa i flera svarsalternativ.

- Brett sortiment
- Miljö & hållbarhet
- Nöjes skull
- Skickgraderingssystemet
- Enkelheten – som följer av att det mesta sköts av Returhuset (transport, lagning, rekonditionering, kvalitetskontroll, m.m.)
- 12 månaders garantin
- Hög kvalitet – upplever att Returhusets produkter har en högre kvalitet än andra begagnade varor
- Priset
- Högre tillit – jämfört med att köpa från privatperson/ideell second hand-verksamhet
- Annat:

Kommentar till fråga 4 (frivillig):

Skriv ditt svar här...

Har du tidigare handlat av GIAB* i några av deras andra försäljningskanaler?

Markera alla försäljningskanaler du handlat från utöver Returhuset.se

* GIAB är en förkortning av Godsinlösen Nordic AB, ägaren till Returhuset.

- Nej
- Ja, via Tradera
- Ja, via Blocket
- Ja, via den fysiska returhuset-butiken i Staffanstorp
- Ja, via CDON marketplace
- Annan:

5. Scenario

Utgå nu från ett scenario där Returhuset inte existerar.

Om du inte hade haft Returhuset.se att handla hos, vem skulle du då först vända dig till?
Jag skulle...

- ...handlat produkten i **andrahand** från någon annan försäljare (t.ex. företag, privatperson eller ideell second hand-verksamhet)
- ...ha **avstätt köpet** och inte fortsatt leta efter produkten i nytt eller begagnat skick någon annanstans
- ...handlat produkten **ny** från en konventionell butik (både fysiska butiker och nätbutiker ingår här)
- Annat:

6. Scenario

Utgå fortfarande från ett scenario där Returhuset inte existerar.

Jag skulle först försöka köpa varan/varorna i andrahand av...

- ...en privatperson
- ...en ideell second hand-verksamhet
- ...ett annat företag med liknande verksamhet som Returhuset.se
- ...annan, nämligen:

7. Scenario

Utgå fortfarande från ett scenario där Returhuset inte existerar.

Jag skulle ha avstätt inköpet helt...
Välj det alternativ som passar bäst in.

- ...då jag kan kolla med bekanta om någon har den varan/de varorna jag söker och är villig att sälja, ge bort eller låna ut.
- ...då jag klarar mig utan varan/varorna.
- ...då jag inte haft råd med motsvarande vara/varor nyproducerat.
- ...då jag kan hyra varan/varorna.

Annat:

8. Scenario

Utgå fortfarande från ett scenario där Returhuset inte existerar.

Jag skulle köpt varan/varorna nyproducerat eftersom jag...
Välj det alternativ som passar bäst in.

- ...verkligen tycker om känslan av att ha en oanvänd vara
- ...verkligen vill ha varan/varorna
- ...verkligen är i stort behov av varan/varorna just nu och inte ser så många andra alternativ i min situation
- Annat:

9. Produktgrupper & skick

Ditt senaste inköp (under 2021)

Vilken typ av vara/varor handlade du vid ditt senaste köptillfälle på Returhuset.se?
Välj den/de produktgrupper varan/varorna tillhör.

- Hemelektronik (ej vitvaror eller mobiltelefoner)
- Sportutrustning
- Kläder
- Vitvaror
- Accessoarier (inkl. väskor)
- Skor
- Mobiltelefoner
- Hälsa & skönhet
- Möbler
- Leksaker & barnprylar
- Hobby & fritid
- Annan:

Vilken skickgradering hade varan/varorna?
Kryssa i flera alternativ om dina varor hade olika skick.

- NY - "Ny"
- A+ - "Perfekt skick"
- A - "Mycket bra skick"
- B - "Bra skick"
- C - "Okej skick"
- Övrigt:

10. Produktgrupper & skick

Du har nu kommit till den avslutande delen i enkäten, håll ut!

Påverkar det faktum att Returhuset använder sig av skickgraderingen* dina inköp på Returhuset.se? Om ja, hur då?

**Ett klassificeringssystem som beskriver skicket på produkten.*

Möjligt att välja flera svarsalternativ.

- Nej
- Ja, om produkten som jag söker för tillfället bara finns i ett för dåligt skick på Returhuset.se än vad jag söker så väntar jag med mitt köp tills Returhuset.se får in samma produkt i bättre skick.
- Ja, jag hade inte handlat på Returhuset.se om de inte haft skick-klassificeringssystemet.
- Ja, om produkten som jag söker för tillfället bara finns i ett för dåligt skick på Returhuset.se än vad jag söker, så köper jag produkten av någon annan i stället.
- Annat:

Vilka andra typer av produkter kan du generellt också tänka dig att köpa i andrahand?
Möjligt att kryssa i flera svarsalternativ. Här behöver det inte vara produkter du handlar på Returhuset

Hemelektronik (ej vitvaror eller mobiltelefoner)

Sportutrustning

Kläder

Vitvaror

Accessoarer (inkl. väskor)

Skor

Mobiltelefoner

Hälsa & skönhet

Möbler

Leksaker & barnprylar

Inga andra produktgrupper

Övrig kommentar:

Kan du tänka dig att bli kontaktad igen (av mig i närtid eller Returhuset i framtiden) för att svara på fler frågor med koppling till studiens resultat?

Ja, går bra att kontakta mig på samma mejl som denna enkät skickades till

Nej

Ja, men kontakta mig då på denna mejladress:

Tack för ditt deltagande, det är mycket uppskattat och bidrar till viktig forskning! 😊

*Har du någon kommentar eller fundering kring studien eller enkäten?
Kontakta mig på undersokning@returhuset.se genom att svara på mejlet med enkätinbjudan så ska jag se till att svara dig så snabbt som möjligt.*

Appendix 2: Invitation text in Swedish

Titel på mejlet:

Examensuppsats med Returhuset – 9 minuter för att delta i utlottning av presentkort



The image shows a screenshot of an email invitation. At the top left is the 'reuse' logo, a green circle with a white 'w' and the word 'reuse' below it. To its right is the 'Returhuset' logo in a green sans-serif font. Below the logos is a white rectangular area containing the text of the email. The text is in Swedish and discusses a survey for a thesis on circular business models. It offers a 500 SEK gift card as an incentive for participating in a 9-minute survey. A green button with the text 'GÅ TILL UNDERSÖKNING' is centered at the bottom of the white area. Below the button, the sender's name 'Vänliga hälsningar Johanna Andersson' is written.

Examensuppsats med Returhuset

Hejsan!

Jag läser sista terminen på en masterutbildning i Strategiskt miljöarbete vid Lunds universitet och skriver just nu min examensuppsats där jag använder Returhuset.se som fallstudie. Studien handlar om användningen av cirkulära affärsmodeller. Därför vill jag bland annat ta reda på varför du väljer att handla på Returhuset.se, var du skulle vända dig annars och hur du använder skickgraderingen. Jag skulle behöva din hjälp med att svara på en enkät om köpbeteende. Enkäten tog inte mer än 10 min att besvara för personerna i testfasen, någon var klar redan efter 5 min. Genom att svara på enkäten deltar du även i en utlottning av tre presentkort från Returhuset till värde av 500 kr styck. Jag behöver ditt svar så snart som möjligt, men senast 10/4.

Har du någon fråga om något i enkäten? Svara på detta mejl, dvs. skicka ett mejl till undersokning@returhuset.se så ska jag se till att svara dig så snabbt som möjligt!

Tack så mycket för din tid, det uppskattas verkligen och bidrar dessutom till viktig forskning!

*Intresserad av att läsa studiens slutrapport?
Kontakta mig på jo3407an-s@student.lu.se så meddelar jag dig när den är publicerad.*

Detta mejl går ut till dig som handlat på Returhuset.se under 2021. Returhuset tar hand om returer och reklamationer från andra e-handlare, produkter med estetiska skador uppkomna under nyproduktionen, och produkter från försäkringsärenden. De reparerar skadade produkter till väl fungerande skick och säljer dem sedan vidare via bl.a. webbutiken (Returhuset.se).

GÅ TILL UNDERSÖKNING

Vänliga hälsningar Johanna Andersson



LUNDS
UNIVERSITET

WWW.CEC.LU.SE
WWW.LU.SE

Lund university

**Education in environmental science
Centre for Environmental and Climate Science
Ekologihuset
223 62 Lund**