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TOWARDS A SUSTAINABLE FASHION INDUSTRY: DETERMINANTS TO FRENCH MILLENNIALS' BUYING INTENTION OF SECOND-HAND CLOTHES.

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**BUSINESS
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Abstract

The Covid-19 health pandemic fostered the awareness and the motivations towards a more sustainable consumption. This quantitative study analyses the conditioning factors of the second-hand clothes purchase by the French Millennials, as they are currently an active generation. Its main objective is to understand this specific population's buying intention of second-hand clothes, and the underlying motivations and barriers. Those determinants might differ compared to previous studies, because of the generation, the localisation and the time period studied. Therefore, the research is meant to provide additional academic knowledge. The aim is also to give insights on consumers' behaviour and recommendations to companies, to help them seize the second-hand market opportunity. It is intended to consumers as well, to educate them about sustainable consumption practices.

To conduct this study, a quantitative approach has been used. An online questionnaire was shared on social medias. Following a convenience sample methodology, a total of 94 participants, consumers as well as non-consumers of used clothing, took part in the research.

The findings reveal that French millennials have a positive buying intention towards second-hand clothes. Economic and ethical motivations have a great positive effect on buying intention, while fashion factors don't. On the other hand, utilitarian and self-expression determinants impact negatively the buying intention, whereas the affiliation barrier doesn't have an influence and seems to fade away. Even though the findings can't be generalized, they can be used for future researches.

Keywords - Second-Hand Clothing, Millennials, Overconsumption, Sustainable Consumption, Buying Intention motivations.

JEL Code: E21, L67, M31.

Resumo

A pandemia de saúde pelo vírus Covid-19 impulsionou a notoriedade e motivação por um consumo mais sustentável. Este estudo quantitativo analisa os fatores condicionantes da intenção de compra em segunda mão pelos franceses da chamada geração *millennial*. O principal objetivo é compreender as motivações e barreiras no processo de intenção de compra desta geração atualmente ativa. Estes fatores podem diferir dos resultados de anteriores estudos, devido à natureza específica deste segmento e ao contexto da sua localização e momento da análise. Assim, este estudo contribui com conhecimento para a academia, mas igualmente para evidenciar, ao consumidor e às empresas, a oportunidade do mercado em segunda mão, bem do fomento de práticas de consumo sustentável.

Seguindo uma metodologia quantitativa, foi aplicado um questionário *on-line* nas redes sociais para uma amostra de conveniência. Obteve-se um total de 94 participantes, sendo consumidores e não-consumidores de compra de vestuário em segunda mão.

Os resultados evidenciam um positivo comportamento de intenção de compra em segunda mão para os franceses da geração *millennial*. As motivações económicas e éticas têm um impacto positivo na intenção de compra, mas não as relacionadas com a moda. Por outro lado, os fatores relacionados com o sentido utilitário e de autoexpressão influenciam negativamente a intenção de compra, onde a barreira da afiliação não apenas não condiciona como parece ausente. Os resultados do estudo revelam ser uma base para futura investigação, apesar de não se poderem generalizar.

Palavras-chave: vestuário em segunda mão, *Millenials*, consumo excessivo, consumo sustentável, Motivações de Intenção de Compra

JEL Code: E21, L67, M31.

Contents

1 Introduction

1.1 Background

"Our house is burning and we are looking elsewhere." That is how former French president Jacques Chirac opened his speech at the Fourth Earth Meeting in Johannesburg in 2002. Twenty years later, this statement is still relevant, if not more. For the past few years, climate change is happening before our very eyes. According to Miltonberger (2017), "climate change is defined as a long term change in the Earth's overall temperature with massive and permanent ramifications". It became the greatest challenge to mankind in modern times. Numerous reports and studies have been released, with the proof that not only climate change is real but is also accelerating. According to the United Nation IPCC (Intergovernmental Panel on Climate Change) last report, we would have 3 years left to reach our peak of gas emissions, before decreasing them, if we want to limit the Earth global average temperature rise to less than 1.5°C above pre-industrial levels, as stated in the Paris agreement (Our Changing Climate, 2020).

Our current lifestyle and overconsumption system is at the heart of the problem, since it is not compatible with the preservation of the ecological resources. It is brought by our current linear economic model. It causes an accumulation of waste, and particularly the rejection of carbon dioxide in the atmosphere (Earth Overshoot Day, 2022). The situation is even more concerning knowing that in 2030, the global population might reach around 8.5 billion and 9.7 billion in 2050 (Olchawska, 2022). According to the UN, in order to maintain our current lifestyles, almost three planets are required.

As a result, we must adapt our lifestyles and make radical changes collectively in every sector, at the corporate, governmental, and individual levels. We are the issue, but we are also the answer (Our Changing Climate, 2020). Several industries, including the fashion industry, which is crucial in our daily lives and in the global economy but also considered as one of the most polluting sectors, have seen changes in their production and consumption models over the past few years (Ellen MacArthur Foundation, 2021). In fact, alternative models like used clothing have gained great popularity (Ferraro et. al 2016). Second-hand retailing has evolved to become a profitable business model, offline as well as online (Yang et al. 2017). Second-hand shopping is more popular than ever, and it's a trend that keeps growing (ThredUp, 2021). By 2025, it is

expected that resale will have a market share of $77 billion, compared to $32 billion today. Millennials, also known as the Generation Y, who are particularly sensitive regarding environmental issues, are mainly responsible for this growth (Guevarra, 2010). They constitute the customer segment purchasing the most used clothing (ThredUp, 2021).

1.2 Problem statement

Millennials show the strongest preference for buying second-hand clothes, especially because of environmental factors (ThredUp, 2021). However, they also seem to be the most impulsive buyers, discarding clothes after just one to five wears. Therefore, this generation of consumers cultivates a high purchasing rate along with their environmental awareness, but when they buy clothes, they frequently throw them out in the same way (Parment, 2013). This is a case of overconsumption. According to Polianskaia (2018), a phenomenon that is frequently studied when implementing a pro-environmental attitude is a gap between attitude and behaviour. The millennial generation is more and more important because they are the current buying generation and are exerting more influence in society and in the markets for consumer goods (Parment, 2013). Since they are more environmentally aware and educated, as well as having a bigger purchasing power (Pew Research Center, 2014), they might change the fashion industry landscape (Sheahan, 2005). Therefore, it is crucial to examine this generation attitudes and how they affect their consumption patterns.

In the past few years, second-hand fashion has been reimagined and is currently a trend especially in Western countries (Yang et al., 2017). Several researches on the topic revealed multiple motivations (Guiot and Rioux 2010; Ferraro et al. 2016). At the time, environmental ones were not the primary factor to buy second-hand clothing (Cervellon et al. 2012; Yan et. al 2015). Along with the motivations, it's important to look into the obstacles millennial consumers face when trying to buy used goods.

1.3 Research question

This study is about circular economy, sustainable development and consumption applied to the fashion industry. It aims to understand the buying intention of French millennial consumers regarding second-hand clothes, in a post-pandemic context, by analysing their motivations as well as the barriers to buy such items, and identify a potential shift. As discussed before, researches have been made on the subject, but not with a focus on this generation and population after the pandemic.

Therefore, the following research question can be formulated:
1. What are the motivations for French millennials to shop second-hand clothing?
2. What are the barriers for French millennials to shop second-hand clothing?

1.4 Research Objectives

The aim of this research is to understand French millennial customers' intention for second-hand shopping, and their main motivations for and against buying such items. This study will contribute to the fields of second-hand clothing, sustainable consumption, and consumer's buying behaviour.

First of all, this study includes a literature review in order to explain key topics and concepts, and use other researches to support the present one. The methodology used to make the research will be further explained, before analysing the results, using outputs from SPSS, version 28. Finally, these results will be discussed, comparing with other sources, to support or balanced the findings. Following the discussion, the thesis will be concluded, and give recommendations not only for managerial implications but also directly for consumers, with an educational objective. Limitations and future researches will be discussed lastly.

2 Literature Review

This chapter will present material to support the topic of this study, in relation with the research questions. The multiple hypotheses will be revealed.

2.1 The current fashion industry's linear model

The fashion industry has experienced exponential growth in production over the past few decades, a decline in profit margins due to lower prices and lost sales, along a rise of negative effects on the environment. Between 2000 and 2015, the production doubled while utilization decreased by 36% (Ellen MacArthur Foundation, 2021). However, in 2020, because of the Covid-19 pandemic, the industry profits decreased by 90% (Ellen MacArthur Foundation, 2021).

2.1.1 Take-make-dispose

The linear "take-make-waste" paradigm of the fashion industry has produced one of the most environmentally destructive economic sectors. By 2050, the fashion industry is expected to consume 26% of the world's carbon budget. It is currently responsible for around 10% of all greenhouse gas emissions (ThredUp, 2021). Following this linear model, businesses create revenue only once, since they sell something and then lose sight of it. H&M and Zara are the two most well-known companies using this "pipeline model." They don't offer two collections a year, one for summer and one for winter, like most brands do. Actually, they switch out their collection every three weeks. They produce quickly and cheaply, implying a lowest quality (United Nations, 2019). That is what we call fast fashion. The concept will be further explained in the next part.

The linear "take-make-waste" model is to blame for the environmental issues in the industry, according to the 2017 Ellen MacArthur Foundation report "A new textiles economy: redesigning fashion's future." Only 1% of the collected clothing is recycled into new garments, with one truck full of textiles being landfilled or burned every second (Zalando, 2021). According to a study by Yang and Ha-Brookshire (2020), the waste of clothing in landfills, which amounts to more than 15 million tonnes annually, puts a huge pressure on the environment.

2.1.2 Overconsumption and fast fashion

According to the McKinsey State of Fashion report, 62 million tonnes of clothing were consumed worldwide in 2019. According to the same report, average consumers are not only purchasing 60% more clothing than they were 15 years ago, but they are also keeping it half as long. In fact, the practical service life of clothing has decreased and is now shorter than its technical service life due to consumers' desire for novelty (Zamani et al., 2017), which has resulted in the underuse of those clothing items.

"Fast fashion", the current main business model in the fashion industry, has made this phenomenon of clothing underuse more obvious. Customers are attracted to frequently buy and discard clothing because of constantly changing collections at low prices. They have quick access to new fashion items, stimulating their desire for newness and motivating them to keep buying new things more often. Because of fast fashion, outdated clothes that are unused are quickly replaced by new styles (Joy et al., 2012).

Therefore, the global demand for clothing has increased because of quickly evolving fashion trends. Consumers from developed nations consider that they have more clothes than they really need. Since clothes go out of style in just a few weeks, and because they can afford new ones, they discard their clothes by donating or recycling them, but most often by throwing them away (Cline, 2012). The average consumer throws away clothing after only 7 or 8 wears.

Fast fashion is unsustainable and has detrimental effects on society, the economy, and the environment (Zamani et al., 2017). Since the amount of clothing produced has doubled between 2000 and 2014, it is crucial to change our business models and make consumption and production as sustainable as possible (Le, 2020).

2.1.3 Environmental impacts

We are aware that human activity and several industries, including manufacturing, energy, transportation, or food production, are bad for the environment. However, as stated before, one of the most harmful industries is the fashion sector. It is considered the second most polluting one in the world by numerous sources, including the UN Nations. Actually, the UN Environment Programme's Consumption and Production Unit claims that it is responsible to "8% of the world's greenhouse gas emissions". That surpasses the sum of maritime shipping and aviation. Because of the concentration of manufacturing in Asia, hard coal and natural gas are primarily used in the sector to produce electricity and heat. By 2030, the industry's greenhouse gas emissions might increase by almost 50%. This industry's production and consumption have a big negative impact on the environment due to excessive water use, chemical use, rejection of microplastics, and carbon emissions.

The fashion industry uses around 93 billion cubic metres of water annually, according to UNCTAD (United Nations Conference on Trade and Development). One tenth of all of the water used industrially over the world is used by the fashion sector. According to the UN, around 7,500 litres of water are required to produce a pair of jeans, which is "equivalent to the amount of water the average person drinks over a period of seven years." In the same idea, still stated by the UN, "it takes 10,000 litres of water to produce one kilogram of cotton or approximately 3,000 litres of water for one cotton shirt."

Additionally, the toxic chemicals used in textile dyeing are eventually found in our oceans. 20% of the world's wastewater is produced by the fashion industry. It is very dangerous, and can't be treated. Actually, many factories are abroad and most of them in countries with permissive environmental laws (Le, 2020).

Other consequences are the huge amounts of clothing in landfills and the burning of clothing. A large part of the population throws away their clothes rather than donate them, whether they just don't fit anymore or because they are out of fashion. Additionally, because there are lots of scraps in the clothing production, a lot of materials are wasted because those scraps can't be used anymore. 57% of all used clothing is thrown away, landfilled fill up and then burned. People who live nearby are at risk for multiple public health and environmental risks because burning landfill releases toxic materials or significant quantities of dangerous gases (Le, 2020).

The amount of microfiber dumped into the ocean each year is around 500,000 tonnes (Le, 2020). The UN Alliance for Sustainable Fashion estimates that 9% of the annual microplastics released in the oceans come from textiles. These synthetic materials are responsible for 35% of all the microplastics in the oceans. Producers use low-quality materials to reduce the price. After some time, plastic in the ocean decomposes and releases a toxic substance. These plastic microfibers provoke numerous health problems since they enter the aquatic food chain and eventually reach humans. They mainly enter our ocean through the use of the washing machine (Le, 2020).

2.2 Sustainability within the clothing industry

The 1987 United Nations Brundtland Commission defined sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their own needs." As explained by the UCLA Sustainability Committee (2021), sustainability is actually the balance between the Three E's: Environment, Equity, and Economy. That is the Triple Bottom Line Framework. The objective is to understand how those 3 pillars are related and how to balance them to make a better functioning society. The Earth offers us many resources to live. Most of these resources can replenish. But this works only if we respect the replacement rate, that is to say if we use the resources and give them the time to replenish. Nowadays, we are consuming resources too fast, they don't have the time to replenish, and their number is going down. That is the consequence of overconsumption, discussed before, and which is responsible for climate change. The circular economy and related business models are now integrating this concept in order to respond to the crisis we are currently facing.

2.2.1 Circular fashion

We must create clothing that will last and wear it for as long as possible. Resale has the capacity to reduce the industry's environmental impact, bringing us one step closer to circularity (ThredUp, 2021). The idea behind the concept of circular fashion is to keep clothing items and materials in use cycles and minimise waste in the production system. It promotes the development of economic, social, and environmental aspects while challenging the current linear model (Ellen MacArthur Foundation, 2013). As stated in the 2021 Ellen MacArthur Foundation report, circular economy is on the agenda for businesses, governments, and society,

and it represents a great opportunity for new and better growth because it can decouple revenues from production and resource use, or to generate more revenue from fewer new products, maximising environmental benefits. As a result, there will be less need for the production of raw materials, which will result in lower greenhouse gas, pollution, and stress on biodiversity. As consumers increasingly use new methods of accessing fashion, driven by factors like affordability, convenience, and environmental awareness, second-hand fashion might grow over time.

According to UNEP, we must encourage a change in clothing consumption through initiatives like better clothing maintenance and recycling. Actually, doubling the amount of time we spend wearing each clothes could cut the greenhouse gas emissions produced by the fashion industry in half.

2.2.2 The case of second-hand fashion

The current study is focused on second-hand clothing shopping, which refers to purchasing clothes that have previously belonged to someone else (Guiot & Roux, 2010). It is an example of recycling because by reusing old clothes, you can extend their life and decrease the amount of clothes that need to be thrown away, hence having a positive impact on the environment (Farrant et al., 2010).

Historically, second-hand shops originated in the 19th century in Paris, France. These outdoor marketplaces were dedicated to the sale of used goods and unhygienic clothing, hence the name "Flea Market", or "Marché aux puces" in French. Following a decline during the 20th century, it experienced a resurgence in the 2000s (Weinstein, 2014). By reselling, the same item of clothing generates income multiple times.

Reselling will soon be more widely adopted by retailers. 60% of retailers offer second-hand goods to their customers or are willing to do so (ThreadUp, 2021). Currently, re-commerce companies like ThredUp, Poshmark, StockX, Vinted, eBay, Vestiaire Collective, or Rebelle, to name a few, are the major players in the second-hand market. Their earnings are consistently rising. However, well-known online retailers like Zalando and About You seized the chance, and major retailers like Nordstrom, Macy's, JCPenney, Levi's, The North Face, Petit Bateau, and Patagonia have been investing in the second-hand market share by creating their own direct

platforms and giving used goods a new life (Forbes Magazine, 2019). Even one of the biggest player in fast fashion, H&M, allows customers to interact with one another through its peer-to-peer platform and clothing collection programme. Smaller businesses want to reshape the fashion industry's environmental landscape and incorporate sustainability throughout their entire business model. For example, Canadian clothing retailer Novel Supply has a "take-back" programme. Customers can return their unwearable clothing, the company can then recycle and reuse it.

The global fashion retail market shrank by 23% during the COVID-19 pandemic, according to the 2021 ThredUp report. The second-hand market, however, expanded by 27%. By 2025, it is expected to more than double from $32 billion to $77 billion. Thanks to the digital revolution, the second-hand market has seen a significant increase. Indeed, due to sanitary restrictions, the second-hand online retail channels almost doubled during the pandemic. In fact, during the Covid-19 pandemic in 2020, 33 million consumers purchased second-hand clothing for the first time, and 76% of those first-time purchasers intend to increase their spending on second-hand in the following five years (ThredUp, 2021). Thus, the pandemic has boosted the second-hand market by increasing consumer financial control and environmental concern. Many are beginning to re-evaluate how they use resources and how they dispose of them because they believe that how they treat the planet now will have a significant impact in the future. Therefore, the coronavirus pandemic caused a major shift in people's lifestyle and purchasing habits, increasing their concern for the environment (Severo et al., 2021). It is important to educate consumers about the value of clothing in order to change their consumption habits if this market is to thrive. By reusing old items instead of purchasing new ones, they are able to self-regulate their spending and contribute to the overall well-being (Borusiak et al., 2020).

2.2.3 Benefits of the second-hand fashion model

Buying used clothing is actually a way to address environmental issues and presents a business opportunity (Ellen MacArthur Foundation, 2021). It addresses issues like pollution, and climate change in general, while offering chances for better growth that are advantageous to society, businesses, and the environment (Ellen MacArthur Foundation, 2021). Actually, the industry could reduce its annual emissions by half by avoiding the production of unnecessary clothing, producing fewer new clothes, and extending the lifespan of existing clothing (The Renewal Workshop, 2021).

Having a second-hand store returns control to fashion brands and offers new opportunities to engage with customers, when they resell their old clothes as well as when they are looking for new second-hand clothing (Graf Dijon von Monteton & Spittler, 2020). Personalization of interactions and communications with customers can heighten the emotional bond. Customers feel more appreciated, which increases their likelihood of making another purchase from the brand (Graf Dijon von Monteton & Spittler, 2020). Additionally, it is a way to target brand-new consumer groups. In the case of luxury clothing brands, they are more accessible to customers at second-hand prices who were either unwilling or unable to afford the product when it was new. For consumers, it is a way to shop at well-known brands on a tighter budget.

The design, production, and consumption of fashion are still largely dominated by the linear operating model. Recycling and material innovation are crucial components of the solution, but circular business models must also take hold in the market for truly making a change of the industry.

2.3 Millennial consumer profile and second-hand fashion consumption

This study focuses on French millennials, also known as Generation Y. The age category for this generation, and the following one known as Generation X, is largely discussed. Some institutes, such as the Pew Research Center, consider that millennials are born between 1981 and 1996, therefore aged between 26 and 41 in 2022. People born between 1997 and after are considered to be from the Generation Z (Dimock, 2019). Other studies estimate that the millennial generation stops at 1994 or at 1995 (Francis & Hoefel, 2018), and others at 1999 (U.S. Chamber of Commerce Foundation, 2012). For the purpose of this study, we will consider that the age category for millennial generation is from 1980 to 1999.

The financial crisis and the economic recession, as well as technology and new forms of communication have influenced this generation. The Internet use, the emergence of new technologies, and innovations were all part of their upbringing (Dimock, 2019). This generation advocates for a wide range of causes, is more accepting, and enjoys connecting with numerous communities, particularly online, based on common interests and causes rather than wealth or status. Millennials make decisions more analytically and pragmatically than previous generations, according to Francis & Hoefel (2018), since they have better and easier access to

more information online and can evaluate a wide range of information before making purchases. Additionally, the idea of consuming brands to conform to social norms is vanishing as millennials use consumption as an expression of singularity and self-expression. They are prepared to pay more for products that are unique and customised. Consumers now expect more than ever to use products and services whenever and wherever they choose, so omnichannel marketing and sales must advance to a new level as the online and offline worlds merge. Online shopping is very popular these days. Convenience, desire for variety, information seeking, shopping experience, and social interaction are just a few of the reasons behind this behaviour.

Regarding second-hand clothing consumption, more than 40% of millennials shoppers have shopped second-hand apparel in 2020 (ThredUp, 2021). They are driving the growth of second-hand clothing. In fact, 53% of them claim that over the next four years, they'll spend more money on used goods (ThredUp, 2021).

2.4 Motivations and barriers for buying second-hand clothes

2.4.1 Motivations for buying second-hand clothes

2.4.1.1 Economic motivations

Generally speaking, used clothes are less expensive than brand-new one. As a result, buying used clothing has a significant financial benefit and can help save money. Consuming used goods is a conflict-avoidance strategy for those with limited budgets (Hamilton, 2009). Everyone wants to pay the least amount of money possible while still receiving a fair price, according to Guiot and Roux (2010). By buying second-hand items, consumers can satisfy their primary needs while still satisfying less essential ones.

H1: Economic motivations impact positively the buying intention for second-hand clothing.

2.4.1.2 Recreational motivations

According to the study by Guiot and Roux (2010), purchasing used clothing is convenient, enjoyable, and unique. It minimises the cost while maximising the satisfaction of customers with an unusual and authentic experience and products. A sense of community is fostered by second-hand shops, which also encourage browsing, treasure hunting, and bargaining activities. Customers want to find a piece of clothing that is distinctive, unexpected, and related to their identity. Because of the variety of items offered, the ability to touch, to search, and the visual stimulation, this activity is also perceived as entertaining and exciting. Finding old and genuine items can also create a nostalgic feeling. Social shopping value is described by Arnold and Reynolds (2003) as "the enjoyment of socialising while shopping, and bonding with others while shopping." Shopping for social purposes is regarded as a recreational, or hedonistic, motivation and is seen as an integral part of social life. As a hedonic motivation, social shopping value emphasises the happiness, pleasure, and entertainment gained from the experience.

H2: Recreational motivations impact positively the buying intention for second-hand clothing.

2.3.1.3 Critical motivations

Reusing textiles, as previously mentioned, could lessen the environmental impact that the fashion industry has. Actually, as stated by Guiot and Roux (2010), a growing number of consumers tend to be more and more ethical and sustainable in their purchasing decisions as well as how they dispose of their old clothes. They avoid fast fashion to be more ethical and donate, recycle, resell, or reuse their clothing items to help protecting the environment. Through critical motivations, consumers turn away from the traditional market for moral, ethical, or ecological reasons. Additionally, they want to distance themselves from the current consumption system. Purchasing used clothing can be viewed as a protest against our consumer society and powerful chains that support fast fashion and the "take-make-waste" model. Customers who purchase used clothing want to demonstrate ethical and environmentally conscious consumption habits that are sustainable (Carrigan & Attalla, 2013). They are now aware of their consumption impact on the environment, the society and public health (Brace-Govan & Binay, 2010).

H3: Critical motivations impact positively the buying intention for second-hand clothing.

2.3.1.4 Fashion motivations

We can find items with unique value in second-hand shops. We want distinctive and one-of-a-kind items. Fashion is defined as "a style of consumer product that is temporarily adopted by a discernible proportion of members" by Sproles and Burns (1994). Wearing used clothing was once undesirable but necessary for economic reasons (DeLong, 2005). It is now a desirable fashion trend (Beard, 2008). Used items can be more expensive because people value them more due to their age and rarity (Cervellon et al., 2012). Motivations for current second-hand buyers include "fashion authenticity and vintage uniqueness" (Guiot & Roux, 2010). The reasons for shopping second-hand have changed because of the aforementioned changes in the market and among consumers. Thus, fashion is a motivation that merits investigation.

H4: Fashion motivations impact positively the buying intention for second-hand clothing.

2.3.2 Barriers for buying second-hand clothes

Following the identification of consumers' motivations to buy second-hand clothes, it seems relevant to understand the barriers as well. Bezançon (2012) identified the five following barriers:

2.3.2.1 Safety barriers

When speaking of safety barriers, we refer to the potential hygienic risks that these items imply (Laitala & Klepp, 2018). Consumers who purchase used items worry that they will acquire contaminated clothing because they may have different hygienic standards than the previous owner (Roux & Korchia, 2006; Edbring et al., 2016).

H5: Safery barriers impact negatively the buying intention for second-hand clothing.

2.3.2.2 Utilitarian or useful barriers

Finding satisfying used clothing can be more difficult than for new clothing because first of all it can take more time than buying brand-new clothing, whether it be for research, shopping, or delivery. It also requires more thought, and effort, which reduces efficiency and, as a result, decreases satisfaction (Bezançon, 2012). Customers do desire functional utility, so they may avoid used goods. They also desire financial utility. The quality/price relationship isn't always as favourable as it is the case for brand-new clothing.

H6: Utilitarian barriers impact negatively the buying intention for second-hand clothing.

2.3.2.3 Hedonist barriers

Due to the possibility that this method of consumption will provide less pleasure for the consumer, the hedonist factor serves both as a motivation and a barrier when purchasing used goods. First of all, since the clothing arrangement may be less sophisticated than new clothing channels, it might seem less enticing than purchasing brand-new items (Hiller Connel, 2009). Additionally, as previously mentioned, buying used items involves more complexity and calls for more knowledge and cognitive effort. As a result, the decision-making process for purchasing is different (Bezançon, 2012). Finally, some customers find it unsettling that the clothing item has already been worn because they believe it still bears the imprint of the previous owner.

H7: Hedonist barriers impact negatively the buying intention for second-hand clothing.

2.3.2.4 Self-expression barriers

Some consumers choose not to purchase used clothing because they feel that it limits their ability to express who they are. They worry about how other people will perceive them. Through their outfit, they hope to affirm themselves or project a certain image (Belk, 1988).

H8: Self-expression barriers impact negatively the buying intention for second-hand clothing.

2.3.2.5 Affiliation barriers

The self-expression barrier is driven by consumers' desire for approval from others. Consequently, purchasing used clothing poses a social risk because it would cause consumers to project a different image to the rest of society and harm their social standing (Kang & Kim, 2013), which could be associated with being modest, frugal, or poor (Bezançon, 2012). Therefore, this social risk reflects how society and other people's perspectives affect a consumer's decisions regarding a particular behaviour. Indeed, consumers could have concerns that others will think that they cannot afford brand-new items. Consumption behaviour is not only a way to satisfy the basic need, but also an approach to reflect an individual's social status (Gonzalez & Bovone, 2012).

H9: Affiliation barriers impact negatively the buying intention for second-hand clothing.

3 Conceptual Model and Methodology

3.1 – Conceptual Model

A quantitative research methodology has been followed to analyse the hypotheses previously identified in the literature review chapter. The design of the following conceptual model reflects the hypotheses explained by the relationships of previous framework studies and the main goal of this study, that is to say understand the buying intention and determinants for second-hand shopping among French Millennials.
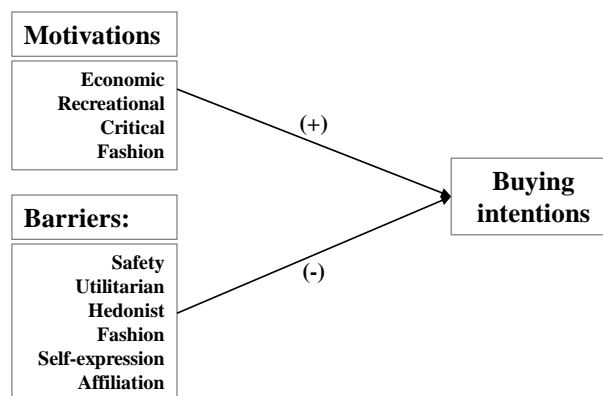
Figure 1 – The conceptual model

To summarize, the following hypothesis are tested:

- *H1: Economic motivations impact positively the buying intention for second-hand clothing.*
- *H2: Recreational motivations impact positively the buying intention for second-hand clothing.*
- *H3: Critical motivations impact positively the buying intention for second-hand clothing.*
- *H4: Fashion motivations impact positively the buying intention for second-hand clothing.*
- *H5: The safety barrier impacts negatively the buying intention for second-hand clothing.*
- *H6: The utilitarian barrier impacts negatively the buying intention for second-hand clothing.*

- *H7: The hedonist barrier impacts negatively the buying intention for second-hand clothing.*

- *H8: The self-expression barrier impacts negatively the buying intention for second-hand clothing.*

- *H9: The affiliation barrier impacts negatively the buying intention for second-hand clothing.*

3.2 – Variables Operationalization and methods of data collection and analysis

In order to test these hypothesis, variables and related questions are created. The following table identifies the independent and dependent variables, the items and questions to measure them, as well as the studies used to make these questions.

Table 1 – Variables operationalization

VARIABLE	ITEM	QUESTION	SOURCE
Buying Intention (INT)	INT_1	I plan to buy second-hand clothes.	Putrevu & Lord (1994)
	INT_2	I plan to buy more second-hand clothes in the future.	
Economic motivations (ECO)	ECO_1	Buying SHC allows you to acquire more clothes because they are cheaper.	Guiot & Roux (2010)
	ECO_2	Buying SHP allows you to acquire clothes at a fair price.	
	ECO_3	Buying SHP allows you to have a better price compared to a new garment.	
Recreational motivations	REC_1	Allows you to come across real finds.	Guiot & Roux (2010)
	REC_2	Is similar to a treasure hunt.	
	REC_3	Allows you to live unique experiences.	Arnold & Reynolds (2003)
Critical motivations	CRI_1	Represents a model of responsible consumption.	Guiot & Roux (2010)
	CRI_2	Allows you to move away from the traditional consumption system.	
	CRI_3	Helps preserve natural resources.	Brace-Govan and Binay (2010)
	CRI_4	Is ecological.	
Fashion motivations	FASH_1	Allows you to find unique and rare pieces.	Cervelon (2012)
	FASH_2	Is trendy.	Beard (2008)
	FASH_3	If I buy second-hand clothes, the brand is a decision criterion.	
	FASH_4	Close ones influence me to buy second-hand.	Cervellon (2012)
Safety barrier	SAF_1	They lack of hygiene.	Roux & Korchia (2006)
	SAF_2	The cleanliness of the previous owner is questionable.	Edbring et al (2016)
Utilitarian	UTI_1	Clothes are often in poor condition.	Bezançon (2012)

barrier	UTI_2	Their purchase requires more time and thinking.	
	UTI_3	Their life expectancy is shorter.	
	UTI_4	I'm afraid they'll be sold for more than they're really worth.	
	UTI_5	Outlet stores offer similar prices.	
	UTI_6	New clothes have a better price-quality ratio than second-hand ones.	
Hedonist barrier	HED_1	Their purchase gives me no pleasure.	Hiller Connel (2009)
	HED_2	They keep the particularities and the essence of their former owner.	Kapitan & Bhargave (2013)
Self-expression barrier	EXP_1	They reflect a different style from mine.	Belk & Russell (1988)
	EXP_2	They are generally out of style.	
Affiliation barrier	AFF_1	I wouldn't like others to say that I buy second-hand clothes.	Bezançon (2012)

The research consists of a questionnaire of 42 questions. Answers are based on a Likert-type scale, as follows:

1. I strongly disagree
2. I disagree
3. I neither agree nor disagree
4. I agree
5. I strongly agree

The targeted population is French millennials, that is to say born between 1980 and 1999. A convenience sample is used to collect data by submitting the questionnaire on social media. The questionnaire is created with Google Forms. The link is then released online, through the personal social media accounts of the researcher. The platforms used are: LinkedIn, Facebook and Instagram. This method is used in order to easily reach young French consumers, since the researcher is also a French millennial. Also, because the researcher is leaving abroad, it is the easiest and fastest way to reach people that are geographically far away. Finally, it is a great way to reach the researcher's acquaintances, and access their network as well, because they can share the questionnaire on their side too. That is called convenience sampling, or availability sampling. In the end, a total number of 94 questionnaires is collected.

In the first part of the questionnaire, information is given to introduce the researcher, the research frame, and the purpose of it. There is also a mention that the answers are anonymized. First, six introductive questions addressing demographic variables, such as gender, age, socio-professional status, or education are asked at the beginning of the survey. The rest of the

questions are about buying intentions and behaviours, and will tend to identify the motivations and barriers to buying second-hand fashion items.

The results are then analysed with the SPSS software, version 28. Before exporting the Excel file with the data set on SPSS, this data base is cleared, and the answers are coded with figures (e.g.: 0 = Men, 1 = Women). Also, it is important to have a positive connotation, so for the questions asked in a negative way, the value for the answers are reversed. The Excel file is then exported to SPSS. In SPSS, the variables are first defined by their type. All of them are numeric, except the localization, which is a string type. All of them have 0 decimal. Finally, the measurement scale is defined. Most variables are ordinal, since answers are based on a Likert-type scale. Only gender and localization are nominal variables.

To analyse the results, get a better understanding of the findings, support or refute the hypothesis, further literature review will be discussed. Conclusions will then be made, from a managerial point of view with recommendations for brands to encourage them to adapt and create new marketing strategies in order to seize the opportunity, as well as from an individual point of view for consumers.

4 Data analyses

4.1 The analyses of the instruments

4.1.1 The instrument Buying intentions

The dependent variable is the buying intention for second-hand clothing items. Two items were analysed to measure this variable:

- INT_1: Intention to buy SH clothes.
- INT_2: Intention to buy more SH clothes in the future.

The Cronbach's Alpha coefficient between these two items, being equal to 0.755, shows that there is an internal consistency between the answers and allows to compute the construct Intention to continue to buy (Intention) (Annex 2b).

The construct is a latent variable, and it is classified as quantitative (metric) variable. Annex 2b shows that the distribution of the dependent variable reveals that it is negatively asymmetric or skewed to the right in the sample (Skewness = -0.816) and is platykurtic or flatter than the normal distribution which is called mesokurtic in the sample (Kurtosis = 0.175).

Because the mean of this construct is equal to 4.048 and its standard deviation is low (0.81343), it can be said that the respondents have the intention to continue buying second-hand clothes.

4.1.2 The instrument Motivations

As discussed in the previous parts of this thesis, the 4 independent variables tested regarding motivations to buy second-hand clothes are critical, economic, recreational and fashion. These variables are measured with 3 or 4 items, based on a Likert-type scale from 1 = Strongly disagree to 5 = Strongly agree.

4.1.2.1 Economic motivations

The items analysed to measure the independent variable Economic motivations were the following:

- ECO_1: Sustainable consumption model.
- ECO_2: Get distance from current consumption system.

- ECO_3: Environmental preservation.

The Cronbach's Alpha coefficient between these three items being equal to 0.547, the constructed Economic motivations cannot be computed. Thus, the item 'Allows you to have a better price compared to new clothes' is to chosen to represent the closest one to this concept (Annex 2b).

4.1.2.2 Recreational motivations

The items analyzed to measure the independent variable Recreational motivations were the following:
- REC_1: Make a great find.
- REC_2: Treasure hunt.
- REC_3: Live unique experiences.

The Cronbach's Alpha coefficient between these three items, being equal to 0.680, shows that there is an internal consistency between the answers and allows to compute the construct Recreational motivations (Annex 2b).

4.1.2.3 Critical motivations

The items analyzed to measure the independent variable Critical motivations were the following:
- CRI_1: Sustainable consumption model.
- CRI_2: Get distance from current consumption system.
- CRI_3: Environmental preservation.
- CRI_4: Ecological.

The Cronbach's Alpha coefficient between these four items, being equal to 0.813, shows that there is an internal consistency between the answers and allows to compute the construct Critical motivations (Annex 2b). Also, the critical motivation with the highest score is CRI_4: «It is ecological» once half of the respondents have an agreement level with the ecological motivations at least agree equal to agree which is the highest value for these four motivations

(Annex 2b).

4.1.2.4 Fashion motivations

The items analyzed to measure the independent variable Economic motivations were the following:

- FASH_1: Find unique and rare pieces.
- FASH_2: Trendy.
- FASH_3: The brand is a decision criterion.
- FASH_4: Influence by close ones.

The same problem as for Economic motivations is detected with these four items, and the constructed Fashion motivations cannot be computed, since the Cronbach's Alpha coefficient is equal 0.506. Thus, the item 'Second-hand is trendy' is chosen to represent this construct (Annex 2b).

4.1.3 The instrument Barriers

Now, regarding barriers to buy second-hand clothing items, the five following constructs are studied: safety, useful, hedonist, affiliation, and self-expression. These variables are also measured by multiple items, based on a Likert-type scale from 1 = Strongly disagree to 5 = Strongly agree. The following chart gathers information about the percentiles of each item.

Table 2: The items' percentiles

BARRIERS		Percentile 25	Median	Percentile 75
USEFULNESS	Items often in poor conditions	2	3	3
	Requires more time and thinking	2	**4**	**4**
	Shorter life expectancy	2	2	3
	Higher price than their real worth	2	3	**4**
	Outlets offer similar prices	2	3	3
	New clothes have a better price-quality ratio	2	2	3
HEDONISM	No pleasure in buying SH	3	**4**	**4**
	Keep previous owner's essence	2	2	3
SELF-EXPRESSION	Reflect a different style	2	3	**4**
	Often out of style	2	2	3
SAFETY	Lack of hygiene	2	2	3

	Questionable previous owner's cleanliness	2	3	3
AFFILIATION	Don't want others to think they buy SH clothes	**4**	**4**	**4**

The barrier with the highest score is Affiliation that shows a great consensus of agreement among the participants. It is measured by the item "They don't want others to think they buy second-hand clothes". Following Affiliation, the first item of Hedonism and the second item of Usefulness are better positioned since they get scores of 4 (agree) for the percentiles 50 and 75.

4.1.3.1 Safety barriers

Relating to the instrument Safety, it is possible to compute this instrument from the two items that measured it (Cronbach's Alpha coefficient = 0.699). Annex 2b (3.4) shows that half of the participants tend to value this construct at least as indifferent. The distribution of safety is positively asymmetric or skewed to the left (0.328) and is platykurtic (-0.361).

4.1.3.2 Utilitarian or useful barriers

In order to verify if the instrument Usefulness can be computed, the Cronbach's Alpha coefficient was calculated and shown in the next table. It is seen that the value for the Cronbach's Alpha coefficient is less than 0.7 (0.582), showing a low consistence in the answers given by the respondents. But, if the item 'It requires more time and thinking' is deleted, this value increases up to 0.655 which is closed enough to the minimum accepted value for this coefficient (0.7). Thus, the computation of this construct is going to be done without the referred item.

Table 3: Some descriptive measures of the construct Usefulness

Mean		2.5468
Std. Deviation		.59545
Skewness		-.215
Kurtosis		.061
Percentiles	25	2.2000
	50	2.6000
	75	3.0000

Table 2 shows that the half of the respondents tend at least to be indifferent (2.6). The distribution of this construct is negatively asymmetric (-0.215) and, in terms of kurtosis, it tends

to be mesokurtic (0.061).

4.1.3.3 Hedonist barriers

Regarding Hedonism, the value of the Cronbach's Alpha coefficient does not let us to compute the construct. Therefore, the items remain as ordinal variables. Annex 2.b shows that the item 'No pleasure in buying second hand' related to Hedonism is better scored since half of the participants agree at least with this statement while in the other item, 'keep previous owner's essence', half of the participants neither agree nor disagree. Thus, the item 'No pleasure in buying second-hand clothes' is chosen to represent this construct.

4.1.3.4 Self-expression barriers

Regarding Self-expression, the Cronbach's Alpha coefficient being equal to 0.561, we can't compute the construct as well. The items of this instrument also remain as ordinal variables. The respondents penalize more the second item 'Often out of style' since half of them attributes at least a level of agreement of disagree, while in the other item 'Reflect a different style' that level is at least neither agree nor disagree. Thus, the item 'Often out of style' is chosen to represent this construct.

4.1.3.5 Affiliation barriers

Finally, for Affiliation, the item 'Don't want others to think they buy second-hand clothes' is chosen to represent the construct.

In sum, the empirical model to be estimated is shown in the next figure.
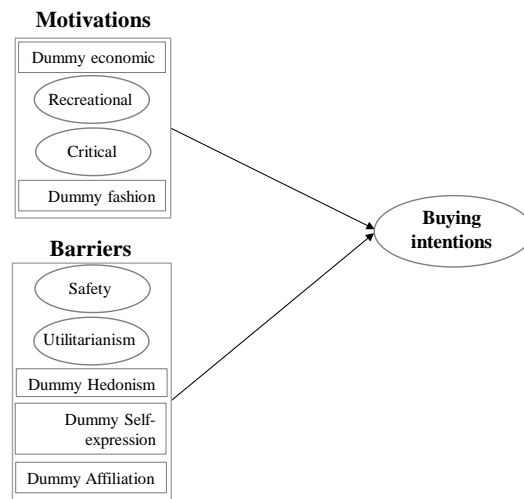
Figure 2 – The empirical model to be estimated

4.2 The respondents' profile

Even though this thesis is about a topic that, we suppose, would interest more women (Roux & Korchia, 2006), the sample gathers almost as many women (53%) as men (47%), as we can see on Annex 2a. Regarding the country were the participants live, France is by far the dominant country (93.1%) (Annex 2a).

Also, regarding the age levels, most of the participants (94.7%) are between 21 and 30 years old. Only 3.2% are between 31 and 40 years old. The over-representation of people between 21 and 30 years old can be explained by the fact that the author is within the same age category. Millennials adheres almost completely to this age level (23 – 40 years old). Finally, 2% are less than 20 years old (Annex 2a).

Regarding education, all the participants had higher education. Likewise, this result is influenced by the author's relationships, such as school friends. 72% of them are either employees or executives, and 19% are students. Regarding annual salary, more than half earn between 25 000€ and 49 000€. On the other hand, 33% earn less than 25 000€ (Annex 2a).

Concerning the affirmation, "I have already bought second-hand clothes", 78% of the sample answered "Yes", and 75% of participants have a positive opinion (agree and strongly agree) for buying second-hand.

4.3 Model's estimation

To estimate the proposed model, the software IBM SPSS Statistics, version 28, was used. In order to determine the contribution of each independent variable on the dependent variable, firstly, it is important to validate several assumptions namely the normality assumption of the error term, the homogeneity of the error variance, and the absence of multicollinearity between the independent variables. The validation of these assumptions are shown in Annex 3.b.

Before running the multiple regression model, and for the ordinal variables is needed to obtain the corresponding dummies (Annex 3.a). Then, in Annex 3.c it is shown the estimations. It was used the Stepwise method to generate the estimates in step 6. The results can be viewed in Tables 3 and 4.

Table 4: Quality of the adjustment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
6	.738[i]	.545	**.512**	.512

Dependent Variable: Intention

Table 5: Coefficient estimates

Step	Independent variables	Unstandardized Coefficients B	Standardized Coefficients Beta	Sig.	Collinearity Statistics VIF
6	(Constant)	4.245		<.001	1.095
	Useful/Utilitarian Barrier	-.547	-.449	<.001	1.116
	SELF-EXP_2=Neither agree nor disagree	-.488	-.304	<.001	1.073
	FASHION_2=Disagree	-.671	-.190	.015	1.070
	Critical Motivations	.252	.205	.009	1.090
	AFFILIATION_1=Agree	.374	.186	.018	1.108
	ECONOMIC_3=Neither agree nor disagree	.448	.175	.028	1.095

Dependent variable: Buying intentions

The quality of this adjustment is estimated to be equal to 0.512, after correcting for the sample size and the number of independent variables and it can be classified has moderated.

There are significant independent variables that have a positive impact on the dependent variable. It is the case for the dummies Affiliation barrier and Economic motivations and for the construct Critical Motivations.

- For a unit increase in Critical motivations, it is estimated an increase in the dependent variable of 0.252 points, if the effect of the other independent variables is hold constant.

- For the Dummy Affiliation_1 = agree, it can be said that this category has a positive impact of 0.374 compared with the reference category which is disagree.

There are significant independent variables that have a negative impact on the dependent variable. It is the case for the dummies Self-expression and Fashion barriers and for the construct Utilitarian barrier.

The independent variables that have higher standardized impacts (Beta coefficients) on the dependent variable are the dummy Self-Expression barrier_2 = neither agree nor disagree (-0.304) and the construct Utilitarian barrier (-0.449).

The estimated empirical model is viewed in the next figure.
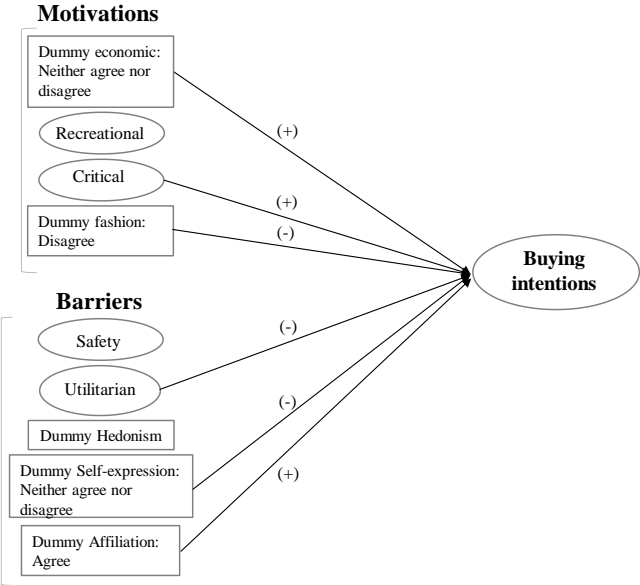
Figure 3 – The estimated empirical model

5. Results and discussion

Following the previous analysis, we can validate or reject the hypotheses:

Table 6: Hypotheses' validation

Hypotheses	Validation
H1: *Economic motivations impact positively the buying intention for second-hand clothing* Second-hand purchase 'Allows you to have a better price compared to new clothes' Categories: disagree, neither agree nor disagree, agree, strongly agree	**Partially validated**[*] The category 'neither agree nor disagree' compared with the baseline category (disagree) has a positive and significant impact.
H2: *Recreational motivations impact positively the buying intention for second-hand clothing.*	Omitted from the model estimates.
H3: *Critical motivations impact positively the buying intention for second-hand clothing.*	**Validated.**
H4: *Fashion motivations impact positively the buying intention for second-hand clothing.*	**Not validated.**
H5: *The safety barrier impacts negatively the buying intention for second-hand clothing.*	Omitted from the model estimates.
H6: *The utilitarian barrier impacts negatively the buying intention for second-hand clothing.*	**Validated.**
H7: *The hedonist barrier impacts negatively the buying intention for second-hand clothing.* 'No pleasure in buying second-hand' Categories: disagree, neither agree nor disagree, agree, strongly agree	Omitted from the model estimates.
H8: *The self-expression barrier impacts negatively the buying intention for second-hand clothing.* 'Often out of style' Categories: strongly disagree, disagree, neither agree nor disagree, agree	**Partially validated**[*] The category 'neither agree nor disagree' compared with the baseline category (strongly disagree) has a negative and significant impact.
H9: *The affiliation barrier impacts negatively the buying intention for second-hand clothing.* 'Don't want others to think they buy second-hand clothes' Categories: disagree, neither agree nor disagree, agree	**Not validated**[*] The category 'agree' compared with the baseline category (disagree) has a positive and significant impact.

[*] The validations were made by their representative items.

The present research is about identifying the relation between buying intention for second-hand clothing items and the motivations and barriers to it, with a focus on French consumers from Generation Y.

First of all, socio-demographic factors can play an important role in sustainable consumption. Although it was before identified that women tend to be more interested by buying second-hand items than men (Roux & Korchia, 2006), the present sample is quite well distributed between men and women, there is no over-representation of one gender. Therefore, French men from Generation Y seem to be more concerned about the nature of this subject and this alternative way of consumption, than men from previous generations. Also, the purchase intention and behaviour of second-hand products is positively associated with income and education. All participants have a college degree, three quarter of them have a job, and more than half have a decent salary. These results are consistent with those of Starr (2009) who identified income and education level as important factors for social or environmental consumption.

Regarding the results, the economic motivation is the first motivation in second-hand shopping, among French millennials. This is in line with the study from Guiot & Roux (2010), consumers tend to buy used items because of economic factors, price is actually the main aspect impacting their buying decision. Also, according to the ThredUp 2021 report, the pandemic has changed shopping motivations. Saving money is the first priority for the post-pandemic consumer.

As mentioned in the previous part of this study, the clothing industry creates large amount of waste and causes environmental issues (Ruppert-Stroescu et al., 2015). Therefore, consumption changes towards more sustainable clothes are observed (Fu & Kim, 2019), and second-hand alternatives are becoming more and more popular, motivating people, especially young ones, to shift their consumption (Weil, 1999). Especially after the Covid-19 outbreak, people are consuming more second-hand clothing due to developing a more accurate sense of socioenvironmental awareness. They believe they can contribute in solving environmental problems (Park & Lin, 2020). The present study and results confirm this affirmation. It appears that, with the circumstances of the pandemic, consumers began to give more importance to their consumption habits, and consider the environmental condition when purchasing clothing. The ThredUp 2021 report stated that one third of consumers care more about wearing sustainable apparel than before the pandemic, and have more disdain regarding waste. It is clear that young French consumers want to get some distance with the traditional and linear consumption system and are more aware and concerned about environmental issues, as well as ethical issues. The fact that this generation is interested about alternative consumption models and do not hesitate to choose them was supported in the study from Healy & Dovel (1975).

Fashion motivations doesn't impact French millennials consumers to buy second-hand clothes. For younger generations, clothes are not only used for clothing but also to show their attitudes, uniqueness, and characters, and therefore seem to prefer express their style and uniqueness with brand new products. The results are therefore not in line with previous studies (Ferraro et al., 2016). Many people go for new branded clothes, as it is seen as a proof for a high-quality product, and therefore prefer to buy them directly in branded stores.

The useful or utilitarian barrier is still strong. Performance risk indicates concerns about the quality of the product. This result is supported by Hur (2020). Consumers might not purchase used clothes because of poor quality. Other previous researches support this finding as well where consumers showed a much lower purchase intention for recycled products with a high level of functional risk (Hamzaoui Essoussi & Linton, 2010). Since consumers invest money, they want to utilize the product properly and have a decent quality (Park & Lin, 2020). This result was expected, because used clothing have a degree of uncertainty, regarding the quality and performance of products. Also, since it is now possible to buy second-hand products online, the risks are even more important, such as product delivery and performance risks.

The self-expression barrier is still accurate as well. Surprisingly, as opposed to previous researches discussed in the literature review, French millennials don't seem to find unique styles and materials to their taste with second-hand clothing, bringing them a sense of individuality and comfort. Second-hand items don't always reflect their style, and even might be out of style.

Finally, the affiliation obstacle is not true among French millennials. More than half of participants didn't agree to the statement "I wouldn't like others to say that I buy second-hand clothes". People tend to pay less attention to the opinions of others, and have less concerns that other people think that they cannot afford new clothing, it doesn't impede their intention to buy second-hand. The fear of judgment tends to disappear, as well as the fear to be seen as stingy.

Even though some barriers related to buying second-hand clothes still exist, some are fading away. Participants seemed to have a true positive opinion and attitudes about it, therefore the second-hand fashion industry has a great future ahead.

6 Conclusion, recommendations and limitations

6.1 Conclusion

Consumers' desire for novelty has resulted in a significant amount of clothing waste, which raises issues for society and the environment. By purchasing used goods, customers can reduce their consumption of new goods and give their old possessions a new life while still having something "new" to wear. The second-hand market has been expanding in the past few years, and even more since the Covid-19 pandemic. In fact, during the confinement period, this alternative mode of consumption became especially popular. Furthermore, the increase in used clothes purchases can be explained by the digitalization and the development of C2C online platforms, such as Vinted, to name the most famous one. It is now easier and faster to sell or exchange clothes, or to buy second-hand items from brands that repair and resell pieces from previous collections.

This research provides contributions to the current literature by highlighting some changes in the motivations and barriers towards second-hand clothes impacting the purchase intentions for French millennials. These changes have been intensified by the Covid-19 pandemic that raised awareness about individual consumption. In fact, the motivations and barriers for buying second-hand clothes have already been studied since the 80's, but not recent studies have been made after the pandemic on the French Generation Y, to identify a potential change in the determinants for buying second-hand clothes. This generation constitutes the current active generation, therefore having a greater consumption impact.

While fashion motivations don't have a positive effect on used clothing purchasing intentions for this generation in France, economic motivations on the other hand are still very strong, if not more than before. They are actually the motivations with the greatest impact on purchase intentions, Generation Y wants to save money. But millennials are also particularly aware about the current environmental issues the society is facing, and they are the most committed to act on it. Actually, the results obtained in the present research are going along with this statement. It seems that there is a shift in consumers' motivations for buying used clothes, since one of the most important one according to this sample is the critical motivations, therefore including the environmental and ethical concerns.

A limit of the second-hand clothing market would actually be what it is fighting in the first place which is overconsumption. Indeed, by purchasing cheaper second-hand items, consumers' might be tempted to buy more of them, or purchase some used clothes and more new items, because of the savings made on the first purchase. Finally, because of this alternative model of consumption, non-profit organizations such as Emmaus are meeting difficulties. Their business model is based on donations. With the rise of exchange and reselling platforms such as Vinted, people first intend to sell their clothes. If they do not succeed, they finally think about donating them to non-profit organizations. Therefore, lots of clothes that are arriving to these associations are such in poor conditions that they can't even sell them. Every model has their limits. The key would be to always consume responsibly and in moderation.

6.2 Recommendations

6.2.1 Managerial implications and recommendations

This research is made for companies specialized in second-hand fashion as well as big players within the general fashion industry to understand the French millennials buying intention and determinants for second-hand clothing. There is an opportunity and a market to seize. Thus, while implementing sustainable practices and addressing current environmental issues, companies could obtain financial profitability by getting additional revenue, improve their image, and benefit the whole society (Ellen MacArthur Foundation, 2021).

As mentioned in the 2021 Zalando report, companies should rethink their business model, and increase the life of products, by encouraging customers with incentives and experiences. To enhance second-hand clothes and fight the stigma, brands could show new and second-hand items side-by-side in marketing campaigns, in stores or online. Also, retailers could vary their offer and distribution channels and choose other business models, in order to address the needs of all consumers. In the same idea, they should rethink their products design in order to increase their lifespan. Clothes need to be physically and emotionally durable, with the possibility to be remade and recycled at the end of their cycle life. Finally, economic and environmental aspects should be emphasis in new marketing strategies. Companies should meet and address consumers' concerns about the environment, and advertise more about the environmental benefits brought by buying second-hand clothes without practicing greenwashing.

6.2.2 Recommendations for consumers

Next to the managerial implications and recommendations, another objective of this thesis is to get people to realize the true environmental costs of the fashion industry and clothing consumption, but also the system of production and consumption in general. There is an urgency to act, fortunately alternative models exist and are getting more attention, that could turn the situation around.

The 2021 Zalando report made some suggestions to help consumers in their buying decision and in increasing their clothing lifespan. It suggests, among others, to incorporate more used clothes in our wardrobe, to learn about repairing clothes and caring about them, to assess the clothes we really miss in our wardrobe, or to understand our shopping impact, by reading the labels for instance. Finally, when disposing of clothes, it is important to try to extend their lifespan and make them stay in the value chain, by reselling or donating.

6.3 Limitations and future researches

With a sample of 94 participants, the results are not representative of the complete situation of second-hand clothing consumption in France among young consumers. It is also not generalizable to wider populations. Future efforts could be made to increase the sample size, to analyse consumers from other countries, with more different background in order to provide evidence for external validity and improve the generalization of the findings. Also, three quarter of respondents already had bought second-hand clothes. In the future, it could be interesting to focus on people who never bought used items and understand why. Future researches could also utilize this model to other types of sustainable consumption, such as renting, swapping, or buying upcycled clothes. These sustainable models might be a viable approach to promote sustainable fashion behaviours. In addition, future work is encouraged to improve the survey procedures and address the problems encountered as much as possible, especially the issues related to the data sample with the three following instrument that were too significantly correlated with other items: hedonism, self-expression, and affiliation. These factors need to be studied more deeply. Finally, it would be interesting to collect data from retailers, and get their point of view as well.

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8 Appendix

__Introductive questions__

I am:
- A man
- A woman
- Do not want to answer

Age:
- Less than 20 years old
- Between 21 and 30 years old
- Between 31 and 40 years old
- More than 40 years old

Localization (country and city)

Education level:
- No degree
- Primary education
- Secondary education
- Higher education
- PhD

Professional status:
- Worker
- Employee
- Executive
- Artisan
- Merchant
- Entrepreneur
- Farmer
- Student
- Unemployed
- Other

Annual income:
- Less than 10 000€
- 10 000€ - 24 999€
- 25 000€ - 49 999€
- 50 000€ - 74 999€
- 75 000€ et plus
- Do not want to answer

__Buying intention and behavior__

I have already bought SHC:
- Yes
- No

I have a favorable opinion towards the purchase of second-hand clothes:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

I plan to buy second-hand clothes:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

I plan to buy more second-hand clothes in the future:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

Motivations in buying second-hand clothing items

Buying SHP represents a model of sustainable consumption:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

Buying SHC allows you to move away from the traditional consumption system:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

Buying SHC helps preserve natural resources:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

Buying SHC is ecological:
6. Strongly disagree
7. Disagree
8. Neither agree nor disagree
9. Agree
10. Strongly agree

Buying SHC allows you to acquire more clothes because they are cheaper:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

Buying SHC allows you to acquire clothes at a fair price:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

Buying SHC allows you to have a better price compared to a new garment:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

Buying SHC allows you to come across real finds:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

Buying SHC is similar to a treasure hunt:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

Buying SHC allows you to live unique experiences:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

Buying SHC allows you to find unique and rare pieces:

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

Buying SHC is trendy:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

If I buy SHC, the brand is a decision criterion:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

Close ones influence me to buy SHC:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

Barriers in buying second-hand clothing items

Clothes are often in poor condition:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

Their purchase gives me no pleasure:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

Their purchase requires more time and thought:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

They reflect a different style from mine:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

They are generally out of style:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

They keep the particularities and the essence of their former owner:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

They lack of hygiene:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

Their life expectancy is shorter:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

I'm afraid they'll be sold for more than they're really worth:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

The cleanliness of the previous owner is questionable:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

I wouldn't like others to say that I buy SHC:

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

Outlet stores offer similar prices:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

New clothes have a better price-quality ratio than SHC:
1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

Annex 2: Outputs

Annex 2.a - Descriptive Outputs

Gender

		Frequency	Percent
Valid	Men	44	46.8
	Women	50	53.2
	Total	94	100.0

Age levels

		Frequency	Percent	Cumulative Percent
Valid	< 20	2	2.1	2.1
	21-30	*89*	*94.7*	96.8
	31-40	*3*	*3.2*	100.0
	> 41	0	0	
	Total	94	100.0	

Millennials: (23-38 years old)
The majority of the respondents (more than 90%) belong to the generation designated as the Millennials. Thus, the conclusions taken from this study will be referred as the conclusions for the French Millennials.

Annual salary

		Frequency	Percent	Cumulative Percent
Valid	Do not want to answer	4	4.3	4.3
	Less than 10 000€	14	14.9	19.1
	10 000€ - 24 999€	17	18.1	37.2
	25 000€ - 49 999€	**53**	**56.4**	93.6
	50 000€ - 74 999€	5	5.3	98.9
	75 000€ and more	1	1.1	100.0
	Total	94	100.0	

Location:

AUTOMATIC RECODE		RECODE	
Old value	New value	Corrected new value	
Allemagne	1 Allemagne	1+2+15	1 Germany
Allemagne, Berlin	2 Allemagne, Berlin		
Angers	3 Angers		
Angleterre, Leeds	4 Angleterre, Leeds	4+33+34	2 UK
Angoulême	5 Angoulême	3+5+7+8+9+13+14+17+18+19+ 20+21+22+23+24+25+26+27+28+ 29+30+31+32+42+45+46++47+48 +49+50+51+52+53+54	3 France
Barcelone	6 Barcelone	6	4 Spain
Besançon(montréré)	7 Besançon		
Bordeaux France	8 Bordeaux France		
Brest	9 Brest		
Bruxelles	10 Bruxelles	10+11	5 Belgium
Bruxelles, Belgique	11 Bruxelles, Belgique		
Canada, Montréal	12 Canada, Montréal	12+37+38+39+40+41	6 Canada
Chambéry, France	13 Chambéry, France		

Chantilly	14 Chantilly		
Cologne Allemagne	15 Cologne Allemagne		
Côte d'Ivoire, Abidjan	16 Côte d'Ivoire, Abidjan	16	7 Ivory Coast
France	17 France		
France, Angers	18 France, Angers		
France, Avignon	19 France, Avignon		
France, Bordeaux	20 France, Bordeaux		
France, la Teste de Buch	21 France, la Teste de Buch		
France, Lille	22 France, Lille		
France, Lisieux	23 France, Lisieux		
France, Nantes	24 France, Nantes		
France, Paris	25 France, Paris		
France, Pornichet	26 France, Pornichet		
France, saint Gilles croix de vie	27 France, saint Gilles croix de vie		
France, Saint Nazaire	28 France, Saint Nazaire		
France, Vannes	29 France, Vannes		
France,Vernon	30 France,Vernon		
La baule	31 La baule		
Laval	32 Laval		
Londres	33 Londres		
Londres, UK	34 Londres, UK		
Los Angeles	35 Los Angeles	35+43	8 USA
Martinique	36 Martinique	37	9
Montréal	37 Montréal		
Montreal	38 Montreal		
Montréal Canada	39 Montréal Canada		
Montreal,Canada	40 Montreal,Canada		
Montreal, Canada	41 Montreal,Canada		
Nantes	42 Nantes		
New York	43 New York		
Oslo, Norvège	44 Oslo, Norvège	44	10 Norway
Paris	45 Paris		
Paris, France	46 Paris, France		
Pornichet	47 Pornichet		
Rennes	48 Rennes		
Rennes, France	49 Rennes, France		
Saint Nazaire, France	50 Saint Nazaire, France		
Saint-Nazaire	51 Saint Nazaire, France		
Theix	52 Theix		
Toulouse	53 Toulouse		
Toulouse, France	54 Toulouse, France		

RECODE Location (1=1) (2=1) (15=1) (4=2) (3=3) (5=3) (42=3) (6=4) (12=6) (16=7) (35=8) (43=8) (37=9) (44=10) (33 thru 34=2) (7 thru 9=3) (13 thru 14=3) (17 thru 32=3) (45 thru 54=3) (10 thru 11=5) (37 thru 41=6) INTO Localization. EXECUTE.

Location

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Germany	3	3.2	3.2	3.2
	UK	3	3.2	3.2	6.5
	France	**68**	72.3	**73.1**	79.6
	Spain	1	1.1	1.1	80.6
	Belgium	2	2.1	2.2	82.8
	Canada	9	9.6	9.7	92.5
	Ivory Coast	1	1.1	1.1	93.5
	USA	2	2.1	2.2	95.7
	Martinique	3	3.2	3.2	98.9
	Norway	1	1.1	1.1	100.0
	Total	93	98.9	100.0	
Missing	System	1	1.1		
Total		94	100.0		

50

73.1% de participants are French and live in France.

Intention to buy SH clothes

		Frequency	Percent	Cumulative Percent
Valid	Disagree	6	6.4	6.4
	Neither agree nor disagree	13	13.8	20.2
	Agree	33	35.1	55.3
	Strongly agree	42	44.7	100.0
	Total	94	100.0	

**Intention
to buy more SH clothes in the future**

		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	1	1.1	1.1
	Disagree	6	6.4	7.4
	Neither agree nor disagree	19	20.2	27.7
	Agree	42	44.7	72.3
	Strongly agree	26	27.7	100.0
	Total	94	100.0	

Annex 2.b – Constructs

1. BUYING INTENTIONS

Reliability Statistics

Cronbach's Alpha	N of Items
.755	2

```
COMPUTE Intention=mean(INT_1,INT_2).
EXECUTE.
DESCRIPTIVES VARIABLES=INT_2 Intention
 /STATISTICS=MEAN STDDEV MIN MAX.
```

Buying Intentions

	Frequency	Percent	Cumulative Percent
2.00	4	4.3	4.3
2.50	5	5.3	9.6
3.00	5	5.3	14.9
3.50	12	12.8	27.7
4.00	28	29.8	57.4
4.50	18	19.1	76.6
5.00	22	23.4	100.0
Total	94	100.0	

Statistics

Intention

Mean	4.0479
Median	4.0000
Mode	4.00
Std. Deviation	.81343
Skewness	-.816
Kurtosis	.175

2. MOTIVATIONS

2.1 CRITICAL MOTIVATIONS

CRI_1

Sustainable consumption model

	n	%	Cumulative %
Neither agree nor disagree	7	7.4	7.4
Agree	42	44.7	**52.1**
Strongly agree	45	47.9	100.0
Total	94	100.0	

CRI_2

Get distance from current consumption system

	n	%	Cumulative %
Disagree	3	3.2	3.2
Neither agree nor disagree	13	13.8	17.0
Agree	47	50.0	**67.0**
Strongly agree	31	33.0	100.0
Total	94	100.0	

CRI_3

Environmental preservation

	n	%	Cumulative %
Disagree	2	2.1	2.1
Neither agree nor disagree	12	12.8	14.9
Agree	45	47.9	**62.8**
Strongly agree	35	37.2	100.0
Total	94	100.0	

CRI_4

Ecological

	n	%	Cumulative %
Disagree	4	4.3	4.3
Neither agree nor disagree	15	16.0	20.2
Agree	49	52.1	**72.3**
Strongly agree	26	27.7	100.0
Total	94	100.0	

Reliability Statistics

Cronbach's Alpha	N of Items
.813	4

COMPUTE
Critical_Motivations=mean(CRI_1,CRI_2,CRI_3,CRI_4).
EXECUTE.

Critical Motivations

		Frequency	Percent	Cumulative Percent
Valid	2.50	1	1.1	1.1
	2.75	1	1.1	2.1
	3.00	4	4.3	6.4
	3.25	2	2.1	8.5
	3.50	6	6.4	14.9
	3.75	10	10.6	25.5
	4.00	21	22.3	47.9
	4.25	10	10.6	58.5
	4.50	14	14.9	73.4
	4.75	11	11.7	85.1
	5.00	14	14.9	100.0
	Total	94	100.0	

2.2 RECREATIONAL MOTIVATIONS
Reliability Statistics

Cronbach's Alpha	N of Items
.680	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Make a great find	6.68	2.542	.490	.592
Treasure hunt	6.99	2.204	.522	.546
Live unique experiences	7.67	2.352	.470	.616

COMPUTE Recreational_Motivations=mean(REC_1,REC_2,REC_3).
EXECUTE.

Recreational_Motivations

		Frequency	Percent	Cumulative Percent
Valid	2.00	3	3.2	3.2
	2.33	4	4.3	7.4
	2.67	5	5.3	12.8
	3.00	16	17.0	29.8
	3.33	18	19.1	48.9
	3.67	16	17.0	66.0
	4.00	14	14.9	80.9
	4.33	8	8.5	89.4
	4.67	5	5.3	94.7
	5.00	5	5.3	100.0
	Total	94	100.0	

ECONOMIC MOTIVATIONS:

Reliability Statistics

Cronbach's Alpha	N of Items
.547	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Buy more clothes because cheaper	7.69	1.829	.335	.503
Buy clothes at a fair price	7.62	2.260	.319	.503
Better price compared to new clothes	7.01	2.183	.441	.338

In conclusion, the constructed Economic motivations cannot be computed $Cronbach's\ Alpha\ coefficient = 0.547$. Thus, the item 'Allows you to have a better price compared to new clothes' is going to be chosen to represent the closest one to this concept.

2.4 FASHION MOTIVATIONS

Reliability Statistics

Cronbach's Alpha	N of Items
.506	2

The same problem is detected with this item and the constructed Fashion motivations cannot be computed ($Cronbach's\ Alpha\ coefficient = 0.506$). Thus, the item 'Second-hand is trendy' is going to be chosen to represent this construct.

3. BARRIERS

3.1 SAFETY BARRIER

Reliability Statistics

Cronbach's Alpha	N of Items
.699	2

COMPUTE Safety=mean(SAF_1,SAF_2).
EXECUTE.

Safety barrier

	Frequency	Percent	Cumulative Percent
1.00 = Strongly disagree	4	4.3	4.3
1.50	9	9.6	13.8
2.00 = Disagree	32	34.0	47.9
2.50	17	18.1	66.0
3.00 = Neither agree nor disagree	19	20.2	86.2
3.50	7	7.4	93.6
4.00 = Agree	6	6.4	100.0
Total	94	100.0	

Statistics

Safety

Mean		2.4415
Median		2.5000
Std. Deviation		.74001
Skewness		.328
Kurtosis		-.361
Percentiles	25	2.0000
	50	2.5000
	75	3.0000

3.2 UTILITARIAN BARRIER

Reliability Statistics

Cronbach's Alpha	N of Items
.582	6

Item-Total Statistics

	Cronbach's Alpha if Item Deleted
Items often in poor conditions	.493
Requires more time and thinking	*.655*
Shorter life expectancy	.511
Higher price than their real worth	.518
Outlets offer similar prices	.577
New clothes have a better price-quality ratio	.433

If the item 'Requires more time and thinking' is deleted, the Cronbach's Alpha coefficient increases to 0.655 which is closed enough to 0.7. Then, the constructed can be computed.
COMPUTE Utilitarian_Barrier=mean(UTI_1,UTI_3,UTI_4,UTI_5,UTI_6).
EXECUTE.

Utilitarian barrier			
	Frequency	Percent	Cumulative Percent
1.0	1	1.1	1.1
1.2	3	3.2	4.3
1.4	1	1.1	5.3
1.6	1	1.1	6.4
1.8	6	6.4	12.8
2.0	9	9.6	22.3
2.2	9	9.6	31.9
2.4	13	13.8	45.7
2.6	12	12.8	58.5
2.8	14	14.9	73.4
3.0	8	8.5	81.9
3.2	9	9.6	91.5
3.4	2	2.1	93.6
3.6	5	5.3	98.9
4.0	1	1.1	100.0
Total	94	100.0	

Statistics		
Usefulness		
Mean		2.5468
Median		2.6000
Mode		2.80
Std. Deviation		.59545
Skewness		-.215
Kurtosis		.061
Percentiles	25	2.2000
	50	2.6000
	75	3.0000

3.3 HEDONISM BARRIER

No pleasure in buying SH			
	Frequency	Percent	Cumulative Percent
Disagree	8	8.5	8.5
Neither agree nor disagree	18	19.1	27.7
Agree	48	51.1	78.7
Strongly agree	20	21.3	100.0
Total	94	100.0	

The item 'No pleasure in buying second-hand clothes' is chosen to represent this construct.

3.4 SELF-EXPRESSION BARRIER

Reliability Statistics	
Cronbach's Alpha	N of Items
.561	2

Often out of style			
	Frequency	Percent	Cumulative Percent
Strongly disagree	13	13.8	13.8
Disagree	48	51.1	64.9
Neither agree nor disagree	26	27.7	92.6
Agree	7	7.4	100.0
Total	94	100.0	

The item 'Often out of style' is the chosen one to represent this construct ($Cronbach's\ Alpha\ coefficient = 0.561$).

3.5 AFFILIATION BARRIER

Don't want others to think they buy SH clothes

		Frequency	Percent	Cumulative Percent
Valid	Disagree	2	2.1	2.1
	Neither agree nor disagree	12	12.8	14.9
	Agree	80	85.1	100.0
	Total	94	100.0	

Annex 3: Regression outputs

Annex 3.a – Dummies

1. FASHION MOTIVATIONS: 'Is trendy'

	Label
D_FASH_1	FASH_2=Strongly disagree
D_FASH_2	FASH_2=Disagree
D_FASH_3	FASH_2=Neither agree nor disagree
D_FASH_4	FASH_2=Agree
D_FASH_5	FASH_2=Strongly agree

2. ECONOMIC MOTIVATIONS: 'Allows you to have a better price compared to new clothes'

	Label
D_ECO_1	ECO_3=Disagree
D_ECO_2	ECO_3=Neither agree nor disagree
D_ECO_3	ECO_3=Agree
D_ECO_4	ECO_3=Strongly agree

3. HEDONISM: 'No pleasure in buying SH'

	Label
D_HED1_1	HED_1=Disagree
D_HED1_2	HED_1=Neither agree nor disagree
D_HED1_3	HED_1=Agree
D_HED1_4	HED_1=Strongly agree

4. SELF-EXPRESSION: 'Often out of style'

	Label
D_EXP_1	EXP_2=Strongly disagree
D_EXP_2	EXP_2=Disagree
D_EXP_3	EXP_2=Neither agree nor disagree
D_EXP_4	EXP_2=Agree

5. AFFILIATION: 'Don't want others to think they buy second-hand clothes'

	Label
D_AFF_1	AFF_1=Disagree
D_AFF_2	AFF_1=Neither agree nor disagree
D_AFF_3	AFF_1=Agree

Annex 3.b – Validation of several assumptions

1. NORMALITY ASSUMPTION

### Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Standardized Residual	.076	90	.200[*]	.987	90	.540

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Decision: (1) the observations with an id 4, 12, 16, and 44 were eliminated because they are extreme outliers.

(2) The hypothesis that the error terms follow a normal distribution is validated

$$(KS_{90} = 0.076; Sig = 0.200)$$

2. HOMOGENEITY ASSUMPTION

Dependent Variable: Buying intentions
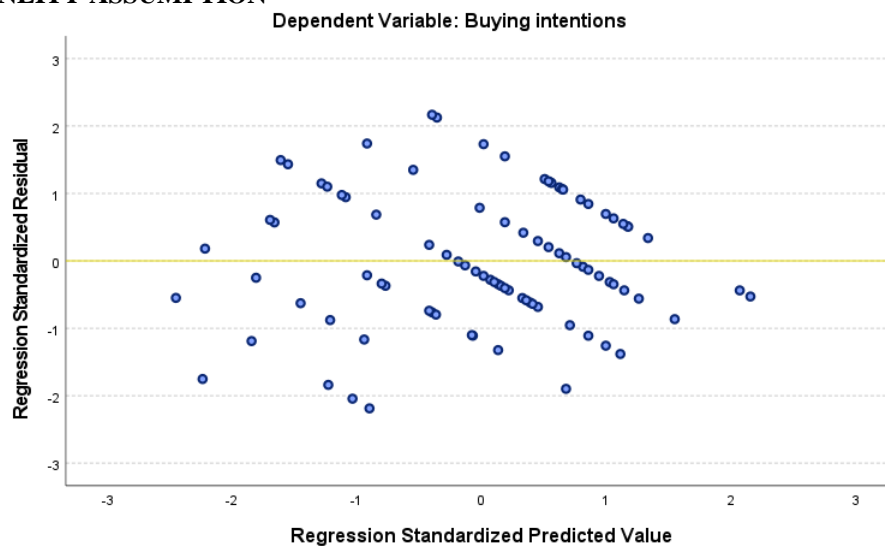
Decision: this hypothesis seems to be validated.

3. THE INDEPENDENT VARIABLES ARE NOT CORRELATED WITH EACH OTHER

The Variance Inflation Factors (VIF's) are less than two points, as it is visible in the coefficients' estimation.

Annex 3.c – Regression estimates

Model Summary[g]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.534[a]	.285	.277	.623
2	.611[b]	.374	.359	.586
3	.668[c]	.446	.426	.555
4	.698[d]	.488	.463	.537
5	.719[e]	.517	.488	.524
6	.738[f]	.545	.512	.512

a. Predictors: (Constant), Useful_Barrier
b. Predictors: (Constant), Useful_Barrier, EXP_2=Neither agree nor disagree
c. Predictors: (Constant), Useful_Barrier, EXP_2=Neither agree nor disagree, FASH_2=Disagree
d. Predictors: (Constant), Useful_Barrier, EXP_2=Neither agree nor disagree, FASH_2=Disagree, Critical Motivations
e. Predictors: (Constant), Useful_Barrier, EXP_2=Neither agree nor disagree, FASH_2=Disagree, Critical Motivations, AFF_1=Agree
f. Predictors: (Constant), Useful_Barrier, EXP_2=Neither agree nor disagree, FASH_2=Disagree, Critical Motivations, AFF_1=Agree, ECO_3=Neither agree nor disagree
g. Dependent Variable: Buying intentions

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1	(Constant)	5.749	.285		20.153	<.001		
	Useful_Barrier	-.649	.110	-.534	-5.921	<.001	1.000	1.000
2	(Constant)	5.676	.269		21.071	<.001		
	Useful_Barrier	-.564	.106	-.464	-5.319	<.001	.948	1.055
	EXP_2=Neither agree nor disagree	-.492	.140	-.306	-3.510	<.001	.948	1.055
3	(Constant)	5.665	.255		22.228	<.001		
	Useful_Barrier	-.542	.101	-.445	-5.386	<.001	.943	1.060
	EXP_2=Neither agree nor disagree	-.506	.133	-.315	-3.819	<.001	.947	1.056
	FASH_2=Disagree	-.951	.284	-.269	-3.343	.001	.995	1.005
4	(Constant)	4.536	.494		9.180	<.001		
	Useful_Barrier	-.527	.097	-.433	-5.411	<.001	.940	1.063
	EXP_2=Neither agree nor disagree	-.469	.129	-.292	-3.635	<.001	.935	1.069
	FASH_2=Disagree	-.848	.278	-.240	-3.052	.003	.976	1.025
	Critical Motivations	.256	.097	.209	2.637	.010	.962	1.040
5	(Constant)	4.299	.494		8.707	<.001		
	Useful_Barrier	-.513	.095	-.422	-5.383	<.001	.936	1.068
	EXP_2=Neither agree nor disagree	-.439	.127	-.273	-3.461	<.001	.925	1.082
	FASH_2=Disagree	-.731	.276	-.207	-2.646	.010	.941	1.062
	Critical Motivations	.229	.096	.186	2.390	.019	.946	1.057
	AFF_1=Agree	.359	.159	.179	2.260	.026	.919	1.088
6	(Constant)	4.245	.483		8.788	<.001		
	Useful_Barrier	-.547	.094	-.449	-5.796	<.001	.913	1.095
	EXP_2=Neither agree nor disagree	-.488	.126	-.304	-3.880	<.001	.896	1.116
	FASH_2=Disagree	-.671	.271	-.190	-2.473	.015	.932	1.073
	Critical Motivations	.252	.094	.205	2.681	.009	.934	1.070
	AFF_1=Agree	.374	.155	.186	2.407	.018	.918	1.090

ECO_3=Neither agree nor disagree	.448	.200	.175	2.243	.028	.902	1.108

a. Dependent Variable: Buying intentions

Pearson´s correlations between the computed constructs

Pearson's correlation		Critical Motivation	Useful Barrier	Safety Barrier
Receational motivations	Pearson Correlation	.132	**-.209***	-.202
	Sig. (2-tailed)	.204	.043	.051
	N	94	94	94

The construct Recreational motivation was dropped from the last iteration since it is significantly correlated with the Utilitarian barrier.

$$\left(Peason_{Rec,UTI} = -0.209; pvalue = 0.043\right)$$

Spearman's rho correlations between

			Often out of style (EXP2)	Don't want others to think they buy SH clothes (AFF1)
Spearman's rho	No pleasure in buying SH HED1	Correlation Coefficient	**-.266****	**.203***
		Sig. (2-tailed)	.010	.049
		N	94	94

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

The item of the hedonistic barrier 'No pleasure in buying second-hand' was eliminated from the estimations since it is significantly correlated with the other two items representative of the instruments Self-expression and Affiliation instrument.

$$\left(Spearman_{HED1,EXP2} = -0.266; pvalue = 0.010; Spearman_{HED1,AFF1} = 0.203; pvalue = 0.049\right)$$