

# Is Second-Hand the New Black?

Understanding the Factors Influencing People's Intention  
to Purchase Second-Hand Clothing through  
Peer-to-Peer Sharing Platforms

Bachelor Thesis  
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### **Abstract**

This study investigates the Millennials and Generation Z consumer's intention to purchase second-hand clothes through peer-to-peer (P2P) sharing platforms in Germany and the Netherlands, using the Theory of Planned Behaviour (TPB). Further, in this study, the TPB is expanded by additional constructs (perceived sustainability, economic motivation, willingness to distance from the fashion industry, negative sentiments towards the fashion industry, trust & self-identity) to measure their effect on purchase intention. An online survey collected the responses from 300 young Dutch and German consumers (18-35) adopting a snowball sampling approach. This research found that online second-hand purchase intention is partially explained by the TPB with attitude and social norms. Among the additional constructs incorporated, self-identity, trust (in strangers and the platform), as well as negative sentiments towards the fast-fashion industry, positively influenced the consumer's intention to purchase second-hand clothes through P2P platforms. This study resulted in theoretical- and practical implications. Concerning the theoretical dimension, this study shows that the TBP can be expanded by additional antecedents to improve the predictive power of second-hand clothes purchase intention for Dutch and German consumers. This study also offers advice to P2P platform managers as well as practitioners operating in the fashion industry.

*Keywords:* Second-hand shopping intention, P2P platforms, sharing economy, consumer behaviour, ethical consumerism, Theory of Planned Behaviour

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## 1. Introduction

From a global perspective, the fashion industry is one of the most harmful industries for the environment (Silva et al, 2021). Textile production is demanding high water usage, and chemical treatments are polluting the planet (Ek Styvén & Mariani, 2020). According to the European Parliament (2021), clothing and footwear production is causing 10% of global greenhouse gas emissions, which is more than all international flights and maritime shipping combined.

Additionally, the textile waste piling up in landfills is contributing to the environmental impact of the industry. Given the cheap production costs and the availability of fast-fashion items, a culture has developed that treats clothes as waste (Silva et al., 2021). Statistics show that Europeans discard about 11 kilograms of textile every year (European Parliament, 2021). These used clothes, however, are mostly incinerated or landfilled instead of donated or exported (Ek Styvén & Mariani, 2020) resulting in negative consequences for people and the environment.

There are, however, signs of improvement. People are recognising the impact of their consumer behaviour and the corresponding environmental- and social issues of overconsumption and textile waste. With the growing interest in sustainable consumption, the demand for second-hand clothes has increased. According to Silva et. al. (2021), the market for second-hand clothes grew 21 times faster than the traditional retail market over the past three years.

Additionally, the market is expected to double its global value to \$51 billion by 2023 (Silva et al., 2021). Buying second-hand will minimize environmental impact while maximising a product's lifespan which ultimately reduces waste production (Abbes et al., 2020; Farrant et al., 2010; Silva et al., 2021).

Studies on the environmental benefits of second-hand clothes point out that there are significant environmental advantages from reusing clothes (Farrant et al., 2010; Silva et al., 2021). This encourages the establishment of circular consumption models. The sharing economy (SE) which is regarded as the new “mega-trend” (Hamari et al., 2015) is built around the values of reduce, reuse and recycle. It enables people to collaboratively consume and share goods and services (Abbes et al., 2020; Hamari et al., 2016). Technological advancements equip users to share goods through various peer-to-peer (P2P) sharing platforms (e.g. Vinted, Uber, Airbnb) which ultimately enables online second-hand clothing markets to grow and gain traction (Abbes et al., 2020; Sihvonen & Turunen, 2016). Reduce, reuse, recycle are also central values to younger generations. Millennials and Generation Z are a predominant part of the second-hand market and are becoming influential in shaping social and economic trends, such as ethical and sustainable consumption, worldwide. Research shows that especially the younger generations consider sustainable consumption important (Bulut et al., 2017; Godelnik, 2017) and are willing to change their consumption habits to mitigate their ecological footprint.

Given the consumer’s growing awareness toward greener consumption, researchers and practitioners are increasingly interested in understanding the factors determining the adoption of this behaviour (Silva et al., 2021). Previous studies have explored potential motivations to engage in ethical consumption (Beldad & Hegner, 2018; Shin et al., 2018; Wiederhold & Martinez, 2018) and factors influencing purchase intention for second-hand clothing in general (Guiot & Roux, 2010; Silva et al., 2021). Additionally, studies focused on why people generally participate in the sharing economy (SE) through P2P platforms (Abbes et al., 2020; Choi, 2019; Hamari et al., 2016). The study of Ek Styvén and Mariani (2020) combined second-hand clothes

shopping with the topic of SE. Nonetheless, little research is done that investigates motivations influencing the purchase intentions of second-hand clothes online via P2P platforms.

Additionally, the impact of trust (in strangers and the platforms), as well as self-identity on the purchase intention, is yet not fully understood. Furthermore, Ek Styvén and Mariani (2020) make a compelling call for further research that focuses on the younger generations as they are showing a growing concern for environmental issues (e.g. Fridays for Future Movement). This is the research gap that this study tries to fill.

This study aims to provide a new and comprehensive model, which applies the Theory of Planned Behaviour (Ajzen, 1991) and additional variables relevant to the research. The factors outline the different motivations of consumers towards the behavioural intention of buying second-hand clothes through P2P sharing platforms. In other words, this paper aims to provide more empirical insights into the motivations behind buying second-hand clothes online among Millennials and Generation Z living in Germany and the Netherlands. To investigate the topic at hand, the following central research question and subquestions are posed:

*RQ1.0: What are the factors that influence the consumers' intention to purchase second-hand clothes through peer-to-peer sharing platforms?*

*SQ1: To what extent are the factors of the Theory of Planned Behaviour (attitude, perceived behavioural control & social norms) influencing the consumers' intention to purchase second-hand clothes through peer-to-peer sharing platforms?*

*SQ2: To what extent are the factors outlined by Ek Styvén and Mariani (2020) (economic motivation, perceived sustainability & willingness to distance from the fast fashion industry) influencing the consumers' intention to purchase second-hand clothes through peer-to-peer sharing platforms?*

*SQ3: To what extent are the factors of trust in strangers, trust in the platform, self-identity and negative sentiments towards the fast-fashion industry influencing the consumers' intention to purchase second-hand clothes through peer-to-peer sharing platforms?*

*RQ 2.0: How does gender moderate the relationship between the factors and the intention to purchase second-hand clothes on peer-to-peer sharing platforms?*

To address the research questions, an online survey was implemented with Dutch and German participants. The presented article is structured as follows: the literature review outlines relevant studies to provide a fundamental theoretical background to the research at hand; furthermore based on the literature, hypotheses are proposed which are finally combined into a research model. Then, the method of the empirical study is outlined, followed by the presentation of the regression analysis results. In the final section of the paper, a discussion of the findings and possible limitations are presented which result in suggestions for future research and practical implications.

## **2. Literature Review**

The Theory of Planned Behaviour (TPB) has been one of the most dominant theories used to explain the purchase intention of customers. This research will serve as the basis to study underlying motivations influencing the behavioural intention to purchase second-hand clothes online. The following section reflects upon the theoretical background of sharing economy (SE) and collaborative consumption (CC) as well as motivations of people to engage in peer-to-peer (P2P) platforms to buy second-hand. It reflects on the theory of planned behaviour and possible other predictors influencing the purchase intention. Finally, a research model with the corresponding hypotheses for each predictor is presented.

### **2.1 Collaborative consumption, sharing economy and peer-to-peer platforms**

The sharing economy (SE), also associated with collaborative consumption (CC), has received increasing attention across a broad spectrum, including researchers, established organisations such as Home Depot, Patagonia and Avis, as well as investors (Botsman & Rogers, 2010; Godelnik, 2017; Schatsky & Mahidhar, 2014). CC refers to the growing phenomena of consumers serving each other rather than opting for companies. It entails individuals sharing access to resources, for monetary or non-monetary compensation (Perren & Grauerholz, 2015). Therefore, CC is often referred to as a sharing economy or peer-to-peer exchange.

Academic literature shows that there is a wide consensus on the definition of SE and CC among scholars. Both phenomena are highly intertwined and to a large extent overlapping. Hamari et. al. (2016) define SE/CC as “the peer-to-peer based activity of obtaining, giving, or sharing access to goods and services, coordinated through community-based online services” (p.



2049). Ek Styvén and Mariani (2020) add that P2P platforms enable participants to “collaboratively make use of underutilised inventory through fee-based sharing” (p. 725).

The rapid development of information technologies has transformed exchanges among individuals and fostered the growth of the collaborative economy. According to the Statista Research Department (2020a), the CC is expected to reach \$335 billion by 2025. The advent of technology in combination with social media platforms contributed to the success of P2P online trading platforms for second-hand clothes such as Depop and Vinted (Abbes et al., 2020; Godelnik, 2017).

While the term P2P was commonly associated with file sharing it also refers to the larger phenomenon of collaborative activities between users online, for instance, consumer to consumer exchanges (Ek Styvén & Mariani, 2020; Hamari et al., 2016). Thus, P2P sharing platforms have grown into an essential tool that enables information sharing and connecting people. GoFundMe, Airbnb, Uber and eBay are different types of P2P sharing platforms that offer varying products or services. Over the past decade, platforms focussing on selling, swapping and exchanging second-hand fashion items, such as Vinted and Depop, have gained popularity (Abbes et al., 2020; Godelnik, 2017). Vinted, a Lithuanian startup founded in 2008 presents one of the biggest European P2P platforms focussing on redistributing second-hand clothes among its members. According to About Vinted (n.d.), the platform has 45 million active users with 15.000 new members subscribing every day. Its value is estimated at 1 billion Euro with the app being available in 12 European countries including Germany and the Netherlands.

## **2.2 Buying second-hand clothes**

Buying second-hand is not a phenomenon of the 21st century. Exchange among individuals has taken place as long as people have been trading and long before the emergence of the internet. Traditional flea markets and garage sales have provided consumers with the opportunity to buy second-hand clothes. These peer exchanges, however, occurred face-to-face, restricted by geographic bounds (Perren & Grauerholz, 2015).

The advancement of information technology has changed the game. P2P sharing platforms for second-hand clothes such as Vinted greatly expand the bounds of time and space restrictions, moving the SE to a new scale. They extend the access to second-hand clothes to a much larger audience which results in the traditional consumption communities evolving from “localized marketplaces with limited economic activity to collaborative global communities with significant economic, environmental, and social consequences” (Perren & Grauerholz, 2015, p. 139). Hence, it comes as no surprise that online platforms are a popular channel for buying and selling second-hand clothes in Germany and the Netherlands (Brandt, 2021; Tighe, 2020).

Modern consumers are encouraged to reduce, reuse and recycle to minimise environmental impact (Abbes et al., 2020; Farrant et al., 2010). As Fashion is considered one of the most polluting and wasteful industries (Silva et al., 2021), many consumers are recognising the importance of engaging in mindful and conscious consumption (Beldad & Hegner, 2018; Ek Styvén & Mariani, 2020; Shang & Peloza, 2016; Wiederhold & Martinez, 2018). Hence, by opting for second-hand people counteract the damaging impacts of the fast-fashion industry.

Certainly, environmental concern is not the only motivation to choose second-hand products. Guiot and Roux (2010) claim that opting for second-hand products offers an economic

incentive. While brands that value ethical and local production are experiencing an increase in popularity (Beldad & Hegner, 2018), buying second-hand products is often considered a good alternative since ethical brands are often perceived as expensive compared to fast-fashion labels (Hamari et al., 2016; Wiederhold & Martinez, 2018). Economic motivation was also a predictor outlined by Ek Styvén and Mariani (2020). Their quantitative study investigated motivational predictors for buying second-hand clothes on P2P platforms and presented three major antecedents namely: economic motivation, perceived sustainability, and taking distance from the consumption system.

While their model provides a fundamental basis, Ek Styvén and Mariani (2020) did not investigate the influence of other factors such as self-identity as a green consumer, trust in strangers and P2P platforms, as well as the social influence on intention to buy second-hand clothes online. All three antecedents can be seen as strong predictors influencing the intention to buy second-hand products as research into the field showed that people's expressed behaviour is often influenced by their social environment (Wiederhold & Martinez, 2018). Furthermore, studies outline that trust is a key factor when it comes to purchasing second-hand goods in general and especially online as the interaction takes place remotely and among strangers (Agag & El-Masry, 2017; Hong & Cha, 2013; Lee & Lee, 2005). Studies focused on ethical consumption highlight the importance that self-identity has on purchase intention (Beldad & Hegner, 2018; Carfora et al., 2019). Therefore this antecedent will also be investigated as a potential motivation to buy second-hand clothes online.

### **2.3 Theory of Planned Behaviour**

The field of social psychology outlines several frameworks that attempt to explain how attitudes and intentions can influence behaviour. The Theory of Planned Behaviour (TPB; Ajzen, 1991), which is an extension of the Theory of Reasoned Action, provides insights into the underlying factors influencing buying attitudes and intentions. The three concepts of attitude, subjective norm, and perceived behavioural control lie at the core of the model and together influence an individual's behavioural intentions. Behavioural intention, in turn, is assumed to be the most proximal antecedent of human social behaviour (Ajzen, 1991).

This theory suggests that a positive attitude to engage in a certain behaviour precedes the intention to eventually perform the behaviour. It is intended to explain and predict all kinds of behaviours over which people can exert self-control. TPB is often applied in studies investigating purchase intentions and is used to gain insights into certain consumer behaviour (Beldad & Hegner, 2018; Ek Styvén & Mariani, 2020; Hamari et al., 2016). A study from Masud et al. (2016) showed that pro-environmental behaviour, such as buying second-hand instead of new clothes, is directly associated with attitudes toward climate change, perceived behavioural control and subjective norms. Therefore, the TPB will serve as the central theory for this study.

Attitude, the first antecedent of the TPB, is defined as the “degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question” (Ajzen, 1991, p. 188) and can lead to the performance of certain behaviour. Ajzen (1991) proposes that the more favourable an attitude towards a behaviour, the stronger the individual's intention to perform the behaviour in question. When it comes to second-hand clothes the attitude one holds towards the behaviour is of utmost importance. It must be taken into consideration that second-hand clothes

differ from new clothes (in terms of price, previous ownership, condition etc) and are thus considered differently by consumers (Farrant et al., 2010). These considerations might negatively impact the attitude the consumer holds towards buying second-hand clothing. On the other hand, Dhir et. al. (2021) show that the fashion industry substantially contributes to global climate change and the growing concern for sustainable behaviour can influence the attitude towards ethical consumption. In line with the increased demand for ethical consumption (Adams & Raisborough, 2010), the demand for second-hand products has also increased. The attitude towards ethical consumerism is thus translated into ethical purchase intentions by buying for instance second-hand or fair trade products (Beldad & Hegner, 2018; Dhir et al., 2021). In other words, a customer's attitude constitutes the foundation for the conveyed behaviour and ultimately the purchase decision. It can therefore be expected that consumers who hold a positive attitude towards second-hand clothes are more likely to buy them. Hence it is hypothesised that:

*H1: A positive attitude towards buying second-hand products increases behavioural intention to buy second-hand products on P2P sharing economy platforms.*

Perceived behavioural control (PBC) constitutes the second antecedent of the TPB. In this context, PBC relates to the access of distribution channels and the "ease or difficulty of performing the behaviour" (Ajzen 1991, p. 188). In other words, the behaviour can only be performed when the necessary infrastructure is provided and easily accessible. If access to the P2P platforms is undemanding and consumers have the means to use the service, they are more likely to use the platforms to buy second-hand clothes. Dhir et. al. (2021) point out that the green apparel industry constitutes less than 10% of the total apparel market. Hence, accessing ethically

produced clothing items in the regular market can be challenging. P2P sharing platforms on the other hand provide easy access to second-hand products which, as explained earlier, can also be considered as a type of sustainable consumption. Thus, in this specific case, PBC relates to the necessary skills and knowledge to successfully use these P2P sharing platforms. Research has outlined that perceived ease of use is a crucial component of several technology acceptance models (e.g. Technology acceptance model by Venkatesh & Bala, 2008). Ease of use has shown to explain current and/or future behavioural intention of (re-)using a technological system or device (Abbes et al., 2020; Venkatesh & Bala, 2008). To buy second-hand clothes online, the user needs internet skills and access to technology. Therefore it is theorised that:

*H2: PBC (in terms of internet skills and access) positively influences behavioural intention to buy second-hand products on P2P sharing economy platforms.*

The final antecedent of the TPB model are subjective norms which are defined as the “social pressure to perform or not to perform the behaviour” (Ajzen 1991, p. 188). It relates to the expectations that others hold regarding the performance of certain behaviour, in this case engaging in ethical consumption by buying second-hand products. The influence of subjective norms on ethical consumption is statistically significant in several studies (Alsaad, 2021; Al-Swidi et al., 2014; Beldad & Hegner, 2018). This could be explained by the fact that much of our behaviour is predicted based on the attitudes and behaviours of others. Additionally, young adults are concerned with what others think of them (Arnett et al., 2014; Botetzagias et al., 2015). Thus, behaviour is often influenced by the possible disapproval of others.

The subjective norms antecedent is however limited in the way it is defined as it does not take all dimensions of social influence into account (Botetzagias et al., 2015; Wiederhold & Martinez, 2018). Therefore, academic literature is used to expand the definition of subjective norms. Cialdini and Goldstein (2004) classify social norms into two types: Injunctive and descriptive social norms. Injunctive norms, which are similar to subjective norms, inform us about what society typically approves and disapproves of (Cialdini & Goldstein, 2004). Descriptive norms on the other hand relate to the norms that inform us about what is typically done by others. Research has found that social norms can influence behaviour linked to sustainability such as recycling and littering (Botetzagias et al., 2015). Hence, it can be expected that they also play a role when it comes to second-hand shopping.

People tend to consume ethically when their social environment does the same and considers it important (Beldad & Hegner, 2018; Botetzagias et al., 2015). If our social world values second-hand shopping, similar behaviour is likely adapted to be in line with these values. While Cialdini and Goldstein (2004) classify two types of social norms this study combines them into one overarching construct as it is expected that injunctive- as well as descriptive social norms together, form one construct. Therefore, it is expected that:

*H3: Social norms (in terms of injunctive- & descriptive social norms) positively influence behavioural intention towards buying second-hand on P2P sharing economy platforms.*

### **2.3.1 Expanding TPB in the Context of Second-Hand Purchase Intention**

The TPB can be seen as a good predictor of purchase intentions and the consumer's behaviour. However, some limitations to the theory have been discovered. The TPB is mainly concerned with how attitude influences a certain behaviour. It assumes that individuals act rationally, thus social obstacles are not taken into account (Wiederhold & Martinez, 2018). It does not account for other factors such as the current mood, past experiences or fear which can potentially also affect behavioural intention. Furthermore, while it does consider normative influences, it does not account for environmental or economic factors that may affect a person's intention to perform a behaviour.

To account for some of these limitations and to fit the purpose of this study the model of TPB is expanded with further antecedents. Firstly, the consumer's self-identity will be taken into account as studies on ethical consumerism have found it to be an important predictor (Beldad & Hegner, 2018). On top of that, Ek Styvén and Mariani (2020) proposed three antecedents: economic motivation, perceived sustainability, willingness to distance oneself from the fast-fashion industry, which will be used to broaden the TPB. Finally, new antecedents will be tested: trust in strangers and the platform as well as the sentiments towards the fast-fashion industry. This way a deeper understanding of the extent to which these predictors influence the intention to engage in P2P sharing platforms is gained.



## 2.4 Self-Identity

The framework of the TPB is sometimes expanded by the further predictor of self-identity. This concept can be defined as the “salient part of an actor’s self which relates to a particular behaviour.” (Conner & Armitage, 1998, p.1444). Some authors (Beldad & Hegner, 2018; Carfora et al., 2019; Shaw et al., 2000) showed the validity of including the self-identity construct to explain consumers’ intentions and behaviours, especially concerning ethical consumption choices. Ethical consumers may make ethical consumption choices because ethical issues have become an important part of their self-identity (Carfora et al., 2019; Choi, 2019; Shaw et al., 2000). It can be argued that if an issue becomes central to an individual's self-identity, the behavioural intention is accordingly adjusted (Shaw et al., 2000). Thus, when it comes to second-hand clothes shopping it can be assumed that if the consumer identifies as an ethical consumer who is concerned about the environmental impact of their consumption behaviour and ethical issues, the consumer is more likely to perform behaviour according to their personal values.

In this specific research, self-identity refers to the identification as an ethical consumer who is concerned with the environment, workers rights and ethical issues in the apparel industry. Research suggests that self-identity contributes to behavioural intention over and above the effect made by the other TPB variables (Shaw et al., 2000). Hence, in the presented study self-identity will be treated as an independent predictor variable and not as an extension of the TPB.

Therefore it was hypothesised that:

*H4: Identifying as an ethical consumer (self-identity) positively influences behavioural intention to buy second-hand clothes on P2P sharing economy platforms.*

## 2.5 Economic Motivation

One antecedent for second-hand shopping highlighted in many studies is economic motivation (Ek Styvén & Mariani, 2020; Guiot & Roux, 2010). CC platforms offer the possibility of economic benefits such as saving money and providing access to difficult to retrieve resources (Godelnik, 2017; Hamari et al., 2016) which are two individualistic reasons for participation. Research highlights that price is a decisive point when making a purchase decision (Wiederhold & Martinez, 2018). Thus, economic motivation in this study translates to saving money, which is an understandable motivator for many consumers. Perren and Grauerholz (2015) outline that P2P platforms are, most of the time, less expensive than traditional marketplaces. Hence, individual consumers gain an economic advantage by fulfilling consumption needs at reduced costs.

Research suggests that buying second-hand clothes is especially popular for younger generations (Bulut et al., 2017; Ek Styvén & Mariani, 2020; Godelnik, 2017). Generation Z<sup>1</sup> is to a large extent still in education and does not yet receive a steady income, hence second-hand clothes which can be purchased at a lower price might be an appealing alternative. Research in the field of CC attests that Generation Z, as well as Millennials, show strong participation in the sharing economy (Godelnik, 2017).

Even though some literature indicates that economic motivation is a predictor of the intention to buy second-hand (Ek Styvén & Mariani, 2020), the study of Silva et al., 2021 found evidence suggesting otherwise. According to their results, the price did not hold statistical significance and was therefore not a notable predictor for purchasing second-hand. They claim, however, that experienced second-hand consumers list cheaper clothes as a reason to purchase

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<sup>1</sup> those born between 1997 and 2015

second-hand clothes and inexperienced consumers revealed that price could be a potential motivation for choosing second-hand. Based on the mixed results from the previous studies this research will investigate the effect of economic motivation on the intention to buy second-hand products on P2P SE platforms. Thus, the following hypothesis was created:

*H5: Economic motivation positively influences behavioural intention to buy second-hand products on P2P sharing economy platforms.*

## **2.6 Perceived sustainability**

The United Nations Development Programme (2015) identifies three pillars of sustainability: economic development, social development, and environmental protection. Academic studies on CC, however, focus mainly on the environmental antecedent of sustainability (Ek Styvén & Mariani, 2020). The growing concern about climate change and the increasing trend towards a more mindful consumption has made the sharing economy an appealing alternative for consumers (Choi, 2019; Silva et al., 2021).

Participation in CC is not only economical but also highly ecological as unused items re-enter the consumption system. Sharing/swapping/renting or selling articles leads to an increased usage of these items (Perren & Grauerholz, 2015). That way the product's lifespan is maximised and environmental impact is minimised. The fashion industry is considered one of the most polluting and wasteful industries which contributes heavily to global climate change (Silva et al., 2021). Purchasing second-hand clothes tackle issues such as waste production (Abbes et al., 2020; Silva et al., 2021) and it is shown that there are significant environmental benefits from reusing clothes (Farrant et al., 2010). Empirical studies found evidence that reasons related to

environmental sensitivity (i.e. beliefs & attitudes towards sustainability issues) influence the motivation to engage in second-hand shopping (Ek Styvén & Mariani, 2020; Hamari et. al, 2016). Therefore the following hypothesis will be tested:

*H6: Perceived sustainability of buying second-hand clothes positively influences behavioural intention to buy second-hand products on P2P sharing economy platforms.*

## **2.7 The Fast-Fashion Industry**

The fast-fashion industry, which is defined in this study as an industry that produces inexpensive clothing rapidly by mass-market retailers in response to the latest trends (Oxford University Press, n.d.), is known for its dubious supply chains, labour exploitation and modern slavery (Silva et al., 2021; Stringer & Michailova, 2018). A rising number of consumers are recognising the consequences of their consumption behaviour and are requesting a change. Guiot and Roux (2010) highlight in their study that critical motivations play a significant role in motivating people to buy pre-owned clothes. In other words, second-hand shoppers are critically engaging with the wider market system reflecting on the issues of consumerism and overproduction of the traditional channels (Ek Styvén & Mariani, 2020; Guiot & Roux, 2010).

This type of motivation is related to the previously outlined sustainability antecedent and focuses on social sustainability. People recognise that the current (over-) consumption behaviour can lead to complex ramifications especially when “the level of consumption becomes unacceptable due to environmental consequences, unaffordable due to economic repercussion, or when it negatively affects personal and collective well-being” (Perren & Grauerholz, 2015, p. 142).

### **2.7.1 Willingness to Distance from the Fast-Fashion Industry**

Distancing from the fast-fashion industry can be seen as a form of protest against the companies that enable overconsumption, modern slavery, social injustice and the exploitation of people and the planet (Buerke et al., 2017; Ek Styvén & Mariani, 2020; Silva et al., 2021). It can be expected that people want to take a step back and search for ethical and greener alternatives. P2P platforms provide an alternative market channel and can thus be seen as a way to distance oneself from the fast-fashion system. They allow users to replace ownership of items in unconventional ways i.e. via lending and swapping (Ek Styvén & Mariani, 2020). According to Hamari et al. (2016), participation and collaboration in P2P platforms can be influenced by attitudes shaped by anti-establishment sentiments and the tendency towards a more sustainable consumption system. By choosing second-hand, consumers are thus distancing themselves from the mainstream fast-fashion industry. Hence it can be expected that:

*H7: The willingness to distance from the fast-fashion industry positively influences behavioural intention towards buying second-hand on P2P sharing economy platforms.*

### **2.7.2 Sentiments towards the fast-fashion industry**

Other academic literature agrees with the protest sentiment. Wiederhold and Martinez (2018) highlight in their article that modern consumers often strive to manifest their values through “boycotting companies or brands and/or through ethical consumption” (p. 420). This rebellion against the fast-fashion industry is however motivated by negative sentiment about practices employed by the industry. Phipps et al. (2013) highlight that recent developments suggest that

CC platforms are used to encourage and promote a more sustainable marketplace. This greener marketplace has the potential to optimise not only the environmental- but also the social consequences of consumption.

Sustainability does not only relate to the planet but also the people involved in the production process (Stringer & Michailova, 2018; Sustainable Development, n.d.). On this note, Silva et. al. (2021) emphasize that people who buy second-hand often disagree with the questionable production processes applied by the fast-fashion industry and show concern for the people involved in the production process. Furthermore, according to Hamari et. al. (2016), participation in CC communities is generally driven by the commitment and obligation to do good for other people and the environment, such as sharing, helping others and engaging in sustainable behaviour. It can be expected that consumers who are aware of the social injustice created through the consumption system are likely to opt for second hand-products and thus engage in a more socially responsible and sustainable consumption by distancing themselves from the fast-fashion industry (Wiederhold & Martinez, 2018). Furthermore, consumers who are aware of the labour exploitation and modern slavery occurring in the fast-fashion industry do not want to contribute to the social injustice and ergo search for suiting alternatives (Silva et al., 2021). Thus the following hypothesis was formulated:

*H8: Negative sentiments towards the fast-fashion industry positively influence behavioural intention to buy second-hand products on P2P sharing economy platforms.*

## 2.8 Trust

The sharing economy relies on trust among strangers as the whole system is based upon two strangers exchanging goods or services. Therefore trust becomes an even more relevant issue as the exchange relationships are based on the impersonal nature of the Internet infrastructure (Hong & Cha, 2013). This means that certain risks such as the quality of the second-hand product and the honesty of the stranger are involved in the SE. Chen et. al. (2015) outline in their study that one's disposition towards trust plays an important role in influencing online shopping behaviour. Mayer et. al. (1995) define trust as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (p. 712). It comes as no surprise that trust in a brand or store has been a crucial factor influencing one's buying decisions in traditional offline interaction (Dumortier et al., 2017; Lee & Lee, 2005). However, when people are choosing second-hand products, trust plays an even more important role as the product has already been used and the buyer has to trust that the seller honestly describes the used item to the best of their ability (Lee & Lee, 2005).

When moving the transaction online, consumers have to place even more trust in the seller as the virtual environment of the sale differs from traditional ones. The shopper is now unable to examine, feel, and touch the product to understand its tactile qualities such as fabric. One has to exclusively rely on extrinsic cues such as pictures displaying the item, its brand name and the interaction with the seller (Chen et. al. 2015; Sihvonen & Turunen, 2016). In these customer-to-customer markets, private online vendors are typically strangers to buyers, therefore previous experiences to rely on often do not exist. This so-called "stranger sharing" (Godelnik,

2017) is one of the characteristics that sets CC apart from traditional consumption and asks for trust in the stranger. Studies have shown that trust is a key indicator for online transactions that influences consumer's intentions to purchase goods online (Chen et. al. 2015). Given the high levels of uncertainty and potential pitfalls related to the purchase of second-hand clothes online the effect of trust in the seller on the willingness to engage in the online transaction is expected to be high. Hence it is expected that:

*H9a: Trust in sellers positively influences behavioural intention of buying second-hand products on P2P sharing economy platforms.*

The primary source of the perceived risk is either the behavioural uncertainty of the transaction partner or the “technological uncertainty of the Internet environment” (Hong & Cha, 2013, p.927). Next to the trust concerns regarding the stranger selling the product, online consumers tend to perceive risks in terms of privacy and security concerns, which are likely to impact their purchasing intentions (Sihvonen & Turunen, 2016). The internet as a sales channel presents new risks to the buyer in addition to the traditional consumer risks. Now the transaction takes place remotely and involves, in the case of purchasing pre-owned clothes, a delivery process that can present the risk of inconsistency between the ordered- and the delivered product. In addition, users may perceive payment risks as the process requires the consumer to transmit important personal information (Hong & Cha, 2013; Sihvonen & Turunen, 2016).

Scientific literature has identified numerous drivers of trust towards websites and e-commerce. According to a study of Beldad et. al. (2010), website-based antecedents of trust are perceived ease of use, perceived usefulness and website quality. Trust in the website or online platform thus plays a crucial role as the user would otherwise not engage in the online service.



Therefore it can be expected that this is also the case for P2P platforms for second-hand clothes.

Hence it is hypothesised that:

*H9b: Trust in SE platforms positively influences behavioural intention of buying second-hand products on P2P sharing economy platforms.*

## **2.9 The moderating effect of gender**

Previous studies demonstrate that women often show a higher purchase intention towards sustainable products and are more likely to consider a companies' values in their purchasing decisions (Beldad & Hegner, 2018). Articles on gender and ethics conclude that women tend to be more ethical than men as they are regarded as more sensitive, emotional and uncompetitive compared to men (McCabe et al., 2006). Bulut et. al. (2017) confirms that women traditionally establish closer relations with sustainable consumption behaviour. Earlier studies attest to this claim since women considered helping others as more important (Bulut et al., 2017; Beldad & Hegner, 2018) and are thus stronger influenced by information about worker exploitation than men. Also in other contexts than consumption, women show more ethical and prosocial behaviour compared to men. For instance, women are more inclined to perform voluntary work, do charitable donations and participate in voluntary organisations (Beldad & Hegner, 2018). Hence it can be concluded that there is a gender difference when it comes to attitude, perceived sustainability, the willingness to distance oneself from the fast-fashion industry, the sentiments towards the fast-fashion industry and self-identity.

When reflecting on the perceived behavioural control antecedent one has to reflect on the access to the internet and necessary internet skills. While research shows that gender inequalities

in access to the internet are no longer a concern, at least in developed countries (Hargittai & Shafer, 2006) there may still be differences in the way the internet is used and the skills applied. Website and online platforms can be used in various ways and a user may possess very different levels of knowledge with regards to various possible actions. Additionally, the perceptions of internet competency may diverge from actual skill levels. The research by Hargittai & Shafer (2006) suggested that there are no significant differences in gender in the ability to use web-based platforms like Vinted. However, since women are more likely to question their online competence as a result of stereotypes, they may be “less likely to take advantage of the myriad of services made available by the medium” (Hargittai & Shafer, 2006, p. 444). It can be therefore expected that perceived behavioural control may be moderated by gender.

Research on the effect of social norms on gender has shown that the influence on females was significantly higher than males in the usage process of technological innovation (Mazman et al., 2009). Furthermore, their study concludes that attitude toward innovation is the most influential factor for males, while females are mostly influenced by social norms. Research hence suggests that females are more susceptible to social influence. It can thus be concluded that there might be a difference in gender when it comes to social influence as a motivation to engage in P2P SE platforms.

Women are a driving force in the world's economy with their annual consumer spendings (Silverstein & Sayre, 2009). A statistical analysis by Poshmark (2020), a social commerce P2P SE platform for second-hand clothes, shows that the vast majority of users are female. A graph of consumer spending by Statista (n.d.) highlights that women spend more money on clothing than men. Furthermore, women spend on average more time on online shopping than men

(Statista Research Department, 2020b). Moving on, research showed that the underlying intentions to consume fashion are different. Women are more interested in clothing than men and perceive shopping as fun while men are mostly practically oriented (Chen et al., 2015; Hasan, 2010). Additionally, there is a gender-based pay gap between men and women which results in women earning less money (Blau & Kahn, 2017). Coupled with the underlying motivation to purchase clothing, opting for second-hand could be an appealing alternative from an economical perspective. Since platforms such as Vinted offer consumers access to more clothing it can be expected that gender moderates the relationship of economic motivation and purchase intention of second-hand clothes.

Regarding the trust antecedents which play a crucial role in this research, it can be concluded that women are more relationship-oriented, and therefore react stronger to the behaviour of others (Schwieren & Sutter, 2008). Additionally, women are also found to be more interested in a fair outcome and are thus less competitive (McCabe et al., 2006). Therefore it can be expected that there is a difference in gender regarding trust in strangers. When looking at trust in the platform however it could be expected that men show a higher level of trust as research outlines that males are more likely to engage in and trust the usage of technological innovations (Mazman et al., 2009). To further elaborate on this, academic research points out that men and women differ when it comes to risk perception. In other words, women and men may perceive the same risks differently (Gustafsson, 1998). Women tend to be more risk-averse than men which in turn can potentially influence the trust antecedent when it comes to online second-hand clothes shopping.

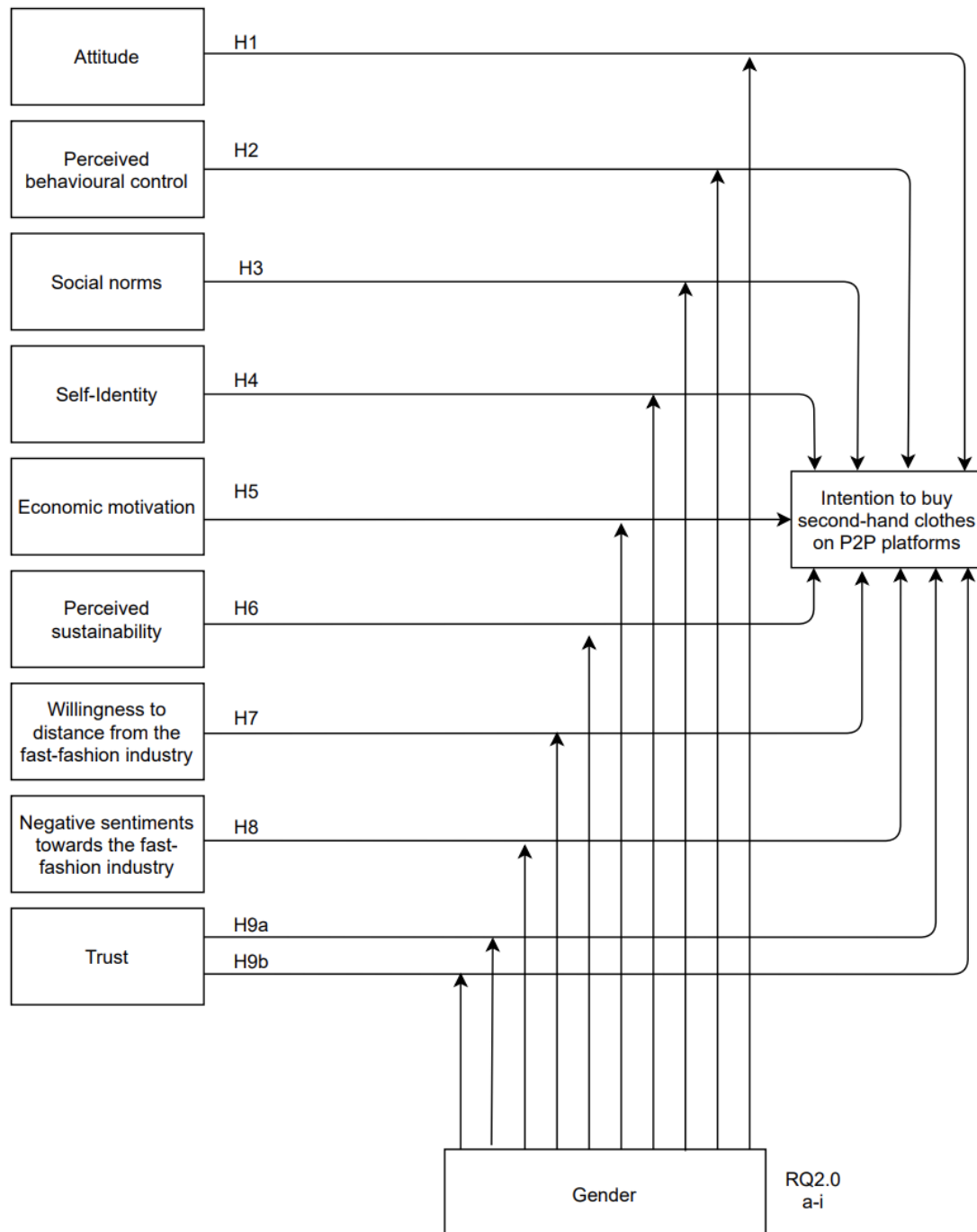
As outlined previously the intention towards a certain action usually precedes the behaviour hence, it can be expected that there is a difference in gender when it comes to the intentions and motivations to engage in P2P SE platforms. This part of the research is, however, very exploratory. Previous literature could not specifically determine whether a specific gender would strengthen or weaken the initial relationship. Thus, a second research question was posed that investigates the moderating role of gender when it comes to the consumers' purchase intention to buy second-hand clothes through P2P sharing platforms.

*RQ2.0: To what extent does the consumers' gender moderate the effect of (a) attitude, (b) perceived behavioural control, (c) social norms, (d) economic motivation, (e) perceived sustainability, (f) willingness to distance from the fast-fashion industry, (g) sentiment towards the fast-fashion industry, (h) trust (stranger & platform), and (i) self-identity on the intention to purchase second-hand clothes on peer-to-peer sharing platforms.*

## **2.10 Research Model and Hypotheses**

Figure 1 shows the research model that was created based on relevant literature. It entails the expanded version of the Theory of Planned Behaviour with the inclusion of economic motivation, perceived sustainability, willingness to distance from the fast-fashion industry, negative sentiments towards the fast-fashion industry, self-identity and trust, which will be tested to determine the factors influencing the purchase intention of second-hand products on P2P SE platforms.

Figure 1

*Research model & hypotheses*

### **3. Method**

#### **3.1 Research Design and Procedure**

To answer the research question, this study adopted a quantitative approach in the form of a questionnaire survey design to measure the proposed independent variables (Attitude, PBC, social norms, distance towards the fast-fashion industry, perceived sustainability, economic motivation, trust, negative sentiments towards the fast-fashion industry & self-identity) and assess their effects on the dependent variable intention. An online survey, created with the Qualtrics tool, was used for data collection.

The questionnaire (Appendix A) was pilot tested with 10 students at a Dutch University with a substantial number of German students to identify potential issues related to the statement formulation and comprehensibility. Based on the feedback of the pretests, the survey was slightly modified; the items however stayed the same. The conducted research consisted of one survey. Firstly, the participant was presented with a starting page that introduced the aim and nature of the study. Additionally, the users were informed about the expected response time, and the anonymity of their answers was reassured. Lastly, the respondents were told that they have the right to withdraw from the study at any given time and were asked to consent to the participation of the study.

#### **3.2 Respondents and Data Collection**

The distribution took place online via an anonymous link and offline via QR-Code flyers on the campus of the University of Twente. The participants were asked to share the survey within their network to reach as many respondents as possible. Hence, convenience- and snowball sampling

was applied for the data collection. The data collection lasted 2 weeks and was stopped after a sufficient number of respondents (403) participated. 80 participants did not complete the survey and only a partial response was collected. The completion rate was approximately 80%. Possible reasons for concluding the survey prematurely could be the length of the survey, technical difficulties or simply lack of interest. The partial responses (80) were excluded from the data set. On average, the participant took 7.5 minutes to complete the questionnaire.

This study specifically decided to include German and Dutch participants aged between 18 and 35. These neighbouring countries are both located in western Europe and are in the top ten of the developed countries (United Nations Development Programme, 2019). The research of Saxena & Khandelwal (2010) shows that in developed countries environmental consciousness is very prominent and consumers are willing to change their buying habits to protect the environment. Additionally, the Dutch Government has announced to have a 100% circular economy by 2050 (Ministerie van Algemene Zaken, 2017) while the German Government just released a new law focussing on recycling single-use plastics (Presse- und Informationsamt der Bundesregierung, 2021). Furthermore, German, as well as Dutch citizens, show an interest in second-hand clothes (Brandt, 2021; Tighe, 2020). Thus, both countries share post-materialistic values, in terms of self-expression and quality of life over economic security, as well as sustainable values.

323 participants completed the survey. However, due to extreme outliers (3) and exclusion criteria (in terms of age & nationality; 20) the analysis ultimately included 300 respondents aged between 18 and 35. About 63% were female and the mean age was 23 years, which is comparable to the user base of P2P platforms selling second-hand clothes. 42% of the

respondents hold Dutch nationality, while 58% have German nationality. The majority of respondents were in education with a job (150 respondents) with a disposable income lower than 1.200€ a month (228 respondents). Regarding the frequency and popularity of buying second-hand clothes, 28% of the respondents indicated that they buy second-hand clothing very often or always. Table 1 summarises all demographics.



**Table 1.***Demographics*

Item	Category	Frequency	Percentage
Age	18-35	23*	3.12**
Gender	Female	189	63.0
	Male	111	37.0
Nationality	German	175	58.3
	Dutch	125	41.7
	Self-employed	4	1.3
Employment status	Full-time	36	12.0
	Part-time	11	3.7
	In education (with a job)	150	50.0
	In education (without a job)	92	30.7
Monthly income	< 1.200€	228	76.0
	1.200 - 2.400	45	15.0
	2.400 - 3.600	16	5.3
	> 3.600	2	0.7
	Prefer not to say	9	3.0
Education Level (obtained)	Primary school	1	0.3
	High school	167	55.7
	Bachelor	98	32.7
	Master	30	10.0
	PHD	4	1.3

**Table 1.** (continued)

Item	Category	Frequency	Percentage
Frequency of buying second-hand	Never	68	22.7
	Rarely	76	25.3
	Sometimes	72	24.0
	Very often	67	22.3
	Always	17	5.7
Total		300	

\*Mean

\*\* Standard deviation

### 3.3 Materials

The questionnaire consisted of 59 questions regarding the predictor variables and eight demographic questions. The proposed constructs were measured with items taken from previous studies (Ajzen, 1991; Ek Styvén & Mariani, 2020; Guiot & Roux, 2010; Hamari et al., 2016; Shaw et al., 2000; Shin et al., 2018). Most items were slightly modified to fit the specific context of this research. Additionally, new items were created. Table 2 presents the items used in the analysis.

Each construct was measured with three to nine items. The tested constructs were attitude towards buying second-hand clothing online, perceived behavioural control, social norms, willingness to distance from the fast-fashion industry, perceived sustainability, economic motivation, negative sentiments towards the fast-fashion industry trust in strangers, as well as the platforms, self-identity, and intention to purchase second-hand clothes online on P2P platforms in the future. All constructs are ordinal variables and were measured using a five-point

Likert scale ranging from strongly disagree to strongly agree. Next to the constructs the survey also measured demographic variables such as age, income, nationality and frequency of buying second-hand clothes. For the moderation effect gender of the participants was also collected.

### **3.4 Validity and Reliability Analysis**

After the Data collection was completed, a confirmatory factor analysis, using principal component analysis, was conducted. That way the large number of items from the questionnaire was reduced to a smaller amount of interpretable constructs. The Kaiser-Meyer-Olkin test showed a value of .87 (Table B1), which is higher than the recommended minimum value of 0.60 (Kaiser, 1974). That means the data is suitable for factor analysis. Both the table of 'Total variance explained' and a created scree plot (Figure B1) showed that there are 11 components with an eigenvalue higher than one. This means that 11 constructs can be found in the data (based on Kaiser's Criterion). The rotated component matrix (Table 2) was used to determine the items that load on the different constructs. The 11 factors confirmed the proposed constructs. A Cronbach's alpha analysis was conducted to establish the reliability of the proposed constructs. Cronbach's alpha of the scales ranged between .77 and .94 suggesting high levels of internal consistency (Nunnally, 1978). One construct (Distancing from the fast-fashion industry), however, showed an alpha of .69. This construct was still included in the analysis as the alpha was very close to .70 (Nunnally, 1978) but will be treated with caution when it comes to the interpretation of the results. Table 2 contains all alpha scores, mean- and standard deviation values for all researched constructs. The rotated component matrix showed that it is possible to create 11 constructs which means that all proposed constructs were measured by the

questionnaire. Furthermore, the factor loadings after rotation of the items included in the analysis are displayed.

*Results of the factor analysis VARIMAX rotation of the items included in the online survey and reliability scores, means and standard deviation values for the different constructs.*

[illegible]

**Table 2.** (continued).

Construct	Items	Components										
		1	2	3	4	5	6	7	8	9	10	11
Negative sentiments towards the fast-fashion industry	Fast-fashion industry has negative effects on the workers in the production process					.80						
	Fast-fashion industry is guilty of modern slavery					.85						
	Fast-fashion industry is exploiting workers					.88						
	Fast-fashion industry does not respect the welfare of the people involved					.84						
Trust in platforms	I believe P2P platforms are competent.		.80									
	I think P2P platforms care about the interests of the consumer.		.73									
	I assume P2P platforms can be trusted.		.83									
	I expect that P2P platforms are honest in dealing with consumers.		.82									
	P2P SE platforms are a secure source for transactions.		.65									
Trust in strangers	P2P platforms seem to be trustworthy.		.79									
	People who sell second-hand clothes are honest in dealing with consumers.			.76								
	People who sell second-hand clothes are honest about the quality of the product.			.76								
	People who sell second-hand clothes can be counted on to do what they say they will do.			.76								
	People who sell second-hand clothes care about the interest of the buyer.			.66								
Self-identity	People who sell second-hand clothes can be trusted.			.74								
	People who sell second-hand clothes don't cheat.			.75								
	I see myself as someone concerned about ethical issues.								.76			
	I care about the state of the environment.								.72			
	I care about workers rights.								.79			
Intention	I am likely to purchase second-hand clothes on P2P platforms the next time I need a clothing item.	.81										
	I will not hesitate to choose P2P platforms offering second-hand clothes instead of buying new clothes.	.75										
	I expect to purchase second-hand clothes online in the future.	.81										
	I plan to purchase second-hand clothes online in the future.	.88										
	I intend to purchase second-hand clothes online in the future.	.87										
Cronbach's alpha		0.94	0.90	0.87	0.90	0.91	0.86	0.80	0.77	0.69	0.85	0.77
Means		3.44	3.55	3.08	4.00	4.26	4.29	3.21	4.16	3.74	3.92	4.06
Standard deviation		1.02	0.66	0.56	0.59	0.70	0.71	0.81	0.59	0.71	0.82	0.67

\*All items were measured using a five-point Likert scale

### **3.4.1 Assumptions of multiple linear regression**

Before a multiple linear regression analysis was performed the data set was checked to see if the four assumptions of multiple linear regression analysis (linearity, homoscedasticity, independence & normality) are met (Casson & Farmer, 2014). Even though the independent variable was not perfectly normally distributed (Figure C2) the sample size of 323 was sufficient to perform the analysis. The VIF values indicated that there were no issues of multicollinearity between predictor variables since all values ranged from 1.06 to 1.57 which lies below ten. To check the assumption of linearity, a P-P plot was created (Figure C3). The points were following the line and showed only slight deviations. To check for homoscedasticity a scatter plot was created (Figure C4). Ideally, all values fall between -3 and 3. Based on the scatterplot, which provided a visual examination of the homoscedasticity assumption between the predicted dependent variable scores and the errors of prediction, three extreme outliers were discovered and removed from the data set (Figure C1). Additionally, the scatter plot showed no clear pattern and the shape of a rectangle which indicated that the assumption of homoscedasticity is met. The output can be found in Appendix C. Overall it can be concluded that all assumptions were met and the hierarchical multiple linear regression could be performed which will be reflected upon in the analysis section.

## 4. Analysis & Results

Before the analysis was conducted the data set was cleaned. All partial responses (80), participants outside the target audience based on age and nationality (20), and extreme outliers (3) were removed leaving a data set with  $n = 300$ . First, a hierarchical regression analysis was performed (Table 3) followed by a moderation analysis with the macro process extension developed by Andrew Hayes. In the following, the results of the regression analysis will be presented followed by the outcome of the moderation analysis. More detailed output can be found in Appendix D.

### 4.1 Regression Analysis

To test the proposed hypotheses a hierarchical regression analysis was performed. That way the effects of the different predictors on the outcome variable can be determined sequentially. As the TPB was considered as the foundational model of the study the three antecedents- attitude, perceived behavioural control and social norms- were entered in the first block of the regression model. In the second block, the antecedents proposed by Ek Styvén and Mariani (2020) - perceived sustainability, willingness to distance from the fast-fashion industry and economic motivation were added. Eventually, the predictors of trust in strangers and platforms, negative sentiments towards the fast-fashion industry and self-identity were entered in the third block of the regression model.

The three antecedents of TPB (attitude, PBC & social norms) in the first block resulted in an adjusted  $R^2$  of .36 ( $F_{3,296} = 56.61$ ;  $p < .001$ ). When the three constructs of Ek Styvén and Mariani (perceived sustainability, willingness to distance & economic motivation) were added



the adjusted  $R^2$  value rose to .38 ( $F_{6,293} = 30.60$ ;  $p < .05$ ). The inclusion of the final four predictors (negative sentiments towards the fast-fashion industry, trust in seller and the platform as well as self-identity) in the last block increased the value of the adjusted  $R^2$  to .46 ( $F_{10,289} = 26.221$ ,  $p < 0.001$ ). This signifies that 46% of the variance of the outcome variable is explained by the independent variables. In other words, it can be said that this model has a strong explanatory value on the dependent variable, but it still could be improved by adding other predictors.

In the completed model the variance of the behavioural intention to buy second-hand clothes through P2P platforms could be attributed primarily to the two antecedents of the TPB attitude towards second-hand clothes ( $b = .44$ ,  $p < .001$ ) and social norms ( $b = .29$ ,  $p < .001$ ), to the two antecedent of trust: trust in the platform ( $b = .256$ ,  $p < .01$ ) and trust in strangers ( $b = .190$ ,  $p < 0.05$ ), as well as negative sentiments towards the fast-fashion industry ( $b = .27$ ,  $p < .001$ ) and self-identity ( $b = .215$ ,  $p < 0.05$ ). These results support hypotheses 1, 3, 4, 8, 9a and 9b respectively.

The three predictors outlined by Ek Styvén and Mariani (2020) - perceived sustainability, willingness to distance from the fast-fashion industry and economic motivation- were not found to positively influence behavioural intention to purchase second-hand clothes online. The associated b values were  $-.046$  ( $p > .05$ ),  $0.39$  ( $p > .05$ ),  $-.031$  ( $p > .05$ ) respectively. Thus, hypotheses 5, 6 and 7 are not supported. Furthermore, there is no statistical support for hypothesis 2, as perceived behavioural control ( $b = .091$ ,  $p > .05$ ) does not positively influence behavioural intention among German or Dutch emerging adults. Table 3 summarises the unstandardised and standardised coefficients of the different constructs that were expected to

influence behavioural intention to purchase second-hand clothes through P2P sharing platforms.

The results show that attitude towards second-hand clothes, social norms, trust in strangers and the platform, negative sentiments towards the fast-fashion industry, as well as self-identity, predict behavioural intention to purchase second-hand clothes on P2P sharing platforms. Overall, attitude towards second-hand clothes, social norms and negative sentiments towards the fast-fashion industry contributes the greatest prediction of the variance in the outcome variable and trust in strangers the least.

**Table 3.***Unstandardised and standardised coefficients of the hypothesised constructs*

Models	B	SE B	$\beta$	p	Adj. $R^2$ ( $\Delta R^2$ )
Constant	-1.08	.38		.005	
Attitude towards second-hand clothes	.56	.08	.37	.000	.36
Perceived behavioural control	.22	.07	.15	.002	
Social norms	.40	.06	.32	.000	
Constant	-1.73	.45		.000	
Attitude towards second-hand clothes	.51	.08	.33	.000	.37 (.01)
Perceived behavioural control	.19	.07	.13	.007	
Social norms	.39	.06	.31	.000	
Perceived sustainability	.07	.10	.04	.467	
Willingness to distance from the fast-fashion industry	-.16	.08	.11	.037	
Economic motivation	.05	.06	.04	.463	
Constant	-3.05	.46		.000	
Attitude towards second-hand clothes	.44	.08	.29***	.000	.46 (.09)
Perceived behavioural control	.09	.07	.06	.177	
Social norms	.29	.06	.23***	.000	
Perceived sustainability	-.05	.09	-.03	.617	
Willingness to distance from the fast-fashion industry	.04	.08	.03	.608	
Economic motivation	-.03	.06	-.03	.598	
Negative sentiments towards the fast-fashion industry	.27	.07	.19***	.000	
Trust in Platforms	.26	.08	.16**	.002	
Trust in Strangers	.19	.09	.10*	.044	
Self-identity	.22	.09	.13*	.013	

\*\*\*  $p < .001$ .\*\*  $p < .01$ .\*  $p < .05$ .

## 4.2 Moderator Analysis via Process Macro

The hypothesised moderator gender was treated as a dichotomous categorical variable. To check RQ2, the moderation effect of gender on the association between the predictor variables and the outcome variable intention, the process macro tool developed by Hayes was used. The analysis was run for each predictor variable respectively. The analysis confirmed that there is a moderation of gender for two variables.

The findings suggest that the interaction term gender  $\times$  perceived behavioural control was positive and significant ( $b = 0.411$ ,  $p < 0.01$ ). This indicates that gender reinforces the association between perceived behavioural control and behavioural intention to purchase second-hand clothes through P2P platforms. The results highlight that females are more likely to use P2P platforms to purchase second-hand clothes when the perceived behavioural control is high, while perceived behavioural control only slightly affects the behavioural intention for men.

Additionally, the interaction term gender  $\times$  economic motivation was positive and significant ( $b = 0.334$ ,  $P < 0.05$ ). This means that gender strengthens the association between economic motivation and behavioural intention to purchase second-hand clothes through P2P platforms. The results showed that economic motivation influences behavioural intention stronger for females than for males. It is important to note that both perceived behavioural control and economic motivation did not show a significant association with behavioural intention and are thus no strong predictors of behavioural intention.

### 4.3 Hypothesis overview

Table 4 summarises the previously posed hypotheses and whether support for them was found in the analysis. The analysis showed that a total of 6 hypotheses could be supported.

**Table 4.**

*Summary of hypotheses testing*

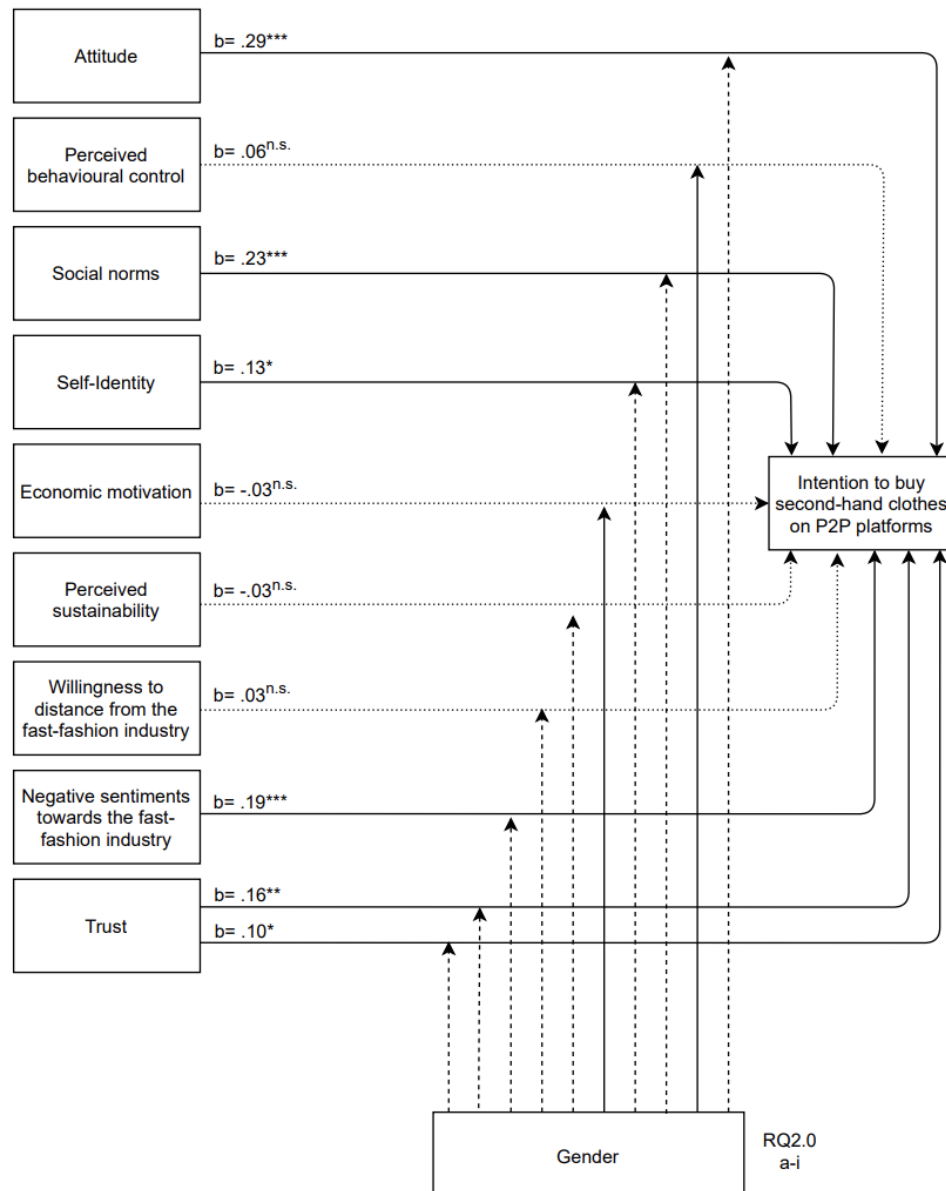
Hypotheses		Supported	Partially
<b>H1</b>	A positive attitude towards buying second-hand clothes increases behavioural intention to buy second-hand clothes on P2P-SE platforms.	Yes	
<b>H2</b>	PBC (in terms of internet skills and access) positively influences behavioural intention to buy second-hand products on P2P sharing economy platforms	No	
<b>H3</b>	Social norms (in terms of injunctive & descriptive social norms) positively influence behavioural intention towards buying second-hand on P2P-SE platforms.	Yes	
<b>H4</b>	Identifying as an ethical consumer (self-identity) positively influences behavioural intention to buy second-hand clothes on P2P-SE platforms	Yes	
<b>H5</b>	Economic motivation positively influences behavioural intention to buy second-hand clothes on P2P-SE platforms.	No	
<b>H6</b>	Perceived sustainability positively influences behavioural intention to buy second-hand clothes on P2P-SE platforms.	No	
<b>H7</b>	The willingness to distance from the fast-fashion industry positively influences behavioural intention to buy second-hand clothes on P2P-SE platforms.	No	
<b>H8</b>	Negative sentiments towards the fast-fashion industry positively influence behavioural intention to buy second-hand product on P2P SE platforms	Yes	
<b>H9a</b>	Trust in sellers positively influences behavioural intention to buy second-hand clothes on P2P-SE platforms.	Yes	
<b>H9b</b>	Trust in SE platforms positively influences behavioural intention to buy second-hand clothes on P2P-SE platforms.	Yes	
<b>Research question pertaining to the model</b>			
<b>RQ 2.0</b>	To what extent does the consumers' gender moderate the effect of (a) attitude, (b) perceived behavioural control, (c) social norms, (d) economic motivation, (e) perceived sustainability, (f) willingness to distance from the fast-fashion industry, (g) sentiment towards the fast-fashion industry, (h) trust (stranger & platform), and (i) self-identity on the intention to purchase second-hand clothes on peer-to-peer sharing platforms.		Yes (b,d)

#### 4.4 Final Research Model

Based on the presented results the proposed research model was modified. The new research model is presented in Figure 2.

Figure 2

*Final research model*



..... ➤ insignificant main effect

----- ➤ insignificant moderation effect

## **5. Discussion**

### **5.1 Discussion of Results**

Inspired by previous research on ethical consumption this study aimed at identifying possible predictors that influence the behavioural intention to buy second-hand clothes on P2P platforms. This paper aimed to scientifically determine if and to what extent the outlined predictors influence a customer's purchase intention. In addition to that, the objective was to find out if and how gender moderates the association between the different predictors and the outcome variable. This research contributes to the study of second-hand purchasing behaviour. By outlining and understanding the factors influencing the behavioural intention to use P2P platforms, this paper helps to gain deeper knowledge about the phenomenon of buying second-hand clothes online.

The performed regression analysis revealed that attitude towards second-hand clothes as well as social norms positively influences the behavioural intention to purchase second-hand clothes online. That is, those who have a favourable attitude towards second-hand clothes and perceive that their social environment values and engages in online second-hand consumption show a higher behavioural intention to purchase second-hand clothes online. These results are consistent with those of previous studies on other types of pro-environmental behaviour and ethical consumption (e.g. Beldad & Hegner, 2018; Shin, 2018). Shin (2018) discussed that consumers' intention to choose organic food items are predicted among others by attitude, perceived behavioural control and social- as well as subjective norms. In the current study, the attitude has the strongest relative importance which is also consistent with Ajzens (1991) findings which suggested that attitude was generally the strongest predictor of behavioural intention. This can be explained by the fact that if people see buying second-hand clothes as

beneficial and good, they are more likely to engage in this behaviour. As pre-owned clothes are regarded differently than new items in terms of quality and hygienic considerations, having a positive attitude is of utmost importance. According to Silva et. al. (2021) people who may hold positive prior experiences and are experienced second-hand shoppers are more likely to hold a positive attitude towards buying second-hand.

Social norms also show a strong effect on behavioural intention. This is in line with the findings of Botetzagias et. al. (2015) who found that social norms have a positive impact on recycling intention. It is important to note that the social norms construct in this study consists mainly of descriptive social norm items as most injunctive social norm items were excluded by the factor analysis. This means that injunctive social norms, which are similar to subjective norms (from Ajzen's TPB), are not a strong predictor of second-hand purchase intention/behaviour. The social environment thus influences an individual not so much through pressure but rather through example (i.e. what significant others do rather than what they condone) (Botetzagias et al., 2015). The findings thus indicate that the behavioural intention of purchasing second-hand clothes is mainly driven by one's attitude as well as the behaviour and values of significant others (Botetzagias et al, 2015; Shin, 2018). A possible explanation could be that younger people are more likely to be influenced by social norms as their process of identity formation is still ongoing. The study by Stok et. al. (2016) showed that emerging adults are more susceptible to social influence as well as peer pressure compared to older adults. An important goal of young people is to fit in with their peers and to live up to peer expectations (Arnett, 2014; Stok et al., 2016). Hence if they feel that by buying second-hand clothing they can



gain peer approval it will be an influential factor and may lead to adjusting their behaviour to be in line with their peers' values.

Evidence was found that negative sentiments towards the fast-fashion industry are a strong predictor for behavioural intention to purchase second-hand clothes. Which is in line with the critical motivations outlined by Guiot and Roux (2010). Also Silva et. al. (2021) highlight in their study that people who disagree with the dubious production processes used in the fast-fashion industry are more likely to opt for second-hand clothes. Based on the obtained results it can thus be concluded that people don't necessarily opt for second-hand clothes to simply distance themselves from the fast-fashion industry but more as a form of protest against the malpractices and worker exploitation employed by the industry. As expected, consumers who are aware and concerned with social sustainability, meaning the exploitation of workers and workers rights, show a higher behavioural intention to opt for second-hand clothes over new ones. Next to attitudes towards second-hand clothes and social norms, the negative perspective on the fast-fashion industry is the third strongest motivation to opt for second-hand clothing.

Moreover, the construct trust was also found to be a strong predictor of intention in this study. This is in line with other studies, which found that trust is an important motivational driver in the decision-making process (Carfora et al., 2019). While purchasing second-hand in general requires an increased level of trust (based on perceived risks regarding hygiene and/or the quality of the item) purchasing second-hand clothes online requires a once again higher level of trust. Now the peer exchange takes place online between strangers which could pose possible new risks. Even when detailed product information from textual descriptions or pictures is available, many purchases cannot be fully understood relying exclusively on online information.

The results show that even though trust in the platform and trust in strangers both significantly influence behavioural intention, there is a difference between the two types. One type of trust, trust in the platform, seems to matter more than the other (trust in strangers). As shown in other studies, privacy and security concerns present major barriers to the internet as a purchasing channel (Hong & Cha, 2013). Hence trusting the platform is of utmost importance as without the necessary trust consumers will not give vendors their personal information. A possible explanation for the lower impact of trust in strangers on behavioural intention could be that the platforms already include trust enhancing mechanisms such as verification of the members and public reviews (Biswas et al., 2020). Therefore the buyer is required to put more innate trust into the authenticity of the platform rather than in the stranger.

The results highlight that self-identification as a green consumer determines consumers' intention which is consistent with previous research (Carfora et al., 2019). People who hold certain values and view themselves in a certain way will most likely exert a behaviour that corresponds to their desired self-image. Therefore respondents who view themselves as ethical consumers concerned about workers rights and the planet show a higher behavioural intention to purchase second-hand. As Connolly and Shaw (2006) point out, these consumers will view their decision to buy pre-owned clothes as an opportunity to fully assume their identities as socially and environmentally conscious individuals.

The third antecedent of the TBP perceived behavioural control (PBC) surprisingly did not show a significant association with behavioural intention. This is somewhat different from previous studies that reported that PBC in fact influences behavioural intention to engage in ethical consumption behaviour (Beldad & Hegner, 2018; Botetzagias et al., 2015; Shin, 2018).

In this specific research context, PBC relates to internet access and skills to use the platform. That PBC is not a strong predictor of behavioural intention to use P2P platforms to purchase second-hand clothes could be explained by the fact that this research specifically targeted Millennials and Generation Z who are often referred to as digital natives (Godelnik, 2017). The average age of the participants was 23 years which indicates that most if not all participants have high digital literacy. As accessing the internet and using apps is a common behaviour exhibited by the target audience one could argue that engaging in P2P platforms when it comes to buying second-hand clothes does not present a hurdle and is thus not affecting behavioural intention to exert the behaviour (Godelnik, 2017; Lazorko, 2015). Additionally, the Netherlands, as well as Germany, are highly developed countries where access to mobile devices and the internet is not an issue.

Even though previous research predicted otherwise, economic motivation, perceived sustainability and distance from the fast-fashion industry did not hold significant associations with the intention to buy second-hand clothes online (Choi, 2019; Ek Styvén & Mariani, 2020; Hamari et al., 2016). Although economic motivation was outlined as a strong predictor of intention to engage in CC and P2P sharing platforms (Choi, 2019) this study could not find similar results. This is especially surprising as the demographics showed that the majority of participants were within a low income bracket (228 respondents). Nevertheless, economic motivation was not found to be a relevant consideration of emerging adults when it comes to buying second-hand. A possible explanation could be that the image of buying second-hand clothes has changed over the years. While it was initially associated with low income it has now

a new reputation of being a form of ethical consumption (Roux, 2006; Silva et al., 2021). Buying second-hand is thus no longer an economic necessity but rather a choice.

To further delve into the topic, P2P sharing platforms are designed to enable people to sell second-hand items while making a profit for themselves. Hence, the offered clothing, while being second-hand, might not be sold as cheap as a charity shop selling second-hand clothing. Furthermore, the fast fashion industry offers new clothing at relatively low prices which are comparable to second-hand items offered on platforms such as Vinted. Hamari et. al (2016) add that the availability of new imported products with relatively low prices might lead to people not being interested in sharing. Thus, P2P platforms might not necessarily be perceived as a source, for second-hand clothes, that offers an economical advantage.

Perceived sustainability which was considered an influential factor of ethical purchase intention is according to the results not a strong motivator for behavioural intention to engage in P2P platform. While buying second-hand in general is perceived as sustainable, performing this action on P2P platforms might be considered differently. Now consumers are purchasing single items from peers which are then being shipped across the country or even Europe. This type of long-distance transportation could also affect the perceived sustainability of the entire behaviour and could potentially hinder people from using the platforms. Nevertheless, the literature highlights that the collection, processing and transportation of second-hand clothes do not significantly impact the environment in comparison to the savings achieved by replacing new clothing (Farrant et al., 2010).

Even though empirical literature outlines the negative impact of the fashion industry on the planet these insights are not yet adopted by the consumer (Silva et al., 2021; Wiederhold &

Martinez, 2018). A possible explanation could be that consumers perceive a sort of powerlessness when it comes to tackling climate change (Larson et al., 2015). The immensely negative impact of the industry on the planet could result in a feeling that no difference can be made with changing the individual behaviour as no significant impact will be generated. Even though literature underscores the ecological benefits of reusing clothes (Farrant et al., 2010), those values have not yet been adopted by the consumers as they might feel like the only way to make a difference is through people with more power.

Moving on, the antecedent of distancing from the fast-fashion industry was not found to be a strong predictor of intention to purchase second-hand clothing via P2P platforms in this study. This means that young adults do not think that by buying second-hand they are distancing themselves from the fast-fashion industry. This can potentially be explained by the fact that consumers often show high brand loyalty and are more inclined to focus on positive information and corporate behaviour. (Wiederhold & Martinez, 2018). While consumers who are aware of the social injustice performed by the industry and hold a negative sentiment show a higher behavioural intention to purchase second-hand, people are not motivated by distancing themselves from the industry. A possible explanation could be that the consumers do not necessarily want to get rid of the fashion industry but rather long for improvement of workers rights and the treatment of the planet.

Additionally, it is widely accepted that people are reluctant toward change (Wiederhold & Martinez, 2018). Over decades strong consumption habits are formed which are hard to break. Opting for the brands and stores known to the consumer can thus be seen as convenient.

Wiederhold & Martinez (2018) highlight that consumers often rely on a familiar shopping environment as it almost always guarantees a positive shopping experience. Distancing from those deeply-rooted habits and moving away from the fast-fashion industry, which is conveniently embedded in the consumers' everyday life, presents a great amount of change. Therefore, it can be expected that consumers will prefer the easiest and most familiar option when making a purchase decision.

The moderation analysis showed no significant effect of gender on the strong predictors of behavioural intention. The analysis did show a significant interaction effect of gender on the association between PBC and behavioural intention. The results underscore that females are more susceptible to PBC than their male counterparts. This means that females are more likely to use P2P platforms to purchase second-hand clothes when the perceived behavioural control is high. This is in line with results from other studies on the effect of gender on ethical purchase intention. For instance, Beldad and Hegner (2018) found that the impact of PBC on fair trade product purchase intention was significantly higher for females. PBC, meaning the access to the platform and the required skills to use it, matters more for female- than for male consumers.

Additionally, a significant interaction effect of gender on the association between economic motivation and the behavioural intention was found. The results demonstrated that gender strengthens the association between economic motivation and behavioural intention to engage in P2P sharing platforms to buy second-hand. Economic motivation influences behavioural intention stronger for females than for males.

For the significant predictors of purchase intention (Attitude, social norms, negative sentiments towards the fast-fashion industry, trust & self-identity) it can thus be concluded that, within the target audience of 18-35-year-old German and Dutch citizens, there is no significant difference in the underlying motivation when it comes to the intention of purchasing second-hand clothes based on gender.

## **5.2 Practical Implications**

Based on the results some practical implications can be drawn. This study identifies motivation in terms of attitude, social norms, negative sentiments towards the fast-fashion industry along with trust (in strangers & platform) and self-identity, as major predictors of online second-hand purchase intention on P2P platforms. Concerning the practical implications, the presented findings might be of potential interest to managers of P2P platforms and fashion industry managers.

As far as P2P SE platform managers are concerned, this study suggests implications from a marketing- and management perspective. Regarding the marketing dimension, this study showed that self-identification as a green consumer is a driving force that influences the behavioural intentions of using P2P platforms. These insights could be incorporated into a marketing strategy that addresses “green consumers” and the potential of fulfilling this role through participation in P2P platforms. Additionally, this study emphasizes that motivations such as negative sentiments towards the fast-fashion industry, which are fueled by the perceived labour exploitation and social injustice garment workers are experiencing, are crucially influencing consumers’ intentions towards purchasing second-hand clothes on P2P platforms.

Accordingly, P2P platform managers should recognise this motivation and should take a more active role in spreading environmental knowledge about the harmful effects of the fast-fashion industry as well as the benefits of sustainable consumption and second-hand fashion on the platform. This could potentially drive more consumers to opt for P2P sharing platforms in the future.

From the management perspective, this study shows that trust in P2P platforms is a crucial factor influencing behavioural intention. P2P platform managers should take this finding into account and address the needs of the user. As shown by Biswas et. al. (2020), to assure high trust in the platform product/user reviews, member authentication as well as detailed product descriptions are necessary. Furthermore, trust in strangers also influences the intention to use P2P platforms. There are several ways that P2P platform managers can support establishing trust. Many platforms are already providing a review mechanism where members can rate other members based on their experiences. These ratings serve as strong indicators for establishing initial trust. Additionally, some platforms incorporate verification processes which also assure that members underwent a security check. This in turn increases trust in the stranger as well. However, often P2P platforms are used primarily for selling instead of buying (Ek Styvén & Mariani, 2020). Gamification elements could be employed to combat this issue and stimulate a more balanced exchange between buying and selling. For instance, rewards could be given to users particularly active in second-hand buying to stimulate other users to do the same.

Regarding the fashion industry managers, it is of utmost importance to recognise the growing popularity of second-hand clothes consumption. According to Silva et. al. (2021), the second-hand market grew 21 times faster than the retail market over the past three years, and it is



expected to double its global value by 2023. Hence buying second-hand can be detrimental to the traditional retail market. P2P sharing platforms such as Vinted hold the potential to substitute for traditional e-commerce channels and incumbent companies (Ek Styvén & Mariani, 2020).

Airbnb for instance changed the hospitality industry by providing the consumers with a new experience that challenges traditional business models forcing industries to adapt.

Many fast-fashion brands are recognising the growing trend towards ethical consumption and are attempting to reposition themselves on the market by including a green paradigm into their values and marketing strategies (e.g. H&M's conscious collection; Zara's join life collection) (Ek Styvén & Mariani, 2020). However, some efforts to become a greener brand were made out of the wrong motivations. Instead of improving the overall sustainability of the product the fast-fashion brands rather monetised on the growing trend. This behaviour is also referred to as greenwashing. This study outlined that negative sentiments towards the fast-fashion industry can serve as a strong motivator to opt for second-hand clothes. Hence, fast-fashion managers need to understand that the growing concern and knowledge about the environmental impact coupled with the malpractices of the fast-fashion industry will most likely push more and more consumers away.

### **5.3 Limitations and Future Research Directions**

This research successfully identified six predictors that influence the behavioural intention to purchase second-hand clothes online: attitude towards second-hand clothes, social norms, self-identity, negative sentiments towards the fast-fashion industry as well as trust in platforms and trust in strangers. There are, however, potential limitations that need to be addressed. As this

study is exclusively focused on Germany and the Netherlands the findings can only be applied to developed countries. Underdeveloped countries may hold different perspectives and motivations when it comes to second-hand clothes consumption and prerequisites such as internet access. On top of that gender was treated as a dichotomous variable. Gender, however, is a complex construct. Not measuring social and psychological components may limit the value of the research findings. Furthermore, this study focused on people aged between 18 and 35, thus people from older generations might not share the same motivations and generalisation is difficult to perform.

Additionally, the results should be treated with caution due to the applied sampling methods. This study used convenience sampling coupled with the snowball sampling approach. This means that the results partially rely on the researcher's network, making the generalisation of the results problematic. However, due to further distribution of the survey through participants, the network of the researcher was left at least to some extent. Finally, the proposed model only tested the direct effect of the different predictors on intention. This limits the study in terms of potential interaction taking place between the different predictors.

This research showed that the TPB can be expanded by further predictors to explain behavioural intention. Future research could expand the theory by different antecedents such as hedonic motivations, like the search for unique garments, discovering hidden "treasures" and bargain hunting, as this research did not include these reasons for buying second-hand clothing. Additionally, the role of brand loyalty was not taken into account which also potentially influences behavioural intention to opt for second-hand. Furthermore, the attitude towards the P2P Platforms in terms of their reputation or customer service was not investigated as a potential

predictor of purchase intention. These two predictors could be included in a follow-up study. Additionally, this research focused specifically on purchasing second-hand clothes online via P2P platforms. It might be worth investigating whether the same motivations hold when consumers opt for physical second-hand stores.

## 6. Conclusion

In general, buying second-hand clothes has gained popularity over the past years. With the increasing awareness of the environmental- and social impact of the fashion industry, consumers are engaging in mindful consumption, which includes shopping second-hand. Given the increasing popularity of buying second-hand in emerging adults, it is of importance to understand the factors influencing the behavioural intention of Generation Z and Gen Y consumers. This study found six strong predictors which influence the purchase intention of second-hand clothes through P2P sharing platforms. These antecedents relate to attitude towards second-hand clothes, social norms, negative sentiments towards the fast-fashion industry, trust in the P2P platforms and strangers as well as self-identification as a green/ethical consumer. Based on these findings practical implications for P2P platforms managers were provided and recommendations for managers in the fast-fashion industry were given.

This study is one of the few that specifically looked into young people's intention to purchase second-hand clothes online and provides insights into the mentioned underlying motivations that influence purchasing intention. Furthermore, it contributed to a better understanding of the consumer attitude towards online second-hand shopping. The current study has identified six major antecedents of purchase intention, although it is not claimed that those are the only predictors that could affect behavioural intention. Hopefully, this paper will generate a basis for new research ideas in behavioural science studies pre-training to sustainability and ethical consumerism.

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**Appendix A: Questionnaire**

## Attitude:

1. Purchasing second-hand clothes online is a good thing.
2. Purchasing second-hand clothes online is beneficial.
3. Purchasing second-hand clothes online is enjoyable.
4. I have a positive attitude towards buying second-hand clothes online.

## Perceived behavioural control:

1. I am confident that I have the necessary skills to purchase second-hand clothes online.
2. I know how to access the necessary technology to purchase second-hand clothes online.
3. I have the necessary knowledge to purchase second-hand clothes online.
4. I have access to the necessary technology to purchase second-hand clothes online.
5. I have enough information about the platform that sells second-hand clothes.

## Social norms

1. I know that most people I know expect me to buy second-hand clothes.
2. I think that most people whose opinion I value would approve of my purchasing of second-hand clothes.
3. People who are important to me think that purchasing second-hand clothes is a good thing.
4. People who are important to me want me to purchase second-hand clothes.
6. Buying second-hand clothes online is popular.
7. I know a lot of people who buy second-hand clothes online.
8. People I regularly interact with buy second-hand clothes online.

## Willingness to distance from the fast-fashion industry

1. By buying secondhand clothes, I feel like I'm escaping the fast fashion industry.
2. Buying secondhand clothes enables me to distance myself from the fast fashion industry.
3. By buying second hand I am protesting against the fast fashion industry.

## Negative sentiments towards the fast-fashion industry

1. By buying second hand I am avoiding overconsumption.
2. Overconsumption of clothes causes problems.
3. Fast fashion industry has negative effects on the workers in the production process.
4. Fast fashion industry is guilty of modern slavery.
5. Fast fashion industry is exploiting workers.
6. Fast fashion industry does not respect the welfare of the people involved.

#### Perceived sustainability

1. Buying second-hand clothes helps save natural resources.
2. Buying second-hand clothes is a sustainable model of consumption.
3. Buying second-hand clothes is ecological.
4. Buying second-hand clothes is efficient in terms of energy usage.
5. Buying second-hand clothes is environmentally friendly.
6. Buying second-hand clothes will help minimize landfill waste.
7. Buying second-hand clothes will help minimize negative effects on natural ecosystems.

#### Economic motivation

1. By buying second-hand clothes I save money.
2. Second-hand clothes are cheaper than new clothes.
3. Buying second-hand clothes is a cheap alternative to buying ethically produced clothes.
4. Buying second-hand clothes is a cheap way to consume ethically.

#### Trust in sellers

1. People who sell second-hand clothes are honest in dealing with consumers.
2. People who sell second-hand clothes are honest about the quality of the product.
3. People who sell second-hand clothes can be counted on to do what they say they will do.
4. People who sell second-hand clothes care about the interest of the buyer.
5. People who sell second-hand clothes can be trusted.
6. People who sell second-hand clothes don't cheat.

#### Trust in P2P platform

1. I believe P2P platforms (such as Vinted, Marktplaats, eBay) are competent.
2. I think P2P platforms (such as Vinted, Marktplaats, eBay) care about the interests of the consumer.
3. I assume P2P platforms (such as Vinted, Marktplaats, eBay) can be trusted.
4. I expect that P2P platforms (such as Vinted, Marktplaats, eBay) are honest in dealing with consumers
5. P2P SE platforms are a secure source for transactions.
6. Buying from P2P Platforms (such as Vinted, Marktplaats, eBay) is safer than buying from Internet stores.
7. P2P platforms (such as Vinted, Marktplaats, eBay) platforms seem to be trustworthy.

#### Self-identity

1. I see myself as an ethical consumer when buying second-hand clothes.
2. I see myself as someone concerned about ethical issues.
3. I care about the state of the environment.
4. I care about workers rights.

Intention

1. I am likely to purchase second-hand clothes on P2P platforms the next time I need a clothing item.
2. I will not hesitate to choose a P2P platform offering second-hand clothes instead of buying new clothes.
3. I expect to purchase second-hand clothes online in the future.
4. I plan to purchase second-hand clothes online in the future.
5. I intend to purchase second-hand clothes online in the future.
6. I do not see a problem in buying second-hand clothes online in the future.



## Appendix B: Factor- and Scale Analysis

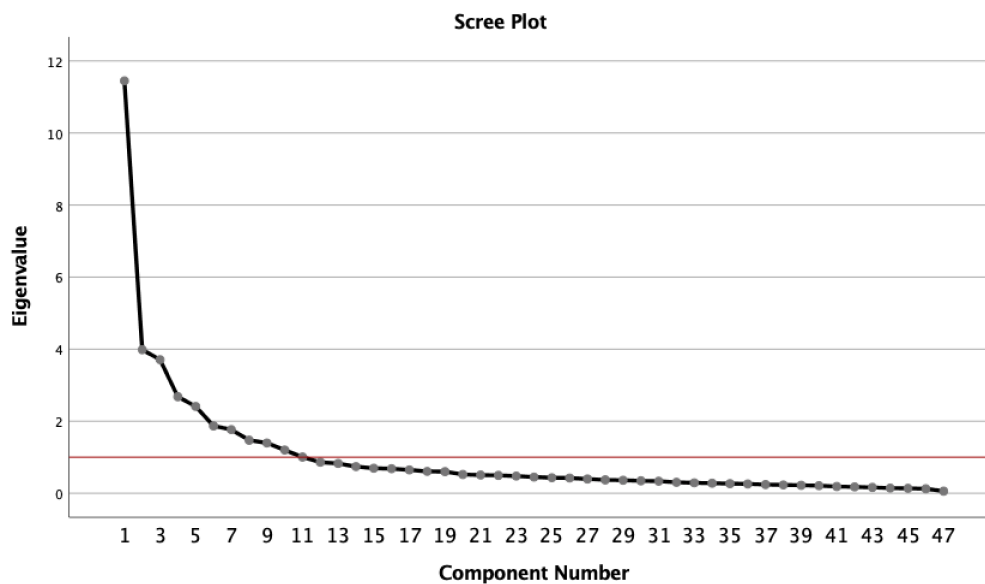
**Table B1.**

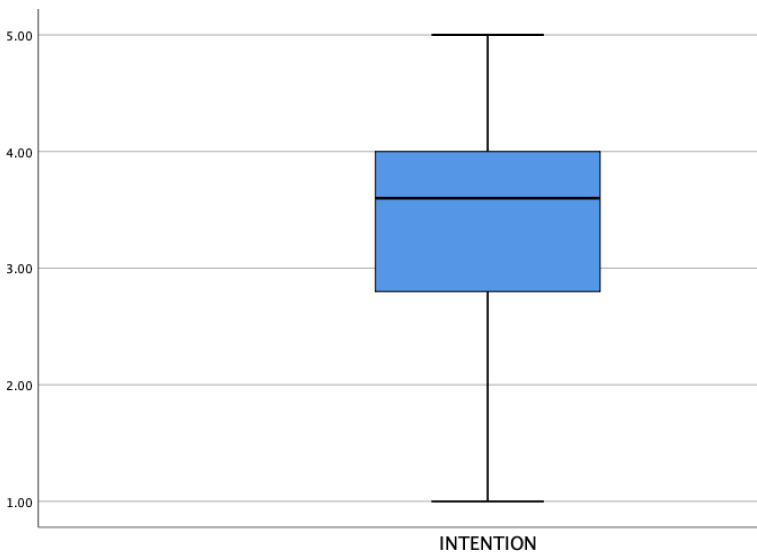
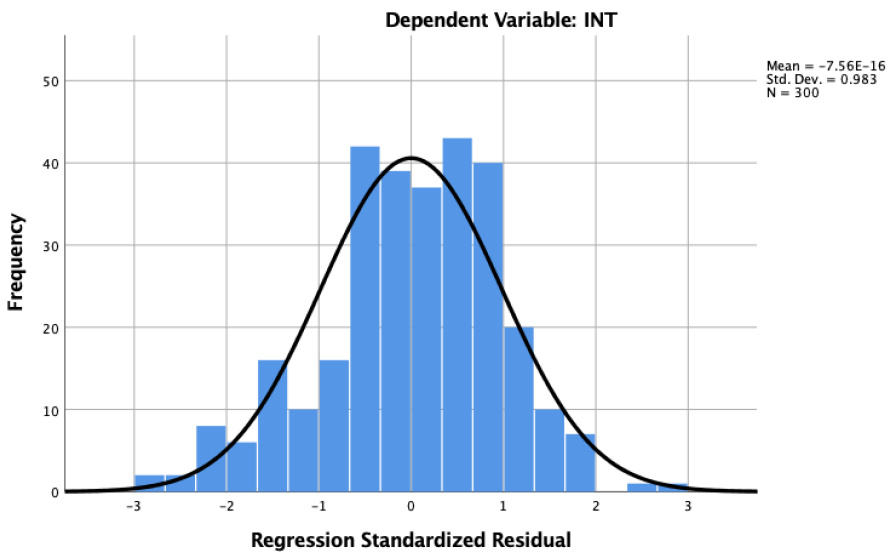
*KMO and Bartlett's Test*

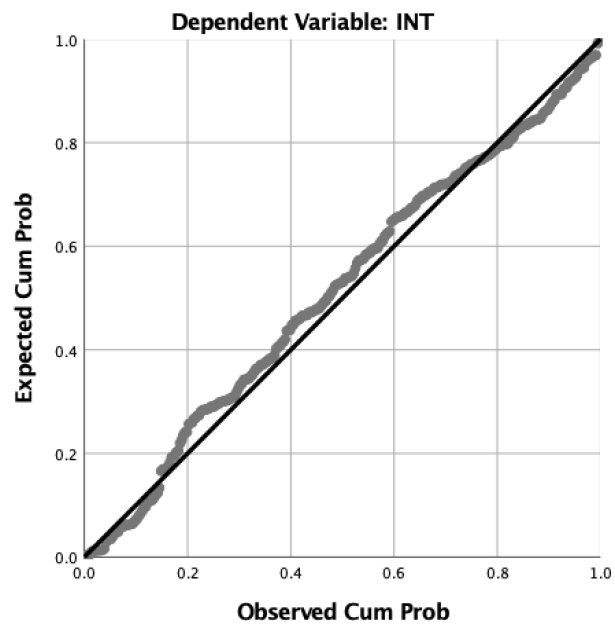
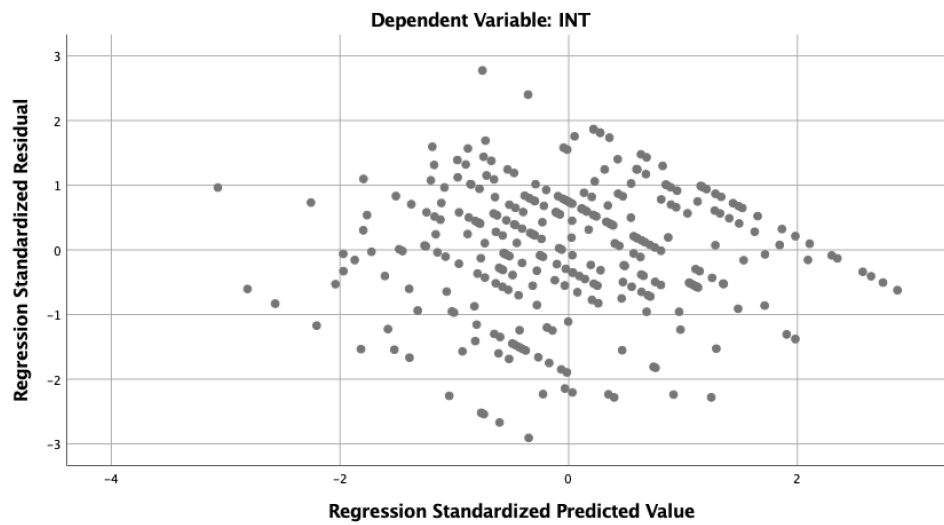
Kaiser–Meyer–Olkin Measure of Sampling Adequacy.		.873
Bartlett's Test of Sphericity	Approx. Chi-Square	9146.512
	df	1035
	Sig.	.000

**Figure B1**

*Scree Plot based on Eigenvalue*



**Appendix C: Assumption of linearity check****Figure C1.***Box plot***Figure C2.***Histogram*

**Figure C3.***P-P Plot of regression standardised Residual***Figure C4.***Scatterplot*

**Appendix D: Hierarchical regression analysis output****Table D1.***Model summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.604 <sup>a</sup>	.365	.358	.82039	.365	56.607	3	296	.000
2	.621 <sup>b</sup>	.385	.373	.81109	.021	3.276	3	293	.021
3	.690 <sup>c</sup>	.476	.458	.75418	.091	12.473	4	289	.000

a. Predictors: (Constant), SOC\_INF, PBC, ATT

b. Predictors: (Constant), SOC\_INF, PBC, ATT, ECON\_MO, DIST\_FST, SUS

c. Predictors: (Constant), SOC\_INF, PBC, ATT, ECON\_MO, DIST\_FST, SUS, TRU\_STR, ATT\_FST, SELFI, TRU\_PLA

d. Dependent Variable: INT

**Table D2.***ANOVA*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	114.298	3	38.099	56.607	.000 <sup>b</sup>
	Residual	199.222	296	.673		
	Total	313.520	299			
2	Regression	120.765	6	20.127	30.595	.000 <sup>c</sup>
	Residual	192.755	293	.658		
	Total	313.520	299			
3	Regression	149.143	10	14.914	26.221	.000 <sup>d</sup>
	Residual	164.377	289	.569		
	Total	313.520	299			

a. Dependent Variable: INT

b. Predictors: (Constant), SOC\_INF, PBC, ATT

c. Predictors: (Constant), SOC\_INF, PBC, ATT, ECON\_MO, DIST\_FST, SUS

d. Predictors: (Constant), SOC\_INF, PBC, ATT, ECON\_MO, DIST\_FST, SUS, TRU\_STR, ATT\_FST, SELFI, TRU\_PLA

**Table D3.**  
*Coefficients*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-1.076	.380		-2.828	.005		
	ATT	.563	.075	.369	7.504	.000	.888	1.126
	PBC	.217	.069	.151	3.154	.002	.939	1.065
	SOC_INF	.404	.061	.318	6.579	.000	.917	1.091
2	(Constant)	-1.728	.448		-3.855	.000		
	ATT	.507	.078	.332	6.475	.000	.798	1.253
	PBC	.186	.069	.129	2.695	.007	.910	1.099
	SOC_INF	.387	.061	.305	6.340	.000	.909	1.100
	SUS	.070	.097	.041	.729	.467	.673	1.485
	DIST_FST	.164	.078	.113	2.095	.037	.719	1.391
	ECON_MO	.045	.061	.036	.735	.463	.875	1.143
3	(Constant)	-3.051	.463		-6.582	.000		
	ATT	.441	.075	.289	5.902	.000	.757	1.321
	PBC	.091	.067	.063	1.355	.177	.839	1.191
	SOC_INF	.286	.059	.226	4.897	.000	.854	1.171
	SUS	-.046	.092	-.027	-.501	.617	.637	1.571
	DIST_FST	.039	.076	.027	.514	.608	.661	1.512
	ECON_MO	-.031	.058	-.025	-.527	.598	.840	1.191
	ATT_FST	.273	.073	.185	3.758	.000	.747	1.339
	TRU_PLA	.256	.082	.164	3.135	.002	.662	1.512
	TRU_STR	.190	.094	.103	2.023	.044	.697	1.434
	SELF	.215	.086	.125	2.508	.013	.735	1.361

a. Dependent Variable: INT