Generation y’s intention to perform in-store recycling in the fast fashion industry:
A combined TPB and NAM approach
Master Thesis in Business Administration

Title: Generation y’s intention to perform in-store recycling in the fast fashion industry: A combined TPB and NAM approach
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Abstract

**Background:** Due to accelerating environmental problems caused by fast fashion sustainable business solutions become increasingly important. Thus, the following thesis examines generation y’s intention to perform in-store recycling at fast fashion retailers and investigates the factors most influential on intention. Besides, it analyses if an attitude-intention gap exists. To fulfil the study’s purpose, a combination of the theory of planned behaviour (Ajzen, 1985) and the norm activation model (Schwartz, 1977) is used.

**Approach:** Within this study a quantitative method in terms of an online survey is applied. Based on a sample of 326 respondents, relationships between variables are analysed with Pearson correlation analysis and multiple regression. To further identify differences among groups, Independent samples t-test and ANOVA are conducted.

**Findings:** The study’s findings reveal that generation y generally intends to participate in in-store recycling, while the intention is significantly higher among women than men. The intention to perform in-store recycling is predominantly intrinsically motivated as it is most driven by individuals’ personal norm.

**Value:** The findings of our study particularly add value for fast fashion retailers and marketers by presenting a novel research model combining most relevant factors required to adequately address consumers among generation y to perform in-store recycling. This specifically allows fashion retailers to successfully establish the concept of in-store recycling. Our study is further beneficial for sustainability researchers, environmental activists, charity organisations and policy makers to create a more sustainable future.
Key terms

**Generation y:** The term generation y comprises consumers who are born between 1980 and 2000. They are considered as the “born green” generation (Oxford Dictionary, n.d.; Rogers, 2013).

**Fast fashion:** Fast fashion is a retail business strategy that is characterised by speed, high volume and just-in time production to adjust fashion ranges to new trends as effectively and fast as possible (Sull & Turconi, 2008; Fletcher, 2008).

**Clothing disposal behaviour:** Clothing disposal behaviour refers to the post-purchase phase in which consumers dispose their clothes in bins, recycle or reuse them (Ha-Brookshire & Hodges, 2009).

**Pro-environmental behaviour:** Consumers who behave pro-environmental intentionally seek at diminishing negative effects on the environment which are caused by different consumer actions (Stern, 2000; Kollmuss & Agyeman, 2002; Rhodes et al., 2015).

**In-store recycling:** In-store recycling is a certified system that includes the positioning of a box in fashion retail stores, enabling consumers to drop off their no longer wanted clothes for recycling or reuse purposes (I:CO, 2018a).
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1 Introduction

1.1 Background and problem definition

“The trends of today are the garbage of tomorrow” (Greenpeace, 2016) – The today’s growing fast fashion industry including production as well as consumption significantly impacts the environment through huge amounts of clothing that is discarded and end up in landfill (Wai Yee, Hassan & Ramayah, 2016; Fletcher, 2008). Therefore, the establishment of appropriate textile recycling systems becomes increasingly important on a global level.

Changing dynamics in the apparel industry such as innovative structural changes in supply chains or the increasingly fading mass production starting with the end of the 1990’s requested retailers to apply major changes in their strategies. In order to stay competitive in an increasingly demanding market, being flexible and reducing costs to regularly launch low-priced new apparel lines became indispensable. This new strategic business concept is called fast fashion (Bhardwaj & Fairhurst, 2010; Djelic & Ainamo, 1999; Doyle, Moore & Morgan, 2006). Fast fashion is founded on the necessity of quick responsiveness towards consumers’ needs and new market trends as opposed to the past requirement of fashion retailers to forecast trends in long advance (Jackson, 2001; Reinach, 2005). Within the timeframe from 2000 to 2014, clothing production has increased twofold and the annual garments consumption of an average consumer has risen by 60 percent. On the other hand, clothes are solely kept half as long as 15 years ago (Remy, Speelman & Swartz, 2017).

Being considered as the most consumption-driven generation ever, shopping among generation y is particularly viewed as an entertainment activity driven by symbolic values triggering excessive clothing hyper consumption and a throwaway culture (Sullivan & Heitmeyer, 2008; Regine, 2011; Tokatli, Wrigley & Kizilgün, 2008). As a matter of fact, globally superfluous clothing amounting up to almost three-fifths of all apparel being manufactured within one year end up in landfills instead of being reused or recycled (Remy et al., 2017). Especially among generation y exceedingly few recycle their clothes even though being considered as the “born green” generation recognised for their environmental consciousness (Rogers, 2013; Birtwistle & Moore, 2007). This ineffective clothing disposal behaviour aggravated crucially in past years, wasting valuable resources and causing serious harm to the environment (Birtwistle & Moore, 2007; Wai Yee et al., 2016).

Even though consumer behaviour is often hard to change (Gould, 2017), companies are recognised to be able to influence consumer behaviour in various ways. Particularly as
companies’ reputation nowadays highly depends on environmental responsibility including waste management, actively empowering consumers to be more sustainable becomes inevitable (Wang, Krishna & McFerran, 2017; Gould, 2017; Leonidou, Katsikeas & Morgan, 2013). In order to counteract the clothing waste problem a new recycling scheme called in-store recycling is increasingly adapted by large fashion retailers (Gould, 2017). It is a take-back service system that enables a more sustainable product end-of-life solution requesting consumers to drop off worn out or unwanted clothes in stores (I:CO, 2018a; Engström & Nicklasson, 2015). This concept seeks to recover valuable materials and components at textiles’ end of use for the purpose of being reprocessed in future clothing production (I:CO, 2018b). Since H&M has introduced its in-store recycling programme in 2013 they have collected more than 55,000 tonnes of clothing items worldwide (H&M, 2018). This is however a rather low number opposed to 100,000 tonnes of second-hand clothes that are annually send to Kenya predominantly donated by western countries (Kubania, 2015).

In order to successfully enhance the establishment and development of the concept as a long-term corporate solution for reducing clothing waste and creating a more sustainable future it requires not only companies to be active, but especially consumer participation. As intention has proven to be a powerful predictor of future behaviour (Ajzen, 1991), consumers’ intention towards this concept needs to be studied on an urgent basis.

So far, only few studies have been conducted in the field of clothing disposal behaviour including apparel recycling (Bianchi & Birtwistle, 2012). To the best of our knowledge, in-store recycling is a topic that has not yet been investigated in any quantitative research and no “best” theoretical model exists which aim at explaining consumers’ intention towards this upcoming phenomenon. Therefore, we present an integrated framework combining relevant variables out of two prominent socio-psychological theories recognised for their usefulness in pro-environmental behavioural research (Kollmuss & Agyeman, 2002; Juárez-Nájera, 2015), namely the theory of planned behaviour (TPB) (Ajzen, 1985) and the norm activation model (NAM) (Schwartz, 1977). Even if the latter theory does not include the concept of intention, research on environmental significant behaviour found NAM’s core construct personal norm (PN) with its antecedent awareness of consequences (AC) and ascription of responsibility (AR) to be a relevant predictor of pro-environmental intention (Harland, Staats & Wilke, 1999).
1.2 Purpose and research questions

The purpose of the following study is to examine generations y’s intention to perform in-store recycling and to further investigate the factors most influential on behavioural intention. Besides, the existence of an attitude-intention gap towards in-store recycling is analysed. Hence, the following research questions are developed to address the study’s purpose:

RQ1: What is generation y’s intention to perform in-store recycling?

RQ2: What are the factors most influencing generation y’s intention to perform in-store recycling?

RQ3: Is there a gap between generation y’s attitude and intention to perform in-store recycling?
2 Theoretical framework

2.1 Fast fashion and its effect on consumption behaviour

Within the last 20 years the worldwide fashion industry has significantly changed due to globalisation. In order to ensure competitiveness in an increasingly demanding market, fashion retailers have adapted to changing dynamics by lowering their costs and becoming more flexible (Bhardwaj & Fairhurst, 2010). In this regard, the high competitive structure within the fashion industry requires quick responses to latest fashion trends and rapid updates of fashion ranges in the stores, which in turn encourages consumers to enter stores more often (Bhardwaj & Fairhurst, 2010; Fletcher, 2008; Christopher, Lowson & Peck, 2004). The phenomenon is covered by the term fast fashion (Fletcher, 2008), comprising a retail strategy characterised by speed to adjust fashion ranges to new trends as effectively and fast as possible (Sull & Turconi, 2008). Similarly, Fletcher (2008) describes fast fashion as a mixture of a high volume, very fast and just-in time production. Additionally, it includes the manufacturing and promotion of low-priced apparel (Barnes & Lea-Greenwood, 2006; Bhardwaj & Fairhurst, 2010; Bruce & Daly, 2006). Crucial elements emphasised by the strategy are significant advances in technology, quick production and control of the supply chain (Barnes & Lea-Greenwood, 2006). Major players in the fast fashion industry are H&M and Zara. Due to their success resulting from fast fashion, many retailers have been inspired and subsequently established the concept (Barnes & Lea-Greenwood, 2010).

A major change fast fashion brought to the industry was the necessity for the implementation of a new perspective dominated by consumer demand and reflected in the shift from a designer-driven push approach to a consumer-driven pull approach (Doyle et al., 2006; Sull & Turconi, 2008). As opposed to the prior requirement of designers to predict and react to trends in long advance, they nowadays need to react almost in-time to consumers demand for adaption to steadily new market trends (Jackson, 2001; Reinach, 2005). Doyle et al. (2006) argue that latter results from the enhanced availability of fashion magazines featuring new trends. Additionally, it gets supported by consumers’ increased fashion consciousness strengthening their desire for new clothing (Bruce & Daly, 2006; Barnes, & Lea-Greenwood, 2010). This heightened demand for new trends and variety has crucially shortened the product life cycle of fashion apparels (Sull & Turconi, 2008; Forza & Vinelli, 2000).

In addition to that, consumption is nowadays predominantly viewed as an entertainment activity driven by symbolic values (Sullivan & Heitmeyer, 2008; Regine, 2011; Tokatli et al.,
Thus, by frequently purchasing new clothes consumers aim at expressing themselves through their dressing style (González, 2007), reflecting symbolic consumption promoting distinction conformity as well as comparison in today’s society (Bourdieu, 1987; Ekström, 2010). This means that while consumers strive for individualisation when buying clothes, they are also affected by others due to their desire to belong to and be conform with the trends of the society. Resulting, consumption is furthermore triggered (Ekström & Salomonson, 2014).

The enormous rise of clothing consumption in combination with the enhanced availability of affordable clothes has altered consumers relationship to clothing. Today’s society less appreciates fashion apparel as well as it has become less personal (Fletcher, 2008). This results in the currently prevalent phenomenon covered by the term throwaway society, characterised by consumers that rather discard their clothes in bins instead of recycling them. As a result, large amounts of textile waste are generated and end up in landfills (Ekström & Salomonson, 2014; Morgan & Birtwistle, 2009; Gray, 2012). Consequently, there is an increase in criticism concerning fast fashion and its mass consumption (Biehl-Missal, 2013).

### 2.2 Clothing disposal behaviour

Consumers’ clothing purchase behaviour includes the pre-purchase as well as the post-purchase phase reflected in the disposition of clothes (Butler & Francis, 1997; Bianchi & Birtwistle, 2012; Jacoby, Berning & Dietvorst, 1977; Hiller Connell, 2010; Ha-Brookshire & Hodges, 2009). Bhardwaj and Fairhurst (2010) argue that the frequent update of new fashion collections encourages consumers not only to buy more clothes, but also to dispose clothing more often. Thus, due to the increase of consumption consumers’ decision on clothing disposal is crucial and can have a significant environmental impact since they determine when and how their clothing is disposed (Laitala, 2014; Biehl-Missal, 2013).

There are several reasons motivating consumers to discard their clothes such as a lack of fit, old-fashioned or worn-out clothes (Koch & Domina, 1999). One issue as already mentioned is clothing ending up in landfills due to consumers discarding their clothes in bins. Besides, there are alternative disposal methods such as reuse, sell or donate clothes (Solomon & Rabolt, 2009). Most common methods are to pass on clothes to friends as well as to family members and the donation to non-profit charity foundations (Koch & Domina, 1999). In line with the aim of non-profit organisations, consumers primary donate because of altruistic concern to help other people (Shim, 1995; Koch & Domina, 1999). In 2015, more than 70% of the globally donated clothes were shipped to Africa (Kubania, 2015). Notably, most of the
African countries seek to ban massive clothing imports from western countries for revitalising the local industry and reducing the dependency of western countries which stops them from developing. Additionally, much of the clothes shipped are in poor condition or do not fit ending up in waste (Brooks, 2015; Kubania, 2015). Thus, conventional apparel recycling does particularly not allow creating feedstock for new clothes (Gunther, 2016). Another method that has risen in popularity in recent years are online platforms with the purpose to swap and swish unwanted clothes enabling consumers to exchange clothes with others (Joung & Park-Poaps, 2013).

In general, it is proven that consumers are often unaware of the relation between specific environmental issues and their behaviour which can improve environmental quality (Davies, Foxall & Pallister, 2002). Previous research demonstrates that consumers who are engaged in pro-environmental behaviour are more likely to dispose their clothing in a sustainable manner to lower environmental harm resulting from textile waste and improper clothing disposal behaviour (Shim, 1995). Pro-environmental behaviour refers to a behaviour that deliberately aims at reducing negative effects on the environment caused by different consumer actions (Stern, 2000; Kollmuss & Agyeman, 2002; Rhodes et al., 2015) which is considered to be remarkably strong among generation y (Rogers, 2013). Additionally, in recent years there has been a shift from a selfish consumer towards an ethical consumer who feels more responsible for the environment and society reflected in an increased demand for environmentally and socially responsible products and services such as recycling (Freestone & McGoldrick, 2008; Carrigan, Szmigin & Wright, 2004). This refers to ethical consumption which comprises consumers who deliberately make consumption choices based on their moral and personal conviction (Carrigan et al., 2004). Literature suggests that the shift towards ethical consumption predominantly relies upon the rise of the internet and is one reason for today’s increased ethical society (Nicholls, 2002; Strong, 1996; Titus & Bradford, 1996; Whysall, 2000).

Thus, valuable insights concerning consumers’ clothing disposal behaviour are required to establish efficient recycling programmes (Koch & Domina, 1999).

2.3 Generation y and the attitude-intention gap

Consumers who can be assigned to generation y are born between 1980 and 2000 (Oxford Dictionary, n.d.) and frequently claimed to be the “born green” generation (Rogers, 2013). This is reasoned by the fact that they grew up during a period where environmental issues
such as global warming publicly gained acceptance. Thus, it is assumed that generation Y is especially aware about the living environment within the ecological landscape (McDougle, Greenspan & Handy, 2011; Doane, 2001; Sanne, 2002). Common characteristics ascribed comprise high environmental consciousness, a heightened engagement in green behaviours or a special valuation of green practices (McKay, 2010; McDougle et al., 2011; Rogers, 2013). Reflected in pro-environmental attitudes, it is assumed that these are translated into pro-environmental actions. However, this is not always the case (Kim & Chung, 2011; Carrington, Neville & Whitwell, 2010; Bamberg, 2003). Especially, when considering appropriate textile disposal behaviour this problematic exists and is frequently explained by the phenomena of hyper-consumption and fast fashion (Joung & Park-Poaps, 2013; Wai Yee et al., 2016; Birtwistle & Moore, 2007). The problematic is reflected in the attitude-intention gap, a contradiction between consumers’ beliefs and their behavioural intention, the major antecedent of actual behaviour (Kim & Chung, 2011; Carrington et al., 2010). Transferring Kim and Chung’s (2011) description of the attitude-intention gap to in-store recycling, it means that even if generation Y is aware of the problem of clothing landfill and has a favourable attitude towards in-store recycling emerging from environmental concern, they may however not have the intention to take part in in-store recycling schemes (Birtwistle & Moore, 2007; Kim & Chung, 2011; Sanne, 2002).

2.4 Circular economy in the fast fashion industry

With the tremendous rise in fashion disposal having significant negative impacts on the environment, more and more pressure is placed on fast fashion retailers in terms of counteracting this development. In this regard, moving from a traditional linear to a circular model has most probably gained highest attention among fast fashion retailers (Gunther, 2016). Circular economies are industrial systems with the ultimate goal of transforming products into something new at the end of their life. This is opposed to the traditional and still predominant economy defined by a linear product lifecycle comprising production, use and disposal. To succeed in this transition, large fashion retailers including H&M increasingly partner up with foundations such as the Ellen MacArthur Foundation to accelerate a fashion industry that is “restorative and regenerative by design” (Ellen MacArthur Foundation, 2017; Gunther, 2016). Related corporate actions and decisions can be considered as green marketing practices that aim at achieving strategic and financial objectives in consideration of protecting the environment (Leonidou et al., 2013; I:CO, 2018a). Within the fashion industry such practices especially include fostering processes that best achieve at extracting valuable
mater
ials from worn out clothing in order to transform them into new fibres instead of
exploiting earth’s natural resources for future clothing production (Gunther, 2016). Latter is
often referred to as “closing the loop” (I:CO, 2018b). In this regard, in-store recycling has
become highly prominent among fashion retailers (Gunther, 2016).

2.5 In-store recycling

As the clothing industry steadily changes and evolves, major retailing players have lately
introduced take-back schemes that enable consumers to hand over their no-longer wanted
clothes in stores in order to tackle environmental issues (Laitala, 2014). One of these is in-
store recycling that was launched by a German company called I:Collect (I:CO) (I:CO,
2018c). In-store recycling can be classified as a green marketing programme requesting
consumers to actively engage in the pro-environmental action of apparel recycling. In
cooperation with I:CO large fashion chains have already implemented in-store recycling such
as H&M and Adidas (I:CO, 2018d). It is a certified system including the positioning of a box
in retail stores enabling consumers to drop off their no longer wanted clothes with the purpose
of recycling or reuse. Additionally, the concept implies incentives in terms of vouchers or
coupons that are given to consumers as a reward for their recycling behaviour.

According to I:CO (2018a), the concept enhances in-store traffic and sales volume which is
an attractive attribute for firms to collaborate. Once consumers have donated their clothes in
the store regardless of quality and brand, I:CO picks up and deliberately classifies the old
garments into three different categories. These are rewear, reuse and recycle. Rewear reflects
clothes that can be still used. Thus, clothes from that category will be resold. Furthermore,
reuse presents a category in which new products such as cleaning cloths will be made from
old garments. The main aim however is to extract as many valuable textile fibres from the
donated textiles as possible for reprocessing them in future clothing production (H&M, 2018;
I:CO, 2018b). This is opposed to traditional disposal methods such as donation to charity as
these hinder the creation of feedstock for new clothes (Gunther, 2016).

However, the system is still in its maturing phase and further investment is needed in research
and development to increase the amount of materials valuable to re-integrate into the clothing
product and material cycle (I:CO, 2018e). The importance of this is especially grounded in the
difficulty to extract sufficient valuable materials from highly low-quality apparel (Gould,
2017). Hereby, critics particularly prompt fashion brands to actively support this necessity by
funding research projects. In this regard, start-ups such as Ambercycle, Dutch Awareness and
Evrnu can lead the way towards breakthrough science and engineering including the development of novel chemical processes allowing to best transform prior processed cotton, polyester or blended apparel into new fibres and thus deliver the most efficient reuse of these materials (Gunther, 2016; Ambercycle, 2018).

2.6 The theory of planned behaviour

The TPB is recognised as the most influential and prominent conceptual framework to predict behavioural intentions (Ajzen, 2001; Chen & Tung, 2014). The model reflects an expansion of the theory of reasoned action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) ceasing the premise that human behaviour solely occurs under full volitional control by adding perceived behavioural control (PBC) as another antecedent of behavioural intention. Constraints on action can emerge caused by factors out of a person’s volitional control such as a lack of resources to perform the behaviour. Resulting, the TPB model proposes that people’s intention to perform an actual behaviour is principally driven by three components: attitude toward the behaviour, subjective norm (SN) and PBC (Ajzen, 1991; Ajzen, 1985) (Figure 1).

Figure 1: Theory of planned behaviour

Source: Adapted from Ajzen (1985)

The TPB is the model most applied in examining pro-environmental behaviours and its powerfulness for demonstrating that environmental friendly behaviour is intention-driven has been supported by multiple studies (Rhodes et al., 2015; De Groot & Steg, 2007). As in-store recycling is considered as a consumer behavioural topic related to pro-environmental consumption including disposal behaviour (Park & Ha, 2014), it is reasonable to adopt the TPB in the conceptual framework for the systematic analysis of generation y’s intention
towards performing in-store recycling. Latter is supported by the TPB’s confirmed predictive validity of recycling intention (Wan, Shen & Choi, 2017; Rhodes et al., 2015; Joung & Park-Poaps, 2013; Chen & Tung, 2010).

According to the TPB, the attitude towards the behaviour emerges from an individual’s rational evaluation of the consequences of the behaviour and is therefore determined by the person’s behavioural beliefs (Ajzen, 2002; Ajzen 1985). The more favourable an attitude towards the considered behaviour, the more likely a person intends to perform it (Ajzen, 1991). Subjective norm reflects the social pressure perceived by an individual to engage in the behaviour resulting from individual’s normative beliefs and the motivation to comply (Ajzen, 2002). Furthermore, PBC refers to the perception of control over the behaviour in terms of being capable to perform the specific action. It is formed by control beliefs about factors that might facilitate or hinder performing the behaviour and reflects like attitude and subjective norm a motivational impact on intention (Ajzen, 2002; Ajzen, 1991). As a result, the intention to perform is the immediate antecedent of behaviour and expresses the personal behavioural commitment. The stronger the intention towards engaging in the behaviour is, the more likely it is to occur (Ajzen, 1991).

Applying the notion of TPB to in-store recycling, our study proposes that generation y’s intention to perform in-store recycling increases the more favourable the attitude towards in-store recycling is. In addition, the intention of generation y towards performing in-store recycling is assumed to increase when consumers feel the urge to behave pro-environmentally due to their relevant social milieu like family members, friends or mass media, and when they perceive an ease to perform it (Park & Ha, 2014; Chan, 1998).

**H1:** Attitude towards in-store recycling will positively influence intention towards performing in-store recycling.

**H2:** Subjective norm will positively influence intention towards performing in-store recycling.

**H3:** Perceived behavioural control will positively influence intention towards performing in-store recycling.

These correlations among the TPB variables have been supported by the results of a review of 24 independent studies on recycling conducted by Rhodes et al. (2015). Here, the authors proved that recycling behaviour is indeed predicted by intention. Besides, attitude towards
recycling as well as PBC were found to be the most powerful predictors of behavioural intention towards recycling, even if they varied considerably across studies (Rhodes et al., 2015). On the contrary, subjective norm indicated a rather low importance among these studies. This recorded weak influence of subjective norm on behavioural intention and thus inferiority of the normative under the attitudinal component is well-known and confirmed in a review by Ajzen (1991) including 16 studies on predicting intention.

However, there are studies that recorded a higher correlation between subjective norm and recycling intention (Ramayah, Lee & Lim, 2012; Chen & Tung, 2010; Cheung, Chan & Wong, 1999). Obviously, there is conflicting evidence on the influence of subjective norm on recycling intentions. Reasons vary among recycling schemes. For example, Vining and Ebreo (1990) relate the contradiction to the public scrutiny when performing recycling. When people carry out recycling in privacy, subjective norm is less relevant (Vining & Ebreo, 1990; Oskamp et al., 1991). Taylor and Todd (1995) additionally found social pressure to be more motivating when participating in novel rather than matured recycling schemes. As in-store recycling is a scheme yet in its maturing phase that is furthermore installed in public places, subjective norm is taken into consideration to address the purpose of the study most comprehensively. Moreover, subjective norm was found to be influential on personal norm (Bamberg & Möser, 2007; Harland et al., 1999), a construct addressed in the NAM (Schwartz, 1977) and subsequently used in our study as a supplement to the TPB.

2.7 The norm activation model

Opposed to the TPB concentrating on individual’s deliberate behaviour originating from personal expectancy and benefits, the NAM places its focus on actions that stem from personal moral beliefs in terms of what is considered right or wrong (Park & Ha, 2014). In the NAM, benefits to others are superior to personal interests (Wall, Devine-Wright & Mill, 2007). Alongside the TPB, NAM is a socio-psychological attitude-behaviour model that has been widely applied for predicting multiple sorts of pro-social behaviour. Latter describes persons’ actions that benefit other persons and therefore implies environmentally friendly behaviour (De Groot & Steg, 2009; Schwartz, 1977; Juárez-Nájera, 2015). Consequently, NAM is well suitable for examining in-store recycling as it is a sustainable concept requiring pro-environmental behaviour. Additionally, NAM has already been prevalent in recycling behavioural studies (Sawitri, Hadiyanto & Hadi, 2015).
According to the NAM, individuals’ pro-social behaviour is positively influenced by one’s personal norm. Personal norm is referred to as an internalised norm as it results from normative self-expectations regarding morally appropriate behaviour and is motivated intrinsically (Klöckner, 2013; Schwartz, 1977). Thus, when a feeling of moral obligation to act in a pro-social manner is experienced, one’s motivation for action will be driven by personal values and the goal to be aligned with them. Personal norm is activated by two main antecedents which are AC and AR (Figure 2). Correspondingly, when an individual feels the negative consequences for not acting environmentally friendly and experiences a feeling of responsibility, a high personal norm is developed (Stern, Dietz, Abel, Guagnano & Kalof, 1999; Harland, 2001; Schwartz, 1977). This development is further explained by Bierhoff (2002) as an interaction of three major factors which are of emotional, cognitive and social nature. Concerning pro-environmental behaviour, the cognitive aspect is reflected in being aware of environmental issues and recognizing the causal relationship between these problems and one’s own behaviour which is reflected in AC. The emotional aspect becomes apparent in the feeling of guilt that is experienced as soon as individuals’ internally ascribe themselves the responsibility for contributing to environmental deterioration. The pro-social emotion of guilt leads to the activation of personal norm and is often enhanced by external, social expectations (Bamberg & Möser, 2007).

Figure 2: The norm activation model

Source: Adapted from Schwartz (1977)

In the field of recycling, authors found that besides the TPB constructs attitude and PBC (Koch & Domina, 1997), also personal norm significantly determines recycling intention (Park & Ha, 2014; Chen & Tung, 2010). This is empirically explained by Thøgersen (1996) arguing that environmental friendly behaviour not only stems from an individual’s assessment
of cost and benefit, but also from altruistic motives. Bamberg and Möser (2007) recorded a considerable variance in recycling intention when adding personal norm to the TPB framework. As already recognised by Ajzen (1991), personal norm is assigned a vital role in explaining behavioural intention. Accordingly, we predict in-store recycling intention to be influenced by generation y’s personal norm.

**H4**: Personal norm will positively influence intention towards performing in-store recycling.

Regarding AC as one antecedent of personal norm, authors like Vining and Ebreo (1992) and Park and Ha (2014) reported the factor to indirectly influence recycling behaviour. Specifically, when predicting recycling intention, individuals’ knowledge of environmental consequences of not participating in recycling has been proven crucial (Chen & Tung, 2010; Davies et al., 2002; Wan, Cheung & Shen, 2012). However, there was no significant impact reported for AR (Vining & Ebreo, 1992). When investigating recycling intention, Park and Ha (2014) explicitly excluded the construct from their study and solely considered AC, similar to Yushkova and Feng (2017) as well as Oom Do Valle et al. (2005) when examining behavioural determinants of recycling. On the contrary, Thøgersen (1996) argues that when individuals consider their recycling behaviour to be effective in terms of reducing waste ending up in landfills, achieving the behaviour becomes more valuable. Nevertheless, solely one study could be identified by us reporting a significant influence of AR on personal norm and a resulting indirect effect on intention within recycling behavioural research (Onel & Mukherjee, 2017).

Since in-store recycling reflects a scheme not yet enlightened sufficiently from a behavioural perspective and intention may differ among recycling schemes (Shim, 1995), we acknowledge AR in our study. This is especially reasoned by our assumption that the latter is related to generation y and their heightened valuation of green practices. Further we want to consider all possible factors that may have an essential influence on in-store recycling intention (McKay, 2010; McDougile et al., 2011; Rogers, 2013). Transferring this finding to our study, we assume that consumers who are aware of environmental consequences of ineffective clothing disposal behaviour and feel responsible for the consequences are more likely to experience a high personal obligation.

**H5**: Awareness of consequences will positively influence personal norm.

**H6**: Ascription of responsibility will positively influence personal norm.
2.8 Combining the TPB with the NAM

Despite TPB’s significance, Ajzen (1991) acknowledged the flexibility of the TPB in terms of including additional variables if they account for a substantial, but yet distinct explanatory contribution. In this regard, it has been proven relevant to combine variables of the TPB and NAM to thoroughly predict pro-environmental behaviour intention (Wall et al., 2007) including recycling intentions (Park & Ha, 2014; Chen & Tung, 2010) and recycling behaviour (Oom Do Valle, Rebelo, Reis & Menezes, 2005). These authors advocate that the occurrence of pro-environmental behaviour not only emerges from individuals’ self-interest and volitional intention (TPB), but additionally from moral-based beliefs (NAM) (Park & Ha, 2014; Black, Stern & Elworth, 1985; Abrahamse, Steg, Gifford & Vlek, 2009; Thøgersen, 1999). This supports the combination of psycho-social determinants from both rational choice and more pro-socially driven theories (Bamberg & Möser, 2007). Hence, a combination specifically enhances TPB’s explanatory performance (Oom Do Valle et al., 2005; Kaiser & Scheuthle, 2003; Ajzen, 1991).

Researchers like Oom Do Valle et al. (2005) see the benefit of combining NAM and the TPB in the similarities of both theories as it eases the integration of both models and supports the prediction power for environmental significant behaviour. On the contrary, authors such as Wall et al. (2007) rather view the special usefulness of the combination of both theories in their differences. This view is supported by a study of Harland et al. (1999) in which they explain multiple pro-environmental intentions. The authors further found that an extension of the TPB with the component of personal norm as provided by the NAM generally leads to a significantly higher intention towards performing a pro-environmental behaviour. Latter was subsequently confirmed by Wall et al. (2007) reporting that a combination of both theories substantially proved better in predicting pro-environmental intention than using the models separately. Resulting, these findings confirm and support the relevance of combining both the NAM and TPB to thoroughly determine generation y’s intention to perform in-store recycling.

Besides, previous research stresses that subjective norm guides individual beliefs about the own perceived appropriateness of green behaviour (Bamberg, Hunecke & Blöbaum, 2007) including recycling intentions (Park & Ha, 2014). Concerning recycling behaviour, subjective norm was found to be influential on personal norm (Bamberg & Möser, 2007; Harland et al., 1999). Bratt (1999) empirically evidenced subjective norm to indirectly influence recycling behaviour through personal norm rather than directly. Therefore, we assume that if in-store
recycling is perceived by an individual as socially desirable it will guide the judgement whether or not to feel obliged to take part in in-store recycling.

**H7:** Subjective norm will positively influence personal norm.

Klöckner (2013, p. 1035) revealed in his meta-analysis concerning environmental friendly behaviour that a “part of the impact of personal [moral] norms on intentions is mediated by attitudes, meaning that what people consider favorable also takes into account if the respective behavior is in line with personal values”. In respect of recycling intention, only restricted evidence exists indicating personal norm to positively influence attitude (Wan et al., 2017). Whereas Chan and Bishop (2013) proved the correlation to be positive, Botetzagias, Dima and Malesios (2015) furthermore demonstrated the strength of the correlation which is why we develop the following hypothesis.

**H8:** Personal norm will positively influence attitude towards in-store recycling.

### 2.9 Extension of the TPB

Previous studies on green consumer behaviour intention as well as in the domain of recycling have extended the combination of TPB and NAM with additional factors to provide a more comprehensive understanding (Chen & Tung, 2014; Chen & Tung, 2010).

Several studies revealed a positive relationship between environmental concern and recycling behaviour. More precise, consumers who care about the environment are more likely to participate in recycling programmes (Jekria & Daud, 2016) including textile disposal (Koch & Domina, 1997). Environmental concern comprises the personal evaluation of factors and behaviours impacting the environment and is vital for explaining green behaviour (Chen & Tung, 2014; Fransson & Gärling, 1999; Vining & Ebreo, 1992). The construct is often referred to as general attitude towards the environment (Chen & Tung, 2014; Fransson & Gärling, 1999; Vining & Ebreo, 1992) and has been included as an antecedent of a more specific attitude towards the respective environmental behaviour (Oom Do Valle et al., 2005; Wan et al., 2017). Findings by Jekria and Daud (2016) demonstrated a positive relationship between environmental concern and attitude which has been further confirmed by Oom Do Valle et al. (2005). Particularly, in the field of textile recycling, no correlation was established (Morgan & Birtwistle, 2009).

However, as we recognised, findings frequently differ among recycling schemes. Additionally, there are no prevalent studies on in-store recycling considering the correlation
between environmental concern and attitude. Since our study focuses on generation y recognised for their environmental consciousness, it further highlights the importance of including this construct in our study. Therefore, we assume that generation y will form a more favourable attitude towards in-store recycling if they are concerned about the environment.

**H9**: Environmental concern will positively influence attitude towards in-store recycling.

Reasons for refusing participation in recycling are that consumers have no access to local recycling programmes or are unaware of further recycling methods (Domina & Koch, 2002). It was evidenced that convenient access is a crucial factor concerning recycling schemes that essentially increases consumers’ intention to attend recycling programmes since consumers assume that easy access reduces the amount of time spent (Chen & Tung, 2010; Oom Do Valle et al., 2005; Ramayah et al., 2012; Rhodes et al., 2015). A survey conducted by Goodwill industries revealed that most of the consumers would not spent more than ten minutes to drop off clothes (Solid Waste District of LaPorte County, 2018). Additionally, Domina and Koch (2002; 1999) emphasise the importance of convenience and access represented as a means of facilitating clothing recycling participation when focusing on curb-side recycling schemes in comparison to more inconvenient programmes like drop-off recycling. The inconvenience related to drop-off schemes was also stressed by Saphoress, Ogunseitan and Shapiro (2012). With regards to in-store recycling, clothing collection boxes are placed in retailers’ stores which are primarily situated in cities (I:CO, 2018a). As many consumers live in the countryside they may lack convenient proximity and thus be hindered to make a drop off in stores. Thus, accessibility contributes to individuals’ perceived ease or difficulty to perform the behaviour. As the factor is out of a person’s volitional control it is comprised in the PBC construct (Ajzen, 1991). Resulting, accessibility is predicted to influence PBC and therefore to indirectly impact generation y’s intention towards performing in-store recycling.

**H10**: Accessibility will positively influence PBC.

Information is required for knowing how to execute the intended behaviour and accounts for the level of responsibility ascribed to the intended action as well as for the evaluation of its effectiveness (Pieters, 1991; Bezzina & Dimech, 2011). It is ascertained that the disclosure of information about a recycling practice substantially enhances consumers’ willingness to take part in the recycling programme (De Young, 1989; Oke & Kruijsen, 2016; Schultz, Oskamp & Mainieri, 1995). This finding is also confirmed in the field of textile recycling participation
(Domina & Koch, 2002). Gamba and Oskamp (1994) even found information availability to be the most relevant predictor for recycling behaviour. Referring to the TPB, researchers stated that PBC decreases if consumers’ lack information about the pro-environmental behaviour which in turn causes a reduction in confidence (Vermeir & Verbeke, 2008) and lastly a decrease in intention. Transferring this to fashion recycling, consumers may lack knowledge about existing apparel recycling schemes and about the actual environmental consequences of improper discarding of clothes (Engström & Nicklasson, 2015; Birtwistle & Moore, 2007). Therefore, we add information availability as a direct predictor of PBC.

**H11**: Information availability will positively influence PBC.

There is proof of public’s heightened scepticism regarding green marketing claims of corporate environmental marketing practices (Dembkowski & Hanmer-Lloyd, 1994). Consumers frequently lack trustworthiness in large organisations because of firms’ primary objective to raise profit margins which in turn may reduce their motivation to participate (Joung & Park-Poaps, 2013). Trustworthiness in a firm is reflected in its perceived credibility, reliability, honesty or benevolence (Ganesan, 1994). Concerning in-store recycling, consumers may be critical about the true impact of their behaviour in terms of fostering a better environment and doing something good. Engström and Nicklasson (2015) in this regard especially talk about the perceived paradox created by in-store recycling. The paradox consists of inviting consumers to recycle apparel while on the same time fostering hyper-consumption by offering vouchers for the next purchase to boost profit growth (I:CO, 2018a). Trustworthiness towards corporate sustainable practices has recently been adapted as a factor in TPB studies as a direct antecedent of PBC indirectly influencing green behavioural intentions (Kleine Stüve & Strauss, 2016). As the described paradox is highly important when considering in-store recycling intention we respectively add the construct trustworthiness to our framework.

**H12**: Trustworthiness will positively influence PBC.

Researchers moreover identified that economic incentives and rewards function as important triggers for consumer recycling behaviour (Joung & Park-Poaps, 2013; Jacobs & Bailey, 1982; Gamba & Oskamp, 1994). Incentives are recognised for significantly motivate people to act environmentally friendly regardless of their personal environmental concern. Therefore, companies increasingly include rewards to enhance consumer participation in green marketing practices (Gamba & Oskamp, 1994; Kollmuss & Agyeman, 2002). However,
incentives were found to be rather effective to initiate recycling behaviour than to trigger long-term participation which requires intrinsic motivation (De Young, 1986). Also, as noted by researchers, the attractiveness of rewards is perceived differently among individuals as it often depends on factors like accessibility or redemption periods (Schultz et al., 1995). Accordingly, we believe incentives to have an additional impact on in-store recycling intention and add it as another direct antecedent of in-store recycling intention to our framework.

**H13**: Incentive will positively influence intention towards performing in-store recycling.

### 2.10 Proposed research model

Finally, we propose an extended version of the TPB combining normative and rational factors based on the NAM and TPB model respectively to predict individuals’ intention towards performing in-store recycling (Figure 3).

Figure 3: Proposed research model
3 Research methodology

3.1 Philosophy of science

The research philosophy of science is a crucial part in academic research since it influences the way in which the world is interpreted by the researcher. Additionally, it determines further steps within the research process such as the research strategy and methods used to fulfil the study’s purpose (Saunders, Lewis, & Thornhill, 2009).

Philosophy of science refers to a concept for developing knowledge based on assumptions, methods and scientific inquiry. There are four main research philosophy approaches that should be taken into consideration when conducting scientific research. These are pragmatism, interpretivism, realism and positivism (Saunders, Lewis & Thornhill, 2016).

For the following research the most appropriate philosophy position is positivism since it is well applicable in combination with a deductive research and a quantitative research approach (Saunders et al., 2009). Positivism reflects natural phenomenon in which social reality can be observed and measured through developing and testing hypotheses (Remenyi, Williams, Money & Swartz, 1998; Duignan, 2016). Existing theory is used to develop these hypotheses which will be measured and confirmed by using statistical analysis (Saunders et al., 2009). The development of hypotheses in our study relies on the theory of planned behaviour (Ajzen, 1985) and the norm activation model (Schwartz, 1977) which will be tested based on primary data collected and analysed with a statistical software analysis tool. This allows us to translate statistical regularities into measurable variables and link them to our theory in order to analyse the quantitative findings of the study. This approach is associated with deductive research allowing generalisations to be derived from the gathered data which enable us to formulate managerial implications for the fast fashion industry (Saunders et al., 2009).

According to Remenyi et al. (1998), positivism further relies on the assumption that the researcher is objective and independent requiring that the author is unaffected by the study’s topic and considers the research from an external and critical point of view. This is reflected in our case as we conduct basic research which aims at expanding the limits of marketing knowledge in general. Hence, we not specifically address the need of a specific company as expected when conducting applied research (Saunders et al., 2009). Additionally, as we have not taken part in in-store recycling so far, we are unbiased which further allows us to critically examine the concept. This non-affected standpoint towards the researched topic is in line with the lack of value-based enquiry reflected in the positivism approach. Hence, the substance of
collected data and the subsequent conclusions drawn cannot be altered by us (Saunders et al., 2009).

3.2 Research approach

The decision concerning the most suitable research approach stems from the chosen philosophy of science. It reflects the manner of how theory is used in the research which can take two forms: deductive and inductive (Saunders et al., 2009). For our study an inductive approach is rejected as it is applied in exploratory research and therefore highly influenced by the subjectivity of the authors for interpretation purposes. Thus, it is not theory-based, and the subjectivity further hinders drawing generalisations of findings (Saunders et al., 2009).

Deduction on the other hand strives for explaining causal relations between several variables. Applying this approach is therefore consistent with our study’s purpose which aims at examining factors influencing in-store recycling intention and explaining relationships among variables within our proposed model (Saunders et al., 2009). Within social sciences, drawing deductive inferences is frequently used when a research topic has already been examined from a qualitative perspective. As clothing disposal behaviour has already been examined from a qualitative perspective and is closely related to in-store recycling, quantitative methods allow us to test these theories on this concept (Saunders et al., 2009). This justifies the deductive approach which reliably addresses our hypotheses through statistical means ensuring an objective analysis as opposed to induction. Applying a deductive approach is furthermore suitable as our hypotheses and research model are derived from existing research.

However, our study is not conclusively deductive as it also includes certain inductive and abductive inferences. The development of the model we conceptualised relies on existing theory but is influenced by certain abductive elements. It includes variables and correlations which have so far not been investigated in this specific constellation and specific field of research. Multiple insights about variables and correlations varying in depth were identified within relating fields of research, combined, and then analogically adapted to the specific research on hand. This resulted in a new model to comprehensively explain the novel phenomenon in-store recycling. Including a certain degree of creativity and analogical reasoning, it relates to abductive reasoning (Minnameier, 2012). Within our statistical tests conducted, independent samples t-test and ANOVA for examining differences among generation y are not specifically related to hypotheses testing. Thus, it implies a lower level of deduction as opposed to multiple regression and correlation analysis. Based on our empirical
findings, we constructed a revised model by inferring implications from our findings and thus, contribute with new theoretical outcomes to original theories. This points to an inductive approach (Bryman & Bell, 2011).

According to Saunders et al. (2009), deduction ensures the reliability and validity of data which increases in line with the growth of sample size. Thus, large quantity of data is required to sufficiently verify the hypotheses and to be capable to generalise findings. It further makes the replication of the study possible. Reliability is further obtained through the highly structured methodology of a deductive approach (Saunders et al., 2009). Additionally, it is emphasised within deduction that operationalisation is necessary to be able to quantitatively measure data reflected by questions developed based on prior research and their precise measurement using a 5-point Likert scale (Saunders et al., 2009).

3.3 Research purpose
The purpose of our research relies on the main research questions this study aims at answering. Saunders et al. (2009) suggest three different methods that can be used to achieve the research objectives. These are descriptive, explanatory and exploratory (Saunders et al., 2009). As we assume that correlations exist between variables within the proposed model, an explanatory research purpose is the most appropriate choice because it allows causal relationships among variables to be drawn. An explanatory research approach can be either applied by using qualitative or quantitative data collection methods (Saunders et al., 2009). Latter is applied by our study.

3.4 Research design
The research design choice is substantially important within the research process since it determines how data is collected (Saunders et al., 2009). According to Saunders et al. (2009), there are quantitative methods, qualitative methods or a combination of both to collect data. Previous studies on textile recycling behaviour including in-store recycling predominantly have applied qualitative data collection methods. Thus, due to the lack of quantitative studies we intend to expand the knowledge that has been gathered so far by applying a quantitative research design to investigate consumers’ intention towards performing in-store recycling. Besides, it enables a change in perspective that assist gaining valuable insights. Our quantitative approach reveals a mono-method reflected in the use of solely one single method (Saunders et al., 2009).
Quantitative data refers to the generation of numeric data which emphasises the analysis with a statistical software analysis tool (Saunders et al., 2009; Weinreich, 2011). In comparison to a qualitative method, advantages of a quantitative research design are the collection of more accurate and quantifiable data as well as a large sample size (Weinreich, 2011; Curwin & Slater, 2008). It further provides standardised data which facilitates the comparison of the gathered data (Saunders et al., 2009). In this regard, a survey-based questionnaire allows collecting large quantity of data which is inevitable to ensure high objectivity, reliability as well as statistical significance as intended by our research (Saunders et al., 2016; Weinreich, 2011). Additionally, Saunders et al. (2016) emphasise that surveys are most efficient when collecting data.

The time horizon of this research is cross-sectional as the online survey for measuring generation y’s intention to perform in-store recycling was distributed once during a period of two weeks. Due to time constraints, no longitudinal study was conducted which would have been more accurate (Saunders et al., 2009).

3.5 Sampling
Sampling describes the selection of a particular part of a population that is able to adequately represent the entire population (Saunders et al., 2016). The selection of an appropriate sampling method allows reducing the amount of data that is needed for the research (Saunders et al., 2009). It is further inevitable since it is unfeasible to collect data of an entire population due to limited time and financial resources (Saunders et al., 2016) as well as to ensure reliable data. Furthermore, the larger the sample size the more precise are the inferences that can be drawn (Law, 2009). In our study, a sample size of 326 cases is achieved which is sufficient for conducting statistical analysis such as multiple regression (Pallant, 2005). For this study, the relevant target population is generation y including women and men born between 1980 and 2000 (Oxford Dictionary, n.d.). Generation y has been chosen as the target population since they are aware of environmental issues and tend to hyper-consumption, a paradox that makes the investigation of this target group’s intention towards performing in-store recycling highly interesting (McDougle et al., 2011; Doane, 2001; Sanne, 2002; Birtwistle & Moore, 2007).

As the probability of the units being chosen from the whole population is unknown and as it is further impossible to draw statistical conclusions about the populations’ characteristics, a non-probability sampling method is most reasonable (Saunders et al., 2009). Non-probability
sampling techniques are popular among researchers and are frequently applied in business researches (Saunders et al., 2016). For the following study convenience sample is used to be able to achieve a large quantity of data in a limited amount of time as this method aims at including arbitrary sampling unit that are easiest to involve in the sample (Saunders et al., 2009). Participants are predominantly friends, classmates and family members supporting the choice for a convenience sampling method.

Even if this sampling technique is commonly used, it tends to involve bias which are difficult to control due to the ease of gathering data, especially in case of a heterogenous population (Saunders et al., 2009; Kothari, 2004). For instance, a sampling error may appear which refers to a discrepancy between the selected sample and the populations characteristics and decreases when the sample size increases (Kothari, 2004). By having a large sample size, we counteracted this error.

3.6 Survey design
The survey design depends on several factors and is highly important to fulfil the study’s purpose. The primary data collection method chosen for our research is a survey as it allows us to measure the value of each explanatory variable as well as the correlations among the variables within our proposed model (Saunders et al., 2009).

Generally, the amount of contact needed with respondents substantially impacts the selection of the survey design (Saunders et al., 2009). Our questionnaire is easily comprehensible and clearly structured. Furthermore, we provide an appropriate introduction and definition of in-store recycling and the study’s purpose, meaning that no additional explanation is needed to participate in our survey. As no contact with respondents is required, it implies a self-administered questionnaire design where researchers have little impact on respondents’ comprehension (Saunders et al., 2009).

The questionnaire (Appendix 1) was developed based on previous literature to ensure high reliability and validity. It was created with Qualtrics and implies a total amount of 55 closed questions. Within the first section, the survey consists of five demographic questions that yield relevant information about the sample population. As some respondents may lack knowledge about in-store recycling they may be unable to properly answer questions about accessibility, which is one of the twelve blocks within the survey. This represents a respondent bias called uninformed response (Saunders et al., 2009). Thus, a question that aims at testing consumers’ awareness about the studied topic was integrated within the
demographic section to increase researchers’ control required for the subsequent statistical analysis.

The main body of the questionnaire includes 50 questions divided into twelve blocks which measure the explanatory variables within the model. Respondents’ answers were assessed using a 5-point-Likert scale ranging from strongly agree (1), somewhat agree (2), neither agree nor disagree (3), somewhat disagree (4) to strongly disagree (5). This type of scale was chosen due to its accurate measurement in previous recycling studies (Joung & Park-Poaps, 2013; Park & Ha, 2014). Moreover, it is recognised for its simplicity to collect primary data and advantageous in studies that measure people’s attitude and viewpoint (Bryman, 2001). Finally, since there is no variation in wording respondents’ answers are numerically convertible facilitating the analysis of the gathered data (Bryman & Bell, 2011).

All scales consisted of three items except from the construct of attitude and intention comprising four items and the incentive construct that solely stresses two questions. Concerning the structure of the questionnaire, items concerning intention as the main construct of the research were purposely stated as the second last question block. This is explained as we first want respondents to become familiar with the various antecedents of in-store recycling intention to best guarantee the quality of answers on the main construct.

The questionnaire is designed user friendly with clear and neutral phrased questions, important to gather reliable data and to prevent the occurrence of response bias (Saunders et al., 2009). All questions included in the survey force answers to guarantee complete responses as well as a usable data set. As the questionnaire is distributed internationally and we assume that generation y has sufficient English language skills to answer the questions properly and adequately, the survey is only designed English.

Due to the requirement of providing a large sample size in a limited time frame with restricted financial resources, the questionnaire was distributed online. By using an internet-mediated questionnaire, the data gathering process is quick and simple (Saunders et al., 2009). As the target population is described as heavy internet users, it justifies the online distribution of the questionnaire (Statista, 2010). Once the questionnaire is spread online, there is a lack of control which is a disadvantage that we are aware of (Kothari, 2004).
3.7 Pilot test
Prior to sending out the final questionnaire to collect data using a self-generated link, the survey was reviewed by an expert to ensure its representativeness as well as the suitability and relevance of questions (Saunders et al., 2009). This allowed us to amend the survey to best ensure content validity. Thereafter, a pilot test was conducted aiming at a further refinement of questions to enhance ease of understanding among future respondents and subsequently the quality of data recorded (Saunders et al., 2009). The pilot questionnaire was sent to a group of five people highly similar to the final sample population. However, pilot test respondents differed in demographic characteristics as well as knowledge about in-store recycling to identify and increase face validity, accordingly the extent to which the questions are subjectively perceived as making sense within the context being studied (Saunders et al., 2009; Davies et al., 2002). Minor changes were adapted after the preliminary test to best avoid ambiguity (Saunders et al., 2009).

3.8 Ethical considerations
In the conduct of our research ethical issues were taken into consideration at any time. This specifically means that the privacy of respondents including the confidential treatment of any personal data provided as well as a voluntary nature of participation was always presupposed while conducting our research (Saunders et al., 2009). In this regard, participants were assured that data collected is anonymous and that it is used for research purposes only. Furthermore, confidentiality of data was guaranteed ensuring that no data will be forwarded to third parties. By using a quantitative method, objectivity is guaranteed. To make the respondents feel comfortable taking the questionnaire, we also guaranteed total anonymity to increase response rate.

3.9 Reliability
Reliability examines the consistency of findings that is yield by the research techniques applied for data collection. Accordingly, reliability reveals whether results will be similar when the same survey is adapted within different occasions, for instance including varying point of times or different samples, as well as executed by other researchers (Saunders et al., 2009). To enhance the reliability of the scales applied in the study, measurements were selected carefully and solely adapted if respective items for each construct have been proven reliable in previous research.
The reliability of the scales adapted by the study is measured using the statistic measure Cronbach’s alpha. This statistic formulates the internal consistency by calculating the extent to which the items on each scale belong together (Pallant, 2005). This is indicated by providing the average correlation among all items comprised in a scale presented in values ranging from 0 to 1. Generally, scales are considered reliable when Cronbach’s alpha exceeds a value above 0.7 (Pallant, 2005). However, according to researchers such as Petrick and Backman (2002) a Cronbach alpha of 0.6 is still acceptable. Results for the reliability of each construct’s scale applied by the research are presented in chapter 4.3.

3.10 Validity

Internal validity reflects the extent to which researchers actually measure what they intend to (Saunders et al., 2009). To ensure the validity of the questionnaire, we established three kinds of validities stressed for their crucial importance, namely content validity, criterion related validity and construct validity (Cooper & Schindler, 2008).

Content validity refers to the degree to which the items within our survey adequately cover the investigative question. This adequate coverage was assured by a thorough literature review conducted, resulting in the deduction of items that have already been proven valid in prior research (Saunders et al., 2009). Additionally, questions were discussed with an expert as well as with the respondents of the questionnaire’s trial run to assess the items essentiality for the purpose of the study and thus, to further enhance content validity (Saunders et al., 2009). Criterion validity is reflected in the items’ capability to make accurate predictions (Saunders et al., 2009). This predictive power is measured within our study by conducting correlation analyses. Lastly, construct validity refers to the extent to which the items used actually measure the underlying constructs that are supposed to be measured. This means that construct validity answers how well generalisations can be drawn from the measurement items to the construct measured (Saunders et al., 2009). This type of validity was especially aimed to be achieved by testing the reliability of each multi-item construct allowing to delete items that do not sufficiently represent the construct being measured. It was furthermore enhanced by utilising a pilot study including both test respondents being aware and unaware of in-store recycling as these were assumed to eventually differ concerning some of the constructs examined. Therefore, items were adapted respectively after the pilot test further ensuring construct validity.
3.11 Literature search and tools

Several academic articles as well as books and journals were reviewed by using different search engines. Predominantly, Primo search developed by Jönköping University and Google Scholar by Google were used to identify relevant articles. Primo search presents a great amount of peer-reviewed articles, journals and further scientific material which implies reliability. Also, Google Scholar offers a lot of citations enabling a simple selection of reliable literature. However, not only online material was used, but also physical material that was borrowed from Jönköping University library. Data was collected using the online survey tool Qualtrics and analysed with IBM SPSS Statistics 25. Furthermore, the software Microsoft Office was utilised.
4 Empirical findings

Using Qualtrics as a tool to collect raw data digitally allowed us to import the data into the software SPSS Statistics to proceed with statistical analyses and the testing of hypotheses. Prior to this, data collected was audited for errors and missing values by running descriptive statistics for all continuous variables and frequencies for categorical variables (Pallant, 2005). Additionally, analysis of descriptive statistics indicated means and standard deviations of variables. Moreover, respective Cronbach’s alphas were measured to ensure the reliability of the constructs. In order to reveal differences among respondents an independent samples t-test and ANOVA was conducted. Subsequently, we tested our hypotheses by conducting correlation and multiple regression analyses revealing the direct effects between variables.

4.1 Demographic sample

The online survey records a total of 391 responses. Firstly, the data set was checked for missing values (Pallant, 2005). Data was cleared by deleting all respondents that filled out less than 100% of the questionnaire instead of the common 75%. This is especially due to the structure of the questionnaire stating items concerning intention as the second last question block as reasoned in chapter 3.6 on survey design. The remaining number amounted to a total of 331 cases. Data was deleted of five more cases as respondents were 39 years old or older, or under 18 years old and therefore did not meet the requirement of the study in terms of belonging to generation y. Resulting, 326 responses were used in the analysis. This number is considered as acceptable as Malhotra and Birks (2007) state the minimum size of responses to be 200 to allow problem solving research. Additionally, scores for each variable ranged within the minimum and maximum values of the respective scales without exceptions indicating that there are no errors in the data set (Pallant, 2005).

Out of the 326 respondents 197 are female (60.4%) whereas 129 are male (39.6%). The average age of respondents is 25 years reflected in a mean of 9.21 and can be reasoned by the convenience sample which predominantly consisted of the researcher’s friends and classmates of similar age. This furthermore allows to explain the overall high educational level among respondents with the majority holding a bachelor’s degree (51.5%), followed by a master’s degree (22.1%), as well as the high number of secondary school (or equivalent) graduates (25.8%). These findings are in line with respondents’ current employment status as 46.9% indicated to be students, whereas 40.8% stated to be full-time employees. Out of the 326 respondents, 50.9% have heard about in-store recycling as opposed to the slightly less 49.1%
that were not familiar with the recycling scheme before participating in our survey (Appendix 2).

4.2 Descriptive statistics
The amount of variation for each item is reflected in the respective standard deviations (SD). These were all reasonably spread around the value 1.0 which is common on a 5-point Likert scale (Pallant, 2005) (Appendix 3). With regards to the main construct of the study which is intention, means indicate an overall agreement in terms of intending to perform in-store recycling as they mainly revolve around the score 2. Except the general item asking respondents if they will consider performing in-store recycling (SD=0.918), the three remaining items asking respondents more specifically about their intention indicated SD’s slightly above 1.0 meaning that here, variation among responses was higher among generation y.

Subsequently, total scores for each construct were calculated by adding up the scores recorded for each individual item. To ease the interpretation of the scores of the total scales, each scale was divided by the number of items it consisted of. With this, scales were converted back into the original 5-point Likert scale ranging from scores between 1 and 5 (Pallant, 2005). The mean score of the construct intention (M=2.60) demonstrates an overall agreement among respondents towards intending to perform in-store recycling with a variation in responses of 0.84. Generation y furthermore tends to have a positive attitude towards in-store recycling expressed by a mean of 2.0 and the second lowest SD reported (0.64). The mean score of environmental concern as antecedent of attitude is the lowest given (M=1.42), revealing that respondents strongly agreed on caring about the environment. Opinions on this were most consistent reflected in the lowest variation in answers recorded (SD=0.56). Respondents furthermore agreed on the construct subjective norm (M=2.88; SD=0.75), however, showing a tendency towards the neutral opinion. Similar findings can be seen for the construct personal norm (M=2.91; SD=0.88). Concerning AC as an antecedent of personal norm, generation y mostly tended to agree to be aware of the positive consequences of participating in in-store recycling reflected in a mean score of 2.15 and a comparably low (SD=0.70). Even if respondents agreed on total of AR (M=2.88), the tendency goes towards the neutral response meaning that generation y rather has an indecisive opinion on the construct. However, as the SD of 0.95 is higher than in almost any other construct and approaches the value 1.0 it shows that opinions vary more than for other constructs.
Regarding PBC, generation y expressed a general agreement (M=2.5) with a comparably low SD (0.73). The mean score for the total information availability construct is rather low (M=2.12) demonstrating an overall agreement among respondents. The SD belongs to the smallest ones recorded with 0.66 demonstrating that individual responses varied fewest after the total construct of environmental concern and attitude indicating a slightly lower SD. Respondents on average perceived in-store recycling as rather difficult to access (M=3.44; SD=0.80). Respondents furthermore expressed an overall agreement on the trustworthiness construct. However, as the mean is 2.88 and thus above 2.5 it demonstrates a tendency towards the neutral response, indicating a rather low SD (SD=0.7) similar to information availability. Lastly, most individuals among generation y agreed to be influenced in their decision of performing in-store recycling through economic incentives (M=2.34). Nevertheless, it is notable that responses vary most expressed by the highest SD of 0.96 (Table 1).

Table 1: Mean scores and SD of total constructs

<table>
<thead>
<tr>
<th></th>
<th>N Statistic</th>
<th>Mean Statistic</th>
<th>SD Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Information</td>
<td>326</td>
<td>2.12</td>
<td>0.66</td>
</tr>
<tr>
<td>Total Accessibility</td>
<td>326</td>
<td>3.44</td>
<td>0.80</td>
</tr>
<tr>
<td>Total Trustworthiness</td>
<td>326</td>
<td>2.88</td>
<td>0.70</td>
</tr>
<tr>
<td>Total Environment</td>
<td>326</td>
<td>1.42</td>
<td>0.56</td>
</tr>
<tr>
<td>Total AC</td>
<td>326</td>
<td>2.15</td>
<td>0.70</td>
</tr>
<tr>
<td>Total AR</td>
<td>326</td>
<td>2.88</td>
<td>0.95</td>
</tr>
<tr>
<td>Total Personal Norm</td>
<td>326</td>
<td>2.91</td>
<td>0.88</td>
</tr>
<tr>
<td>Total SN</td>
<td>326</td>
<td>2.88</td>
<td>0.75</td>
</tr>
<tr>
<td>Total PBC</td>
<td>326</td>
<td>2.50</td>
<td>0.73</td>
</tr>
<tr>
<td>Total Attitude</td>
<td>326</td>
<td>2.00</td>
<td>0.64</td>
</tr>
<tr>
<td>Total Intention</td>
<td>326</td>
<td>2.60</td>
<td>0.84</td>
</tr>
<tr>
<td>Total Incentive</td>
<td>326</td>
<td>2.34</td>
<td>0.96</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>326</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.3 Analysis of scale reliability

The scales’ internal consistency is expressed by calculating respective Cronbach alpha coefficients (Table 2). The reliability of the scales measuring AC, AR, personal norm, attitude, intention and incentive can be considered as good as their Cronbach’s alpha is higher than 0.8 (Pallant, 2005). With Cronbach alphas exceeding 0.7, the scales measuring trustworthiness, environmental concern, subjective norm and PBC indicate an acceptable reliability. For the construct PBC one item ("In-store recycling is convenient") was removed which considerably improved the reliability of the scale from 0.626 up to a Cronbach alpha of
0.749. As opposed to this, informational availability indicated a rather low reliability (0.619) impossible to enhance by deleting an item. However, the value is still acceptable and can be considered as reliable (Petrick & Backman, 2002). This was also the case for the scale measuring accessibility even if indicating a poor reliability (0.556), as the rule of thumb of an acceptable 0.7 generally refers to rather established and well validated scales (Pallant, 2005). Accessibility is however a construct that has not been widely applied within research applying TPB and even less often in recycling research and thus cannot be considered as widely established and validated. Additionally, its reliability approaches the acceptable value of 0.6 (Petrick & Backman, 2002) further reasoning why it has not been rejected.

Table 2: Reliability of constructs

<table>
<thead>
<tr>
<th>Scale</th>
<th>Cronbach's alpha</th>
<th>Items deleted</th>
<th>Final number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information availability</td>
<td>0.619</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Accessibility</td>
<td>0.556</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>0.739</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Environmental concern</td>
<td>0.796</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Awareness of consequences</td>
<td>0.832</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Ascription of responsibility</td>
<td>0.821</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Personal norm</td>
<td>0.822</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Subjective norm</td>
<td>0.739</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>PBC</td>
<td>0.749</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Attitude</td>
<td>0.836</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Intention</td>
<td>0.838</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Incentive</td>
<td>0.839</td>
<td>0</td>
<td>2</td>
</tr>
</tbody>
</table>

4.4 Correlation analysis

In order to identify the strength as well as the direction of the relationship between the variables as presented in the hypotheses, a Pearson correlation analysis was performed (Pallant, 2005). It was approved for all correlation analyses that the number of cases (N=326) is correct. Correlations were categorised according to Cohen (1988) indicating a small correlation if the Pearson coefficient (r) ranges between 0.10 and 0.29, a medium correlation if r is between 0.30 and 0.49 and a strong relationship when r ranges within 0.50 and 1.0. The correlation coefficients can be either positive or negative indicating the direction of the relationship. Correlations are significant when their significance level (Sig. 2-tailed) is below or equal 0.01 (Pallant, 2005).
**H1**: Attitude towards in-store recycling will positively influence intention towards performing in-store recycling.

With a positive Pearson correlation coefficient of 0.615, the correlation between attitude and intention is positive. As the r value is larger than 0.5, it indicates a strong relationship between these variables which is significant at a 0.01 level (2-tailed) (Table 3). This confirms hypothesis H1, meaning that the more favourable generation y’s attitude towards in-store recycling is the more likely they intend to perform in-store recycling.

**Table 3: Correlation of intention with attitude**

<table>
<thead>
<tr>
<th>Total_Intention</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total_Attitude</td>
<td>0.615**</td>
<td>0.000</td>
<td>326</td>
</tr>
</tbody>
</table>

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

**H2**: Subjective norm will positively influence in-store recycling intention.

A positive correlation of medium strength (r=0.436) can also be identified between subjective norm and intention which is significant (Table 4). Confirming H2, perceived social pressure positively influences generation y’s intention to participate in in-store recycling.

**Table 4: Correlation of intention with SN**

<table>
<thead>
<tr>
<th>Total_Intention</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total_SN</td>
<td>0.436**</td>
<td>0.000</td>
<td>326</td>
</tr>
</tbody>
</table>

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

**H3**: Perceived behavioural control will positively influence intention towards performing in-store recycling.

The relationship between PBC and in-store recycling intention was found to be positive but weak (r=0.116). It was however not significant at the 0.01 level (2-tailed) (Table 5) which rejects H3. This demonstrates that the perceived ease or difficulty to perform in-store recycling does not influence generation y’s intention to perform in-store recycling.
Table 5: Correlation of intention with PBC

<table>
<thead>
<tr>
<th>Total_Intention</th>
<th>Pearson Correlation</th>
<th>Total_PBC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.116*</td>
<td>0.037</td>
</tr>
<tr>
<td>N</td>
<td>326</td>
<td></td>
</tr>
</tbody>
</table>

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

**H4:** Personal norm will positively influence intention towards performing in-store recycling.

A positive correlation was determined between the variables personal norm and intention. The strength of the correlation is the highest analysed (r=0.659) which is significant at a 0.01 level (Table 6). This confirms that generation y’s intention to perform in-store recycling is affected by one’s experienced moral obligation to perform the pro-social behaviour.

Table 6: Correlation of intention with PN

<table>
<thead>
<tr>
<th>Total_Intention</th>
<th>Pearson Correlation</th>
<th>Total_PersonalNorm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sig. (2-tailed)</td>
<td>0.659**</td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td>326</td>
<td></td>
</tr>
</tbody>
</table>

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

**H5:** Awareness of consequences will positively influence personal norm.

A correlation coefficient of 0.442 indicates a positive and medium correlation between PN and the variable AC (Table 7). As the relationship is significant, hypothesis H5 can be confirmed. Thus, the more generation y is aware of the positive environmental consequences when participating in-store recycling the higher is the individual perceived moral obligation to perform the behaviour.

**H6:** Ascription of responsibility will positively influence personal norm.

Slightly higher than the relationship between AC and personal norm is the correlation between AR and PN reflected in a positive and significant Pearson coefficient of 0.459 (Table 7). This confirms H6, indicating that the more individuals ascribe responsibility to themselves for the environmental problems arising from their ineffective clothing disposal behaviour the higher is their intention to participate in in-store recycling.

**H7:** Subjective norm will positively influence personal norm.
With a significant and positive correlation coefficient of 0.490 (Table 7), subjective norm shows the strongest influence on personal norm followed by AR and AC. This value furthermore indicates a great tendency towards a strong correlation that starts with a coefficient value from 0.5. Resulting, if performing in-store recycling is perceived as socially desirable by individuals it will guide the judgment whether or not to feel obliged to take part in in-store recycling.

Table 7: Correlation of PN with AC, AR and SN

<table>
<thead>
<tr>
<th></th>
<th>Total_AC</th>
<th>Total_AR</th>
<th>Total_SN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total_PersonalNorm</td>
<td>0.442**</td>
<td>0.459**</td>
<td>0.490**</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>326</td>
<td>326</td>
<td>326</td>
</tr>
</tbody>
</table>

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

H8: Personal norm will positively influence attitude towards in-store recycling.

As illustrated in Table 8, H8 is supported with a medium correlation of 0.467. This finding is statistically significant as the Sig. (2-tailed) value equals 0.000. Hence, the more generation y feels personally obliged to participate in in-store recycling the more favourable is their attitude towards the pro-environmental behaviour.

H9: Environmental concern will positively influence attitude towards in-store recycling.

A substantially weaker relationship could be identified between attitude and environmental concern that can be classified as positive and small with a coefficient (r=0.214) ranging within r=0.10 and 0.29 (Table 8). As this finding is statistically significant, it confirms hypothesis H9. Thus, the more concerned generation y is about the environment the more favourable is their attitude towards in-store recycling.

Table 8: Correlation of attitude with environmental concern and PN

<table>
<thead>
<tr>
<th></th>
<th>Total_Environment</th>
<th>Total_PersonalNorm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total_Attitude</td>
<td>0.214**</td>
<td>0.467**</td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>326</td>
<td>326</td>
</tr>
</tbody>
</table>

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

Further, the relationship between the PBC and the variables accessibility, trustworthiness and information availability was investigated.

H10: Accessibility will positively influence PBC.
A correlation is identified in terms of accessibility and PBC. With a correlation coefficient of 0.224 (Table 9), the strength of correlation can be considered as small as it ranges within $r=0.10$ to 0.29 (Cohen, 1988), suggesting a rather weak relationship. As it is however significant at a 0.01 level (2-tailed), hypothesis H10 suggesting that the quality of access to in-store recycling possibilities positively influences PBC can be confirmed (Pallant, 2005).

**H11: Information availability will positively influence PBC.**

On the contrary, no correlation is identified regarding information availability and PBC as the correlation almost equals zero ($r=-0.037$) (Table 9). Thus, the positive relationship between information availability and PBC needs to be rejected, meaning that the disclosure of information revolving around the specific recycling scheme is not related with the perceived ease or difficulty to perform the behaviour.

**H12: Trustworthiness will positively influence PBC**

Also, similar to information availability there was no influence reported for trustworthiness and PBC as no correlation could be identified ($r=0.031$) (Table 9). With this, hypothesis H12 is rejected, indicating that the perception of veracity of corporate claims and promises related to in-store recycling is not influential on generation y’s perception of their ability to perform the given behaviour.

**Table 9: Correlation of PBC with trustworthiness, information availability and accessibility**

<table>
<thead>
<tr>
<th></th>
<th>Total_Trustworthiness</th>
<th>Total_Information</th>
<th>Total_Accessibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total_PBC Pearson Correlation</td>
<td>0.031</td>
<td>-0.037</td>
<td>0.224**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.531</td>
<td>.500</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>326</td>
<td>326</td>
<td>326</td>
</tr>
</tbody>
</table>

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

**H13: Incentive will positively influence in-store recycling intention.**

Further correlation analysis was conducted to examine the relationship between incentive and intention. Here, a positive correlation can be confirmed as illustrated in the Table 10. The relationship is significant but small ($r=0.152$; $p<0.01$). Thus, hypothesis H13 stating that incentives will positively influence generation y’s intention towards in-store recycling is confirmed.
Summarising the key findings out of the Pearson correlation analyses, it is evident that personal norm is most influential on generation y’s intention towards performing in-store recycling followed by attitude with correlation coefficients above 0.6 indicating a strong relationship. Furthermore, it is notable that PBC shows no significant correlation with in-store recycling intention.

4.5 Multiple regression analysis

Multiple regression analysis is used to examine the causal relationships within our proposed model in a more detailed manner compared to simple correlation analysis (Pallant, 2005). Before conducting the analysis, it is required to determine whether the requirements are fulfilled properly as a large sample size is necessary to be able to make generalisations. As within this study eleven independent variables will be tested on the dependent variables, a sample size of 138 cases is the minimum number that is needed according to the formula $N > 50 + 8m$ (m=number of independent variables) (Tabachnick & Fidell, 2001). This assumption is fulfilled adequately since our sample stresses a total amount of 326 cases.

4.5.1 Factors influencing intention

A multiple regression was conducted in order to measure the direct influence of the independent variables incentive, PBC, attitude, PN and SN on intention. Analysis requires that there is at least some correlation between the tested variables which should preferably range between 0.3 and 0.7 (Pallant, 2005). Most of the independent variables correlate well with intention (Total_PN 0.659; Total_SN 0.436; Total_Attitude 0.615) as opposed to Total_PBC (0.116) and Total_Incentive (0.152) with poor correlation values below 0.3. However, all variables show at least some correlation with intention which is why they are retained (Pallant, 2005). The existence of a correlation between variables is further tested by checking the tolerance and VIF value for each variable. As the tolerance values of the independent variables are all above 0.10 and respective VIF values smaller than 10, it can be concluded that the assumption of multicollinearity is not violated (Table 11).
By considering the normal probability plot depicted in Figure 4, a rather straight line can be ascertained resulting that there are no major deviations from normality (Pallant, 2005).

Figure 4: Normal probability plot_Dependent variable intention

The cases within the Scatterplot of the standardised residuals illustrate a rectangle, however comprising some minor deviations ranging out of the values 3.3 and –3.3 (Figure 5) which is reasonable for large sample sizes and thus acceptable as the number of outliers is very small. Hence, no further action needs to be executed (Tabachnick & Fidell, 2001).
The model summary in Table 12 presents the R square value determining that the degree of variance of the dependent variable intention is 0.563. This means that the independent variables have an impact of 56.3% on generation y’s intention towards performing in-store recycling. This finding achieves statistical significance (Sig=0.000, p<0.05) resulting that the null hypothesis is rejected (Pallant, 2005).

### Table 12: Model summary_Dependent variable intention

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.751a</td>
<td>0.563</td>
<td>0.557</td>
<td>0.55850</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Total_PersonalNorm, Total_PBC, Total_Incentive, Total_SN, Total_Attitude
b. Dependent Variable: Total_Intention

Lastly, by having a look at the Beta values of the independent variables (Table 11) it can be seen that PN has the strongest influence on intention (β=0.437) and is statistically significant at a 0.000 level. This supports the finding of the Pearson correlation analysis and confirms the hypothesis proposed that PN positively influences generation y’s intention to perform in-store recycling. Additionally, attitude is the second strongest predictor (β=0.368) that also shows statistical significance (0.000<0.05). Besides, subjective norm is rather a poor predictor of generation y’s intention towards participating in in-store recycling (β=0.094), however achieving statistical significance with a Sig. value of 0.029. No statistical significance was evident for the remaining factors assumed to influence intention which are PBC (β=0.032) and incentive (β=0.030). Thus, respective hypotheses are rejected.
4.5.2 Factors influencing attitude

Concerning multicollinearity, both independent variables environmental concern (r=0.214) and personal (r=0.46) norm show at least some relationship with the dependent variable attitude (see Table 8 in Chapter 4.4). Even if the correlation of environmental concern is slightly below the preferable value of 0.3, it still shows a considerable degree of correlation which is why both independent variables will be retained (Pallant, 2005). The assumption of multicollinearity is not violated as the tolerance and the VIF values are reasonable as reflected in the collinearity statistics (Table 13).

Table 13: Coefficients_Dependent variable attitude

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>95.0% Confidence Interval for B</th>
<th>Correlations</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td>t</td>
<td>Sig.</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>0.921</td>
<td>0.121</td>
<td>7.637</td>
<td>0.000</td>
</tr>
<tr>
<td>TotalEnvironment</td>
<td>0.090</td>
<td>0.039</td>
<td>0.084</td>
<td>1.051</td>
<td>0.104</td>
</tr>
<tr>
<td>TotalPersonalNorm</td>
<td>0.324</td>
<td>0.038</td>
<td>0.443</td>
<td>8.644</td>
<td>0.000</td>
</tr>
</tbody>
</table>

There are no substantial deviations from normality as the normal probability plot (Figure 6) shows an almost straight line from the lower left to the top right corner.

Figure 6: Normal probability plot_Dependent variable attitude

The Scatterplot of the standardised residuals (Figure 7) demonstrates that the residuals are rectangularly distributed with most scores concentrated in the centre along the 0 point.
only one outlier is falling outside the reasonable range between 3.3 and -3.3 which is acceptable, no further testing is executed (Tabachnick & Fidell, 2001).

Figure 7: Scatterplot of the standardised residuals Dependent variable attitude

The independent variables environmental concern and personal norm have an impact of 22.5% on generation y’s attitude towards in-store recycling \( (R^2=0.225) \) (Table 14). This finding achieves statistical significance (Sig.=0.000, p<0.05) meaning that the null hypothesis will be rejected (Pallant, 2005).

Table 14: Model summary Dependent variable attitude

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.474a</td>
<td>0.225</td>
<td>0.220</td>
<td>0.56706</td>
</tr>
</tbody>
</table>

\( a. \) Predictors: (Constant), Total_PersonalNorm, Total_Environment

\( b. \) Dependent Variable: Total_Attitude

By comparing the Beta values of the independent variables (Table 13), personal norm makes a statistically significant contribution to explain the dependent variable (Total_PN 0.448). This confirms the finding of the correlation analysis and supports hypothesis H8 presented that personal moral obligations positively influence generation y’s attitude towards in-store recycling. This was however not the case for the environmental concern showing a very low Beta value (Total_environment 0.084) with a Sig. value above 0.5, meaning that the variable does not contribute sufficiently to the prediction of attitude. Thus, hypothesis H9 is not supported as previously done in the Pearson correlation.
4.5.3 Factors influencing personal norm

Subsequently, a multiple regression was conducted for the variables AR, AC and subjective norm on personal norm. Apparently, all independent variables reasonably correlate (0.3 > r < 0.7) with the dependent variable personal norm (Total_AR 0.459; Total_AC 0.442; Total_SN 0.490) and thus will be retained (Pallant, 2005; Tabachnick & Fidell, 2001). Furthermore, as the tolerance values for each independent variable are above 0.10 and VIF scores properly below 10, the assumption of multicollinearity is not violated (Table 15).

Table 15: Coefficients_Dependent variable PN

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>95.0% Confidence Interval for B</th>
<th>Correlations</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B Std. Error</td>
<td>Beta</td>
<td>t</td>
<td>Sig.</td>
<td>Lower Bound</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>0.293</td>
<td>0.178</td>
<td>1.649</td>
<td>0.100</td>
</tr>
<tr>
<td>Total_AC</td>
<td>0.346</td>
<td>0.057</td>
<td>0.278</td>
<td>6.060</td>
<td>0.000</td>
</tr>
<tr>
<td>Total_AR</td>
<td>0.302</td>
<td>0.041</td>
<td>0.326</td>
<td>7.313</td>
<td>0.000</td>
</tr>
<tr>
<td>Total_SN</td>
<td>0.347</td>
<td>0.055</td>
<td>0.295</td>
<td>6.268</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>0.816</td>
<td>1.228</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The normal probability plot in Figure 8 demonstrates nearly a straight line from the lower left corner to the top right one. Hence, there are no substantial deviations from normality.

Figure 8: Normal probability plot_Dependent variable PN

The Scatterplot of the standardised residuals presented in Figure 9 illustrates a distribution of residuals in terms of a rectangle, whereby most of the cases are located in the centre. No further testing is needed as only one case that deviates from the remaining ones which is acceptable as the number of outliers is low (Tabachnick & Fidell, 2001).
The R square value (0.417) indicates that the variables AR, AC and subjective norm have an impact of 41.7% on generation y’s personal norm that is statistically significant (Sig.=0.000, p<0.05) (Table 16). Therefore, the null hypothesis is rejected (Pallant, 2005).

Table 16: Model summary_Dependent variable PN

<table>
<thead>
<tr>
<th>Model Summary (b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Total_SN, Total_AR, Total_AC
b. Dependent Variable: Total_PersonalNorm

As AR records the largest Beta value (β=0.326) it can be considered as the most relevant factor for explaining personal norm followed by SN (β=0.295) and AC (β=0.278). Similar to the outcome of the Pearson correlation analysis, all three hypotheses are supported with Sig. values that equal 0.000 (Table 15).

4.5.4 Factors influencing PBC

As opposed to information availability (r=-0.037) and trustworthiness (r=0.031), only accessibility was found to substantially correlate with PBC (r=0.224). Accessibility is therefore the only independent variable retained. Even if the correlation coefficient is slightly below the preferable correlation of 0.3, it still shows a considerable degree of correlation.
With a tolerance value greater than 0.10 (0.937) and a VIF below the reasonable score 10 (1.068), the assumption of multicollinearity is not violated (Table 17).

Table 17: Coefficients_Dependent variable PBC

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>95.0% Confidence interval for B</th>
<th>Correlations</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td>t</td>
<td>Sig</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>1.569</td>
<td>0.328</td>
<td>4.780</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Total_Information</td>
<td>0.015</td>
<td>0.075</td>
<td>0.011</td>
<td>0.195</td>
</tr>
<tr>
<td></td>
<td>Total_Accessibility</td>
<td>0.247</td>
<td>0.061</td>
<td>0.226</td>
<td>4.025</td>
</tr>
<tr>
<td></td>
<td>Total_Trustworthiness</td>
<td>0.008</td>
<td>0.069</td>
<td>0.007</td>
<td>0.119</td>
</tr>
</tbody>
</table>

The normal probability plot in Figure 10 implies a rather straight diagonal line. Thus, there is no considerable variance from normality.

Figure 10: Normal probability plot_Dependent variable PBC

The Scatterplot of the standardised residuals (Figure 11) shows that residuals are distributed rectangularly with most of the cases located centrally ranging between the values 3.3 and –3.3, revealing that there are no outliers (Tabachnick & Fidell, 2001).
Furthermore, with a R square value of 0.050 (Table 18) accessibility explains 5% of the construct PBC. The null hypothesis could be rejected due to statistical significance (Sig. = 0.001, p<0.05) (Pallant, 2005).

Table 18: Model summary_Dependent variable PBC

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.224a</td>
<td>0.050</td>
<td>0.042</td>
<td>0.85783</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Total_Trustworthiness, Total_Accessibility, Total_Information
b. Dependent Variable: Total_PBC

Finally, the results provided in Table 17 highlight the findings of the Pearson correlation analysis stressing that solely one hypothesis can be confirmed which is H10 (β=0.226; p=0.000) meaning that accessibility contributes strongest to PBC. As the Beta values for information (β=0.011) and trustworthiness (β=0.007) are small and not significant, hypotheses H11 and H12 are rejected (Pallant, 2005).

Summarising, the following Table 19 illustrates the hypotheses presented in the study with respective Beta values, as well as if they were supported or not. Multiple regression analysis confirms that personal norm has the strongest influence on intention (β=0.437), followed by attitude (β=0.368). Subjective norm (β=0.094) has the lowest contribution on explaining intention, whereas PBC and incentive record no contribution at all. Besides personal norm’s strong influence on intention, it also makes a high contribution to explain attitude with a Beta value of 0.448.
Table 19: Summary of hypothesis testing

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Standardized coefficient (Beta)</th>
<th>Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Attitude -&gt; Intention</td>
<td>0.368*</td>
<td>yes</td>
</tr>
<tr>
<td>H2: Subjective norm -&gt; Intention</td>
<td>0.094*</td>
<td>yes</td>
</tr>
<tr>
<td>H3: PBC -&gt; Intention</td>
<td>0.032</td>
<td>no</td>
</tr>
<tr>
<td>H4: Personal norm -&gt; Intention</td>
<td>0.437*</td>
<td>yes</td>
</tr>
<tr>
<td>H5: AC -&gt; Personal norm</td>
<td>0.278*</td>
<td>yes</td>
</tr>
<tr>
<td>H6: AR -&gt; Personal norm</td>
<td>0.326*</td>
<td>yes</td>
</tr>
<tr>
<td>H7: Subjective norm -&gt; personal norm</td>
<td>0.295*</td>
<td>yes</td>
</tr>
<tr>
<td>H8: Personal norm -&gt; Attitude</td>
<td>0.448*</td>
<td>yes</td>
</tr>
<tr>
<td>H9: Environmental concern -&gt; attitude</td>
<td>0.084</td>
<td>no</td>
</tr>
<tr>
<td>H10: Accessibility -&gt; PBC</td>
<td>0.226*</td>
<td>yes</td>
</tr>
<tr>
<td>H11: Information availability -&gt; PBC</td>
<td>0.011</td>
<td>no</td>
</tr>
<tr>
<td>H12: Trustworthiness -&gt; PBC</td>
<td>0.007</td>
<td>no</td>
</tr>
<tr>
<td>H13: Incentive -&gt; Intention</td>
<td>0.030</td>
<td>no</td>
</tr>
</tbody>
</table>

*significant at a 0.05 level

4.5.5 Direct influence of the remaining factors on intention
Apart from testing hypotheses, it was tested how the independent variables AC, AR, environmental concern, accessibility, information availability and trustworthiness influence the dependent variable intention to reveal further valuable insights.

The independent variables information availability (r=0.481), environmental concern (r=0.308), AC (r=0.476) and AR (r=0.407) show correlation coefficients within the range of 0.3 and 0.7 meaning that they substantially correlate with intention. Even if the correlation coefficient of the variable trustworthiness (r=0.190) is smaller than 0.3, it is still retained in further analysis as at least some correlation is given (Pallant, 2005). Also, the factor accessibility showing a correlation of 0.091 is retained as it also shows some correlation rather approaching a correlation of 0.1 than 0.00 (Table 20).

Additionally, as the tolerance values of the independent variables are above 0.10 and their VIF values smaller than 10, the assumption of multicollinearity is not violated (Table 20).
Table 20: Coefficients Dependent variable intention

<table>
<thead>
<tr>
<th>Model</th>
<th>Coefficients</th>
<th>Standardised Coefficients</th>
<th>95.0% Confidence Interval for B</th>
<th>Correlations</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unstandardized</td>
<td>Std. Error</td>
<td>t</td>
<td>Sig.</td>
<td>Lower Bound</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>0.385</td>
<td>0.260</td>
<td>-2.254</td>
<td>0.025</td>
</tr>
<tr>
<td></td>
<td>Total Information</td>
<td>0.414</td>
<td>0.061</td>
<td>0.932</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Total Accessibility</td>
<td>0.174</td>
<td>0.046</td>
<td>0.809</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Total Trustworthiness</td>
<td>0.036</td>
<td>0.053</td>
<td>0.473</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Total Environment</td>
<td>0.147</td>
<td>0.068</td>
<td>0.953</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Total AC</td>
<td>0.323</td>
<td>0.057</td>
<td>0.927</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Total AR</td>
<td>0.224</td>
<td>0.040</td>
<td>0.960</td>
<td>0.000</td>
</tr>
</tbody>
</table>

The respective normal probability plot (Figure 12) shows an almost straight line from the lower left to the top right corner indicating that there are no major deviations from normality (Pallant, 2005).

Figure 12: Normal probability plot Dependent variable intention

The residuals are rectangular distributed with most scores concentrated in the centre along the 0 point as depicted Figure 13 in the Scatterplot of the standardised residuals. As the number of outliers is small, no further testing is needed (Tabachnick & Fidell, 2001).
The model summary (Table 21) illustrates a R square value of 0.441 saying that the independent variables impact generation y’s intention to perform in-store recycling with 44.1% in total. This finding achieves statistical significance (Sig.=0.000, p<0.05) allowing to reject the null hypothesis (Pallant, 2005).

Table 21: Model summary _Dependent variable intention

<table>
<thead>
<tr>
<th>Model Summary (b)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>R</td>
<td>R Square</td>
<td>Adjusted R Square</td>
</tr>
<tr>
<td>1</td>
<td>0.664a</td>
<td>0.441</td>
<td>0.431</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Total_AR, Total_Trustworthiness, Total_Accessibility, Total_Information, Total_Environment, Total_AC

b. Dependent Variable: Total_Intention

The comparison of the standardised coefficient Beta values of the independent variables (Table 20) lastly reveals that information availability is the most relevant factor for explaining the dependent variable intention (β=0.323), followed by AC (β=0.270), AR (β=0.253), accessibility (β=0.166) and environmental concern (β=0.098) with all values being statistically significant. Opposed to this, trustworthiness (β=0.047) does not contribute to the prediction on intention as no statistical significance is given.
4.6 Determining differences among groups

Independent-samples t-tests were conducted to further determine significant differences between females and males and to reveal if consumers’ awareness significantly influences the intention to perform in-store recycling (Pallant, 2005).

Concerning in-store recycling intention, the test reveals a significant difference (p<0.05) between females (M=2.52; SD=0.82) and males (M=2.72; SD=0.86) (Table 22) illustrating that women’s intention towards performing in-store recycling is considerably higher than men’s. It could also be confirmed that women feel morally more obliged to perform in-store recycling than men as reflected in differing mean scores on personal norm among women (M=2.82; SD=0.87) and men (M=3.04; SD=0.88), showing a Sig. (2-tailed) value of 0.029 < 0.05 (Table 22). Also, women were found to feel personally more responsible to perform in-store recycling than men, as AR is significantly different (0.002<0.05) among females (M=2.57, SD=0.98) and males (M=2.93, SD=1.02) (Table 22).

Table 22: Independent samples t-test Gender_Intention, Gender_PN, Gender_AR

<table>
<thead>
<tr>
<th></th>
<th>Females</th>
<th></th>
<th>Males</th>
<th></th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Total_Intention</td>
<td>2.52</td>
<td>0.82</td>
<td>2.72</td>
<td>0.86</td>
<td>0.034</td>
</tr>
<tr>
<td>Total_PersonalNorm</td>
<td>2.82</td>
<td>0.87</td>
<td>4.04</td>
<td>0.88</td>
<td>0.029</td>
</tr>
<tr>
<td>Total_AR</td>
<td>2.57</td>
<td>0.96</td>
<td>2.93</td>
<td>1.02</td>
<td>0.002</td>
</tr>
</tbody>
</table>

No significant difference could be determined regarding consumers’ awareness or unawareness related to intention to perform in-store recycling. Opposingly, the level of awareness influences trustworthiness as consumers previously aware of in-store recycling less trust in-store recycling practices (M=3.00; SD=0.71) than consumers unaware (M=2.75; SD=0.67). This is significant with a Sig. (2-tailed) value of 0.002 (Table 23).

Table 23: Independent samples t-test Awareness_Trustworthiness

<table>
<thead>
<tr>
<th></th>
<th>Aware</th>
<th></th>
<th>Unaware</th>
<th></th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Total_Trustworthiness</td>
<td>3.00</td>
<td>0.71</td>
<td>2.75</td>
<td>0.67</td>
<td>0.002</td>
</tr>
</tbody>
</table>

Besides the independent samples t-test, ANOVA was used to ascertain differences among different age groups. This was done as age differences between individuals among generation
y can amount up to 20 years implying that consumers’ have been affected by different external conditions which may also impact internal variables differently. Therefore, three age groups were created ranging from 18 to 24, 25 to 31 and 32 to 38 years. Here, it is evident that youngest consumers (M=2.79; SD=0.84) feel a greater moral obligation to perform in-store recycling than middle-aged ones (M=3.04; SD=0.87) which is statistically significant (p=0.020<0.05) (Table 24). Also, as the mean score of subjective norm of youngest consumers (M=2.74; SD=0.64) is substantially lower than the score of middle-aged consumers (M=3.03; SD=0.80), it indicates that they are more influenced by people important to them. This result is statistically significant (p=0.002<0.05) (Table 24).

Table 24: ANOVA AGE_PN, AGE_SN

<table>
<thead>
<tr>
<th>Age groups</th>
<th>18 - 24 years</th>
<th>25 - 31 years</th>
<th>32 - 38 years</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total_PersonalNorm</td>
<td>Mean 2.79</td>
<td>Mean 3.04</td>
<td>-</td>
<td>0.020</td>
</tr>
<tr>
<td>Total_SN</td>
<td>Mean 2.74</td>
<td>Mean 3.03</td>
<td>-</td>
<td>0.002</td>
</tr>
</tbody>
</table>
5 Discussion

The following chapter aims at clarifying our empirical findings and to connect these with previous research to subsequently answer the research questions presented in our study.

5.1 Factors influencing PBC

Previous literature revealed that especially with regards to recycling practices individuals’ often experience a perceived lack of control reflected in one’s perceived difficulties to perform the behaviour (Rhodes et al., 2015). Reasons established within the theoretical framework assumed to affect the perceived control in terms of performing in-store recycling are accessibility (Domina & Koch, 2002; Chen & Tung, 2010), the disclosure of information (Gamba & Oskamp, 1994; Vermeir & Verbeke, 2008) and trustworthiness (Joung & Park-Poaps, 2013). Therefore, the following hypotheses H10 to H12 were developed:

H10: Accessibility will positively influence PBC.
H11: Information availability will positively influence PBC.
H12: Trustworthiness will positively influence PBC.

Concerning in-store recycling, generation y however mostly agreed to have personal control over engaging in the behaviour (PBC) without feeling crucially impacted by factors out of their volitional control which could also be seen in the outcomes of the correlation and multiple regression analysis. Here, only one of the three hypotheses could be supported which is H10 (β=0.226; p=0.000). H11 (β=0.011; p>0.05) and H12 (β=0.007; p>0.05) needed to be rejected due their non-significant lack of correlation with PBC. Therefore, only accessibility has a significant influence on generation y’s PBC concerning in-store recycling.

5.1.1 Accessibility

Findings by Domina and Koch (2002) stressing that clothing recycling is frequently not executed due to a lack of access is also prevalent within our study. It furthermore supports the prior identified correlation between accessibility and perceived control examined for alternative recycling schemes not related to clothing disposal (Chen & Tung, 2010; Oom Do Valle et al., 2005; Ramayah et al., 2012; Rhodes et al., 2015). Especially the descriptive statistics on the accessibility construct revealed that generation y perceives the accessibility of in-store recycling schemes as rather inconvenient. A possible explanation is provided by Domina and Koch (2002; 1999) and Saphores et al. (2012) who found drop-off schemes to be generally perceived as more inconvenient than alternative recycling methods as more time
and effort is required. As expected, individuals aware of in-store recycling prior to participating in the study recognised accessibility to be less an issue than those unaware which is reasonable because of familiarity with the scheme.

5.1.2 Information availability
With a very low variation in responses, generation y agreed on the importance of the disclosure of information about in-store recycling as well as the need for additional, respective knowledge which is in line with former studies on fashion recycling (Engström & Nicklasson, 2015; Birtwistle & Moore, 2007). As opposed to the assumption of the researchers as well as previous studies on pro-environmental behaviour (Vermeir & Verbeke, 2008), information availability as a factor out of a person’s volitional control was not found to significantly influence the perceived ease or difficulty (PBC) of performing in-store recycling. Thus, opposing the findings of Pieters (1991) and Bezzina and Dimech (2011), information is not especially required in terms of heightening generation y’s perception of their ability to perform the given behaviour. This may be reasoned as consumers visit fashion stores frequently (Bhardwaj & Fairhurst, 2010; Fletcher, 2008; Christopher, Lowson & Peck, 2004) and therefore become aware of in-store recycling bins by coincidence, which is more likely as opposed to traditional clothing disposal methods were individuals actively seek out information to access.

5.1.3 Trustworthiness
As opposed to the assumptions of previous research on green marketing practices (Dembkowski & Hanmer-Lloyd, 1994) including in-store recycling (Engström & Nicklasson, 2015), generation y on overall agreed to trust corporate claims related to the recycling scheme. This finding may function as a potential explanation why there was no impact of the variable trustworthiness on PBC as reported in previous pro-environmental behavioural research (Joung & Park-Poaps, 2013; Kleine Stüve & Strauß, 2016). Thus, no tremendous decrease of individual confidence levels due to unfulfilled sustainable expectations can be evidenced which would result in less perceived control.

5.2 Factors influencing personal norm
In line with previous literature (Park & Ha, 2014; Chen & Tung, 2010), a moral obligation to perform in-store recycling could be evidenced which is particularly higher among women. This may be caused by women’s heightened importance of their physical appearance resulting in an increased clothing consumption (Sarpila, 2013) enhanced by the fast fashion industry
(Fletcher, 2008). Accordingly, consumers aged between 18 and 24 feel morally more obliged than middle-aged consumers to engage in in-store recycling. As negative impacts of fashion on environment aggravated crucially in the last 20 years (Bhardwaj & Fairhurst, 2010) and fast fashion industry hit the headlines negatively especially within recent years accompanied by the rise of social media, this finding is reasonable. It similarly relies on our finding that subjective norm most influences young consumers. Also, they are the ones that need to take actions to handle these environmental issues in the future. Literature suggests that the feeling to behave morally appropriate is principally influenced by AC and AR (Stern et al., 1999; Harland, 2001; Schwartz, 1977) and subjective norm (Bamberg & Möser, 2007; Harland et al., 1999). Consequently, the following hypotheses were proposed:

**H5:** Awareness of consequences will positively influence personal norm.

**H6:** Ascription of responsibility will positively influence personal norm.

**H7:** Subjective norm will positively influence personal norm.

Hypotheses H5 (β=0.326; p=0.000), H6 (β=0.278; p=0.000) and H7 (β=0.295; p=0.000) can be confirmed supporting the aforementioned research.

### 5.2.1 Awareness of consequences

With a considerable low variation in responses, generation y is highly aware of the consequences of appropriate clothing recycling behaviour which is fostered by in-store recycling, shaping personal values respectively. Consequently, it can be argued that it is very likely that generation y experiences an intrinsic motivation towards performing in-store recycling as they consider in-store recycling as way to solve environmental problems (Bamberg & Möser, 2007). This is in line with the current societal development including the heightened public sensitivity towards environmental problems resulting in the increase importance and appreciation of sustainable business practices such as in-store recycling (Leonidou et al., 2013). This also explains why AC is the most powerful predictor of personal norm (β=0.326). Based on available literature (Park & Ha, 2014), a direct correlation between AC and personal was expected and is required for any indirect effect that AC may have on intention.

### 5.2.2 Ascription of responsibility

It is evident from the results, that on average generation y experiences a feeling of responsibility for the consequences of their behaviour. This means that they feel at least some guilt for the ineffective clothing disposal behaviour that aggravated in the last years and
crucially impacted the environment (Birtwistle & Moore, 2007; Wai Yee et al., 2016). Even if Vining and Ebreo (1992) failed to prove any relationship regarding AR and recycling intention, our study has proven that AR ($\beta=0.278$) positively influences personal norm which is required for any indirect effect on intention. One possible explanation is that as intention differs among recycling schemes, so does the influence of its indirect as well as direct antecedents (Shim, 1995). As authors mostly excluded the concept when predicting recycling intentions (Park and Ha, 2014), our study belongs to the first one’s providing actual relevance of AR in the field of recycling, especially in-store recycling and with this substantially contributes to clothing disposal literature which is so far not sufficiently established (Bianchi & Birtwistle, 2012). It further justifies that we added AR to our framework since in-store recycling is a recycling scheme not yet examined sufficiently.

5.2.3 Subjective norm
As Ekström and Salomonsen (2014) suggest, consumers are affected by others when buying clothes, the same could be relevant for the disposal of clothing to be conform with the trends of the today’s society which was also evident among generation y concerning in-store recycling. Whereas literature only suggested a low influence of subjective norm on recycling intentions, it was found to be highly influential on personal norm when considering recycling behaviour (Bamberg & Möser, 2007; Harland et al., 1999). The correlation could be supported ($\beta=0.295$) as already evidenced in previous research (Bamberg & Möser, 2007; Harland et al., 1999). According to Schwartz (1977) arguing that social norm is adapted personally and thus becomes an internalised personal value could be a reasonable explanation for this finding. As expected, subjective norm’s influence was remarkably stronger than on intention ($\beta=0.094$). This further enhances the requirement of combining NAM and TPB when investigating consumers’ intention towards in-store recycling. Particularly, within research regarding ethical and green behaviour persons might perceive a feeling that performing in-store recycling is socially desirable guiding the respondent’s moral obligation to engage in the in-store recycling practice. This may also point to a possible occurrence of a social desirability bias among respondents when filling out the survey (Carrington et al., 2010).

5.3 Attitude
Following our proposed theoretical model, it is assumed that personal norm and environmental concern will positively influence the attitude towards in-store recycling, resulting in the following hypotheses H8 and H9:
**H8:** Personal norm will positively influence attitude towards in-store recycling.

**H9:** Environmental concern will positively influence attitude towards in-store recycling.

According to the descriptive statistics, generation y has a high favourable attitude towards in-store recycling and agrees in the opinion almost consistently. Thomas and Sharp (2013) argue that consumers who put more emphasis on extrinsic goals such as money and power status are more likely to have a less positive attitude to engage in pro-environmental behaviour including recycling. Thus, it can be concluded that within our study generation y rather strives for intrinsic goals expressed in the favourable attitude towards performing in-store recycling.

This is further supported by our empirical findings revealing that consumers’ personal norm has the highest impact on attitude which is driven by intrinsic motivation (Klöckner, 2013; Schwartz, 1977). This high influence is in line with previous findings (Chan & Bishop, 2013; Klöckner, 2013; Botetzagias et al., 2015) and confirms hypothesis H8. As the correlation is the strongest detected within our proposed model ($\beta=0.448$), it shows that performing in-store recycling seems to be consistent with generation y’s personal values resulting in the detected favourable attitude (Klöckner, 2013). This again supports Thomas and Sharp’s (2013) findings.

Despite the fact that generation y is highly concerned about the environment, no significant influence of environmental concern on attitude was recorded ($\beta=0.084; p=0.104$) which is consistent with the finding of Morgan and Birtwistle (2009) who denied a correlation between the two variables in the field of textile recycling. Thus, hypothesis H9 was rejected. A possible explanation is that even a high environmental concern may lead to a positive pro-environmental attitude, it must not be translated into a favourable attitude towards the specific pro-environmental action such as in-store recycling. As our study measured the existence of a general environmental concern and generation y’s specific attitude towards in-store recycling, there are more factors prevalent that outweigh the reflection of general environmental concern in the specific attitude which is also affected by other variables (Stern & Dietz, 1994; Best & Mayerl, 2013; Blake, 1999). However, prior results by Jekria and Daud (2016) show a positive relationship between these variables, which is further supported by Oom Do Valle et al. (2005). Best and Mayerl (2013) explain that these contradicting results may depend on the scale specificity and how the construct environmental concern is defined and interpreted by the researcher which often varies greatly.
5.4 Intention

Descriptive statistics revealed an overall agreement among generation y on intention indicating consumers’ overall willingness to participate in in-store recycling. This is an important finding as consumers’ intention is a powerful predictor of future behaviour, especially regarding pro-environmental actions including recycling (Rhodes et al., 2015; De Groot & Steg, 2007). It also contributes to the reasoning that in-store recycling embeds the potential to function as a long-term corporate solution for creating a more sustainable future as it indispensably requires active consumer participation. Apparently, women’s intention is significantly higher compared to men. A possible explanation is the considerably higher perceived moral obligation to act in a pro-social manner among women in combination with the finding that personal norm is most influential on generation y’s in-store recycling intention which will be discussed below.

The most prevalent factors influencing intention towards performing a pro-environmental behaviour such as recycling could be identified from prior research predominantly stemming from both TPB and the NAM. Additionally, incentives were previously found to be influential on recycling intention (Joung & Park-Poaps, 2013; Gamba & Oskamp, 1994). Therefore, the following hypotheses were developed:

**H1**: Attitude towards in-store recycling will positively influence intention towards performing in-store recycling.

**H2**: Subjective norm will positively influence intention towards performing in-store recycling.

**H3**: Perceived behavioural control will positively influence intention towards performing in-store recycling.

**H4**: Personal norm will positively influence intention towards performing in-store recycling.

**H13**: Incentive will positively influence intention towards performing in-store recycling.

5.4.1 Attitude, PBC and subjective norm on intention

As opposed to the findings of a review of recycling studies utilising the TPB model to explain recycling intentions (Rhodes et al., 2015), no significant correlation was evident between PBC and intention resulting in the rejection of H3. Therefore, control beliefs do not hinder individuals to perform in-store recycling. However, the powerful influence of attitude on intention could be confirmed (β=0.368) as suggested by Rhodes et al. (2015). In line with the meta-analysis examining recycling intentions (Rhodes et al., 2015) and a review of Ajzen
(1991) subjective norm recorded a weak importance in explaining in-store recycling intentions ($\beta=0.094$). The existing correlation is supported by authors such as Vining and Ebreo (1990) and Taylor and Todd (1995) arguing that a practice carried out in public which furthermore embodies a novel character such as in-store recycling increases consumers’ perception of social pressure which is influential on intention (Vining & Ebreo, 1990; Taylor & Todd, 1995).

Furthermore, despite subjective norm’s minor relevance on intention, subjective norm’s direct influence on personal norm is greater. Thus, it can be assumed that subjective norm positively influences generation y’s intention indirectly. This effect is mediated by personal norm, highlighting that they rather internalise the normative expectations of their social milieu as their own, before performing on them. Therefore, in-store recycling intention increases when emphasising on social expectations as these favourably shape attitude and evoke high personal obligations (Park & Ha, 2014).

5.4.2 Personal norm on intention

In line with prior clothing disposal studies (Koch & Domina, 1997), personal norm was found to be highly influential on in-store recycling intention ($\beta=0.437$) correlating with alternative recycling studies recording similar importance of normative self-expectations with regards to recycling intentions (Park & Ha, 2014; Chen & Tung, 2010). Similar to previous research (Bamberg & Möser, 2007) personal norm could even be identified as the most relevant factor determining generation y’s in-store recycling intention. A possible reason for this may be the recent shift from selfish towards ethical consumers feeling more responsible for the environment and society which is reflected in deliberate consumption choices based on moral and personal convictions (Carrigan et al., 2004).

Above findings are furthermore in line with previous research on recycling intentions in terms of an enhanced explanatory power when combining both TPB and NAM constructs (Harland et al., 1999; Wall et al., 2007) as personal norm was found to significantly contribute to the explanation of the intention variable. Thus, including it in our study was reasonable as it allowed to examine generation y’s intention towards in-store recycling in a more detailed manner which would not have been possible by solely applying the TPB model. It also confirms that in-store recycling intentions not only stem from individuals’ self-interest, but additionally from their moral-based beliefs as stressed in prior pro-environmental behaviour research (Park & Ha, 2014; Black et al., 1985; Abrahamse et al., 2009; Thøgersen, 1999).
5.4.3 Incentive on intention

H13 was rejected after a multiple regression analysis as no statistical significance could be identified. This is opposed to prior findings that evidenced economic incentives to significantly impact consumer recycling behaviour (Joung & Park-Poaps, 2013; Jacobs & Bailey, 1982; Gamba & Oskamp, 1994). Latter could not be confirmed with regards to in-store recycling. One possible reason for this may emerge from a study of Thomas and Sharp (2013) suggesting that people appreciating extrinsic values including rewards less tend to engage in pro-environmental behaviour. However, not only did respondents agreed to intend in the behaviour, but also was the intention found to be mostly influenced by ones’ intrinsic pro-social values. Thus, economic incentives as drivers of in-store recycling intention would have rather contradicted to the characteristics prevalent among generation y. Also, generation y was found to highly care about the environment which would according to Thomas and Sharp (2013) result in a lower appreciation of "achievement" values including economic rewards. Thus, it is reasonable that no impact could be recorded of incentives on intention. This does however not necessarily contradict prior research as it may reflect the recent shift from selfish to more ethical consumers (Freestone & McGoldrick, 2008) making the necessity of monetary incentives increasingly obsolete.

5.4.4 All other factors on intention

Even if the disclosure of information does not influence generation y’s perceived ease or difficulty to perform in-store recycling, it substantially enhances consumers’ willingness to take part in the recycling programme. Latter can be supported by multiple studies on recycling behaviour (De Young, 1989; Oke & Kruijzen, 2016; Schultz et al., 1995) and the research on hand (β=0.323). This also proves that fashion retailers have the power to actually change consumer behaviour towards a more responsible one by providing additional information on their sustainable recycling scheme, which is opposed to the common opinion that consumer behaviour is hard to change (Gould, 2017). This can furthermore be enhanced by improving the accessibility of in-store recycling options (Domina & Koch, 2002) as our findings show that the factor directly impacts intention.

Also, multiple regression revealed a direct contribution of AC (β=0.270) and AR (β=0.253) to the explanation of in-store recycling intention. Thus, it is crucial that consumers become aware of the environmental consequences emerging from their clothing disposal behaviour to establish a feeling of personal responsibility. This importance has already been stressed in various recycling studies (Chen & Tung, 2010; Davies et al., 2002; Wan et al., 2012). To
work towards a more sustainable business fast fashion retailers may increase AR and AC by providing more information on the relatively new recycling concept, reasonable as all three factors directly affect intention. Findings further contribute to prior recycling research that mostly excluded the concept AR from their studies (Park & Ha, 2014) by reporting a significant and large influence on recycling intention. Additionally, it has been proven that AC and AR indirectly impact intention, which is mediated by personal norm and attitude. This is especially reasoned due to the prevalent strong direct effects between personal norm and attitude as well as attitude and intention.

Lastly, a contribution of environmental concern on intention was detected which was very low (β=0.098; p=0.032<0.05) and is common when researching specific environmental related behaviour (Bamberg, 2003).

### 5.5 Revised model

Above discussed findings allow the revision of our previously conceptualised research model (Figure 3), deriving to a novel model to predict in-store recycling intention in the fast fashion industry (Figure 14).

Figure 14: Revised research model
Our revised model aims at benefitting fashion retailers to best address all factors relevant to generation y in their decision to intend to perform in-store recycling.

The new model suggests that subjective norm’s direct influence on personal norm is substantially more important than its direct influence on intention when predicting in-store recycling intention. This reveals that in-store recycling is a predominantly moral driven behaviour in line with the recent ethical development within society. Latter is further adapted by the model by stressing that the normative expectations of one’s social milieu first need to become internalised before an individual acts upon them. Thus, in-store recycling intention increases when emphasising on social expectations as these favourably shape attitude and evoke high personal obligations as presented in our new model (Park & Ha, 2014). Intention and thus behavioural change can also be targeted by addressing consumers AC and AR as illustrated in the revised model, as both are found to be influential on personal norm, which is most influential on intention. Thus, these variables are assumed to indirectly influence in-store recycling intention (Baron & Kenny, 1986).

Presenting our new model helps enhancing fast fashion retailers’ capability of changing consumers often “hard to change” behaviour and thus, become more environmentally and socially responsible (Gould, 2017). Additional factors crucial for behaviour change are the improvement of in-store recycling possibilities as well as the disclosure of needed information. Our model demonstrates to examine these barriers rather as direct antecedents of intention than PBC when investigating in-store recycling intention. Also, environmental concern can be considered as direct motivational driving force of in-store recycling intention rather than an antecedent of the specific recycling attitude. However, its role ascribed in recycling research is controversial (Best & Mayerl, 2013) and it also only contributes little in explaining recycling intention in our study. In this regard, we believe AR and AC to be similar with environmental concern, but far more significant and comprehensive predictors of in-store recycling intention.

Concluding, our revised model particularly targets the “new” ethical consumer who deliberately makes consumption choices based on his moral and personal conviction (Carrigan et al., 2004). With this, it reacts to the recent shift going away from a selfish to an ethical consumer (Freestone & McGoldrick, 2008; Carrigan, Szmigin & Wright, 2004), as the model especially highlights the importance of factors that are perceived as morally appropriate rather than those stemming from individuals’ self-interest (TPB).
5.6 Attitude-intention gap

It was assumed based on prior pro-environmental behavioural research that a favourable attitude is often not sufficiently translated into generation y’s intention to perform the behaviour (Birtwistle & Moore, 2007; Kim & Chung, 2011; Sanne, 2002). Even if agreement is given in terms of intention towards performing in-store recycling (M=2.5997), generation y’s attitude towards the concept was considerably higher agreed upon (M=2.0). Also, variation in responses for intention was larger as compared to attitude. It is additionally evident that respondents are more likely to generally intend to perform in-store recycling rather than within a specific time-period in the near future. Furthermore, more than half of the consumers among generation y would not actively seek out for in-store recycling possibilities even if they criticise the inconvenient access and request more information indicating that the intention is rather low. Thus, the average intention is not as prevalent as it pretends to be as it is not enough specified. Also, scores on intention may be influenced by an eventually prevalent social desirability bias as often evidenced within ethical behaviour research making the intention higher as it actually is (Carrington et al., 2010). Lastly, the high environmental concern among generation y was not translated into a favourable attitude opposing research suggesting that more ethically consumers automatically intend to participate in green practices (Freestone & McGoldrick, 2008; Carrigan et al., 2004). Above findings may point to a gap between attitude and intention. A major explanation is the evidenced inconsistency between generation y’s environmental consciousness and their aspiration for individualisation and symbolic consumption stimulated by fast fashion (Ekström, 2010).
6 Conclusion

The purpose of this thesis was to examine generations y’s intention towards in-store recycling and to further investigate the factors most influential on behavioural intention. Besides, the existence of an attitude-intention gap towards in-store recycling was analysed. For fulfilling this purpose, three research questions were developed.

RQ1: What is generation y’s intention to perform in-store recycling?

The findings of this study reveal that generation y generally has the intention to perform in-store recycling which is significantly higher among women than men. It is also evident that generation y intends to perform in-store recycling more generally rather than within a specific time-period in the future.

RQ2: What are the factors most influencing generation y’s intention to perform in-store recycling?

In-store recycling is a predominantly normative behaviour as intention is most driven by generation y’s personal norm. The importance of personal norm is highlighted by its great influence on attitude towards in-store recycling which is the second most relevant factor in explaining generation y’s intention towards performing in-store recycling. Resulting, when in-store recycling is in line with generation y’s personal values a favourable attitude is developed which in turn leads to the intention to perform it. Subjective norm has a minor direct influence on in-store recycling intention, but substantially contributes to its explanation due to its crucial relevance on personal norm and thus rather indirectly impacts in-store intention.

RQ3: Is there a gap between generation y’s attitude and intention to perform in-store recycling?

A gap can be assumed as generation y has a higher attitude than intention towards performing in-store recycling. Thus, ethical consumers do not automatically intend to participate in the green practice of in-store recycling. Additionally, half of the consumers among generation y would not actively seek out for in-store recycling possibilities even if they generally intend to perform the behaviour and show a positive attitude. This may further point out the existence of an attitude-intention gap concerning in-store recycling.
6.1 Theoretical implications

By reporting a significant and large influence of ascription of responsibility on personal norm as well as on recycling intention, our findings add a substantial value to recycling research. To the best of our knowledge, such influence could be reported only once before which is why the construct was often excluded (Onel & Mukherjee, 2017; Park & Ha, 2014). By confirming the importance of AR especially for apparel recycling, our study crucially enhances clothing disposal literature (Bianchi & Birtwistle, 2012).

Further relevant theoretical outcomes are that the factors PBC and incentive which have often been regarded as vital for enhancing recycling behaviour play no significant role with regards to in-store recycling intention. Especially as previous literature emphasised the relevance of both factors when examining recycling behaviour (Rhodes et al., 2015; Joung & Park-Poaps, 2013; Gamba & Oskamp, 1994), future research is needed to confirm our findings.

Another theoretical implication results from the importance of information availability and accessibility as evidenced to directly impact in-store recycling intention. Both factors should therefore be taken into consideration as direct predictors of intention rather than antecedents of PBC due to the inferior relevance of the construct concerning in-store recycling intention.

Lastly, our research contributes to literature investigating the frequent attitude-intention gap prevalent concerning green corporate marketing practices (Kim & Chung, 2011; Carrington et al., 2010; Bamberg, 2003). This gap may also exist concerning in-store recycling, giving another possible start point for future research on in-store recycling intention.

Following, the findings of this thesis substantially contribute to existing pro-environmental behavioural literature in the field of recycling and clothing disposal and can furthermore function as a foundation for future behavioural research in the field of in-store recycling.

6.2 Managerial implications

Our study yields beneficial insights for marketers and fashion retailers valuable to evoke pro-environmental behavioural changes among generation y in the context of clothing disposal behaviour, and thus successfully establish the concept of in-store recycling.

At first, nearly half of our respondents have not been aware of in-store recycling before participating in our survey, however, in line with those people aware they intend to perform in-store recycling. Therefore, it is required that fashion retailers enhance awareness of the concept.
In this regard, we advise fashion retailers to create a strong sense of personal obligation as personal norm is the major psychological factor to enhance generation y’s intention towards performing in-store recycling. One possibility is to show advertising spots on screens in the stores that make consumers aware of the concept and reach out to their moral obligation by stressing the pro-social benefits of in-store recycling. Furthermore, as we found that personal norm is mediated by attitude and influenced by the social environment, fashion retailers should use balance theory to increase expectations that stem from social groups as these help consumers to develop a feeling of moral obligation, resulting in the development of a favourable attitude towards in-store recycling. Particularly, retailers could use celebrities most likely to be associated with ethical behaviour to enhance favourable synergy effects and thus evoke pro-environmental behavioural change (Yakut, 2017).

Additionally, when communicating the concept of in-store recycling, fashion retailers should stress the favourable consequences of in-store recycling to establish a close link between consumers’ participation and in-store recycling as a major way to improve environmental quality. Advertising messages should particularly include the positive consequences of recycling such as conserving finite natural resources, the reduction of landfills and saving energy from repurposing and emphasise consumers’ responsibility to recycle. It is anticipated that these efforts increase consumers’ recycling motivation and willingness by heightening the sense of moral obligation and attitude towards performing in-store recycling. Since most of the respondents would not actively seek out for information and in-store recycling possibilities, fashion retailers should directly confront consumers with information revolving around the recycling scheme. We suggest retailers to utilise flyers made out of recycled paper handed out when purchasing new clothes. As the target population is characterised as heavy internet users (Statista, 2010), we especially claim to spread content on the concept on relevant social media platforms.

In order to simplify the discoverability of in-store recycling possibilities fashion retailers offering in-store recycling should cooperate and design a joint website where consumers can easily find all available in-store recycling possibilities regardless of the respective brand. Because generation y perceives the recycling scheme as rather difficult to access, a solid in-store recycling infrastructure should be established allowing more clothing to be recycled.

Our study evidenced that financial incentives play no vital role in enhancing consumers’ motivation to engage in in-store recycling. Thus, retailers should reconsider the established
concept of providing voucher as it is also often perceived as inconsistent with corporate sustainability goals (Engström & Nicklasson, 2015). To avoid latter, incentives should not stress an economic but ecological benefit. Varying environmental incentives such as flower seeds or quotes could be offered that keep consumers curious and furthermore appreciate their participation.

Our findings also reveal managerial implications for the fast fashion industry and its actors who should increasingly collaborate and raise the investment on research and development to improve the technology to extract as many valuable textile fibres as possible from the donated apparels. This is especially relevant as the number of old garments is assumed to increase when enhancing marketing communication and awareness of consumers as suggested.

6.3 Societal implications
As ineffective clothing disposal behaviour affects the society as a whole it is not only the responsibility of individuals and companies to take action, as it must also be targeted from a macro perspective. Thus, it is the government’s duty to make the society aware of in-store recycling as a major way to conserve natural resources and to support and fund fashion retailers and in-store recycling to improve the environmental quality and thus consumers’ quality of life. This is more realisable from a policy side than fostering the reduction of consumption as a whole as latter is related to economic welfare. Redirecting resources does not impact GDP to the same amount as a reduction in consumption would do (Ekström, 2015). Here, in-store recycling is a major way to work towards a more sustainable environment. Additionally, proper clothing disposal behaviour such as performing in-store recycling would revitalise the African countries’ local industry resulting that they can develop and lower the dependency of western countries (Brooks, 2015; Kubania, 2015).

6.4 Future research
In-store recycling is still in its maturing phase. Resulting, awareness about the concept among consumers, as well as respective technology, may be considerably advanced within the near future. Consequently, further research on the concept should especially examine if consumer’s intention to perform in-store recycling has become more specific than it is currently.

Our research is the first enlightening the intention to perform in-store recycling by using a quantitative research method. Here, it was restricted by a limited time as well as financial resources. For this reason, we advise future researchers to use a similar research approach
including greater samples that allow more representative empirical findings. This is especially reasonable and required as our study belongs to one of the first recording a significant impact of AR on recycling intention. Therefore, the construct and its influence on recycling intention should be further investigated. More research is also suggested concerning the correlation between PBC and in-store recycling intention due to a non-significant relationship revealed by our study. Respective results could be utilised to improve the research model developed by us and thus, enhance its prediction power for in-store recycling intention. After having applied respective changes, we recommend researchers to utilise the revised model within future clothing disposal behaviour research as it enables a direct comparison of consumer’s intention to participate in existing alternative apparel disposal methods. Additionally, we advise researchers to extend the model where appropriate with factors picking up current societal changes to best explain intention towards performing in-store recycling because it depends on various external conditions constantly changing over time. Latter would result in novel recycling behaviour empirics, highly relevant for the fast fashion industry and fashion retailers for enhancing and working towards a more sustainable future.

6.5 Limitations
Our research was limited because of various circumstances which were examined in the early stage of our study. One limitation that needs to be outlined is reflected in the application of quantitative research methods. Regardless of the many advantages quantitative methods offer, they lack interactivity between the researchers and the study’s participants. This hindered us in assessing emotional responses or other physical expressions of participants which would have eventually enriched the content of our research (Bryman, 2012). Furthermore, choosing a more accurate sample by focusing on a specific geographical area would have delivered more accurate insights. Latter would have also been more precise when considering the actual behaviour instead of generation y’s intention to perform in-store recycling. Both delimitations are reasoned by the strict scope of our study and the resulting limited time. Additionally, because in-store recycling is a relatively new scheme yet in its maturing phase, examining the intention from consumers who are not yet aware of the scheme allowed us to get an overall impression of generation y’s interest in the concept. Thus, above limitations did not restrain our study from gathering novel insights as well as perspectives on the concept of in-store recycling which enrich both existing as well as future research.
7 Reference list


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Appendix

Appendix 1: Survey

With this survey we want to examine consumers' intention towards performing in-store recycling. In-store recycling is a take-back scheme including the positioning of a box in retail stores that enables consumers to drop off their no longer wanted clothes for the purpose of recycling or reuse in order to tackle environmental issues. The concept has been recently adapted by large fashion retailers such as H&M and Adidas.

All data collected with this survey is anonymous and will be used for research purpose only. Your responses in this survey will be treated with ultimate confidentiality and will not be forwarded to third parties.

This survey will take approximately 7 minutes. We want to thank you in advance for your time!

<table>
<thead>
<tr>
<th>Construct</th>
<th>Scale Item</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics</td>
<td>• What is your gender?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• How old are you?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• What is the highest education you have completed?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• What is your current employment status?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Have you ever heard about in-store recycling before?</td>
<td></td>
</tr>
<tr>
<td>Information</td>
<td>• It is difficult for me to find information on in-store recycling.</td>
<td>O’Reilly &amp; Kumar (2015)</td>
</tr>
<tr>
<td>availability</td>
<td>• More information about in-store recycling should be available.</td>
<td>Lee, De Young &amp; Marans (1995)</td>
</tr>
<tr>
<td></td>
<td>• If I had more information, I would perform in-store recycling (more often).</td>
<td>Kelly, Mason, Leiss &amp; Ganesh (2006)</td>
</tr>
<tr>
<td>Accessibility</td>
<td>• In-store recycling is easily accessible.</td>
<td>Kleine Stüve &amp; Strauß (2016)</td>
</tr>
<tr>
<td></td>
<td>• I can find in-store recycling in my local store.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• I think that in-store recycling is present in</td>
<td></td>
</tr>
<tr>
<td>Category</td>
<td>Statements</td>
<td>Reference</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
</tbody>
</table>
| **Trustworthiness**            | • I feel that environmental claims/statements related to in-store recycling are generally trustworthy.  
                                | • Advertisements about in-store recycling are honest.  
                                | • Fashion retailers who offer in-store recycling keep their promises to protect the environment. | Kleine Stüve & Strauß (2016) |
| **Environmental Concern**      | • I am extremely worried about the state of the environment.  
                                | • I think environmental problems are serious.  
                                | • I think we should care about environmental problems. | Bianchi & Birtwistle (2010)  
                                |                                                            | Chen & Tung (2014) |
| **Awareness of Consequences**  | • In-store recycling is a way to conserve natural resources.  
                                | • In-store recycling improves environmental quality.  
                                | • In-store recycling reduces pollution. | Ramayah et al. (2012)  
                                |                                                            | Wan et al. (2017) |
| **Ascription of responsibility** | • I feel personally responsible for the problems resulting from clothing consumption.  
                                | • My clothing consumption behaviour contributes to environmental problems.  
                                | • My clothing consumption behaviour constitutes a problem to society. | Abrahamse et al. (2009) |
| **Personal Norm**              | • I feel a strong personal obligation to perform in-store recycling.  
                                | • I am willing to put extra effort into in-store recycling on a regular basis.  
                                | • I would feel guilty if I did not perform in-store recycling. | Park & Ha (2014) |
| **Subjective Norm**            | • Most people who are important to me think that I should perform in-store recycling. | Park & Ha (2014) |
Most people who are important to me would approve me performing in-store recycling.
Most people who are important to me think that in-store recycling is a good thing to do.

**Perceived behavioural control**
- In-store recycling is convenient.
- I have complete personal control over performing in-store recycling if I really wanted to do so.
- Performing in-store recycling is mostly up to me if I wanted to do so.

**Attitude**
- In-store recycling is responsible.
- In-store recycling is useful.
- In-store recycling is rewarding.
- In-store recycling is beneficial.

**Intention**
- It is likely that I will perform in-store recycling in the near future.
- I intend to perform in-store recycling within the next month.
- I will consider to perform in-store recycling.
- I would actively seek out for in-store recycling possibilities.

**Incentive**
- I am more likely to participate in in-store recycling if it is linked with financial incentives.
- Fashion retailers’ financial incentives will encourage me to drop off my clothing waste in retail stores.
Appendix 2: Descriptive statistics of items on intention

<table>
<thead>
<tr>
<th>Item</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is likely that I will perform in-store recycling in the near future.</td>
<td>326</td>
<td>2.41</td>
<td>0.984</td>
</tr>
<tr>
<td>I intend to perform in-store recycling within the next month.</td>
<td>326</td>
<td>3.12</td>
<td>1.093</td>
</tr>
<tr>
<td>I will consider to perform in-store recycling.</td>
<td>326</td>
<td>2.1</td>
<td>0.918</td>
</tr>
<tr>
<td>I would actively seek out for in-store recycling possibilities.</td>
<td>326</td>
<td>2.77</td>
<td>1.083</td>
</tr>
</tbody>
</table>

Appendix 3: Descriptive Statistics of sample demographics

<table>
<thead>
<tr>
<th></th>
<th>Gender</th>
<th>Age</th>
<th>Highest education level</th>
<th>Employment status</th>
<th>Awareness</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Valid</td>
<td>326</td>
<td>326</td>
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