# Beyond the Choice

A quantitative study on the ultimate impact of default delivery
options on customer choice satisfaction

**Authors**

Ebba Österlund

Sara Hedman

**Supervisor**

Sara Rosengren

**Examiner**

Claes-Robert Julander

# Abstract

The dramatic rise of e-commerce has put pressure on online retailers to reduce the $CO_2$ emissions of their increasing last-mile deliveries. One strategy retailers might apply in this context is the use of green defaults to push the customer's choice of delivery mode in a more sustainable direction. While the effectiveness of default policies has been proven, no previous research has looked at reactions beyond the customer's behavior. The purpose of this thesis was thus to examine if a default meant to alter customer choice also has an effect on customer choice satisfaction. An experimental scenario-based role-playing design was used in which participants were randomly allocated to one of four choice situations in an online checkout context. Two variables were manipulated: the default delivery option was either green or non-green, and the participant was either made aware of his or her conflicting motives in the situation or not. The study showed that defaults indeed alter customer choice of delivery mode in a predictable manner. That choice, in turn, has an impact on choice satisfaction: customers who choose a green delivery mode are more satisfied with their choice than those who choose a non-green delivery mode. This relationship was shown to be partly moderated by the customer's awareness of his or her conflicting situational motives. Whether the choice of delivery mode was made actively (i.e., to opt out a default) or inactively (i.e., to stick to a default), however, did not affect the customer's choice satisfaction. This thesis thus offers an extension of the research on choice architecture by examining the impact of default rules beyond the choice of compliance or defiance. The findings suggest that retailers are free to use the default delivery option of their choice. However, if that default option is green, more customers are likely to choose it, and by choosing a green delivery mode, they are also more satisfied with their choice. Thus, defaults are not only an efficient tool to help reduce the $CO_2$ emissions of the last mile but ultimately also a way to increase customer satisfaction.

**Keywords:** Consumer behavior, last-mile delivery, nudging, default option, choice satisfaction

# Acknowledgements

We would like to thank the following for their invaluable contribution:

# Table of Contents

# 1. Introduction

## 1.1 Background

Do defaults meant to alter customer choice ultimately also have an effect on customers' evaluative judgments? The rise of e-commerce has caused a dramatic shift in consumer behavior, putting pressure on retailers to reduce the $CO_2$ emissions of their increasing last-mile deliveries. This thesis examines one strategy retailers might apply in this context: the use of default delivery options to push the customer's choice of delivery mode in a more sustainable direction. More specifically, we offer an extension of the research on choice architecture by identifying the impact of default rules beyond the choice of compliance or defiance – ultimately investigating its influence on choice satisfaction.

Online sales have been growing consistently. But in 2020, consumers went all in; Swedish e-commerce sales jumped to 122 billion SEK, up a record-high 40% from 2019 (PostNord, 2021). The COVID-19 pandemic has upended the retail industry. As brick-and mortar stores are forced to shutter and the future of the in-store experience is uncertain, many retailers are scrambling to effectively serve their customers through other channels (Briedis et al., 2020). The dramatic rise in e-commerce amid social distancing restrictions increased online sales' share of Swedish total retail trade from 11% to 14% in 2020 (PostNord, 2021). As Microsoft CEO Satya Nadella famously put it shortly after the outbreak last year, "We have seen two years' worth of digital transformation in two months" (Spataro, 2020). The coronavirus is thereby pushing the transition from in-store to online into full speed.

One significant difference between e-commerce and traditional brick-and-mortar sales is the spatial separation that requires the product to be delivered to customers (Tokar et al., 2020). Thus, as e-commerce booms, so does the demand for last-mile delivery; PostNord distributes about half a million parcels to its 2,000 service points on a daily basis (Escudero, 2020; Forsberg, 2021). The last mile – from the last distribution center to the customer's preferred destination point – is considered one of the most expensive, inefficient, and polluting parts of the supply chain (Lim et al., 2018). Emissions from urban last-mile delivery are estimated to increase by over a third in the

top 100 cities globally by 2030 (World Economic Forum, 2020); thus, as COVID-19 has put e-commerce at the forefront of retail, the last mile has become an increasingly hot discussion topic in both the academic and public domains (Ignat and Chankov, 2020; PostNord, 2021).

E-commerce players can reduce the emissions of last-mile logistics in two ways: (1) by taking operational measures, or (2) by influencing customers to adopt a more sustainable behavior (Ignat and Chankov, 2020). The customer's choice of delivery mode is critical in determining the environmental sustainability of the last mile – the longer the delivery window, the lower the $CO_2$ emissions generated by the delivery fulfilment (Ignat and Chankov, 2020; Manerba et al., 2018). Today, 80% of Swedish consumers state that they would be willing to wait 1-2 days longer for a more sustainable delivery of their online orders (PostNord, 2021). Yet, despite embracing the values of ethical consumerism, few customers actually defend their beliefs at the checkout (Carrington et al., 2014). Instead, mental accounts for money, time, and convenience influence the choice of delivery mode; after delivery fee, customers rank delivery speed as the most important decision criteria (Nguyen et al., 2019; Garver et al., 2012).

Fueled by numerous successful applications, an increasingly used tool to help customers bridge this so-called attitude-behavior gap is nudging (Momsen and Stoerk, 2014; Thaler and Sunstein, 2008). The idea of nudging is to push people in a desired direction by making alterations to the choice architecture (Thaler and Sunstein, 2008). Among the most effective nudges at fostering sustainable behavior are default rules (Sunstein, 2014; Hummel and Maedche, 2019). Defined as "the alternative the consumer receives if he/she does not explicitly request otherwise" (Brown and Krishna, 2004), default interventions are characterized by a decision situation in which one of the alternatives is pre-selected but the possibility to actively choose another option (i.e., to opt out) is retained. In general, people then tend to stick to the default option (White et al., 2019). When customers place online orders nowadays, they get the chance of choosing between different last-mile delivery modes. By setting green delivery as default rule, online retailers can thus have an extensive impact on the emissions of their last-mile logistics.

## 1.2 Research gap

Although the importance of defaults is established (Thaler and Sunstein, 2008), their effectiveness in advancing sustainable behavior has been proven (Ansher et al., 2014), and the underlying mechanisms that urge consumers to comply with them have been explained (Theotokis and Manganari, 2015), our understanding of how customers' evaluative judgments are affected by alterations to the presentation and design of choices is still obscure. Several studies have examined the behavioral effects of default rules on consumer choice (Brown and Krishna, 2004; Johnson and Goldstein, 2003; Park et al., 2000); however, to the knowledge of the authors, no previous research has been done so far to investigate the impact of defaults on psychological consumer responses beyond that choice of compliance or defiance (i.e., to stick to or to opt out a default).

## 1.3 Purpose

The purpose of this thesis is thus to examine if the use of defaults meant to alter customer choice also has an effect on customers' evaluative judgments. More specifically, it investigates whether, why, and when the outcome of a (non-)green delivery default option affects customers' choice satisfaction in an online retailing context. This relationship is suggested to be mediated by the customer's emotions and moderated both by the decision to opt out or to stick to the default (i.e., the choice process) and by the customer's awareness of his or her conflicting motives in that situation.

Building on existing theories about choice architecture (e.g., Johnson and Goldstein, 2003; Johnson et al., 2012; Thaler and Sunstein, 2008; Sunstein, 2014) and consumer behavior (e.g., Richins, 1997; Zhang and Fitxsimons, 1999; Botti and Iyengar, 2004; Botti and Mcgill, 2006), the main contribution of this thesis is adding both a deeper and broader understanding of default policies to the behavioral economics literature's discourse of nudging – beyond that of their impact on behavioral responses. Considering online retailers' extensive use of defaults in the presentation and design of delivery options, practitioners should also benefit from an increased knowledge of customer reactions to such interventions. Insights from this thesis could help retailers

not only to better understand how pre-selected options affect their customers, but to also devise more effective and efficient policies for advancing sustainable behavior. To assess the impact of defaults on customers' evaluative judgments, two empirical studies were carried out. Both employed experimental research designs in which participants were randomly allocated to one of four choice situations in an online checkout context.

## 1.4 Disposition
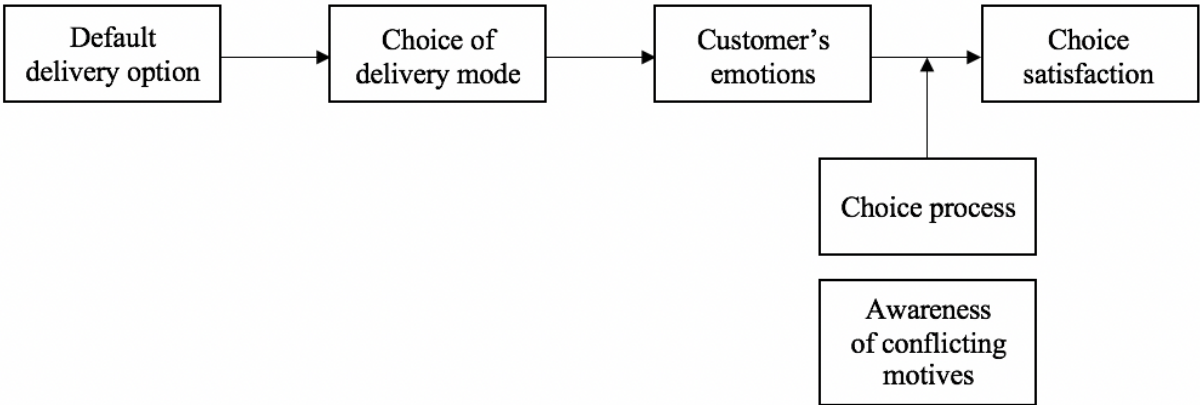
In the following, the relevant literature is reviewed, and the theoretical background of our thesis presented. Before introducing our findings, we then discuss the methodological perspectives and procedures employed. Finally, a discussion of the results follows, including both our contributions, managerial implications, the limitations of our study, and suggestions for further research.

# 2. Theoretical framework

## 2.1 Overview of the framework

Our main thesis is that the use of default delivery options in an online retailing context influences customers' choice of delivery mode in a more or less sustainable direction, and that that choice of a green versus non-green delivery mode in turn sets in motion a response process in which mediating and moderating variables are involved, ultimately affecting the customer's choice satisfaction (see Figure 1). The mediating variable is the customer's emotions, and the moderating variables are the choice process and the customer's awareness of his or her conflicting motives. In the following sections, our task is to review the relevant literature, provide conceptual arguments regarding the proposed relationship between variables, and develop hypotheses for the empirical part of the thesis.

**Figure 1.** The proposed model



## 2.2 Defaults as means of shaping consumer choice

Environmental consumerism is a burgeoning social movement. More and more consumers express concerns regarding the environmental impact of their consumption choices (Carrington et al., 2014; Pelsmacker et al., 2005). Yet, albeit the emerging trend of environmental consumerism has shifted attitudes in society, most consumers still fail to act accordingly (Devinney and Auger, 2007; Belk et al., 2005). 30% state that they want to purchase ethically, but only 3% actually do (Carrington et al., 2010).

Consumers' decision-making thus plays an important role in shaping and perpetuating the sustainability challenges of our time (Antal and Hukkinen, 2010).

Referred to as the attitude-behavior gap, this phenomenon has been addressed in copious studies related to consumer behavior research (e.g., Carrington et al., 2010; Carrington et al., 2014; Szmigin et al., 2009). To help consumers overcome the gap, both private and public institutions show mounting interest in the use of nudges (Momsen and Stoerk, 2014; Thaler and Sunstein, 2008). While some policies take the form of mandates and bans, nudges are designed to preserve freedom of choice. As small alterations to the choice architecture (i.e., how the choice is conveyed through its presentation and design; Johnson et al., 2012), nudges are intended to gently push consumer behavior in a desired direction by making negative decisions more burdensome to take (Thaler and Sunstein, 2008; Sunstein, 2014). In the context of retailing, nudges can be used to push customers into purchasing green products (e.g., by the means of descriptive norms; Demarque et al., 2015) or to change e-commerce customer's preferred last-mile delivery (e.g., by displaying its environmental impact; Ignat and Chankov, 2020).

In recent years, the default nudge has received the highest attention in academic articles (Ingendahl et al., 2021; Hummel and Maedche, 2019), recognized as a robust and well-established approach to foster sustainable behavior (Jachimowicz et al., 2019). Defaults are defined as an externally pre-selected option that people receive if no active choice is made (Goswami and Urminksy, 2016). Several studies have shown that people then tend to stick to the default setting – even when the alternatives may yield better outcomes (Anderson, 2003; Thaler and Sunstein, 2003, White et al., 2019). The decision to stick to a default can be considered rational as it both saves time and often is viewed as a recommendation by the provider (Antonides and Welvaarts, 2020; Johnson and Goldstein, 2003). Further, the default could be the first available option that suffices or satisfies the consumer's minimum requirements (Johnson and Goldstein, 2003). Given the premise that defaults alter consumers' choices in a predictable manner (Thaler and Sunstein, 2008), we expect this to be true also in an online retail environment. Presented with different last-mile delivery modes at the checkout page, more consumers should thus choose a (non-)green delivery option when that option is set as default compared to when it is not.

6

**H1:** Consumers' propensity to choose a (non-)green delivery option in an online retailing context is higher when that option is set as default compared to when it is not.

## 2.3 Sustainable choices, emotions and choice satisfaction

Emotions are valenced affective reactions to perceptions of situations (Richins, 1997), defined as "mental states of readiness that arise from cognitive appraisals of events or one's own thoughts" (Bagozzi et al., 1999). Green consumption choices have been shown to both decrease negative emotions and increase positive emotions (White et al., 2019). On the other hand, violations of societal ethical beliefs can evoke emotions of negative valence (e.g., guilt, disappointment, regret; Carlsmith and Gross, 1969; Peloza et al, 2013). As environmental protection comprises a widely held moral standard (Peloza et al., 2013), non-green consumption choices can thus lead to negative emotions. This as individuals assume personal responsibility for the unsustainable outcome (Lerner and Keltner, 2000), leading them to feel morally responsible for the environment (Kaiser and Shimoda, 1999).

When a particular choice task is evoking emotions, such emotions have been found to inform consumers' judgments of this choice in a valence-congruent way. This subconscious influence of emotions on evaluations is referred to as affect infusion (Pham, 2004; Schwarz, 1990; Schwarz and Clore, 1988; Slovic et al., 2007). That is, emotions experienced in a choice task get carried over and are used by consumers as heuristics to evaluate their final level of choice satisfaction, defined as "the level of feelings of satisfaction or regret regarding the chosen alternative or rejected alternative" (Zhang and Fitzsimons, 1999). As such, we expect that a customer that chooses a green delivery option experiences a higher level of choice satisfaction than a customer that chooses a non-green delivery option. This as the customer's emotional reactions to the choice are positively associated with the customer's level of choice satisfaction. Thus, we hypothesize that:

**H2:** The choice of a green (non-green) delivery option results in higher (lower) customer choice satisfaction.

**H3:** This relationship is mediated by the customer's emotional reactions to that choice.

## 2.4 The moderating role of the choice process

While green default rules have proven efficient in altering consumer choice toward a more sustainable direction (thus bridging the prevalent attitude-behavior gap in sustainable consumption; Pichert and Katsikopoulos, 2008), not all consumers decide to stick to them. Most choice situations call for consumers to compare alternatives to recognize the option that best meets their needs (Bettman et al., 1998). However, these needs can sometimes be conflicting, and consumers can thus experience difficulty in making decisions (Luce et al., 1999). Often, the market does not serve options that enable consumers to align their consumption with their environmental concerns (Carrington et al., 2014); decision-making in a retailing context thus involve trading off sustainability with price, quality, convenience and other attributes (Szmigin et al., 2009; Ross and Milne, 2020). Trading-off an attribute set as default then requires that the customer explicitly request to "opt-out" that preselected option rather than to stick to it automatically (Theotokis and Manganari, 2015). Thus, this constitutes an active choice.

Retailers hope that the object that they are in control of (here, the choice architecture of last-mile delivery modes) evokes appropriate emotions and evaluative judgments (Söderlund and Öhman, 2003). The process through which consumers make decisions can have a critical impact on the outcome of evaluative judgments (Zhang and Fitzsimon, 1999); variables that shape the environment in which the decision occurs influence consumers' affective experience of the decision-making process (Bagozzi, 1999). Thus, different consumers can have different reactions to the same choice depending on how that choice has been designed. In a green default setting, consumers will, by default, be committed to environmental protection; in a non-green default setting, consumers have to actively commit to environmental protection themselves.

Prior research suggests that higher engagement in a choice task causes *choosers'* (i.e., individuals making an active choice) evaluation of the outcome to be more

extreme than that of *non-choosers* (individuals making a passive choice; Botti and Iyengar, 2004; Botti and McGill, 2006). If presented to positive conditioned options, *choosers* accommodate more positive evaluations than *non-choosers,* thus resulting in higher choice satisfaction; if presented to negative conditioned options, *choosers* contemplate more negative evaluations than *non-choosers*, resulting in lower satisfaction of the aversive outcome (Botti and McGill, 2006).

We expect that the impact of an *active* versus *passive* choice on consumers' evaluations, as suggested by Botti and McGill (2006), also applies to the consumer's decision to either opt-out or to stick to a default option. As sticking to a default option is effortless and can be perceived as the rational choice (Antonides and Welvaarts, 2020; Johnson and Goldstein, 2003), we expect that the decision to actively opt-out a default will generate more extreme evaluations. However, whether that choice results in more satisfaction or more dissatisfaction should be dependent on what the customer opt outs to. To *actively* choose a green outcome (i.e., to opt out a non-green default option) is assumed to generate higher choice satisfaction than to *passively* uphold that same green outcome (i.e., to stick to a green default option). This as an action to reverse a non-green outcome induces greater levels of positive emotions compared to an inaction that maintains a green situation (Theotokis and Manganari, 2015). To *actively* choose a non-green outcome (i.e., to opt out a green default option) is assumed to lead to greater choice dissatisfaction than to *passively* uphold that same non-green outcome (i.e., to stick to a non-green default option). This as an action that reverses a green outcome induces greater levels of negative emotions compared to an inaction that maintains a non-green situation (Theotokis and Manganari, 2015). Thus, we hypothesize that the choice process (as formed by the choice architecture) moderates the relationship between the choice and the level of choice satisfaction:

> **H4a:** The choice of a green delivery mode results in higher choice satisfaction when that choice is made by actively opting out a non-green default option compared to when it is made by inactively sticking to a green default option.

**H4b:** The choice of a non-green delivery mode results in lower choice satisfaction when that choice is made by actively opting out a green default option compared to when it is made by inactively sticking to a non-green default option.

## 2.5 The moderating role of conflicting motives

Consumers increasingly encounter choice situations in the retail environment that involve information about the relative environmental impact of products or services (Luchs and Kumar, 2017). Thereby, they are becoming more and more aware of the environmental outcomes of their consumption choices. However, as already discussed, choice situations in a retailing context may involve trade-offs; the market does not always serve options that enable consumers to align their consumption with their environmental concerns (Carrington et al., 2014). While a consumer may perceive him- or herself as environmentally conscious, he or she does not always consume sustainably (Szmigin et al., 2009). Followingly, the consumer's awareness of these conflicting motives in a given choice situation may induce cognitive dissonance; it creates inconsistency between the consumer's self-concept and behavior as the piece of behavior here violates a cognition about the self (Szmigin et al., 2009). When we experience such threats to our self-concepts, we feel uncomfortable to the extent that we believe we have made a less than optimal choice (Hoshino-Browne et al., 2005). Self-concept (in)congruence has thus been suggested to be a strong predictor of choice satisfaction; a decision in congruence with one's self-concept results in high satisfaction, whereas a decision in incongruence with one's self-concept results in low satisfaction (Jamal, 2004).

On the other hand, a consumer unaware of any conflicting motives in a given choice situation does not face the same commitment and sacrifice issues when presented with alternatives explicitly more or less sustainable (Carrington et al., 2014). Instead, one's main priority has been set prior to entering the shopping environment and the plan is enacted automatically at the checkout. Therefore, these consumers compose their decision in the fast, intuitive automatic, effortless, and implicit thinking system rather than in the slow, conscious, effortful, and explicit thinking system that consumers aware of their conflicting motives use (Engler et al., 2019). As already argued for, high

engagement in the decision-making process leads to more extreme evaluations than low engagement (Botti and Iyengar, 2004); therefore, people unaware of any conflicting motives should be more neutral in their evaluative judgments of the choice made.

Followingly, we expect that the impact of a customer's choice of a (non-)green delivery mode on choice satisfaction is also moderated by the customer's awareness of his or her conflicting motives. A customer aware of his or her internal conflicting motives that acts in a self-concept congruent way in the choice of delivery mode (i.e., a sustainable customer choosing a green delivery option) will be more satisfied with that choice than a customer unaware of these conflicting motives that makes the same choice. A customer aware of his or her conflicting motives that act in a self-concept incongruent way will instead be less satisfied with the choice of delivery mode than a customer unaware of these conflicting motives that makes the same choice.

> **H5a:** A customer aware (unaware) of his or her conflicting motives in a choice situation that involves comparisons of more or less environmentally friendly alternatives will be more (less) satisfied with the choice of a green delivery option.

> **H5b:** A customer aware (unaware) of his or her conflicting motives in a choice situation that involves comparisons of more or less environmentally friendly alternatives will be less (more) satisfied with the choice of a non-green delivery option.

# 3. Methodology

The purpose of this thesis, to examine if the use of default delivery options in an online retailing context meant to alter customer choice also has an impact on customers' evaluative judgments, is addressed in two empirical studies – a prestudy for stimuli development and a main study to test our hypotheses. Before we introduce our findings, this chapter discusses the methodological perspectives and procedures employed in the studies.

## 3.1 Research approach

The thesis assumes a deductive approach to research, in that our hypotheses are generated based on existing theory about consumer responses to defaults and tested in empirical studies. The findings are thus based on quantitative research, closely associated with the deductive approach and sometimes referred to as "theory testing" (Bryman and Buchanan, 2018, p.50; Hausman, 2015). This approach was deemed an appropriate choice as it allows for generalization (to infer from the sample to a population) and statistical testing of differences in evaluative judgments and relationships (Eliasson, 2018, p.30-31); being able to *quantify* the psychological effects of nudging is important in order to assess the efforts (Lemoine et al., 2019).

## 3.2 Experimental research designs

Both the prestudy and the main study employed experimental research designs and controlled experimental settings. An experimental method was deemed the logical choice for subjecting our hypotheses to confirmation or disconfirmation, as it allows for systematic testing of causal claims between variables in a rigorous manner and is considered useful when empirically examining already existing theory in a new context (Söderlund, 2018, p.16; Söderlund, 2010, p.33). The research procedure involved stimuli manipulations and comparisons between group reactions after exposure to the experiment treatments. Both experiments employed a full-factorial between-subjects design and participants were randomly allocated to experiment groups. The phenomena examined were isolated to the greatest degree possible in order to minimize the influence of confounding variables.

Experimental methods have often been criticized for the effects that experimental settings can have on participants; for example, participants may be influenced by their wish to perform in accordance with expectations (Söderlund, 2010). For ego-defensive or impression management reasons, respondents often over report socially desirable attitudes and behaviors and underreport less desirable attributes – a phenomenon known as social desirability bias (Fisher, 1993; Latkin et al., 2017). Not only is social desirability bias pervasive, but it can moderate variable relationships, increase measurement errors, and affect variable means (Fisher, 1993). With regard to the prevalent attitude-behavior gap in sustainable consumption (Young et al., 2010), this concern was deemed especially relevant to address for the purpose of this thesis. To approximate consumer responses to defaults in a real-life decision-making situation and prevent participants from over reporting their intentions to choose a green delivery mode, we therefore employed a text-based role-play scenario for the manipulations of our variables (as later described in detail in Chapter 3.4.2). This approach has been frequently used in retailing experiments (cf. Sharma and Stafford, 2000; Song and Zinkhan, 2008; Söderlund, 2016, 2019), particularly with respect to research focused on ethical issues (Wason et al., 2002). The method involves the provision of a scripted presentation of the factors of interest to participants who are instructed to assume an *a priori* defined role and, through this role, react and respond to the information presented (Rungtusanatham et al., 2011). The main advantages of role-playing experiments are that they allow for (1) control of non-manipulated variables and (2) manipulations of variables and contexts that can be difficult to study in a real-world setting (here, conflicting motives in ethical consumption; Söderlund, 2018, p.82). Approximating real-life decision-making situations by offering situational or contextual factors, the use of role-play scenarios can help reduce social desirability bias in consumer responses and thus provide greater realism (Wason et al., 2002).

## 3.3 Measurements and questionnaire construction

In both studies, consumer responses were measured with self-administered questionnaires and the results were later analyzed with quantitative methods. The stimuli exposed to participants were included in the beginning of a questionnaire packet containing relevant measures for the study at hand. Both questionnaires were

distributed online. In self-administered questionnaires, the wording and construction of questions may have an impact on the results (Jacoby, 1978; Peterson, 2005; Schwarz; 2003); to avoid such methodological bias and ensure measurement quality of the questionnaires used in this thesis, a number of steps were followed. Firstly, most variables were measured with multi-item question designs using unipolar and bipolar rating scales. Based on the subsequent answers, Cronbach's alpha was calculated. Whenever this value was higher than the generally accepted lower limit of 0.70 (Söderlund, 2018, p.136), an average was computed to form an index. Thus, we argue that the measurements used exhibit an acceptable level of reliability (i.e., the extent to which several measures of a particular variable provide similar results; Söderlund, 2018, p.135). However, with multi-item measures, care must also be taken to ensure that the items in fact measure the same underlying construct (Söderlund, 2006). Content validity was therefore built into the questionnaires by careful selection of which items to include. First, most consumer responses were captured using established measurements and scales that have been defined and validated in previous research (Viswanathan, 2008). In addition, an experienced researcher in the field reviewed all questions employed in the studies beforehand, as per recommendation by Söderlund (2018, p.136). We also examined the nomological validity of the dependent variable in our proposed model; given that satisfaction is frequently assumed to affect several intentions (Söderlund, 2006), one purchase intention item and one repatronage intention item were also included in the study.

## 3.4 Prestudy

Abstract and complex cause variables such as sustainability can be difficult to translate into corresponding treatments (Söderlund, 2018, p.86); therefore, we pre-tested our stimuli in a separate prestudy. As recommended by Rungtusanatham et al. (2011), the intent was to ensure that the developed treatments were effective (in that they cue participants to perceive the desired levels of the variables of interest) before using them to test our hypotheses in the main study.

### 3.4.1 Study design

A 2 x 2 between-subjects factorial design was used to validate our designed treatment conditions. Two variables were manipulated: the default delivery option (green vs. express) and the customer's awareness of his or her conflicting motives (low vs. high). As argued for in Chapter 3.2, we used a role-play scenario for the manipulations.

### 3.4.2 Stimuli development

The scenario was generated through iterative discussions with an experienced researcher in the field and designed in line with Rungtusanatham, Wallin, and Eckerd's (2011) three-stage process to ensure that it was deemed "clear, realistic, and complete" (p.9) by participants. This since scenario-based experiments insert participants to role-play, and through this role-playing, to respond to real issues in a simulated context (Rungtusanatham et al., 2011).

Each participant was asked to assume the role of a focal customer who visited an online clothing store to buy a t-shirt. The scenario text served to verbally "walk" participants through the purchase; it described how the customer put the selected item in his or her shopping bag and then proceeded to the checkout to choose delivery mode. Fashion retailing was deemed an appropriate context as clothes are among the most popular products bought online (PostNord, 2021) and the t-shirt was chosen to represent a generic product that most respondents would be able to imagine buying, regardless of gender, age, style, or size.

For the manipulation of the customer's awareness of his or her conflicting motives (low vs high), two versions of the scenario text were created. In both versions, the text stated that the customer planned to wear the t-shirt to an event the upcoming weekend. Informed that it was now Wednesday night, it was thus important for the customer to get the purchase delivered as quickly as possible. By explicitly informing participants about their situational motive, this framing meant to reduce social desirability bias. It was chosen as representative of a typical online purchase situation that most respondents would be able to imagine, considering that delivery speed is ranked as one of the most critical decision criteria for customers' choice of delivery mode and the

expectation for shorter delivery time is constantly increasing (Nguyen et al., 2019; Garver et al., 2012; Ignat and Chankov, 2020). The role-play scenario was thereby designed to approximate consumer reactions to defaults in a real-life decision-making situation. In the second version of the scenario text, we added a sentence stating that the customer also was environmentally conscious and concerned with green decision-making. Thus, this customer was aware of his or her conflicting motives in the given choice situation; he or she wanted the t-shirt delivered as fast as possible but at the same time also cared for the environment. Everything else in the scenario text was kept constant between the two versions in order to minimize the influence of confounding variables (Söderlund, 2018, p.61).

After having read the scenario text, respondents were presented with a picture of a fictitious checkout page that contained an overview of the shopping bag and a list of the available delivery options to choose from. To ensure external validity, the checkout page was typical to the online fashion retail industry but stripped from brand related features to eliminate associations that could potentially affect the results. To not overburden respondents with details (Wason et al., 2002), the delivery modes were limited to three options: (1) express delivery (labeled "express" and delivered in 1-2 business days for 29 SEK), (2) green delivery (labeled "environmentally-friendly" and delivered in 3-5 business days for 29 SEK), and (3) free delivery (delivered in 4-7 business days for free). These options were inspired by existing retailers and intended to cover attributes important for customers in their choice of delivery mode (e.g., price, delivery speed, point of delivery; Luchs and Kumar, 2017); however, to minimize differences not related to the experiment, we kept the point of delivery constant between the options. The free delivery option was not of particular interest to our proposed model but included to provide greater realism and minimize hypothesis guessing (Söderlund, 2018, p.63); the scenario was instead designed to contrast the choice between green delivery and express (non-green) delivery. To distinguish the green delivery option from the express delivery option, the delivery time for the former was set to 3-5 days and the latter 1-2 days. This since longer delivery windows imply lower $CO_2$ emissions (Ignat and Chankov, 2020; Manerba et al., 2018). The customer's choice situation thus involved a trade-off between sustainability and delivery speed (as is common for decisions made in a retailing context; Szmigin et al., 2009); to get the

t-shirt delivered in time for the upcoming weekend, the customer would have to choose express delivery.

For the manipulation of the default delivery option, we created two versions of the checkout page. In the first version, the green delivery option was pre-selected and presented on top of the other alternatives; in the second version, the express option was pre-selected and presented on top of the other alternatives. Everything else was kept constant between the two versions. The participant was thereby free to either stick to the default or actively choose another alternative (i.e., opt out).

Our 2 x 2 experimental design thus resulted in the development of four different treatments. All contained one of the two scenario texts that described either the customer's non-conflicting or conflicting motives and a picture of a checkout page characterized by either a green default delivery option or an express default delivery option. Detailed comparisons of the manipulations can be found in Appendix A.

### 3.4.3 Data collection and participants

A convenience sample from the authors' own personal networks was employed ($N = 135$), of which 87 respondents were female, 45 were male, and 3 were non-binary. Ages of the participants ranged from 18 to 66 years, with a mean age of 34.59 years ($SD = 14.96$). There were no statistically significant differences in age ($F = 0.66$, $p = 0.58$) or gender ($\chi^2 = 4.53$, $p = 0.61$) distribution between the four treatment groups. Our four treatment conditions were included in the beginning of separate versions of the same questionnaire to which the participants were randomly allocated (see Appendix B). The questionnaire was distributed online, and respondents were asked to read through the scenario carefully and then to look at the checkout page in detail, before responding to a set of subsequent questionnaire items.

### 3.4.4 Measures

*Manipulation checks*

The main advantage of conducting a manipulation check in a separate prestudy is that it provides early warning signals if there is a problem associated with a treatment

(Söderlund, 2018, p.87). To check the relationship between our variables of interest and the stimuli presumed to represent these variables (i.e., to ensure the validity of designed manipulations; Söderlund, 2018, p.87), the participants were given the following statements: "In the scenario I was described as a person who is concerned with sustainability" and "The pre-checked delivery option at the top was the most environmentally friendly". Both items were scored on a unipolar scale ranging from 1 (do not agree at all) to 7 (agree completely).

*Perceived realism*

To assess the perceived realism of the scenario, which is common practice for this type of role-play experiments (Rungtusanatham et al., 2011; Söderlund, 2018, p.133), we asked the participants to what extent they agreed with the statements "The situation described in the scenario was realistic" and "I could imagine myself in the described situation" (1 = do not agree at all; 7 = agree completely). Similar items have been used by, for example, Pulles and Loohuis (2020) and Thomas et al. (2013). Responses to the two items were averaged to form an index, Cronbach's alpha = 0.92.

To measure the perceived realism of the delivery options, the participants were given the two following statements: "The delivery options were realistic" and "I would not be surprised if I came across these specific delivery options" (1 = do not agree at all; 7 = agree completely). Cronbach's alpha was 0.73, and an average was computed to form an index.

*Perceived clarity*

To ensure that the participants considered the scenario clear, they were asked to what extent they agreed with the statement: "The situation described was clear". The item was scored on a 7-point unipolar scale ranging from 1 (do not agree at all) to 7 (agree completely). The clarity of the delivery options was measured using the statement "The difference between delivery options was clear" (1 = do not agree at all; 7 = agree completely).

**3.4.5 Results**

For the manipulation checks, we compared the responses to the "In the scenario I was described as a person who is concerned with sustainability" item between the two conflicting motives conditions. This comparison showed that they reached a higher level for participants who were characterized as sustainable consumers ($M = 5.99$, $SD = 1.44$) than for those who were not ($M = 2.04$, $SD = 1.58$). An independent t-test indicated that this difference was significant ($t = 15.15$, $p < 0.01$). Second, the two default conditions were compared in terms of the responses to the "The pre-checked delivery option at the top was the most environmentally friendly" item. The green delivery default version produced a higher mean ($M = 5.93$, $SD = 1.65$) than the express delivery default version ($M = 2.34$, $SD = 1.57$). Again, an independent t-test showed that the difference between the two groups was significant ($t = 12.96$, $p < 0.01$). These results demonstrated that both our manipulations affected the participants in the intended direction; the different treatments were thus deemed effective in translating the variables of interest.

With regard to the perceived realism of the scenario, combining the results from the four experimental conditions resulted in a mean of 6.09 ($SD = 1.44$). A one-way ANOVA showed that there were no statistically significant differences between the groups ($F = 0.17$, $p = 0.92$), demonstrating that participants across all four treatments considered the designed scenario to be realistic. For the perceived realism of the delivery options, combining results from the four experimental conditions resulted in a mean of 6.22 ($SD = 1.07$). Again, a one-way ANOVA demonstrated that there were no statistically significant differences between the groups ($F = 1.08$, $p = 0.36$), indicating that participants across all treatments considered the delivery options to be realistic.

The perceived clarity of the scenario was also assessed by combining the responses of respondents from all four treatment groups. This resulted in a mean of 6.27 ($SD = 1.16$). A one-way ANOVA showed that there were no statistically significant differences between the groups ($F = 0.68$, $p = 0.56$); thus, participants across all treatments considered the scenario to be clear. For the perceived clarity of the delivery options, combining results from the four conditions resulted in a mean of 6.06 ($SD = 1.22$). Again, a one-way ANOVA demonstrated that there were no statistically significant

differences between the experimental groups ($F = 0.30$, $p = 0.83$), indicating that respondents across all four treatments considered the delivery options to be clear.

## 3.5 Main study

### 3.5.1 Study design

A 2 x 2 between-subjects experiment was conducted to collect the data needed to test our hypotheses. Again, we manipulated the two following factors: the default delivery option (green vs. express) and the customer's awareness of his or her internal conflicting motives in a given choice situation (low vs. high). Satisfied with the results from the prestudy, the same role-play scenario was used also for the manipulations in the main study; again, the participant was asked to imagine that she or he was a focal customer who visited an online clothing store to buy a t-shirt.

### 3.5.2 Procedure

The data collection was executed through an online survey. The survey, which may be found in its entirety in Appendix C, was composed of three parts: (1) introduction and scenario (2) checkout and choice, and (3) a self-administered questionnaire.

The first page of the survey introduced participants to the study and the basics of what it meant to examine. Asked to "Please imagine yourself in the following scenario" and to read through it carefully, each participant was subsequently randomly allocated to one of the four treatment versions as previously described in Chapter 3.4.2. The scenario text then served to verbally "walk" the participant (in his or her assumed role of a customer) through an online purchase situation – either made aware of his or her conflicting motives or not. Informed that they were satisfied with their choice of t-shirt and had put the item in their shopping bag, the participants proceeded to the checkout page that followed. Here, each participant was presented with one of the two default delivery options (green vs. express) and asked to choose one of the available alternatives for the delivery of their purchase (free, green, or express delivery). Upon doing so, the participant either inactively stuck to the pre-select option or actively chose another.

On the next pages, each treatment was followed by a set of questionnaire items to capture the participant's responses (see Chapter 3.5.4 for a detailed description of these measures). Care was taken to ensure that the construction of the questions and the questionnaire design would not affect the results; for example, the respondent's emotional state was measured immediately after exposure to the stimuli, while our manipulation checks did not appear until the end of the questionnaire. Finally, participants were asked to complete items with regard to demographic variables and their own purchase behavior, before voluntarily entering their email address to participate in the lottery for a gift voucher.

### 3.5.3 Data collection and participants

Participants were recruited through Facebook invitations in groups for people with an interest in fashion (see Appendix D for full disclosure). While convenience sampling is by far the most common approach for the recruitment of participants to experiments, critics have argued that there is no real alternative to true random probabilistic sampling if the aim is to infer characteristics of a population based on that sample (Söderlund, 2018, p. 190). However, "whereas random sampling ensures chance sample differences from the source population on all characteristics, random allocation ensures that differences between the groups on all variables, assessed or not, are non-systematic" (Shaver, 1993, p.297). As researchers are more interested in the relative rather than the absolute effects of experiment treatments (Söderlund, 2010), the random assignment of participants to treatment groups is thus of greater importance to secure than the representativeness of the sample. Given time and resource constraints, convenient sampling was thereby deemed the logical choice for the collection of data in this study and helped recruit a sufficient number of people to our treatment groups.

In total, 538 respondents completed the survey. Two control measures were implemented. To capture the degree of participant attention when answering questions, participants were asked to "select number 5" among four options ("2", "8", "5", and "7"); 17 failed. In addition, as an instructional manipulation check to ensure that the respondents in fact understood what they were subjected to, the question "What were you asked to do in this survey?" was used, followed by the three different

response options "Book a train ticket", "Buy a t-shirt", and "Compare insurance companies" (2 failed). The answers of those who did not comply within the standards of the control measures were discarded (19 participants), leaving a sample of 519 participants for analysis. 282 of these participants were female, 236 were male, and 1 preferred not to say. Ages of the participants ranged from 15 to 81 years, with a mean age of 36.63 years ($SD$ = 10.89). There were no statistically significant differences in gender ($\chi^2$ = 3.04, $p$ = 0.80) or age ($F$ = 0.44, $p$ = 0.73) distribution between the four treatment groups.

### 3.5.4 Measures

*Choice satisfaction*

To measure choice satisfaction, participants were asked the following question: "How would you summarize your view of your choice of delivery mode?". The question was followed by three items: "I am happy about my choice of delivery mode", "I believe I did the right thing when I chose delivery mode", and "Overall, I am satisfied with the choice of delivery mode". These items were scored on a unipolar scale ranging from 1 (do not agree at all) to 7 (agree completely). This act-oriented measure of satisfaction is often preferred to the more well-established, object-oriented way of capturing evaluative judgments (i.e., Fornell's (1992) scale) when predicting intentions with regard to an act (here, consumer choice; Söderlund and Öhman, 2003). Similar measures have been recommended by Oliver (1997) and used by, for example, Söderlund and Öhman (2003, 2005) and Cronin et al. (2000). Responses to the three items were averaged to form an index, Cronbach's alpha = 0.91.

As a validity check, and given the frequent assumption that satisfaction affects several behavioral intentions (Söderlund, 2006), we included one purchase intention item ("How likely is it that you would complete the purchase?") and one repatronage intention item ("How likely is it that you would visit the same retailer again?"). A response format ranging from 1 (very unlikely) to 7 (very likely) was provided for both items. The responses were significantly and positively associated with choice satisfaction ($r$ = 0.69, $p$ < 0.01; $r$ = 0.61, $p$ < 0.01); thus, the satisfaction measure behaved as expected in relation to many previous studies, indicating that it had an

acceptable level of nomological validity. Similar items to measure behavioral intentions have been used by, for example, Boulding et al. (1993), Cronin et al. (2000), Söderlund and Öhman (2003, 2005), and Söderlund and Rosengren (2008).

*Emotional valence*

Given that emotions are ephemeral by definition (Söderlund, 2018, p.119), the respondent's emotional state was assessed immediately after he or she had been exposed to the treatments. We used the question "How do you feel now, after having made your choice of delivery mode?", followed by three adjective pairs (negative emotions–positive emotions, unhappy–happy, and in a bad mood–in a good mood) scored on a 7-point bipolar scale. These continuums were assumed to capture the fundamental valence aspect of emotions (Russell, 2003). Similar items have been used by, for example, Söderlund and Oikarinen (2018). Cronbach's alpha for this scale was 0.95, and an average was computed to form an index.

*Manipulation checks*

As manipulation checks, and in the final part of the questionnaire to minimize hypothesis-guessing and reduce the risk of the check serving as a cause variable in relation to our effect variables (Söderlund, 2018, p.91), the participants were given the two statements "In the scenario I was described as a person who is concerned with sustainability" and "I chose the most environmentally-friendly delivery option amongst the three available alternatives", scored on a unipolar scale ranging from 1 (do not agree at all) to 7 (agree completely).

# 4. Results and analysis

This chapter presents the empirical results of the main study. A significance level of 0.05 was used throughout the analysis. We first assess the participants' responses to our manipulation checks. Then, the impact of the use of default options on the customer's choice of delivery mode is examined. Subsequently, we present descriptive statistics of our data set, before finally extending our analysis beyond the choice of delivery mode using inferential statistics.

## 4.1 Manipulation checks

For the manipulation checks, we first compared the responses to the "In the scenario you were described as a person who is concerned with sustainability" item between the two conflicting motives conditions. This comparison showed that they reached a higher level for participants who were characterized as sustainable consumers ($M = 5.64$, $SD = 1.61$) than for those who were not ($M = 2.59$, $SD = 1.75$). An independent t-test indicated that this difference was significant ($t = 24.36$, $p < 0.01$). The manipulation thus performed as expected. Second, the responses to the "I chose the most environmentally-friendly delivery option amongst the three available alternatives" item were compared between those who chose the green delivery option and those who did not. Green delivery produced a higher mean ($M = 6.09$, $SD = 1.48$) than non-green delivery ($M = 2.18$, $SD = 1.47$). Again, an independent t-test showed that the difference between the two groups was significant ($t = 21.97$, $p < 0.01$). Thus, it can be concluded that both manipulations affected the participants in the intended direction.

## 4.2 Assessing the impact of defaults on choice

Hypothesis 1 predicted that a default rule affects customers' choice of delivery mode. A chi-square test of homogeneity showed that there was a significant difference in the distribution of chosen delivery modes between respondents exposed to a green default delivery option and respondents exposed to an express (non-green) delivery default option $\chi^2 = 9.10$, $p = 0.01$; see Table 1). This held true also when comparing only treatment groups aware of their conflicting motives ($\chi^2 = 8.59$, $p = 0.01$) and unaware of any conflicting motives ($\chi^2 = 7.07$, $p = 0.03$). The propensity to choose a green

delivery option, then, was significantly higher when that green delivery option was set as default. Concurrently, the propensity to choose an express delivery option was significantly higher when that express delivery option was set as default. **Hypothesis 1 was thus supported.**

**Table 1.** Cross-tabulation of default option and chosen option

| Chosen option | Treatment condition | | $\chi^2$ | $p$ |
| | Green default | Express default | | |
| | $N$ (%) | $N$ (%) | | |
|---|---|---|---|---|
| Green delivery | 50 (19.6%) | 31 (11.7%) | | |
| Express delivery | 188 (73.7%) | 223 (84.5%) | 9.10 | 0.01 |
| Free delivery | 17 (6.7%) | 10 (3.8%) | | |
| Total | 255 (100%) | 264 (100%) | | |

## 4.3 Descriptive statistics of the data set

In this section, we present descriptive statistics of the data set collected in our 2 x 2 between-subjects experiment (see Table 2). Additionally, a fourfold contingency table can be found in Appendix E. This to simply summarize the examined variables and the characteristics of our sample – providing a background understanding to the data used for the subsequent analyses.

**Table 2.** Descriptive statistics of the data set

| | | Delivery mode | | | | | |
| | | Green delivery | | Express delivery | | Free delivery | |
| | Choice satisfaction | Choice proportion | Choice satisfaction | Choice proportion | Choice satisfaction | Choice proportion | Choice satisfaction |
| Treatment conditions | M (SD) | % | M (SD) | % | M (SD) | % | M (SD) |
|---|---|---|---|---|---|---|---|
| 1 | 5.13 (1.70) | 19.6 | 5.63 (1.36) | 73.7 | 5.05 (1.76) | 6.7 | 4.53 (1.66) |
| 2 | 5.11 (1.65) | 11.7 | 6.01 (1.46) | 84.5 | 4.95 (1.65) | 3.8 | 5.90 (1.24) |
| 3 | 4.71 (1.64) | 23.7 | 5.90 (1.43) | 67.2 | 4.26 (1.52) | 9.1 | 4.97 (1.45) |
| 4 | 5.47 (1.63) | 8.6 | 5.49 (1.33) | 89.6 | 5.48 (1.64) | 1.8 | 5.33 (2.49) |
| (1,3) | 4.75 (1.64) | 29.2 | 5.78 (1.32) | 57.5 | 4.26 (1.60) | 13.2 | 4.60 (1.47) |
| (1,4) | 5.40 (1.70) | 12.8 | 5.39 (1.43) | 85.2 | 5.43 (1.72) | 2.0 | 5.63 (1.24) |
| (2,3) | 4.68 (1.65) | 19.3 | 6.04 (1.57) | 74.8 | 4.26 (1.48) | 5.9 | 4.22 (2.80) |
| (2,4) | 5.56 (1.54) | 3.9 | 5.87 (0.84) | 94.6 | 5.53 (1.57) | 1.6 | 7.0 (0.00) |
| Total sample | 5.12 (1.68) | 15.6 | 5.78 (1.41) | 79.2 | 5.00 (1.70) | 5.2 | 5.04 (1.64) |

Note.
1 = Green default
2 = Express default
3 = High awareness of conflicting motives
4 = Low awareness of conflicting motives

## 4.4 Assessing the impact of choice on choice satisfaction

In the following sections, we extend our analysis of the customer's choice satisfaction beyond the default's effect on the choice alone.

**Table 3.** Impact of choice on choice satisfaction and emotional valence

|  | Choice of delivery mode | | | |
|  | Green delivery | Non-green delivery | | |
|  | *M* (*SD*) | *M* (*SD*) | *t* | *p* |
| Choice satisfaction | 5.78 (1.41) | 5.00 (1.70) | 4.43 | < 0.01 |
| Emotional valence | 5.39 (1.58) | 4.84 (1.64) | 2.79 | < 0.01 |

In hypothesis 2, we predicted that the choice of a green delivery option would result in higher customer choice satisfaction than the choice of a non-green delivery option. To address this, an independent t-test was conducted. The results showed that the mean choice satisfaction for participants who chose a green delivery option ($M = 5.78$, $SD = 1.41$) was significantly higher than for participants who chose a non-green delivery option (i.e., express or free delivery; $M = 5.00$, $SD = 1.70$; $t = 4.43$, $p < 0.01$; see Table 3). Thus, we conclude that the choice of a green delivery option indeed produces higher choice satisfaction than the choice of a non-green delivery option. **This means that hypothesis 2 was supported**.

Hypothesis 3 suggested that the impact of the choice of a (non-)green delivery option on choice satisfaction was mediated by the customer's emotional reactions to that choice. An independent t-test demonstrated that emotional valence was significantly more positive for respondents who chose a green delivery option ($M = 5.39$, $SD = 1.58$) than for respondents who chose a non-green delivery option (i.e., express or free delivery; $M = 4.84$, $SD = 1.64$; $t = 2.79$, $p < 0.01$; see Table 3). To test the direct link between choice satisfaction and the customer's emotional reactions, the Pearson

correlation between the two variables was computed. The correlation was significant and positive (r = 0.64, p < 0.01), indicating that emotional reactions to the choice of delivery mode indeed mediates the customer's evaluative judgments of that choice (i.e., choice satisfaction). **Thus, hypothesis 3 was supported.**

## 4.5 Examining the effects of the moderating variables

**Table 4.** The moderating effect of choice process on choice satisfaction

| Choice option | Choice process | | $t$ | $p$ |
| | Stick to default | Opt out default | | |
| | *M (SD)* | *M (SD)* | | |
| Green delivery | 5.63 (1.36) | 6.01 (1.46) | -1.18 | 0.24 |
| Express delivery | 4.95 (1.65) | 5.05 (1.76) | -0.58 | 0.56 |

In hypothesis 4, we predicted that the impact of the customer's choice of delivery mode on his or her choice satisfaction was moderated by the choice process as determined by the default option (i.e., to either opt out or stick to the pre-selected option). To address hypothesis 4a, we performed an independent t-test to compare the responses of participants who chose the green delivery option by inactively sticking to the green default and those who chose the green delivery option by actively opting out the non-green (express) default. The mean choice satisfaction was higher for those who chose the green delivery option actively (*M* = 6.01, *SD* = 1.46) than for those who chose it inactively (*M* = 5.63, *SD* = 1.36); however, these differences were not significant (*t* = -1.18, *p* = 0.24; see Table 4). To test hypothesis 4b, we then conducted another independent t-test to compare the responses of participants who chose the express (i.e., non-green) delivery option by inactively sticking to the express default and those who chose the express delivery option by actively opting out the green default. In contrast to our predictions, the mean choice satisfaction was higher for those who chose the express delivery option actively (*M* = 5.05, *SD* = 1.76) than for those who chose it inactively (*M* = 4.95, SD = 1.65). However, neither these differences were

statistically significant (t = 0.58, p = 0.56; see Table 4). The impact of the customer's choice of delivery mode on his or her choice satisfaction can thereby not be contended to be moderated by the customer's choice process. **Thus, both hypothesis 4a and hypothesis 4b were rejected.**

**Table 5.** The moderating effect of awareness of conflicting motives on choice satisfaction

| Choice option | Awareness of conflicting motives | | | |
| | High | Low | | |
| | *M (SD)* | *M (SD)* | *t* | *p* |
|---|---|---|---|---|
| Green delivery | 5.90 (1.43) | 5.49 (1.33) | 1.22 | 0.23 |
| Express delivery | 4.26 (1.52) | 5.48 (1.64) | -7.54 | < 0.01 |

Hypotheses 5 suggested that the impact of the customer's choice of delivery mode on his or her choice satisfaction was also moderated by the customer's awareness of his or her conflicting motives in the comparison of more or less environmentally friendly alternatives. To address hypothesis 5a, an independent t-test was conducted to compare the responses of participants who chose the green delivery option – either aware of their conflicting motives or unaware of any conflicting motives. The mean choice satisfaction was higher for those aware of their conflicting motives ($M$ = 5.90, $SD$ = 1.43) than for those unaware of any conflicting motives ($M$ = 5.49; $SD$ = 1.33). However, these differences were not statistically significant ($t$ = 1.22, $p$ = 0.23; see Table 5). To test hypothesis 5b, we then performed another independent t-test to compare the responses of participants who chose the express (i.e., non-green) delivery option – either aware of their conflicting motives or unaware of any conflicting motives. The mean choice satisfaction was lower for those aware of their conflicting motives (M = 4.26, SD = 1.52) than those unaware of any conflicting motives ($M$ = 5.48, $SD$ = 1.64). These differences were, on the other hand, statistically significant ($t$ = -7.54; $p$ < 0.01; see Table 5). The impact of the customer's choice of a *non-green* delivery option on his or her choice satisfaction is thus moderated by the customer's awareness of his or her conflicting motives in that choice situation; however, it cannot

be contended that the impact of the choice of a *green* delivery mode on choice satisfaction is moderated by the awareness of conflicting motives. **Thus, we found support for hypothesis 5b but not for hypothesis 5a.**

## 4.6 Summary of hypothesis testing

In summary, we found support for hypothesis 1, 2, 3, and 5b. Hypothesis 4a, 4b, and 5a was on the contrary not supported. Table 6 provides an overview of the results of the hypothesis testing.

**Table 6.** Summary of hypothesis testing

| Hypotheses | | Results |
|---|---|---|
| H1 | Consumers' propensity to choose a (non-)green delivery option in an online retailing context is higher when that option is set as default compared to when it is not. | Supported ($p = 0.01$) |
| H2 | The choice of a green (non-green) delivery option results in higher (lower) customer choice satisfaction. | Supported ($p < 0.01$) |
| H3 | This relationship is mediated by the customer's emotional reactions to that choice. | Supported ($p < 0.01$) |
| H4a | The choice of a green delivery mode results in higher choice satisfaction when that choice is made by actively opting out a non-green default option compared to when it is made by inactively sticking to a green default option. | Not supported ($p > 0.05$) |
| H4b | The choice of a non-green delivery mode results in lower choice satisfaction when that choice is made by actively opting out a green default option compared to when it is made by inactively sticking to a non-green default option. | Not supported ($p > 0.05$) |
| H5a | A customer aware (unaware) of his or her conflicting motives in a choice situation that involves comparisons of more or less environmentally friendly alternatives will be more (less) satisfied with the choice of a green delivery option. | Not supported ($p > 0.05$) |
| H5b | A customer aware (unaware) of his or her conflicting motives in a choice situation that involves comparisons of more or less environmentally friendly alternatives will be less (more) satisfied with the choice of a non-green delivery option. | Supported ($p < 0.01$) |

# 5. Discussion

In this chapter, we first summarize our main findings. We then discuss how the study contributes to previous research and what the managerial implications are. Finally, we consider the limitations of our thesis and provide suggestions for further research.

## 5.1 Summary of main findings

This thesis set out to answer the question: "Do defaults meant to alter customer choice ultimately also have an effect on customers' evaluative judgements?". More specifically, we examined whether, why, and when the outcome of a (non-)green default delivery option affects customer choice satisfaction in an online retailing context. Our findings suggest that default rules indeed alter customers' choice of delivery mode in a predictable manner; more customers are likely to choose a certain delivery option when that option is set as default. Beyond that choice, we found that customers experienced higher choice satisfaction when they chose a green delivery mode than when they chose a non-green delivery mode. This relationship was shown to be mediated by the customer's emotional reaction to that choice and partly moderated by the customer's awareness of his or her conflicting situational motives. A customer that chose a non-green delivery mode despite being aware of his or her conflicting motives in that choice situation was less satisfied with that choice than a customer unaware of any conflicting motives. However, we did not find support for the proposed moderating role of the customer's choice process; whether the choice of delivery mode was made actively (by opting out a default) or inactively (by sticking to a default) did not affect the customer's choice satisfaction.

## 5.2 Contributions

This paper offers an extension of the previous research on choice architecture and consumer behavior by examining psychological responses to defaults – beyond their effect on customer choice. Prior literature has primarily focused on how nudges in private and public domains can be used to influence individuals' decision-making to ultimately advance prosocial behavior. However, to the knowledge of the authors, no previous research has addressed how behavioral reactions to such nudges in turn

affect consumers' psychological responses. Thus, the main contribution of this thesis is adding both a deeper and broader understanding of default policies to the behavioral economics literature's discourse on nudging by examining effects that so far have been overlooked.

In alignment with existing literature on default nudges (e.g., Thaler and Sunstein, 2008; Sunstein, 2014), we found that defaults indeed alter customer choice in a predictable manner. While this result was quite expected, previous research suggests that the effectiveness of defaults varies across studies (Jachimowicz et al., 2019). Thus, this finding proves the effectiveness of default rules also in an online checkout retailing context. Beyond the impact on choice, our results show that although customers may not always walk their talk (that is, because of the attitude-behavior gap; Carrington et al., 2010), they are satisfied when they do. Customers who chose a green delivery option were more satisfied with their choice than customers who chose a non-green delivery option. This relationship between choice and choice satisfaction was shown to be mediated by the customer's emotional reactions to that choice, thus indicating that affective reactions can be evoked by customer choices in a delivery setting. This finding is in line with previous research suggesting that green consumption choices can increase positive emotions (White et al., 2019). To be highlighted here, however, is that participants' responses overall were favorable, meaning that the choice of a non-green delivery option did not result in either negative emotions or dissatisfaction. This finding contrasts previous research proposing that violations to societal ethical beliefs (e.g., environmental protection) evoke negative emotions (Peloza et al., 2013). A potential explanation to this might be that our manipulations were not strong enough for customers to assume personal responsibility for the unsustainable outcome.

In line with prior literature on decision-making (Botti and Iyengar, 2004; Botti and McGill, 2006), we expected that customers that chose to actively opt-out a default option would report more extreme evaluative judgements (i.e., greater choice (dis)satisfaction) than customers that inactively chose to stick to the default option. However, our study found no significant differences in choice satisfaction between respondents who decided to opt out versus to stick to a default. One explanation to this could be that defaults as such often go unnoticed. They are designed to make decision-making effortless (Sunstein, 2014); thus, it is likely that experiment

participants did not engage enough in the choice process to react to it with any strong emotions. This suggests that our manipulation of the participants' choice architecture may have been too weak to influence their choice satisfaction. Critics of defaults have argued that alterations to the choice architecture infringe the decision-maker's autonomy; yet empirical research on whether people exposed to defaults agree is limited. These findings suggest that although default rules alter customer behavior, they do not affect the customer's level of choice satisfaction. Thus, we add a new dimension to Thaler and Sunstein's (2008) concept of libertarian paternalism.

Previous research has suggested that self-concept (in)congruence in decision-making is a strong predictor of choice satisfaction (Jamal, 2004). In line with these findings, we found that customers who chose a non-green delivery option were more satisfied with their choice when they were not aware of any internal conflicting motives. However, in contrast to our beliefs, customers who despite their conflicting motives chose the green delivery option were not more satisfied with their choice than those without any conflicting motives. A possible explanation to this could be that the positive effect of choosing a green option was somewhat neutralized, as participants in both groups (conflicting motives vs. non-conflicting motives) were aware that the choice of the green delivery mode would imply that they would not get their product delivered in time.

## 5.3 Managerial implications

Digital shopping is here to stay (Charm et al., 2020). As more and more customers buy their products online, the demand for last-mile delivery is rapidly growing. The insights from this thesis propose novel implications for retailers on how default options in a delivery setting affect their customers. The results of this thesis suggest that although the default option was effective in altering customer behavior, the process in which the customer made their choice of delivery mode (i.e., to inactively stick to or to actively opt out a default) did not have an effect on their psychological responses (here, emotions and choice satisfaction). This indicates that although customers at times choose another alternative than the default, having to opt out this default does not negatively affect their choice satisfaction. Thus, online retailers are free to continuously use defaults as means to steer customer choice in a desired direction without having

to consider whether this alteration to the choice architecture may jeopardize customer choice satisfaction.

Our findings further indicate that customers who chose a green delivery mode are more satisfied with their choice than those who chose a non-green delivery option – even when that choice means that the purchase will not get delivered in time. Followingly, we suggest that green default delivery options not only push customer choices in a more sustainable direction, but that the choice to choose green in turn also makes the customer more satisfied. Thus, defaults are not only an efficient tool to help retailers reduce the $CO_2$ emissions of their last-mile logistics but ultimately also a way to increase customer satisfaction.

However, as trading off one's sustainability concerns with other attributes is sometimes inevitable, a retailer with the goal to maximize customer satisfaction should offer a wide range of delivery options. This to reduce the risk of creating cognitive dissonance amongst sustainable customers having to defy their own self-concept by choosing a non-green option when the green option does not fit.

## 5.4 Limitations and suggestions for further research

The results of our thesis are subjected to limitations. Whilst role-play scenarios are suggested to generate psychological and behavioral reactions comparable to those in real-life situations (Wason et al., 2002), we cannot entirely rule out that responses would look different outside the controlled experimental setting. While an experimental research design allowed us to examine different motives in an online checkout choice situation, our study only covered two different situational motives. Future research should thus address other motives to give a more comprehensive understanding of how this could affect retailing decision-making.

Few, if any, previous studies have investigated the link between a customer's choice following exposure to a default, its effect on choice satisfaction, and the mediating role of emotions; thus, further research is needed to fully explain this relationship. One suggestion is to investigate whether alterations to the choice architecture could evoke specific emotions related to sustainable consumption choices (e.g., guilt, shame, and

pride; White et al., 2019), and if these emotions, in turn, could have an impact on customers' choice satisfaction.

Although we did not find any significant differences in choice satisfaction between customers who either had actively opt-out or inactivity stuck to a default, we consider this thesis to be an interesting point of departure for further research on consumers' psychological responses to nudges. We therefore suggest that the priority for future studies should be to examine the effects of more prominent nudges (e.g., social norms and reminders) and to also do so in other contexts (e.g., grocery retailing). This to more comprehensively evaluate whether nudges meant to alter consumer choices ultimately have an impact on choice satisfaction. When it comes to environmental issues, it is our belief that stronger consideration of insights from decision-making research will contribute to an improved understanding and encouragement of sustainable behavior.

# References

Anderson, C., 2003. The Psychology of Doing Nothing: Forms of Decision Avoidance Result from Reason and Emotion. *Psychological Bulletin,* **129**(1), pp. 139-67.

Ansher, C., Ariely, C., Nagler, A., Rudd, M., Schwartz, J. and Shah, A., 2014. Better Medicine by Default. *Medical Decision Making: An International Journal of the Society for Medical Decision Making,* **34**(2), pp. 147-158.

Antal, M. and Hukkinen, J.L., 2010. The Art of The Cognitive War to Save the Planet. *Ecological Economics,* **69**(5), pp. 937-943.

Antonides, G. and Welvaarts, M., 2020. Effects of Default Option and Lateral Presentation on Consumer Choice of The Sustainable Option in an Online Choice Task. *Sustainability,* **12**(13), pp. 5484.

Bagozzi, R., Gopinath, M. and Nyer, P., 1999. The Role of Emotions in Marketing. *Journal of The Academy of Marketing Science,* **27**, pp. 184-206.

Belk, R., Devinney, T. and Eckhardt, G., 2005. Consumer Ethics Across Cultures. *Consumption markets & culture,* **8**(3), pp. 275-289.

Bettman, J.R., Luce, M.F. and Payne, J.W., 1998. Constructive Consumer Choice Processes. *Journal of Consumer Research*, **25**(3), pp.187-217.

Botti, S. and Iyengar, S.S., 2004. The Psychological Pleasure and Pain of Choosing: When People Prefer Choosing at the Cost of Subsequent Outcome Satisfaction. *Journal of Personality and Social Psychology,* **87**(3), pp. 312-26.

Botti, S. and Mcgill, A.L., 2006. When Choosing Is Not Deciding: The Effect of Perceived Responsibility on Satisfaction. *Journal of Consumer Research*, **33**(2), pp. 211-219.

Boulding, W., Kalra, A., Staelin, R. and Zeithaml, V., 1993. A Dynamic Process Model of Service Quality: From Expectations to Behavioral Intentions. *Journal of Marketing Research,* **30**(1), pp. 7-27.

Briedis, H., Kronschnabl, A., Rodriquez, A. and Ungerman, K., 2020. Adapting to the Next Normal in Retail: The Customer Experience. Available at:

https://www.mckinsey.com/industries/retail/our-insights/adapting-to-the-next-normal-in-retail-the-customer-experience-imperative (Accessed 21-05-10).

Brown, C.L. and Krishna, A., 2004. The Skeptical Shopper: A Metacognitive Account for The Effects of Default Options on Choice. *Journal of Consumer Research,* **31**(3), pp. 529-539.

Bryman, A. and Buchanan, D.A., 2018. Unconventional Methodology in Organization and Management Research. *Oxford University Press.*

Carlsmith, J.M. and Gross, A.E., 1969. Some Effects of Guilt on Compliance. *Journal of Personality and Social Psychology,* **11**(3), pp. 232-239.

Carrington, M., Neville, B. and Whitwell, G., 2010. Why Ethical Consumers Don't Walk Their Talk: Towards a Framework for Understanding the Gap Between the Ethical Purchase Intentions and Actual Buying Behaviour of Ethically Minded Consumers. *Journal of Business Ethics,* **97**(1), pp. 139-158.

Carrington, M.J., Neville, B.A. and Whitwell, G.J., 2014. Lost in Translation: Exploring the Ethical Consumer Intention–Behavior Gap. *Journal of Business Research,* **67**(1), pp. 2759-2767.

Charm, T., Coggins, B., Robinson, K. and Wilkie, J., 2020. The Great Consumer Shift: Ten Charts that Show How US Shopping Behavior is Changing. Available at: https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/the-great-consumer-shift-ten-charts-that-show-how-us-shopping-behavior-is-changing (Accessed 2021-05-17).

Cronin. JR, J., Brady, M. and Hult, G.T.M., 2000. Assessing the Effects of Quality, Value, and Customer Satisfaction on Consumer Behavioral Intentions in Service Environments. *Journal of Retailing,* **76**(2), pp. 193-218.

Demarque, C., Charalambides, L., Hilton, D.J. and Waroquier, L., 2015. Nudging Sustainable Consumption: The Use of Descriptive Norms to Promote a Minority Behavior in a Realistic Online Shopping Environment. *Journal of Environmental Psychology,* **43**, pp. 166-174.

Devinney, T. and Auger, P., 2007. Do What Consumers Say Matter? The Misalignment of Preferences with Unconstrained Ethical Intentions. *Journal of Business Ethics,* **76**(4), pp. 361-383.

Eliasson, A., 2018. Kvantitativ metod från början. *Studentlitteratur AB.*

Engler, J., Abson, D.J. and Von Wehrden, H., 2019. Navigating Cognition Biases in The Search for Sustainability. *Ambio,* **48**(6), pp. 605-618.

Escudero, R., Alves, F., Ehmler, M., Goel, K. and Filonov, V., 2020. Can Delivery Companies Keep up with the E-Commerce Boom? Available at: https://www.bcg.com/publications/2020/can-delivery-companies-keep-up-with-the-ecommerce-boom (Accessed 2021-05-10).

Fisher, R.J., 1993. Social Desirability Bias and The Validity of Indirect Questioning. *Journal of Consumer Research,* **20**(2), pp. 303-315.

Fornell, C., 1992. A National Customer Satisfaction Barometer: The Swedish Experience. *Journal of Marketing,* **56**(1), pp. 6-21.

Forsberg, J., 2021. Paketrekord för PostNord under påsken: "Nästan uppe i Black Friday-nivåer". Available at: https://www.market.se/nyhet/paketrekord-for-postnord-under-pasken-nastan-uppe-i-black-friday-nivaer (Accessed 21-05-10).

Garver, M., Williams, Z., Taylor, G. and Wynne, W., 2012. Modelling Choice in Logistics: A Managerial Guide and Application. *International Journal of Physical Distribution & Logistics Management,* **42**(2).

Goswami, I. and Urminsky, O., 2016. When Should the Ask Be a Nudge? The Effect of Default Amounts on Charitable Donations. *Journal of Marketing Research,* **53**(5), pp. 829-846.

Hausman, D.M., 2015. Economics, Philosophy of. In: J.D. Wright, ed, *International Encyclopedia of the Social & Behavioral Sciences (Second Edition).* Oxford: Elsevier, pp. 99-104.

Hoshino-Browne, E., Zanna, A.S., Spencer, S.J., Zanna, M.P., Kitayama, S. and Lackenbauer, S., 2005. On the Cultural Guises of Cognitive Dissonance: The Case

of Easterners and Westerners. *Journal of Personality And Social Psychology,* **89**(3), pp. 294-310.

Hummel, D. and Maedche, A., 2019. How Effective is Nudging? A Quantitative Review on The Effect Sizes and Limits of Empirical Nudging Studies. *Journal of Behavioral and Experimental Economics,* **80**, pp. 47-58.

Ignat, B. and Chankov, S., 2020. Do E-Commerce Customers Change their Preferred Last-Mile Delivery Based on its Sustainability Impact? *The International Journal of Logistics Management,* **31**(3).

Ingendahl, M., Hummel, D., Maedche, A. and Vogel, T., 2021. Who Can Be Nudged? Examining Nudging Effectiveness in The Context of Need for Cognition and Need for Uniqueness. *Journal of Consumer Behaviour,* **20**(2), pp. 324-336.

Jachimowicz, J., Duncan, S., Weber, E. and Johnson, E., 2019. When and Why Defaults Influence Decisions: A Meta-Analysis of Default Effects. *Behavioural Public Policy,* **3**(2), pp. 1-28.

Jacoby, J., 1978. Consumer Research: A State of the Art Review. *Journal of Marketing*, **42**(4), pp. 87-96.

Jamal, A., 2004. Retail Banking and Customer Behaviour: A Study of Self Concept, Satisfaction and Technology Usage. *The International Review of Retail, Distribution and Consumer Research,* **14**(3), pp. 357-379.

Johnson, E.J. and Goldstein, D.G., 2003. Do Defaults Save Lives? *Science,* **302**, pp. 1338-1339.

Johnson, E.J., Shu, S.B., Dellaert, B.G.C. and Fox, C.R., 2012. Beyond Nudges: Tools of a Choice Architecture. *Marketing Letters*, **23**, pp. 487-504.

Kaiser, F.G. and Shimoda, T.A., 1999. Responsibility as a Predictor of Ecological Behavior. *Journal of Environmental Psychology,* **19**(3), pp. 243-253.

Latkin, C.A., Edwards, C., Davey-Rothwell, M.A. and Tobin, K.E., 2017. The Relationship Between Social Desirability Bias and Self-Reports of Health, Substance Use, and Social Network Factors Among Urban Substance Users in Baltimore, Maryland. *Addictive Behaviors,* **73**, pp. 133-136.

Lemoine, I., Lindström, K., Lindström, L. and Salzer, S., 2019. Nudging i praktiken: så gör organisationen det lätt att göra rätt. *Flexband.*

Lerner, J.S. and Keltner, D., 2000. Beyond Valence: Toward a Model of Emotion-Specific Influences on Judgement and Choice. *Cognition and Emotion,* **14**(4), pp. 473-493.

Lim, S.F.W.T., Jin, X. and Srai, J.S., 2018. Consumer-Driven E-Commerce. *International Journal of Physical Distribution & Logistics Management,* **48**(3), pp. 308-332.

Luce, M.F., Payne, J.W. and Bettman, J.R., 1999. Emotional Trade-Off Difficulty and Choice. *Journal of Marketing Research,* **36**(2), pp. 143-159.

Luchs, M.G. and Kumar, M., 2017. "Yes, but this Other One Looks Better/Works Better": How do Consumers Respond to Trade-offs Between Sustainability and Other Valued Attributes? *Journal of Business Ethics,* **140**(3), pp. 567-584.

Manerba, D., Mansini, R. and Zanotti, R., 2018. Attended Home Delivery: Reducing Last-Mile Environmental Impact by Changing Customer Habits. *IFAC-PapersOnLine,* **51**(5), pp. 55-60.

Momsen, K. and Stoerk, T., 2014. From Intention to Action: Can Nudges Help Consumers to Choose Renewable Energy? *Energy Policy,* **74**, pp. 376-382.

Nguyen, D.H., Leeuw, S.D., Dullaert, W. and Foubert, B.P.J., 2019. What is the Right Delivery Option for You? Consumer Preferences for Delivery Attributes in Online Retailing. *Journal of Business Logistics,* **40**(4), pp. 299-321.

Oliver, R.L., 1997. Satisfaction: A Behavioral Perspective on the Consumer. *McGraw-Hill*, New York.

Park, C., Jun, S. and Macinnis, D., 2000. Choosing What I Want Versus Rejecting What I Do Not Want: An Application of Decision Framing to Product Option Choice Decisions. *Journal of Marketing Research,* **37**(2), pp. 187-202.

Peloza, J., White, K. and Shang, J., 2013. Good and Guilt-Free: The Role of Self-Accountability in Influencing Preferences for Products with Ethical Attributes. *Journal of Marketing,* **77**(1), pp. 104-119.

Pelsmacker, P.D., Driesen, L. and Rayp, G., 2005. Do Consumers Care About Ethics? Willingness to Pay for Fair-Trade Coffee. *Journal of Consumer Affairs,* **39**(2), pp. 363-385.

Peterson, R., 2005. Response Construction in Consumer Behavior Research. *Journal of Business Research,* **58**(3), pp. 348-353.

Pham, M., 2004. The Logic of Feeling. *Journal of Consumer Psychology,* **14**(4).

Pichert, D. and Katsikopoulos, K., 2008. Green Defaults: Information Presentation and Pro-Environmental Behaviour. *Journal of Environmental Psychology,* **28**(1), pp. 63-73.

PostNord, 2021. E-barometern 2020.

Pulles, N.J. and Loohuis, R.P.A., 2020. Managing Buyer-Supplier Conflicts: The Effect of Buyer Openness and Directness on a Supplier's Willingness to Adapt. *Journal of Supply Chain Management,* **56**(4), pp. 65-81.

Richins, M., 1997. Measuring Emotions in the Consumption Experience. *Journal of Consumer Research,* **24**(2), pp. 127-46.

Ross, S.M. and Milne, G.R., 2020. Price? Quality? Or Sustainability? Segmenting by Disposition Toward Self-other Tradeoffs Predicts Consumers' Sustainable Decision-Making. *Journal of Business Ethics.*

Rungtusanatham, M., Wallin, C. and Eckerd, S., 2011. The Vignette in a Scenario-Based Role-Playing Experiment. *Journal of Supply Chain Management,* **47**(3), pp. 9-16.

Russell, J.A., 2003. Core Affect and the Psychological Construction of Emotion. *Psychological Review,* **110**(1), pp. 145-172.

Schwarz, N., 1990. Feelings as Information: Informational and Motivational Functions of Affective States. In: *Handbook of Motivation and Cognition.* Guilford Press.

Schwarz, N., 2003. Self-reports in Consumer Research: The Challenge of Comparing Cohorts and Cultures. *Journal of Consumer Research,* **29**(4), pp. 588-594.

Schwarz, N. and Clore, G., 1988. How Do I Feel About It? Informative Functions of Affective States. In: *Affect, Cognition, and Social Behavior*. Hogrefe, pp. 44-62.

Sharma, A. and Stafford, T., 2000. The Effect of Retail Atmospherics on Customers' Perceptions of Salespeople and Customer Persuasion: An Empirical Investigation. *Journal of Business Research,* **49**(2), pp. 183-191.

Shaver, J.P., 1993. What Statistical Significance Testing Is, and What It Is Not. *The Journal of Experimental Education,***61**(4), pp. 293-316.

Slovic, P., Finucane, M.L., Peters, E. and Macgregor, D.G., 2007. The Affect Heuristic. *European Journal of Operational Research,* **177**(3), pp. 1333-1352.

Söderlund, M., 2006. Measuring Customer Loyalty with Multi-Item Scales. *International Journal of Service Industry Management,* **17**(1), pp. 76-98.

Söderlund, M., 2010. Experiment med människor. *Liber.*

Söderlund, M., 2016. Employee Mere Presence and its Impact on Customer Satisfaction. *Psychology & Marketing,* **33**(6), pp. 449-464.

Söderlund, M., 2018. Experiments in Marketing. *Studentlitteratur AB.*

Söderlund, M., 2019. Can the Label 'Member' in a Loyalty Program Context Boost Customer Satisfaction? *The International Review of Retail, Distribution and Consumer Research,* **29**(3), pp. 340-357.

Söderlund, M. and Oikarinen, E., 2018. Joking with Customers in the Service Encounter has a Negative Impact on Customer Satisfaction. *Journal of Retailing and Consumer Services,* **42**, pp. 55-64.

Söderlund, M. and Rosengren, S., 2008. Revisiting the Smiling Service Worker and Customer Satisfaction. *International Journal of Service Industry Management,* **19**(5), pp. 552-574.

Söderlund, M. and Öhman, N., 2003. Behavioral Intentions in Satisfaction Research Revisited. *Journal of Consumer Satisfaction, Dissatisfaction, and Complaining Behavior*, **16**, 53-66.

Söderlund, M. and Öhman, N., 2005. Assessing Behavior Before It Becomes Behavior: An Examination of the Role of Intentions as a Link Between Satisfaction and Repatronizing Behavior. *International Journal of Service Industry Management,* **16**(2), pp. 169-185.

Song, J.H. and Zinkhan, G., 2008. Determinants of Perceived Web Site Interactivity. *Journal of Marketing,* **72**(2), pp. 99-113.

Spataro, J., 2020. 2 Years of Digital Transformation in 2 Months. Available at: https://www.microsoft.com/en-us/microsoft-365/blog/2020/04/30/2-years-digital-transformation-2-months/ (Accessed 21-05-10).

Sunstein, C., 2014. Nudging: A Very Short Guide. *Journal of Consumer Policy,* **37**(4), pp. 583-588.

Szmigin, I., Carrigan, M. and Mceachern, M.G., 2009. The Conscious Consumer: Taking a Flexible Approach to Ethical Behaviour. *International Journal of Consumer Studies,* **33**(2), pp. 224-231.

Thaler, R. and Sunstein, C., 2003. Libertarian Paternalism. *American Economic Review,* **93**(2), pp. 175-179.

Thaler, R. and Sunstein, C., 2008. Nudge: Improving Decisions About Health, Wealth, and Happiness. *Yale University Press.*

Theotokis, A. and Manganari, E., 2015. The Impact of Choice Architecture on Sustainable Consumer Behavior: The Role of Guilt. *Journal of Business Ethics,* **131**(2), pp. 423-437.

Thomas, S.P., Thomas, R.W., Manrodt, K.B. and Rutner, S.M., 2013. An Experimental Test of Negotiation Strategy Effects on Knowledge Sharing Intentions in Buyer–Supplier Relationships. *Journal of Supply Chain Management,* **49**(2), pp. 96-113.

Tokar, T., Williams, B.D. and Fugate, B.S., 2020. I Heart Logistics—Just Don't Ask Me to Pay for it: Online Shopper Behavior in Response to a Delivery Carrier Upgrade and Subsequent Shipping Charge Increase. *Journal of Business Logistics,* **41**(3), pp. 182-205.

Viswanathan, M., 2008. Measurement Error in Experimental Designs in Consumer Psychology. In C.P. Haugtvedt, P. Herr, and F. Kardes (Eds.), *Handbook of Consumer Psychology.* New York, NY: Psychology Press, pp. 1133-1159.

Wason, K.D., Polonsky, M.J. and Hyman, M.R., 2002. Designing Vignette Studies in Marketing. *Australasian Marketing Journal (AMJ),* **10**(3), pp. 41-58.

White, K., Habib, R. and Hardisty, D.J., 2019. How to Shift Consumer Behaviors to Be More Sustainable: A Literature Review and Guiding Framework. *Journal of Marketing,* **83**(3), pp. 22-49.

World Economic Forum, 2020. The Future of the Last-Mile Ecosystem. Available at: http://www3.weforum.org/docs/WEF_Future_of_the_last_mile_ecosystem.pdf (Accessed 21-05-10).

Young, W., Hwang, K., Mcdonald, S. and Oates, C.J., 2010. Sustainable Consumption: Green Consumer Behaviour When Purchasing Products. *Sustainable Development,* **18**(1), pp. 20-31.

Zhang, S. and Fitzsimons, G.J., 1999. Choice-Process Satisfaction: The Influence of Attribute Alignability and Option Limitation. *Organizational Behavior and Human Decision Processes,* **77**(3), pp. 192-214.

# Appendix A. Treatment conditions

## A.1 Scenario versions in Swedish

### Scenario 1:
Low awareness of conflicting motives

### Scenario 2:
High awareness of conflicting motives

Föreställ dig att du ska handla en t-shirt hos en e-handlare. Efter att ha valt färg och en passande storlek lägger du t-shirten i varukorgen och klickar dig vidare för att fullfölja köpet. Väl i kassan fyller du i dina betalningsuppgifter och ombeds därefter att välja leveranssätt. Det är nu onsdag kväll och du har tänkt ha på dig t-shirten på en tillställning du ska på i helgen – det är därför viktigt för dig att få den levererad så snabbt som möjligt.

Föreställ dig att du ska handla en t-shirt hos en e-handlare. Efter att ha valt färg och en passande storlek lägger du t-shirten i varukorgen och klickar dig vidare för att fullfölja köpet. Väl i kassan fyller du i dina betalningsuppgifter och ombeds därefter att välja leveranssätt. Det är nu onsdag kväll och du har tänkt ha på dig t-shirten på en tillställning du ska på i helgen – det är därför viktigt för dig att få den levererad så snabbt som möjligt. **Samtidigt bryr du dig också om hållbarhet och försöker att alltid fatta så miljövänliga beslut som möjligt i din vardag.**

## A.2 Scenario versions in English

### Scenario 1:
Low awareness of conflicting motives

### Scenario 2:
High awareness of conflicting motives

Imagine that you are going to buy a t-shirt online. After you have chosen the right color and size, you put the t-shirt in the shopping bag and proceed to the checkout page to complete the purchase. At the checkout, you fill in your payment details and are asked to select delivery mode. It is Wednesday night and you have planned to wear the t-shirt to an event this upcoming weekend. Therefore, it is important for you to get it delivered as quickly as possible.

Imagine that you are going to buy a t-shirt online. After you have chosen the right color and size, you put the t-shirt in the shopping bag and proceed to the checkout page to complete the purchase. At the checkout, you fill in your payment details and are asked to select delivery mode. It is Wednesday night and you have planned to wear the t-shirt to an event this upcoming weekend. Therefore, it is important for you to get it delivered as quickly as possible. **At the same time, you are concerned with sustainability and aim to always make as green choices as possible in your everyday life.**

## A.3 Default delivery options

**Checkout 1**
Green default delivery option

**Checkout 2**
Express default delivery option

### KASSA

**VARUKORG**

Crew-Neck T-shirt
Storlek: M
159 kr

— 1 +

% Rabattkod/Presentkort

**Totalt pris (inkl. moms)**

**LEVERANSINFORMATION**

- ● Utlämningsställe
  29 SEK · 3-5 veckodagar
  Miljövänligt

- ○ Utlämningsställe
  29 SEK · 1-2 veckodagar
  Express

- ○ Utlämningsställe
  Gratis · 4-7 veckodagar

### KASSA

**VARUKORG**

Crew-Neck T-shirt
Storlek: M
159 kr

— 1 +

% Rabattkod/Presentkort

**Totalt pris (inkl. moms)**

**LEVERANSINFORMATION**

- ● Utlämningsställe
  29 SEK · 1-2 veckodagar
  Express

- ○ Utlämningsställe
  29 SEK · 3-5 veckodagar
  Miljövänligt

- ○ Utlämningsställe
  Gratis · 4-7 veckodagar

# Appendix B. Prestudy survey
## Example from treatment group 1 (scenario 1 and checkout 1)

**Q1.1**

**Hej och välkommen!**

Den här undersökningen utförs av två studenter vid Handelshögskolan i Stockholm.

Genom att fortsätta till följande sidor ger du oss ditt godkännande till att använda dina svar i vår forskning. I enlighet med dataskyddsförordningen (GDPR) kommer dina personuppgifter att hanteras konfidentiellt.

Enkäten tar ca 3 min att genomföra. Du kan när som helst välja att avsluta din medverkan genom att stänga ner webbläsarfönstret. Har du några frågor är du varmt välkommen att kontakta oss på 50616@student.hhs.se.

**Stort tack för din medverkan!**

Sara Hedman och Ebba Österlund

**Q2.1**

Du kommer härnäst att få ta del av ett givet scenario att sätta dig in i. Det är därför viktigt att du läser texten noggrant och granskar bilden ordentligt. Därefter följer ett visst antal frågor som vi ber dig att besvara sanningsenligt.

**Q3.1**

Föreställ dig att du ska handla en t-shirt hos en e-handlare. Efter att ha valt färg och en passande storlek lägger du t-shirten i varukorgen och klickar dig vidare för att fullfölja köpet. Väl i kassan fyller du i dina betalningsuppgifter och ombeds därefter att välja leveranssätt. Det är nu onsdag kväll och du har tänkt ha på dig t-shirten på en tillställning du ska på i helgen – det är därför viktigt för dig att få den levererad så snabbt som möjligt.

**Q4.1**

Du kommer härnäst att få se själva utcheckningssidan hos e-handlaren. Ta god tid på dig och granska noggrant de olika leveransalternativen innan du väl klickar dig vidare.

## Q5.1

KASSA

**VARUKORG**

Crew-Neck T-shirt
Storlek: M
159 kr

— 1 +                                    🗑

%   Rabattkod/Presentkort                    +

**Totalt pris (inkl. moms)**              **159 kr**

**LEVERANSINFORMATION**

⬤  Utlämningsställe
   29 SEK · 3-5 veckodagar
   Miljövänligt

◯  Utlämningsställe
   29 SEK · 1-2 veckodagar
   Express

◯  Utlämningsställe
   Gratis · 4-7 veckodagar

## Q6.1

Till vilken grad instämmer du med följande påståenden?

## Q6.2

Det förvalda leveranssättet högst upp var mest miljövänligt

Instämmer inte alls │ ◯   ◯   ◯   ◯   ◯   ◯   ◯ │ Instämmer helt

## Q6.3

I scenariot beskrevs jag som en person som bryr sig om hållbarhet

Instämmer inte alls │ ◯   ◯   ◯   ◯   ◯   ◯   ◯ │ Instämmer helt

## Q6.4

Situationen som beskrevs i scenariot var realistisk

Instämmer inte alls │ ◯   ◯   ◯   ◯   ◯   ◯   ◯ │ Instämmer helt

**Q6.5**

### Jag kunde föreställa mig själv i situationen som beskrevs

Instämmer inte alls | ○ ○ ○ ○ ○ ○ ○ | Instämmer helt

**Q6.6**

### Situationen som beskrevs var tydlig

Instämmer inte alls | ○ ○ ○ ○ ○ ○ ○ | Instämmer helt

**Q6.7**

### Leveransalternativen var realistiska

Instämmer inte alls | ○ ○ ○ ○ ○ ○ ○ | Instämmer helt

**Q6.8**

### Jag skulle inte bli förvånad om jag stötte på dessa leveransalternativ i verkligheten

Instämmer inte alls | ○ ○ ○ ○ ○ ○ ○ | Instämmer helt

**Q6.9**

### Skillnaden mellan leveransalternativen var tydlig

Instämmer inte alls | ○ ○ ○ ○ ○ ○ ○ | Instämmer helt

**Q7.1**

Hur gammal är du (i siffror)?

**Q8.1**

Ditt kön

○ Kvinna
○ Man
○ Ickebinär
○ Föredrar att inte svara

**Q9.1**

Tack för att du tog dig tid att göra denna undersökning.
Ditt svar har registrerats.

## Appendix C. Main study survey
### Example from treatment group 1 (scenario 1 and checkout 1)

**Q1.1**

Hej och välkommen!

Den här undersökningen utförs av två studenter vid Handelshögskolan i Stockholm som en del av vårt examensarbete.

Genom att fortsätta till följande sidor ger du oss ditt godkännande till att använda dina svar i vår forskning. I enlighet med dataskyddsförordningen (GDPR) kommer dina personuppgifter att hanteras konfidentiellt.

Enkäten tar ca 7 min att genomföra. Du kan när som helst välja att avsluta din medverkan genom att stänga ner webbläsarfönstret. Har du några frågor är du varmt välkommen att kontakta oss på 50616@student.hhs.se.

Stort tack för din medverkan!

Sara Hedman och Ebba Österlund

**Q2.1**

Du kommer härnäst att få ta del av ett fiktivt scenario att sätta dig in i. Därefter följer ett visst antal frågor som vi ber dig att besvara utifrån att du befinner dig i denna givna situation. Det är därför väldigt viktigt att du läser scenariot noggrant från början.

**Q3.1**

Föreställ dig att du ska handla en t-shirt hos en e-handlare. Efter att ha valt färg och en passande storlek lägger du t-shirten i varukorgen och klickar dig vidare för att fullfölja köpet. Väl i kassan fyller du i dina betalningsuppgifter och ombeds därefter att välja leveranssätt. Det är nu onsdag kväll och du har tänkt ha på dig t-shirten på en tillställning du ska på i helgen – det är därför viktigt för dig att få den levererad så snabbt som möjligt.

**Q4.1**

Du kommer nu att få se själva utcheckningssidan hos e-handlaren och därefter välja leveranssätt. Ta god tid på dig och överväg noga de olika leveransalternativen innan du väl fattar ett beslut utifrån det scenario du tog del av.

**Q5.1**

KASSA

**VARUKORG**

Crew-Neck T-shirt
Storlek: M
159 kr

— 1 +                                    🗑

%   Rabattkod/Presentkort                  +

Totalt pris (inkl. moms)                   159 kr

**LEVERANSINFORMATION**

- ⦿ Utlämningsställe
  29 SEK · 3-5 veckodagar
  Miljövänligt

- ◯ Utlämningsställe
  29 SEK · 1-2 veckodagar
  Express

- ◯ Utlämningsställe
  Gratis · 4-7 veckodagar

**Q5.2**

Vilket leveransalternativ väljer du?

- ⦿ Utlämningsställe, 29 SEK, 3–5 veckodagar, Miljövänligt
- ◯ Utlämningsställe, 29 SEK, 1–2 veckodagar, Express
- ◯ Utlämningsställe, Gratis, 4–7 veckodagar

**Q6.1**

Hur troligt är det att du kommer att fullfölja ditt köp?

Inte alls troligt | ◯   ◯   ◯   ◯   ◯   ◯   ◯ | Mycket troligt

## Q7.1

### Hur känner du dig nu efter att ha gjort ditt val av leveranssätt?

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Negativa känslor | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Positiva känslor |
| Ledsen | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Glad |
| Dåligt humör | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Bra humör |

## Q8.1

Hur skulle du sammanfatta din syn på ditt val av leveranssätt?

## Q8.2

### Jag är nöjd med mitt val av leveranssätt

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Instämmer inte alls | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Instämmer helt |

## Q8.3

### Jag tror att jag fattade rätt beslut när jag valde leveranssätt

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Instämmer inte alls | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Instämmer helt |

## Q8.4

### Sammantaget är jag tillfredsställd med valet av leveranssätt

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Instämmer inte alls | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Instämmer helt |

## Q9.1

### Baserat på din upplevelse av köptillfället, vad är ditt intryck av e-handlaren?

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Dålig | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Bra |
| Ogillar | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Gillar |
| Negativt intryck | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Positivt intryck |

## Q10.1

### Hur troligt är det att du skulle besöka samma e-handlare igen?

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Inte alls troligt | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Mycket troligt |

## Q11.1

Välj siffran 5

- ○ 2
- ○ 8
- ○ 5
- ○ 7

## Q12.1

Frågorna som följer på kommande sidor berör dig och ditt köpbeteende.

## Q13.1

Hur van är du vid att handla mode online?

Mycket ovan | ○   ○   ○   ○   ○   ○   ○ | Mycket van

## Q13.2

Hur ofta handlar du uppskattningsvis mode online?

- ○ Flera gånger per vecka
- ○ En gång i veckan
- ○ 2–3 gånger per månad
- ○ En gång in månaden
- ○ Mer sällan
- ○ Aldrig

## Q14.1

Hur viktiga är följande attribut när du vanligtvis väljer mellan olika leveransalternativ?

| | 1. Inte alls viktigt | 2 | 3 | 4 | 5 | 6 | 7. Mycket viktigt |
|---|---|---|---|---|---|---|---|
| Pris | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Bekvämlighet | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Hållbarhet | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Tid | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

**Q15.1**

I scenariot beskrevs jag som en person som bryr sig om hållbarhet

Instämmer inte alls ○ ○ ○ ○ ○ ○ ○ Instämmer helt

**Q15.2**

Jag valde det mest miljövänliga leveranssättet av de tre alternativen som erbjöds

Instämmer inte alls ○ ○ ○ ○ ○ ○ ○ Instämmer helt

**Q16.1**

Hur gammal är du (i siffror)?

**Q17.1**

Ditt kön

○ Kvinna
○ Man
○ Ickebinär
○ Föredrar att inte svara

**Q18.1**

Vad ombads du att göra i denna undersökning?

○ Boka en tågbiljett
○ Köpa en t-shirt
○ Jämföra försäkringsbolag

**Q19.1**

Var vänlig och fyll i din e-postadress ifall du vill vara med i utlottningen av ett presentkort värt 500 SEK på Åhléns.

**Q20.1**

Tack för att du tog dig tid att göra denna undersökning.
Ditt svar har registrerats.

# Appendix D. Data collection

## Facebook groups for survey distribution:

- **Lyxloppis för hela Sverige**

  16,900 members; buying and selling of clothing, accessories and furniture.

- **Lyxloppis Mode**

  71,600 members; buying and selling of luxurious clothing.

- **Circle of Clothes**

  37,400 members; buying and selling of clothing and accessories.

- **Labels We Love**

  42,100 members; buying and selling of branded clothing and accessories.

- **What We Wear**

  3,600 members; buying and selling of branded menswear.

- **Stockholm and Sweden Streetwear**

  6,700 members; buying and selling of streetwear.

- **Polarn O. Pyret Köp och sälj**

  32,200 members; buying and selling of children clothing.

- **Svensk E-handel**

  21,000 members; discussions about retail trends, services and solutions.

# Appendix E. Tables

**Table E.1.** Fourfold contingency table of the data set

| | | High awareness of conflicting motives | | Low awareness of conflicting motives | | Marginal means |
| :-- | :-- | :-: | :-: | :-: | :-: | :-: |
| | | Choice green delivery | Choice express delivery | Choice green delivery | Choice express delivery | |
| **Green default** | % | 29.2 | 57.5 | 12.8 | 85.2 | |
| | Choice satisfaction | 5.78 | 4.26 | 5.39 | 5.43 | 5.22 |
| | Emotional valence | 5.01 | 4.18 | 5.44 | 5.27 | 4.98 |
| **Express default** | % | 19.3 | 74.8 | 3.9 | 94.6 | |
| | Choice satisfaction | 6.04 | 4.26 | 5.87 | 5.53 | 5.43 |
| | Emotional valence | 5.81 | 4.46 | 5.40 | 5.13 | 5.20 |
| | | | | | | **Totals** |
| **Marginal means** | Choice satisfaction | 5.91 | 4.26 | 5.63 | 5.48 | 5.32 |
| | Emotional valence | 5.41 | 4.32 | 5.42 | 5.20 | 5.09 |