

ARE CONSUMERS HABITUAL LIARS?

**A QUANTITATIVE STUDY OF FACTORS INFLUENCING
SWEDISH CONSUMERS' PURCHASE INTENTION FOR
SUSTAINABLE PRODUCTS**

NELLIE GUNNARSSON

LOVISA HEDVALL ROSQVIST

Bachelor Thesis

Stockholm School of Economics

2022



Are consumers habitual liars?: A quantitative study of factors influencing Swedish consumers' purchase intention for sustainable products

Abstract:

Overconsumption has become an increasing global challenge in the last decades, followed by an awareness of the need to change consumption behaviors to sustainable purchasing decisions. The purpose of this quantitative study is to create a better understanding of the drivers and their effects on sustainable purchasing behavior. In other words, the factors hypothesized to impact the purchase intention of sustainable products was examined in hope of receiving a greater comprehension of the attitude-behavior gap and what factors play a major role in closing it. The data was collected through an online self-completion questionnaire distributed through the authors' peer networks and university emails. The outcome of this thesis indicates that cost and quality are the product attributes most important to consumers. Furthermore, personal sustainability norm and perceived sustainability knowledge are significant predictors of the purchase intention of sustainable products, while environmental concern did not have a significant effect. Increasing awareness of the moral obligation of consumers and the perceived knowledge the individual claims to have regarding sustainability would be appropriate ways of creating effective marketing communication, in the quest of increasing consumption of sustainable products.

Keywords:

Sustainability, sustainable consumption, Theory of Planned Behavior, attitude-behavior gap

Authors:

Nellie Gunnarsson (24700)
Lovisa Hedvall Rosqvist (24667)

Tutors:

Daniel Tolstoy, Associate Professor, Department of Marketing and Strategy

Examiner:

Henrik Glimstedt, Associate Professor, Department of Marketing and Strategy

Bachelor Thesis

Bachelor Program in Business and Economics

Stockholm School of Economics

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Acknowledgements

We would like to give a special thank you to our tutor Daniel Tolstoy for the invaluable support and guidance during the completion of our first thesis. Thank you for showing concern and patience with us.

Thank you to our fellow students in the same tutor group for giving feedback and help with minor and major issues.

Thank you to all survey respondents for providing us with comprehensive data that made this thesis possible.

Yours sincerely,

Nellie and Lovisa

Definitions

Sustainable behavior: “A set of effective, deliberate, and preemptive actions that lead to the preservation of natural resources, including the integrity of animal and plant life, as well as the individual and social welfare of current and future human generations” (Carrete et al., 2012).

Sustainable products: “Products that are in line with sustainable consumption. This applies to consumption options that reduce the ecological and social problems associated with production and consumption – relative to conventional consumption, while still being economically viable” (Hanss & Böhm, 2012).

Environmental concern: “Refers to the degree of emotional involvement in environmental issues. It taps the individuals’ affective response towards environmental protection.” (Lee, 2008).

Personal norm: “By incorporating social norms into a consistent personal value system, personal norms are established. Personal norms are defined as feelings of strong moral obligation to engage in altruistic or green behavior” (Moser, 2015).

Perceived behavioral control: “the perceived ease or difficulty of performing the behavior” (Ajzen, 2002).

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1. Introduction

If individuals are motivated to make a sustainable contribution to the environment, social welfare, and economic prosperity, the consumption behavior would be an appropriate first habit to scrutinize. Overconsumption is the second main source of our planet's environmental problems, where a pattern of exhausting natural resources is a worldwide addiction (Oskamp, 2000).

By making informed purchasing decisions, by substituting higher-impact products with products that are more sustainably designed, produced, and distributed, a chance to reduce this negative trend would arise. This is the case since the "right" purchasing decision could have the possibility to reduce, and possibly eliminate, environmental damage in the later stages of the consumption cycle (Thøgersen, 1999). This would not only limit the benefits for consumers and our planet, but also create opportunities for businesses. Sustainability-oriented companies would receive advantages, including greater profitability and market share (Menguc & Ozanne, 2005), increased customer satisfaction (Luo & Bhattacharya, 2006), and higher levels of employee commitment (Maignan & Ferrell, 2001).

At the same time, it seems reasonable to assume that individually held values, beliefs, and attitudes about the importance of sustainable development would lead to subsequent aligned actions, but this is not always the case. So, are consumers habitual liars?

1.1. Background

1.1.1. The Sustainability Concept and Landscape

The famous definition of sustainable development by WCED (1987), namely

"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs"

has since its publishing emerged as the common description today. Sustainability can be conceptualized as involving two states, where society should move from an unsatisfactory to a satisfactory one. An unsatisfactory state, defined as where environmental and social needs are expensed for economic needs, is compared to when the limits of the environment are not exceeded to meet economic and social needs in a satisfactory state. (Hanss & Böhm, 2012)

Sustainability has three core dimensions – environmental quality, social justice, and economic prosperity – a concept called "the triple bottom line" (Elkington, 1999). The three dimensions are closely intertwined, and it is ideal for them to be fulfilled simultaneously. Additionally, two dimensions of the sustainability concept was studied by Hanss and Böhm (2012), namely "the temporal dimension"; the needs of future

generations are considered in meeting the current, and the developmental dimension; considering the necessity of development, e.g., technological, and to achieve and maintain sustainability.

One can, therefore, conclude that sustainability has advanced as a concept foundational for driving societal change for all actors in society, where the requirement to comply has increased through time (Balderjahn et al., 2013). The strengthened focus on environmental challenges has increased the pressure to act sustainably for several stakeholders. Companies have realized that becoming sustainable is a prerequisite for their legitimation and long-term competitiveness, since the role of their corporation in society has gained increased awareness from consumers (Balderjahn et al., 2013; Flammer, 2013; Murphy et al., 2013). Therefore, firms that do not respond to this challenge with action, risk losing credibility in the eyes of the consumer, while countless opportunities will be presented by sustainable consumption for those who will (do Paço & Raposo, 2009).

Likewise, the institutional norm of acting in a sustainable manner has become an expectation for consumers as well, where they should pave the way for sustainable development (Caruana & Crane, 2008). Hence, a pivotal position has emerged where consumers are, not only important stakeholders, but agents of societal change through their behaviors in all areas of their lives for sustainable development (Balderjahn et al., 2013). To make sustainability a guiding principle for consumption behavior is a phenomenon frequently pledged from scientists and politicians. However, an explanation for which consumption decisions are sustainable is often lacking, making it difficult for consumers to make behavioral changes (Hanss & Böhm, 2012).

1.1.2. Development of Sustainable Products and Marketing

Sustainable products can be defined as those alternatives that reduce the environmental and social challenges associated with production and consumption while still being economically viable, relative to conventional products. Hence, sustainable products are products aligning with sustainable consumption (Hanss & Böhm, 2012), such as fair-trade coffee (local producers receiving higher payment which translates into improved working and living conditions) and ecologically grown vegetables (having fewer detrimental effects on our planet).

To make consumers aware of sustainable products companies are increasingly implementing sustainable aspects within marketing, where external expectations are forcing them to investigate the costs and benefits of “greening” their marketing mixes (Leonidou et al., 2012). Considerable increases in performance and positive effects on return on assets and product-market performance are indicated using green marketing programs. Furthermore, there are many marketing aspects related to sustainability that firms can engage in, including market-oriented approaches to acquire competitive

advantages (Crittenden et al., 2011), and company's marketing strategies incorporating sustainability elements (Baker & Sinkula, 2005; Banerjee, 2001; Fraj-Andrés et al., 2009). Hence, the internal debate within management should not be "why" but rather "why not" when making decisions about engaging in sustainability marketing reflecting their offers' sustainability (Leonidou et al., 2012).

Overcoming barriers of executing pro-environmental behavior is a matter sustainable marketing can have a significant effect on (Peattie, 2010). This makes it important for companies to create and distribute marketing campaigns for their target audience regarding their sustainability efforts. For that reason, an antecedent for successful sustainable marketing is to acquire knowledge about what factors affect the purchase intention of sustainable consumers. By using gained information about what makes the consumer take an informed purchasing decision, companies can amplify those factors and minimize potential barriers.

1.2. Problem Formulation and Research Gap

According to Peattie (2010), what the consumer lifestyle looks like within the industrialized economy and what alterations are needed to make advancement towards it – including consumer behaviors, transport infrastructure, technologies, communities – is only in its preface, and to understand the broader picture requires further research.

While broad definitions of several types of sustainable behaviors (e.g., recycling, energy conservation) has been found extensively in literature (Mainieri, Barnett, Valdero, Unipan, & Oskamp, 1997), this thesis will take a focused approach in exploring the context of the purchase intention related to sustainable products. At the same time, a comprehensive view will be adopted of the potential factors influencing this specific context. This will hopefully contribute to the many studies within the research field, in which factors potentially influencing a behavior has been studied in isolation.

1.3. Purpose and Research Question

The primary purpose of this thesis is to create a better understanding of the drivers and their effects on sustainable purchasing behavior. In other words, the factors hypothesized to impact the purchase intention of sustainable products will be examined in the quest of receiving a greater comprehension of the attitude-behavior gap and what factors play a major role in closing it. The research question chosen in this report is the following:

- *Which factors affect the purchase intention of sustainable products?*

The ulterior purpose includes investigating the possible difference in explanatory value of the three chosen factors: attitude, social norm, and perceived risk.

1.4. Delimitations

Due to limited resources of a bachelor thesis, the study was geographically restricted to Sweden, for the sake of convenience, even though consumption of products is a global phenomenon.

The data collected was handled confidentially according to the General Data Protection Regulation (Andersson, 2022). For that reason, only personal data considered necessary was collected, and consent to participate was given from all respondents.

1.5. Expected Contribution

Since overconsumption is a worldwide phenomenon (Oskamp, 2000), to generate positive impact many individuals need to alter their consumption behavior. Since it ultimately is the consumer determining how effective the sustainable products will penetrate the market, it is through sustainability-oriented marketing communication that companies can show their differentiation. Hence, it is important to understand the drivers behind the purchase intention of sustainable products so companies can amplify those specific drivers and minimize potential obstacles.

Additionally, the results of this study could be used in further research in understanding which drivers have an impact in the context of when a consumer has the intent to purchase a sustainable product. This would contribute to well-grounded decision-making in the research field as well as in practice.

This thesis gives a theoretical contribution by examining the specific context of the intention to purchase sustainable products, since this context of sustainable consumption and the factors influencing it has not been comprehensively studied before. The usage of the concept “sustainable” is a rather new phenomenon – where it emerged from concepts such as environmental, green, and ethical consumption (Lee, 2008) – and has additional features attached to it, that is of interest in this study.

2. Literature Review and Theoretical Foundation

To address the purpose and the following research question, this section will present the theoretical framework based on previous literature and research on the respective topics, and hypotheses will be introduced and developed accordingly.

In the establishment of the theoretical framework, library databases, mainly Scopus and HHS Library, were used as primary sources. During the literature search several keywords were used, including the following (but not limited to): sustainable behavior, sustainable consumption, environmental attitude, environmental values, environmental behavior, Theory of Planned Behavior, personal norm, attitude-behavior gap.

2.1. Previous Research on Purchase Intention of Sustainable Products

The consumer behavior of purchasing sustainable products has received significantly less attention in comparison to the behavior of reducing negative environmental impact, such as recycling and energy conservation (Jansson et al., 2010). This lack of research within sustainable consumption behavior is due to the scarcity of environmentally friendly products available on the market in the past. However, in recent times there has been an increasing number of studies conducted about sustainable products and the intention from consumers to purchase them.

2.1.1. Conceptualization of Sustainable Behavior

According to Carrete et al. (2012), from the middle 1980s to the late 1990s ecologically friendly and pro-environmental behaviors gained a wide usage, influencing the creation of strategic papers, such as the report of the World Commission on Environment and Development in 1987. These definitions mainly emphasized concern in the protection of the environment, where it involves actions of preserving natural resources and to increase the environmental quality, either undertaken individually or collectively (Roberts, 1996). However, these definitions were later criticized for only taking into consideration the physical environment in terms of environmentally friendly behaviors, without acknowledging the social welfare or related aspects like the benefits of health, education, employment, and economic justice. Likewise, mindful consumption and political consumption faced the same criticism, since these concepts also focused on a single factor or concerned a specific driver of sustainable consumption behavior (Balderjahn et al., 2013).

Consumers became during the mid 1990s more socially aware, and the green consumerism broadened into a concept called ethical consumption (Strong, 1996; Uusitalo & Oksanen, 2004; Newholm & Shaw, 2007). According to Uusitalo and

Oksanen (2004), ethical consumerism can be described as a purchasing behavior with a consideration for issues arising from unjust and unethical global trades, like infringement on human rights, child labor, low paid labor, labor union suppressions and animal testing. For that reason, the individual and social welfare of current and future generations became an integral part of the definition (Carrete et al., 2012).

The concept of sustainable behavior emerged as a response in the late 1990s, a term extending the notion of only concerning for the environment and social welfare to taking a comprehensive picture including all three domains, namely environment, social and economic aspects, and their integrative roles and interdependencies. Furthermore, scholars started to use the term “sustainability marketing” in the same time period (Lee, 2008).

2.1.2. The Choice of Using Psychographic Measures

In the aspiration to profile the sustainable consumer, several variables like socio-demographic, psychographic and demographic variables have been used. The explanatory value of these various variables has been changing during the years. Traditional research previously indicated socio-demographic variables as good predictors of the sustainable consumer. However, in recent research, socio-demographic characteristics have been of limited use in the pursuit of anticipating behavioral aspects. Instead, in profiling consumer segments, the psychographic variables are of better usage than socio-demographic ones (Straughan & Roberts, 1999). Socio-demographic measures can be used to in some degree to identify environmental knowledge and attitudes in consumers. Nevertheless, behavioral intentions are indicated to be more determined based on situational contexts (Carrete et al., 2012).

Psychographic variables concern the potential effect of values and attitudes on behavior. Values concerning the importance of the environment in an individual's life is strongly linked with a high degree of environmental activism (Steel, 1996). If an individual is aware of the environmental consequences of a behavior and assigns responsibility to them, the pro-environmental norm has a high potential to affect actual behavior (Jansson et al., 2010).

Overall, a combination of perceived personal benefits [...]; compatibility with individuals' values, identity, and social references; strong social influence and normative beliefs; a sense of control over costs and associated inconveniences attached to switching over; good information and no perceived risk or uncertainty push people from “intention to adopt” to “actual adoption” (Jansson et al., 2010; Ozaki, 2010).

For that reason, psychographic measures will be used to identify which factors will affect the purchase intention of sustainable products.

2.2. Theory of Planned Behavior

Theory of Planned Behavior is a model first conceptualized by Ajzen (1991; 2002). The fundamental components of the TPB, namely, attitude, norm, and perceived behavioral control (PBC) will be taken into consideration in this study to examine in a context of sustainable consumption behavior. Ajzen (2002) describes the Theory of Planned Behavior as the following

“In combination, attitude toward the behavior, subjective norm, and perception of behavioral control lead to the formation of a behavioral intention. Finally, given a sufficient degree of actual control over the behavior, people are expected to carry out their intentions when the opportunity arises” (Ajzen, 2002).

2.2.1. Attitude

The degree to which a person has a favorable or unfavorable evaluation of the behavior in question is referred to as an *attitude* (Ajzen, 1991). An attitude is characterized by an explicit tendency towards one direction in the evaluation of topics, people, or objects, with an enduring positive or negative feeling (Kollmuss & Agyeman, 2010).

Depending on the study context, the degree of correlation has been varying in studies between sustainable attitudes and corresponding behavior. Environmental attitudes have generally had a small influence on sustainable consumption behavior, an unexpected result considering the assumption that people live according to their values (Kollmuss & Agyeman, 2010). This makes it necessary to investigate whether an attitude regarding environmental concern will have an impact on the purchase intention of sustainable products specifically.

On one hand, several studies fail to explain pro-environmental attitudes' impact on predicting purchasing behavior, acknowledging a low attitude-behavior correlation for sustainable consumption (Gupta & Ogden, 2009; Mainieri et al., 1997).

The literature proposes various explanations for the observed attitude-behavior gap, which is a recurring theme within this research field. Consumption in a sustainable manner might require sacrifices related to costs, performance, and convenience without providing significant environmental benefits (Peattie, 2010). Furthermore, several individual characteristics, namely, in-group identity, trust, perceived efficacy, and expectation of others' cooperation were significant in contributing to the attitude-behavior gap (Gupta & Ogden, 2009). Moser (2015) suggests the consumer's habits and lifestyles as well as perceived trade-offs may function as a constraint to sustainable consumption. Mainieri et al. (1997) summarizes reasons for the observed gap in the following manner:

“Research has suggested several plausible explanations: (a) low correlations among environmental behaviors, (b) different levels of specificity in the measures of attitude and behavior, (c) effects of extraneous variables, and (d) lack of measurement reliability and validity.”

On the other hand, other studies indicate that attitudes predict pro-environmental behavior (Hines et al., 1986; Bamberg & Möser, 2007), especially in the context of organic food (Hauser et al., 2013; Honkanen et al., 2006; Tarkiainen & Sundqvist, 2009; Pino et al., 2012; Zhou et al., 2013).

Previous research has studied people’s environmental attitude to sustainable behaviors in general, for example, recycling, minimizing water consumption and in supporting environmental initiatives. However, to consider all types of environmental attitudes as interchangeable would be erroneous, since sustainable behaviors are often not highly correlated among themselves (Mainieri et al., 1997). Therefore, a rather narrow and focused approach will be taken in this study to determine attitudes as the environmental concern a customer experiences relating to the specific situation when having the intent to make a purchase. This approach might give a better understanding and solve some of the inconsistencies present within the research field.

Therefore, H1 is proposed as follows:

H1: Consumers’ environmental concern will positively affect purchase intention of sustainable products.

2.2.2. Norm

A second antecedent of sustainable purchase intention is a social factor where the perceived social pressure to perform or not perform a particular behavior is termed a *subjective norm* (Ajzen, 1991). To decide whether it is easy or beneficial to act in a certain way or what is morally right or wrong, social norms in the form of guidelines are often used to assist in appropriate behavior (Moser, 2015).

An individual’s consumption behavior serves as a symbol of identification and differentiation, where sustainable purchasing could be an expression of what they believe their social surrounding expects and wants them to do (Moser, 2015). The consumption of sustainable products could therefore be a type of symbolic consumption where social influence from the peer network leads to sustainable consumption (Uusitalo & Oksanen, 2004).

The feeling of moral obligation to undertake altruistic or sustainable behavior is termed *personal norms* (Schwartz, 1977), and is created by incorporating the social norms present in one’s surroundings into a consistent personal value system. In addition, how people view themselves could be a factor contributing to subsequent behavior, where an identification with a green lifestyle is reflected in sustainable behavior, and those who

see themselves as green consumers are more likely to purchase sustainable products (Peattie, 2010).

Personal norms reflect an individual's own moral standards in a better manner, in comparison to social norms which are seen as socially shared rules. This circumstance is supported by research, where personal norms is a considerable predictor of choosing environmentally friendly products (Ha & Janda, 2012). The results of Thøgersen (1999) indicated that stronger personal norms increased the customer's attention to the environmental friendliness of packaging in the purchasing situation, and, for that reason, increased the probability that the customer would choose the product with a sustainable packaging.

Significant personal norms can increase the likelihood of changing consumption patterns to more sustainable behavior over time since the personal norm of buying sustainable is reinforced sequentially triggering even more favorable beliefs about consumption in an environmentally friendly manner. This is empirically supported in the purchase of organic foods (Thøgersen & Ölander, 2006). Additionally, strong personal norms for sustainable behavior can possibly create spillover effects from one domain of sustainable behavior to another (Thøgersen & Ölander, 2003).

Hence, following the argumentation above, the present survey will in the same way as Moser (2015) use personal norms as a predictor affecting the purchase intention of sustainable products.

Therefore, H2 is proposed as follows:

H2: Personal sustainability norms will positively affect purchase intention of sustainable products.

2.2.3. Perceived Behavioral Control

This potential driver of sustainable consumption concerns the perceived ease or difficulty of performing the behavior in question, a factor called *perceived behavioral control*, where it is assumed to reflect anticipated obstacles and past experiences (Ajzen, 1991). Because the performance of sustainable consumption behavior isn't executed in a vacuum, the customer potentially faces several barriers under some circumstances and is not in volitional control of their behavior, which the concept of PBC reflects (Ajzen, 2002). An individual could be constrained to display a certain behavior depending on non-motivational factors such as resources and opportunities (Ajzen, 1991). For that reason, PBC express an individual's ability to behave in a desired manner and in the perception of having control.

According to Moser (2015) most research within the field using the PBC as a theoretical framework don't explicitly name barriers, instead studying general inquiries about the

convenience and capability of acting in a particular way. However, the challenge arises in the many different types of barriers being present, where they can be manifold and cover broad ranges of topics, from lack of time to economic variables. Two studies empirically support this notion by arguing that it is an incorrect assumption to believe general environmental attitudes having a direct influence on specific behaviors. Instead, situation-specific cognitions could be direct determinants of specific behaviors, where Bamberg (2003) investigates a student's decision to request a brochure and Hee & Chung (Hee & Chung, 2011) examines the influence of consumer values on the purchase intention of organic personal care products.

To receive insight into the underlying perception of the cognitive foundation of behavioral control it will be essential to identify specific factors to study, a pursuit that will be undertaken in this thesis by examining the perceived sustainability knowledge a consumer claims to have. The exploration of the influence sustainability knowledge has on the intention to purchase sustainable products is an inquiry that haven't received great amount of attention in the literature. For instance, Moser (2015) assumes in her study that customers have access to sound information in the endeavor of making an informed purchasing decision, something this thesis instead will scrutinize in terms of influence on purchasing behavior. In addition, an arising challenge within the domain of sustainable marketing is consumer confusion (Carette et al., 2010; Mitchell & Papavassiliou, 1999). Additionally, consumer confusion involves the risk of developing general skepticism towards environmental claims. For instance, the exact meaning of environmental labels is not always clear (Carette et al., 2010), and the ability to separate between organic and conventional food is a frequent struggle (Chrysoschoidis, 2000). This will have effects on the potential trust and credibility consumers assign to sustainable products.

Peattie (2010) acknowledges the frequency of assuming environmental knowledge having a positive influence consumption behavior, where some of the research support this. With the use of a self-reported questionnaire, Bartkus et al. (1999) found both objective and subjective knowledge having a relationship with consumer environmental behavior.

However, other research results have other conclusions. To make consumers take informed purchasing decisions one cannot just *inform* them about desirable actions, instead it is vital to *motivate* people in making behavioral changes (Oskamp, 2000). This is the case since without strengthening motivation, simply providing information will have very little effect on behavior. Furthermore, the provision of information can risk making consumers feeling overwhelmed or confused (Peattie, 2010). To overcome this matter, Goldstein et al. (2008) found that a much more effective approach than conventional messages simply emphasizing the environmental benefits of towel reuse, was in using normative appeals ("the majority of guests reuse their towels") to encourage sustainable behavior.

In motivating sustainable consumption behavior, research findings concern the distribution of sustainability information and knowledge as a key step (Peattie, 2010). There are, however, several ways of displaying this kind of information to consumers. Social marketing – meeting social goals by using marketing techniques in the objective of influencing a target audience in changing its behavior; choice editing – the phenomenon of removing the least sustainable alternatives in limiting the offers presented to the consumer; and green labeling – addressing information asymmetry between producers and consumers and elevates the lack of environmental literacy among consumers.

To establish an environment which facilitates sustainable consumption, environmental labels can aid consumers in making an informed decision. However, the fact that a customer pays attention to an environmental label presumes the customer's interest, appraise, and possibly possessed knowledge of environmental issues and its protection (Pedersen & Neergaard, 2006). Additionally, it is unlikely that the consumer is familiar with all labels indicating sustainable product attributes, and the multitude of labels may be confusing rather than helpful (Hanss & Böhm, 2012; Pedersen & Neergaard, 2006). For that reason, environmental labels will not be considered in this thesis.

What is environmentally and socially the right thing to do is unclear for the consumer, since researchers and environmentalists have differing strategies for appropriate sustainable behavior, which is further complicated by potentially unsubstantiated sustainability claims in advertising (Moisander, 2007). However, this thesis will take a step back and reassure the potential importance perceived sustainability knowledge has on the intention to purchase sustainable products, to give empirical support.

Hence, consumers' perceived sustainability knowledge is integrated into the TPB model as a factor of perceived control and is considered a critical predictor of the purchase intention of sustainable products.

Therefore, H3 is proposed as follows:

H3: Consumers' perceived sustainability knowledge will positively affect purchase intention of sustainable products.

2.3. Conceptual Framework and Hypothesis Development

Based on the purpose of this thesis, the theoretical framework has been developed from previous research with the Theory of Planned Behavior as a foundation. The model has been adjusted to be suitable in the context of sustainable consumption to create three hypotheses, one for each factor influencing a subsequent behavior.

The aim of all hypotheses is to examine whether a positive effect can be shown on the intent to purchase sustainable products, where each hypothesis focuses on an individual factor. **H1** concentrate on the displayed environmental concern, **H2** on personal sustainability norm, and **H3** on the perceived knowledge about sustainability the respondent claims to have.

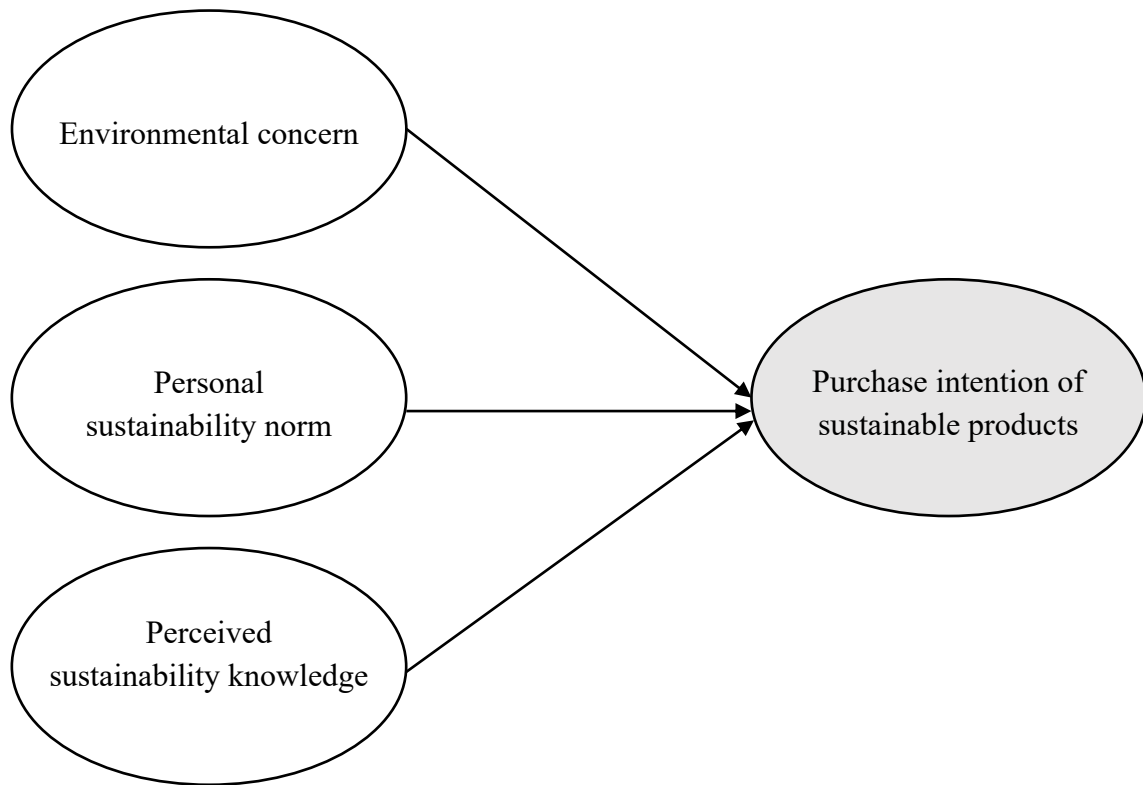


Figure 1. Overview of the three variables identified

Table 1. Hypothesis development

H1	Consumers' environmental concern will positively affect purchase intention of sustainable products.
H2	Personal sustainability norms will positively affect purchase intention of sustainable products.
H3	Consumers' perceived sustainability knowledge will positively affect purchase intention of sustainable products.

3. Method

3.1. Research Design

This research will be conducted in a cross-sectional way since our variables are not possible to manipulate. This means that this study is not an experimental one. Social surveys are common to use when conducting a cross-sectional study (Bell, Bryman, & Harley, 2019).

There are several characteristics of a cross-sectional study that also have been implemented in this research study:

- *Several cases.* Considering several variables are being examined and a quantitative method was chosen, it is in the best interest of this study to achieve variation in the data. Variation occurs as soon as there is more than one case. Variation at large in the data is important to try achieving variation in all variables (Bell, Bryman, & Harley, 2019). This is to achieve more generalizable results. Variation in this case has tried to be achieved by supplying the survey to a group as large as possible.
- *Short period to collect answers.* All responses should be collected during the same, short time span (Bell, Bryman, & Harley, 2019). In this research, the survey has been actively supplied since April 17th until 1st of May. To achieve a sample size as large as possible, the authors waited as long as they reasonably could to start the analysis.
- *Data that is quantitative.* To examine how the responses variate and how the variables are related to each other, a reliable measurement method is needed (Bell, Bryman, & Harley, 2019). In this study, to achieve a measurement as reliable as possible, all respondents got the same exact survey via a link. This is a stable foundation on which applying SPSS tests will achieve reliable results.
- *How variables associate.* With this type of research design, what is studied is how the variables are associated with each other. An apparent relationship between two variables, however, does not necessarily have to mean that there is causality – just that they are related to each other. This is because the study is in fact cross-sectional, and not experimental.

3.2. Choosing a Method

3.2.1. Qualitative versus Quantitative Research

When picking a method, the choice was made between a quantitative and a qualitative research method, as this is a common way of dividing different research strategies (Bell, Bryman, & Harley, 2019).

Qualitative research is centered around the words rather than collecting and analyzing numbers, as is done in quantitative research. The qualitative method is mainly connected to induction. In inductive research, the theory is the consequence of conducted research. In addition, to conduct qualitative research, interviewing participants is one approach (Bell, Bryman, & Harley, 2019).

The quantitative method has a strong connection to deduction. Deductive theory can be summarized as a theory where one hypothesis or several hypotheses will be deduced and formulated, thereafter data will be collected and closely analyzed. Even though deductive theory is closely tied to quantitative method, induction is used to compare the results of the study to the chosen theory (Bell, Bryman, & Harley, 2019).

3.2.2. Method of Choice

Exploring if there is any correlation between the independent variables and the dependent variable, the quantitative method was the reasonable choice. The way the hypotheses are posed, verifying them requires a method as systematic and objective as possible. Furthermore, to identify correlation and the differences in explanatory value made a quantitative method an appropriate choice. It becomes clear if the results are significant or not.

To investigate the hypotheses, a larger sample size is beneficial since it provides more variation among the answers, and the research becomes more reliable.

3.2.3. Critique of Method Chosen

The quantitative method has flaws. Some of them will be mentioned below.

A self-completed questionnaire was used to collect data for this thesis. Therefore, it is difficult knowing whether the respondents' actions are in line with their answers in the survey or not. This flaw is unavoidable since researchers do not have insight in respondents' actual actions (Bell, Bryman, & Harley, 2019). For that reason, the outcome of this study will need to be used cautiously.

Sometimes, on questionnaires, certain terms can be interpreted differently by people. To avoid this, in many studies (including this one), fixed-choice responses are used. However, this does not solve the initial problem. Language used in questionnaires

should be easy to understand and avoid any possible misinterpretations (Bell, Bryman, & Harley, 2019). In the survey, the language used was intended to be as unambiguous and straight-forward as possible to avoid this issue to the largest extent possible.

3.3. Pilot Testing

Unfortunately, there was no time to conduct a pilot survey before the actual questionnaire was released. In other words, there was no time to try out the accurateness and if the questions were subject to misinterpretation. Instead, before publishing the survey, the authors received feedback from the supervisor. While this was valuable feedback, the supervisor and the authors of this thesis are likely more familiar with the topic than a layman. Even though most people who received an invite to participate in this survey study at SSE and are probably more knowledgeable in this topic than most, the questions and statements might still not be interpreted in the same way by them as by the supervisor and authors. Therefore, a questionnaire that has not passed through a pilot testing process, might lead to less accurate survey responses, which might be the case of this study.

3.4. Main Study

3.4.1. Questionnaire

The conducted study was in the form of a self-completion questionnaire. The first part of the survey was an introduction to the subject and the aim of the thesis. Furthermore, participants were informed about the handling of survey data in compliance with GDPR, which was followed by the need to tick a box “YES. I have read the information above and would like to participate in this study”, and by filling in their initials and the date of agreement. This was used to ensure participants’ consent before entering the survey. In addition, the participant could choose to tick the box “NO. I do not want to participate in this study.”, in which case the respondent would be sent to the last page of the survey, to eliminate the risk of filling in the form even if consent was not given.

When it comes to deciding how to formulate questions in a survey, an important decision is whether to feature open or closed questions. For this thesis, closed questions were chosen since that would give data easier to process, although one should consider that variation in the type of answers from respondents could be lower.

The questionnaire consisted of six blocks with eight questions in total, where four of the questions focused on one specific variable to be measured. The Likert-scale ranging 1 to 7 was used on questions regarding the variables environmental concern, personal sustainability norms, and perceived sustainability knowledge. A Likert-scale ranging 1 to 5 was used on questions about factors influencing purchasing decision. These two

Likert-scales have been used in previous studies in the area and the authors, therefore, considered them appropriate for this study.

The first block of the survey mentioned product attributes like cost, quality, and safety to the environment where the respondent was asked to grade the importance to them. The second block contained statements connected to environmental concern, like to what extent the respondents considered themselves as sustainable people. The third block consisted of statements related to personal sustainability norms, such as in what degree the participant felt morally obliged to engage in sustainable consumption behavior. In the fourth block, statements associated with perceived sustainability knowledge were listed, for example regarding the awareness the respondent has of the impact of one's consumption behavior. The fifth block contained one statement, where the participants had to answer to what degree they have the intention to always purchase sustainable products. The last block consisted of demographic questions like age, gender and the highest education level completed.

To make sure that the respondents had not fundamentally misinterpreted the survey or paced through it without reading closely, a control question was included at the very end. The answers in the survey of those who have given the wrong answer to the control question will be completely discarded. The control question was “What was this survey about?” and the three answer options were “sustainability”, “technology” and “services”, where the correct answer was “sustainability”.

3.4.2. Incentivization

To work against a low response rate, a financial incentive can be helpful (Bell, Bryman, & Harley, 2019). To increase the response rate for the survey tied to this research study, it was decided that for every fully completed survey, 5 SEK will be donated to UNHCR and their work to aid Ukraine in their current situation. This incentive was made clear in the Facebook posts we published with the survey link and in the email subject and content.

3.4.3. Dependent Variable

This thesis explores the dependent variable “purchase intention of sustainable products”. This variable is connected to the last block in our survey and the respondent will answer to what degree this statement is true using the Likert-scale ranging from 1 to 7.

3.4.4. Independent Variables

Based on the chosen theory for this study, namely the Theory of Planned Behavior, there are three independent variables that supposedly will affect the dependent variable (purchase intention of sustainable products). The three variables are *environmental*

concern, sustainability norms and perceived knowledge about sustainable products. We hypothesize that these three independent variables are positively associated with the dependent variable. There are a total of 15 statements to investigate these three variables. There is one question with five statements per variable.

3.4.5. Control Variables

The control variables picked for this study were demographic questions about age, gender and highest level of education completed.

These control variables were picked because in traditional research, these socio-demographic variables have been deemed to be good indicators of who is a sustainable consumer and who is not. In newer research, however, it has been disputed whether these variables have the explanatory value previously stated (Straughan & Roberts, 1999). Despite this, these variables were chosen to be included in this study as they might, after all, offer some (although possibly limited) insights regarding consumers' attitude and environmental knowledge (Carrete et al., 2012).

3.5. Data Collection and Analysis

3.5.1. Data Collection and Participants

The online self-completion survey was distributed between the 17th of April and 1st of May 2022. 132 valid responses were collected.

The sample selection was made on a basis of convenience for the sake of the limitations present during a bachelor thesis. To collect data, a survey was created using HHS Qualtrics. The link to the survey was distributed in several ways. The link was posted on Facebook as well as sent in direct messages to friends and family. For even further outreach, the survey link was distributed via school email to hundreds of students and alumni at Stockholm School of Economics. Furthermore, the link was shared with a network on Facebook called "Klimatstudenterna", where one of the authors is a member. However, one should consider the possibility of a non-representative sample since the survey was distributed within the network of the two authors. This could have effects on the results and associated discussion below.

3.5.2. Quality of Data

A total number of 155 respondents participated in the survey. However, before the analysis of the results, participants who had not completed the survey, i.e., completed less than 100%, was excluded. Among the 155 participants, three people did not agree to the GDPR terms and was therefore also excluded. The control question was used to exclude responses of participants not paying enough attention throughout the survey.

However, everyone gave the correct response, and no one was excluded based on their answer to the control question.

3.5.3. Data Analysis

The questionnaire was conducted using the online tool Qualtrics, where the collected data was transported to IBM SPSS Statistics 28 in order to conduct the necessary analyses. First, the descriptive data of means and standard deviations was summarized for the product attributes questioned in the survey. Furthermore, reliability analyses were conducted for the three independent variables where a cutoff value of 0.7 for Cronbach's alpha was used (Bell, Bryman, & Harley, 2019).

The authors assumed a linear relationship between the independent variables and the dependent variable. Therefore, multiple linear regressions were conducted to measure the effects of environmental concern, personal sustainability norm and perceived sustainability knowledge. An alpha level of maximum 0.05 was used to determine the significance level of the effects noted in the analysis (Bell, Bryman, & Harley, 2019).

3.6. Research Reliability and Validity

3.6.1. Reliability

Reliability is about whether the study's results are repeatable. The measurements must be consistent and not fluctuate (Bell, Bryman, & Harley, 2019).

The reliability of the results in this research has been ensured by basing a survey on well-researched concepts and by providing all potential responders with the exact same questions and answer options. The survey has been presented under the same circumstances to all respondents, through a link online, and no changes has been made to the survey through time to ensure reliable results. In addition, an analysis with the use of Cronbach's alpha will be used.

3.6.1. Validity

Internal validity is concerned with the matter of causality. Is it certain a particular independent variable shows causality with the dependent variable in question? Or could there be other factors at play, affecting the dependent variable? (Bell, Bryman, & Harley, 2019).

The internal validity of the study appears to be high as there is one clearly defined dependent variable and three distinguished independent variables. The independent variables effect on the dependent variable are tested separately, as there are five statements connected to each of the three independent variables.

External validity is about the conclusions and the possible generalization of them. When a conclusion is drawn from a study which has been conducted in a specific context, external validity addresses how generalizable these conclusions are. To achieve high external validity, it is essential to have a sample that is as representative as possible. The way the sample is selected is therefore of outmost importance (Bell, Bryman, & Harley, 2019). Unfortunately, the external validity of this research is somewhat weak, as most survey respondents are young adults who mainly study or have studied in roughly the same field at the same school (SSE).

4. Results

4.1. Descriptive Statistics

4.1.1. Overview of Sociodemographic Variables

The distribution of female respondents and male respondents were almost equal, while 90.2% of the respondents were between the age of 18-29 years (Table 1). Most of the respondents had high school as the highest education level completed, although respondents with a bachelor's degree were close behind. Additionally, the sample included one respondent with a PhD as the highest education level completed.

Table 1. Overview of socio-demographic variables

Variable	N	n	% of total sample
	132		
Gender			
Female		68	51.5
Male		64	48.5
Non-binary		0	
Other		0	
Age (years)			
18-29		119	90.2
30-39		5	3.8
40-49		5	3.8
> 50		3	2.3
Highest education level completed			
High school		53	40.2
Bachelor's degree		50	37.9
Master's degree		28	21.2
PhD		1	0.8

Notes: The percentages may not equal to 100% due to rounding errors.

4.1.2. Importance of Product Attributes

Table 2 indicates the importance of product attributes according to the respondents. It was investigated what product attributes had the highest perceived importance according to the respondents, where the results indicated quality (Important 49.2% and Very Important 47.0%) and cost (Important 56.8% and Very Important 38.6%). Additionally, safety to the environment and that the product is produced with social justice were two important attributes to the respondents. It was not important to the respondents, in comparison to the other attributes, that the product had ranges of sizes available.

Table 2. Overview of importance of product attributes in %

Variable	Not important	Less important	Neither important nor not important	Important	Very important
Cost	0.0	1.5	3.0	56.8	38.6
Quality	0.0	0.8	3.0	49.2	47.0
Prior use of the product	3.0	11.4	33.3	35.6	16.7
Ranges of sizes available	6.8	17.4	33.3	34.1	8.3
Safety to the environment	0.8	15.2	23.5	52.3	8.3
Produced with social justice	5.3	13.6	26.5	43.9	10.6

Notes: N = 132. The percentages may not equal to 100% due to rounding errors.

4.1.3. Importance of Product Attributes Based on Control Variables

By investigating the means of the importance of the product attributes based on the control variable gender, several results can be specified. From Table 3 it can be shown that respondents identifying as females indicated a higher importance to the product attributes “safety to the environment” and “produced with social justice” than the respondents that defined themselves as male. In comparison, males perceived the product attributes of cost and quality having a higher importance than females.

Table 3. Overview of importance of product attributes based on gender

Gender	Female n=68		Male n=64		Total n=132	
	μ	σ	μ	σ	μ	σ
Product attribute						
Cost	4.21	.659	4.45	.532	4.33	.612
Quality	4.35	.641	4.50	.535	4.42	.594
Prior use of the product	3.44	.983	3.59	1.019	3.52	1.00
Ranges of sizes available	3.18	1.105	3.22	.983	3.20	1.044
Safety to the environment	3.66	.725	3.37	1.00	3.52	.878
Produced with social justice	3.69	.868	3.11	1.10	3.41	1.026

Notes: N = 132

As can be shown in Table 4, the importance of “cost” could be interpreted to decrease as the age of the respondent increases. At the same time, the perceived importance of the product attribute “quality” is overall increasing the older the respondent is. The other product attributes, such as “prior use of the product” is fluctuating throughout the different age groups.

Table 4. Overview of importance of product attributes based on age

Age	18-29 n=119		30-39 n=5		40-49 n=5		> 50 n=3	
Product attribute	μ	σ	μ	σ	μ	σ	μ	σ
Cost	4.37	.595	4.20	.447	3.60	.894	4.00	.00
Quality	4.41	.602	4.40	.548	4.60	.548	4.67	.577
Prior use of the product	3.51	.973	4.20	.837	3.40	1.342	2.67	1.528
Ranges of sizes available	3.19	1.019	3.40	1.517	3.00	1.414	3.33	1.155
Safety to the environment	3.46	.871	4.20	.447	3.80	1.095	4.33	.577
Produced with social justice	3.35	1.030	3.20	.837	4.20	.447	4.67	.577

Notes: N = 132

Based on the highest education level completed by the respondents, different perceived importance of the product attributes can be identified (Table 5). For example, the attribute “quality” increases in importance with higher levels of education completed. In comparison, “safety to the environment” can be considered fairly constant. However, caution needs to be taken when making conclusions including the completion of a PhD, since only one respondent surveyed belonged to this group.

Table 5. Overview of importance of product attributes based on highest education level completed

Highest education level completed	High School n=53		BSc n=50		MSc n=28		PhD n=1	
Product attribute	μ	σ	μ	σ	μ	σ	μ	σ
Cost	4.45	.574	4.28	.607	4.18	.670	4.00	0.00
Quality	4.32	.701	4.48	.505	4.50	.509	5.00	0.00
Prior use of the product	3.49	.953	3.46	1.014	3.64	1.096	4.00	0.00
Ranges of sizes available	3.26	1.022	3.20	1.069	3.14	1.008	1.00	0.00
Safety to the environment	3.49	.775	3.56	.907	3.50	1.036	4.00	0.00
Produced with social justice	3.43	.797	3.48	1.11	3.21	1.258	4.00	0.00

Notes: N = 132

4.1.4. Results of Respondents' Answers to Questionnaire Statements

In Table 6 the attributed importance to the statements from the respondents is shown, where the answer overall is leaned towards an agreeableness with the statements, indicating that respondents think it is important to purchase products with recyclable

materials, reusable containers and that they are compliant with environmental standards. The third statement is reversed (the safety of the environment is not important), where most of the respondents indicated a disagreeableness.

In the Appendices, the inter-item correlation between the corresponding statements within environmental concern can be found (Appendix 1).

Table 6. Overview of respondents' environmental concern in %

Variable	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
It is important to purchase products with recyclable materials	0.0	0.0	0.8	13.6	32.6	38.6	14.4
It is important to purchase products packaged in reusable containers	0.0	3.0	0.8	18.9	29.5	33.3	14.4
Consideration for safety of the environment and people when making a purchase is not important	25.0	34.1	9.8	8.3	11.4	7.6	3.8
It is important to purchase products compliant with environmental standards	0.0	1.5	0.0	6.1	25.8	47.7	18.9
I consider myself a sustainable person	1.5	3.8	9.1	20.5	38.6	22.7	3.8

Note: The percentages may not equal to 100% due to rounding errors.

In Table 7 the attributed importance to the statements from the respondents is shown, where the range of answers can be considered rather leaned towards one side of the

scale, namely in agreeing with the statements. For example, 43.2% of the respondents agree that we have a responsibility to avoid purchasing and using products that are known to be unsustainable.

In the Appendices, the inter-item correlation between the corresponding statements within personal sustainability norm can be found (Appendix 2).

Table 7. Overview of respondents' perceived sustainability norms in their environment in %

Variable	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
My surroundings (friends and/or family) expect me to be sustainable in my consumption	3.0	10.6	9.8	24.2	33.3	15.9	3.0
I personally feel morally obliged to engage in sustainable consumption behavior	1.5	3.8	6.1	4.5	35.6	37.1	11.4
I discuss sustainable products with my friends and/or family	4.5	7.6	12.1	14.4	25.8	25.0	10.6
We have a responsibility to avoid purchasing or using products that are known to be unsustainable	1.5	2.3	3.0	5.3	24.2	43.2	20.5
Sustainable consumption behavior makes me more socially attractive	3.0	3.8	9.8	28.8	29.5	18.2	6.8

Note: The percentages may not equal to 100% due to rounding errors.

Table 8 indicates the respondents' perceived sustainability knowledge according to five statements. Most of the respondents were confident in making an objective assessment of the sustainability of a product (30.3%), although 21.2% of the respondents felt confused about the marketing claims companies make. Furthermore, respondents somewhat agree with knowing the meaning and being able to use a sustainability label on a product when making a purchase decision (39.4%).

In the Appendices, the inter-item correlation between the corresponding statements can be found (Appendix 3).

Table 8. Overview of respondents' perceived sustainability knowledge in %

Variable	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
I am confident in making an objective assessment of the sustainability of a product.	4.5	6.1	19.7	19.7	30.3	16.7	3.0
I know the meaning of and can use a sustainability label on a product when making a purchase decision.	2.3	5.3	18.2	12.9	39.4	18.2	3.8
I am confused about the marketing claims companies make about their products' environmental and social impact.	0.8	5.3	15.2	12.1	34.8	21.2	10.6
I know what activities in the value chain (from designing, production, distributing, and consumption)	8.3	12.9	15.9	12.9	26.5	18.9	4.5

cause the most environmental and social impact when making a purchase.

I am aware of the impact of my consumption behavior.	2.3	9.8	11.4	8.3	34.8	26.5	6.8
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Note: The percentages may not equal to 100% due to rounding errors.

The results of the dependent variable – purchase intention of sustainable products – is shown in Table 9.

Most of the respondents somewhat agreed with the intention to always purchase a sustainable product (34.8%), even though many of the respondents also agreed (25.8%).

Table 9. Overview of respondents' perceived purchase intention of sustainable products in %

Variable	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
My intention is always to buy a sustainable product.	1.5	9.1	14.4	9.8	34.8	25.8	4.5

Note: The percentages may not equal to 100% due to rounding errors.

4.2. Reliability Test of Variables

Before the analysis of the variables will be presented, the reliability of them will be examined.

4.2.1. Reliability Test on Environmental Concern Variable

To test the extent that the same results from several measurements will occur, a reliability test with Cronbach's alpha was used. Cronbach's alpha is a measurement describing how closely related the set of statements are as a group, namely the internal consistency. In Table 10, the result of Cronbach's alpha for the variable environmental concern is shown to be 0.625, a rather questionable result. Since the cutoff point was decided at 0.7, this is not considered to be a reliable result.

However, it is worth noting that the result of Cronbach's alpha would have been higher, 0.720, if the statement "*Consideration for the safety of the environment and people when making a purchase is not important*" had not been included (Appendix 4). Furthermore, the fact that excluding the other statements in the set would lower the Cronbach's alpha, indicates the closeness of the statements in describing the same concept – environmental concern.

4.2.2. Reliability Test on Personal Sustainability Norm Variable

The reliability test on the variable personal sustainability norm showed an acceptable result of 0.747 (Table 10), since an outcome above 0.7 can be considered acceptable, although not good.

Furthermore, it can be noted that the exclusion of the statement "*We have a responsibility to avoid purchasing or using products that are known to be unsustainable*" could have increased the Cronbach's alpha to 0.759 (Appendix 5).

4.2.3. Reliability Test on Perceived Sustainability Knowledge Variable

Cronbach's alpha for the variable perceived sustainability knowledge resulted in 0.715, an acceptable outcome considering the relatively few statements included within the variable, as discussed previously (Table 10). Nevertheless, a higher result of Cronbach's alpha, 0.723, could have been achieved if the statement "*I am confused about the marketing claims companies make about their products' environmental and social impact*" were excluded (Appendix 6).

4.2.4. Summary

In Table 10, the summary of the variables' Cronbach's alpha is shown with a corresponding comment regarding its acceptance.

Table 10. Summary of the variables' Cronbach's alpha

Variable	Number of Items	Cronbach's alpha	Comment
Environmental concern	5	.625	Rejected
Personal norm	5	.747	Accepted
Perceived sustainability knowledge	5	.715	Accepted

4.3. Multiple Linear Regressions

To predict the effect of environmental concern, personal sustainability norm and perceived sustainability knowledge on the intention to purchase sustainable products,

several multiple linear regressions were performed. One model for the control variables and for each variable was completed, adding up to four models in total.

4.3.1. Multiple Linear Regression Results of Control Variables

Before presenting the analysis with multiple regression on the three variables connected to the hypotheses of the study, it is worth showing the potential explanatory value of the control variables.

As can be noted in Table 11, the control variables – age, gender and highest education level completed – are not significant in explanatory value in being factors driving the intention to purchase sustainable products. This is the case since $F(3, 128) = 1.681$, $p = 0.174$, with an adjusted R^2 of 0.015. indicating that Model 1 is not a significant predictor of the intention to purchase products. Furthermore, R of 0.195 is a result rather close to 0, indicating that the control variables and the intention to purchase sustainable products are not correlated, i.e., no linear relationship exists.

Table 11. Regression analysis for control variables

	Model 1
	Unstandardized coefficients
	B
<i>Constant</i>	3.766*** (.528)
<i>Control variables</i>	
Age	.284 (.231)
Gender	.426* (.253)
Highest educational level completed	-.064 (.179)
N	132
F	1.681
R^2	.038
Adjusted R^2	.015

Note: $p < 0.1^*$; $p < 0.05^{**}$; $p < 0.01^{***}$. Standard errors are indicated in parentheses. Dependent variable is Purchase Intention of Sustainable Products.

4.3.2. Multiple Linear Regression Results of Environmental Concern

The results indicated that Model 2 is a significant predictor of the intention to purchase sustainable products (Table 12), since $F(8, 123) = 8.756$, $p < 0.001$, with an adjusted R^2 of 0.321. Furthermore, it is a positive relationship considering that R of 0.602 is rather close to 1.

The significant predictor of environmental concern toward the intention to purchase sustainable products is based on the perceived importance to purchase products

compliant with environmental standards and that the respondent considers himself or herself a sustainable person.

In the Appendices, the coefficients for Model 2 can be found (Appendix 7).

Table 12. Regression analysis for environmental concern

	Model 1	Model 2
	Unstandardized coefficients	
	B	B
<i>Constant</i>	3.766*** (.528)	-.825 (.828)
<i>Control variables</i>		
Age	.284 (.231)	.085 (.196)
Gender	.426* (.253)	.120 (.226)
Highest educational level completed	-.064 (.179)	-.125 (.150)
<i>Independent variables</i>		
<i>Environmental concern</i>		
It is important to purchase products with recyclable materials		.296* (.165)
It is important to purchase products packaged in reusable containers		-.044 (.129)
Consideration for safety of the environment and people when making a purchase is not important		.003 (.063)
It is important to purchase products compliant with environmental standards		.311** (.129)
I consider myself a sustainable person		.464**** (.096)
<i>Key Statistics</i>		
N	132	132
F	1.681	8.756
R ²	.038	.363
Adjusted R ²	.015	.321

Note: p < 0.1*; p < 0.05**; p < 0.01***; p < 0.001****. Standard errors are indicated in parentheses. Dependent variable is Purchase Intention of Sustainable Products.

4.3.3. Multiple Linear Regression Results of Personal Sustainability Norm

The results of Model 3 indicates that personal sustainability norm is a significant predictor of the intention to purchase sustainable products (Table 13), since F (13, 118)

= 9.204, $p < 0.001$, with an adjusted R^2 of 0.449. Furthermore, since R of 0.710 is rather close to 1 it can be concluded that a positive relationship exists between personal sustainability norm and the intention to purchase sustainable products.

The significant predictor of Model 3 is based on that the respondent feels morally obligated to engage in sustainable consumption behavior. Additionally, it can be noted that the significance of the respondent considering himself or herself a sustainable person has decreased (from environmental concern).

In the Appendices, the coefficients for Model 3 can be found (Appendix 8).

Table 13. Regression analysis for sustainability norm

	Model 1	Model 2	Model 3
	Unstandardized coefficients		
	B	B	B
<i>Constant</i>	3.766*** (.528)	-.825 (.828)	-.1.838** (.153)
<i>Control variables</i>			
Age	.284 (.231)	.085 (.196)	.136 (.178)
Gender	.426* (.253)	.120 (.226)	.184 (.218)
Highest educational level completed	-.0.64 (.179)	-.125 (.150)	-.035 (.142)
<i>Independent variables</i>			
<i>Environmental concern</i>			
It is important to purchase products with recyclable materials		.296* (.165)	.224 (.153)
It is important to purchase products packaged in reusable containers		-.044 (.129)	-.069 (.120)
Consideration for safety of the environment and people when making a purchase is not important		.003 (.063)	.00004 (.057)
It is important to purchase products compliant with environmental standards		.311** (.129)	.146 (.122)
I consider myself a sustainable person		.464**** (.096)	.240** (.098)
<i>Sustainability norm</i>			
My surroundings (friends and/or family) expect me to be sustainable in my consumption			.154* (.086)
I personally feel morally obliged to engage in sustainable consumption behavior			.389**** (.099)

I discuss sustainable products with my friends and/or family	-.049 (.075)
We have a responsibility to avoid purchasing or using products that are known to be unsustainable	.148* (.089)
Sustainable consumption behavior makes me more socially attractive	-.015 (.090)

Key Statistics

N	132	132	132
F	1.681	8.756	9.204
R ²	.038	.363	.503
Adjusted R ²	.015	.321	.449

Note: $p < 0.1^*$; $p < 0.05^{**}$; $p < 0.01^{***}$; $p < 0.001^{****}$. Standard errors are indicated in parentheses. Dependent variable is Purchase Intention of Sustainable Products.

4.3.4. Multiple Linear Regression Results of Perceived Sustainability Knowledge

The results of Model 4 indicates that perceived sustainability knowledge is a significant predictor of the intention to purchase sustainable products (Table 14), since $F(18, 113) = 7.843$, $p < 0.001$, with an adjusted R^2 of 0.485. Furthermore, since R of 0.745 is rather close to 1, a positive relationship is indicated between perceived sustainability knowledge and the intention to purchase sustainable products.

The significant predictor is that the respondent knows what activities in the value chain cause the most environmental and social impact when making a purchase. In addition, that the respondent feels morally obligated to engage in sustainable consumption behavior is still a significant predictor (from personal sustainability norm).

In the Appendices, the coefficients for Model 4 can be found (Appendix 9).

In Table 14, all multiple linear regressions performed are shown. In Model 4, the result of R^2 shows that 55.5% of the variation on the dependent variable – purchase intention of sustainable products – can be explained by the independent variables, namely environmental concern, personal sustainability norm, perceived sustainability knowledge.

Table 14. Regression analysis for sustainability norm

	Model 1	Model 2	Model 3	Model 4
	Unstandardized coefficients			
	B	B	B	B
<i>Constant</i>	3.766*** (.528)	-.825 (.828)	-.1.838** (.153)	-2.177*** (.802)
<i>Control variables</i>				
Age	.284 (.231)	.085 (.196)	.136 (.178)	.167 (.179)

Gender	.426* (.253)	.120 (.226)	.184 (.218)	.085 (.214)
Highest educational level completed	-.0.64 (.179)	-.125 (.150)	-.035 (.142)	-.052 .139
<i>Independent variables</i>				
<i>Environmental concern</i>				
It is important to purchase products with recyclable materials		.296* (.165)	.224 (.153)	.134 (.154)
It is important to purchase products packaged in reusable containers		-.044 (.129)	-.069 (.120)	-.072 (.121)
Consideration for safety of the environment and people when making a purchase is not important		.003 (.063)	.00004 (.057)	.026 (.057)
It is important to purchase products compliant with environmental standards		.311** (.129)	.146 (.122)	.168 (.119)
I consider myself a sustainable person		.464**** (.096)	.240** (.098)	.184* (.098)
<i>Sustainability norm</i>				
My surroundings (friends and/or family) expect me to be sustainable in my consumption			.154* (.086)	.067 (.090)
I personally feel morally obliged to engage in sustainable consumption behavior			.389**** (.099)	.429**** (.102)
I discuss sustainable products with my friends and/or family			-.049 (.075)	-.074 (.075)
We have a responsibility to avoid purchasing or using products that are known to be unsustainable			.148* (.089)	.130 (.087)
Sustainable consumption behavior makes me more socially attractive			-.015 (.090)	.027 (.088)
<i>Perceived sustainability knowledge</i>				
I am confident in making an objective assessment of the sustainability of a product.				-.091 (.092)
I know the meaning of and can use a sustainability label on a product when making a purchase decision.				.169* (.090)
I am confused about the marketing claims companies make about their products' environmental and social impact.				.035 (.074)
I know what activities in the value chain (from designing, production, distributing, and consumption) cause the most environmental and social impact when making a purchase.				.185** (.067)

I am aware of the impact of my consumption behavior.	-.012 (.075)
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Key Statistics

N	132	132	132	132
F	1.681	8.756	9.204	7.843
R ²	.038	.363	.503	.555
Adjusted R ²	.015	.321	.449	.485

Note: $p < 0.1^*$; $p < 0.05^{**}$; $p < 0.01^{***}$; $p < 0.001^{****}$. Standard errors are indicated in parentheses. Dependent variable is Purchase Intention of Sustainable Products.

4.4. Hypothesis Testing

From the results described above, not all the hypotheses identified in the literature review and theoretical foundation can be supported.

H1, concerning the variable environmental concern and its explanatory value on the intention to purchase sustainable products was not supported. In comparison, the result for H2 and H3, since a positive relationship could be indicated, is that the hypotheses are supported.

H1	Consumers' environmental concern will positively affect purchase intention of sustainable products.	Not supported
H2	Personal sustainability norms will positively affect purchase intention of sustainable products.	Supported
H3	Consumers' perceived sustainability knowledge will positively affect purchase intention of sustainable products.	Supported

5. Discussion

As mentioned before, the primary purpose of this thesis is to create a better understanding of the drivers and its effect on sustainable purchasing behavior. The research question to be examined in this report is the following:

- *Which factors affect the purchase intention of sustainable products?*

5.1. Conclusions and Implications

5.1.1. Descriptive

From the sample collected, the distribution between female and male respondents were almost equal (Female 51.5%; Male 48.5%), where no respondents identified as non-binary. However, the majority of the respondents were between the age of 18-29 years, representing 90.2%. Having a high school degree (40.2%) and a bachelor's degree (37.9%) were almost the same in frequency.

Several differences between females and males could be identified based on the perceived importance of product attributes. For instance, females indicated a higher importance to the product attributes "safety to the environment" and "produced with social justice" than males, while the product attributes "cost" and "quality" had a higher perceived importance for them. Although, it can be noted that cost and quality had the highest perceived importance for both genders. In relation to the control variable age, the perceived importance of cost decreased the older the respondent indicated to be, while at the same time the product attribute quality increased in importance.

These results indicate that females use more sustainability-oriented attributes when making a purchasing decision in comparison to males, and that the older the respondent is the higher the importance of quality becomes. This could suggest that consumers of a higher age, placing less importance to cost, could be more willing to purchase sustainable products in the case of them being more expensive.

5.1.2. Environmental Concern

In this study, a narrow approach was taken in terms of the type of behavior, sustainable consumption, and related attitude, environmental concern, that were examined, to overcome the challenges associated with it (Mainieri et al., 1997). However, the results of the comprehensive Model 4 (Table 14) indicates that environmental concern, with its underlying statements, were not significant predictors of purchasing intention of sustainable products. Although, one explanation for attitude not being a significant predictor of sustainable consumption behavior has been related to the low correlation between the attitude and related behavior, and the different level of specificity in the

measures of attitudes and behavior, this study can confirm a rather high or adequate correlation between the statements representing the attitude of environmental concern (Appendix 1). At the same time, environmental concern, specifically the statement “I consider myself a sustainable person” was a significant predictor in Model 2 and 3, indicating that the explanatory value of perceived sustainability knowledge could overshadow the attitude of environmental concern. Still, the results of Models 2 and 3 indicate a positive relationship being present, which would suggest that a higher attitude regarding environmental concern could increase the intention to purchase sustainable products.

This insignificant result of environmental concern is in line with literature regarding the observed attitude-behavior gap (Gupta & Ogden, 2009; Mainieri et al., 1997). The required sacrifice of costs has been mentioned in earlier research (Peattie, 2010), which could be a factor at play in this thesis considering the high perceived importance the respondents have to the product attribute cost. Furthermore, considering the

5.1.3. Personal Sustainability Norm

The hypothesis that personal sustainability norm would have a positive effect on the purchase intention of sustainable products is supported, specifically since respondents feel morally obliged to engage in sustainable consumption behavior (Table 14). This result is aligned with the literature concerning that personal norms create a feeling of moral obligation to undertake sustainable behavior (Schwartz, 1977). However, the results of the multiple linear regressions suggest that it is only the moral obligation to engage in sustainable purchasing behavior that influences the intention to purchase sustainable products, since no other of the statements representing the personal sustainability norm variable is significant. This indicates that the intention to purchase sustainable products is not affected by the respondent’s discussion of sustainable products with friends and/or family including the surroundings’ expectations, nor that sustainable consumption behavior would make the respondent feel more socially attractive. Therefore, this moral obligation seems to not take the form of a social norm and/or pressure from the peer network being internalized, but rather as how the respondents view themselves which could contribute to subsequent behavior (Peattie, 2010). This could have been affected by the study’s focus on personal norms rather than social norms, where the former reflects an individual’s own moral standards while the latter is based on socially shared rules in a person’s surroundings (Ha & Janda, 2012).

The result of this thesis is contrasting to the study performed by Lee (2008), where the exploration of adolescents resulted in successful green marketing being based on the following four pillars (1) emotional appeal, (2) image branding, (3) peer network, and (4) behavioral efficacy. These outcomes are not aligned, even though many of the respondents in this thesis were in the age of 18-29 years, since this type of marketing would encourage adolescent consumers to discuss sustainability with their peers and

give sustainable product recommendations through word-of-mouth, which in the present study, indicates would not translate into an increased intention to purchase sustainable products. Instead, marketers should focus on making consumers aware of the moral responsibility in making sustainable consumption choices.

5.1.4. Perceived Sustainability Knowledge

The hypothesis that perceived sustainability knowledge would have a positive effect on the purchase intention of sustainable products is supported, specifically since the respondent indicates knowing the activities within the value chain that causes the most environmental and social impact when making a purchase (Table 14). This is line with previous research where support was found, as Bartkus et al. (1999), for the subjective type of knowledge, which in this thesis is defined as perceived sustainability knowledge.

In comparison, the statement “I am confused about the marketing claims companies make about their products’ environmental and social impact” was not a significant predictor of the intention to purchase sustainable products. Furthermore, even though the statement is not significant it is worth noting that the outcome is positive, indicating no negative relationship, which has been elaborated in the literature (Peattie, 2010; Carrete et al., 2010; Mitchell & Papavissiliou, 1999). The argument has mainly concerned the arising challenge of consumer confusion where it involves a risk of consumers generating skepticism towards sustainable marketing claims, which would decrease the intention to purchase sustainable products. Therefore, the statement mentioned above would be thought of having a negative relationship with the dependent variable, especially since 34.8% of the respondents somewhat agree with being confused and 21.2% agree with the statement (Table 8).

In a situation of confusion, consumers are not able to incorporate a benefit into their decision-making if one cannot identify and assign that specific benefit to the product. Therefore, consumers might better understand the sustainability of a product if more relevant and tangible information were to be provided (Carrete et al., 2012). Furthermore, the literature mentions knowledge being an antecedent of attitude (Moser, 2015; Ha & Janda, 2012), but since environmental concern was not a significant predictor of the intention to purchase sustainable products, simply communicating information would not be a promising approach. However, Gatersleben et al. (2002) mentions that it could be useful to establish information and education programs on household consumption’s environmental impact, since the reduction of energy consumption has been notified when education about energy-saving options has been provided.

Nonetheless, perceived sustainability knowledge indicates to be a driver on the intention to purchase sustainable products, the question therefore remains how to increase the perceived knowledge about sustainable issues in marketing communication.

5.2. Key Findings

As mentioned before, overconsumption is an increasing issue having consequences globally. But, in making informed purchasing decisions the chance to diminish this challenge arises. Therefore, the purpose of this thesis was to create a better understanding of the drivers and its effect on sustainable purchasing behavior, specifically which factors affect the purchase intention of sustainable products. The Theory of Planned Behavior has been shown to be useful in explaining the field of sustainable consumption. The results of this study could be useful for marketing practitioners in designing more effective communication, and therefore, have a positive impact on both consumers and the planet.

The key findings of this study can be summarized as follows:

Consumers believe the most important product attributes to be cost and quality. Significant influencing factors on the purchase intention of sustainable products were found to be personal sustainability norm and perceived sustainability knowledge. To develop effective marketing communication, practitioners should focus on raising awareness of the moral obligation of consumers as well as increasing the perceived knowledge the individual claims to have.

5.3. Limitations and Future Research

In the completion of this bachelor thesis, the collection of data was restricted to Sweden for convenience's sake, although consumption and the increasing importance of sustainability is a worldwide phenomenon, which entails that the sample collected might not be representative of the general population. Therefore, the results of this study might have questionable abilities to become generalizable, since non-sampling errors such as non-responses and low response rates is evidenced to be generated using online surveys (Bell, Bryman, & Harley, 2019). This could have been improved by distributing the survey to a larger extent of various groups, and in using other channels to distribute the questionnaire to reach other potential respondents. Furthermore, future research might find it insightful to replicate this study to overcome this limitation.

The outcome of this study requires careful interpretation since it is based on self-assessed and self-reported behavior. The share of explained variance might in practice be lower, since individuals tend to overestimate their behavior (Mainieri et al., 1997; Gatersleben et al., 2002; Armitage & Conner, 2010). For that reason, to acquire the

most accurate indication of sustainable consumption behavior, it might be beneficial to monitor actual purchasing.

Consumers subjective evaluation of a product might be erroneous due its complexity, composition, and origin, which creates uncertainty whether consumers are able to correctly judge products by their environmental impact if they were willing to purchase one (Moser, 2015). Plastics and metal are more negatively assessed by consumers than they actually are (Tobler et al., 2011), and consumers generally overestimate the impact a product has compared with results from environmental analyses (Jungbluth et al., 2000).

To increase the reliability and validity of the study, established scales where used.

Another limitation is the lack of a preparatory questionnaire, where the questions in the survey could have been tested on participants to receive feedback of its content. For that reason, aspects of the survey might have been subject to improvement, which in turn could have established an environment for the respondents to answer in a more rightful manner.

6. References

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7. Appendices

Appendix 1. Inter-item correlation matrix of environmental concern

Variable	It is important to purchase products with recyclable materials	It is important to purchase products packaged in reusable containers	Consideration for safety of the environment and people when making a purchase is not important	It is important to purchase products compliant with environmental standards	I consider myself a sustainable person
It is important to purchase products with recyclable materials	1.000	.680	.197	.415	.405
It is important to purchase products packaged in reusable containers	.680	1.000	.171	.469	.231
Consideration for safety of the environment and people when making a purchase is not important	.197	.171	1.000	.156	.117
It is important to purchase products compliant with environmental standards	.415	.469	.156	1.000	.259
I consider myself a sustainable person	.405	.231	.117	.259	1.000

Appendix 2. Inter-item correlation matrix of personal sustainability norm

My surroundings (friends and/or	I personally feel morally obliged	I discuss sustainable	We have a responsibility	Sustainable consumption
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Variable	family) expect me to be sustainable in my consumption	to engage in sustainable consumption behavior	products with my friends and/or family	to avoid purchasing or using products that are known to be unsustainable	makes me more socially attractive
My surroundings (friends and/or family) expect me to be sustainable in my consumption	1.000	.490	.430	.156	.436
I personally feel morally obliged to engage in sustainable consumption behavior	.490	1.000	.421	.317	.410
I discuss sustainable products with my friends and/or family	.430	.421	1.000	.261	.481
We have a responsibility to avoid purchasing or using products that are known to be unsustainable	.156	.317	.261	1.000	.302
Sustainable consumption behavior makes me more socially attractive	.436	.410	.481	.302	1.000

Appendix 3. Inter-item correlation matrix of perceived sustainability knowledge

I am confident in making an objective assessment of a product	I know the meaning of and can use a sustainability label on a product when making a	I am confused about the marketing claims companies make about their products'	I know what activities in the value chain (from designing, production, distributing,	I am aware of the impact of my consumption behavior
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		purchase decision	environmental and social impact	and consumption) cause the most environmental and social impact when making purchase	
Variable					
I am confident in making an objective assessment of a product	1.000	.607	.281	.386	.409
I know the meaning of and can use a sustainability label on a product when making a purchase decision	.607	1.000	.257	.236	.299
I am confused About the marketing claims companies make about their products' environmental and social impact	.281	.257	1.000	.172	.257
I know what activities in the value chain (from designing, production, distributing, and consumption) cause the most environmental and social impact when making a purchase	.386	.236	.172	1.000	.470
I am aware of the impact of my consumption behavior	.409	.299	.257	.470	1.000

Appendix 4. Cronbach's Alpha if item deleted on environmental concern

	It is important to purchase products with recyclable materials	It is important to purchase products packaged in reusable containers	Consideration for safety of the environment and people when making a purchase is not important	It is important to purchase products compliant with environmental standards	I consider myself a sustainable person
Cronbach's alpha if Item Deleted	.489	.506	.720	.554	.597

Appendix 5. Cronbach's Alpha if item deleted on for personal sustainability norm

	My surroundings (friends and/or family) expect me to be sustainable in my consumption	I personally feel morally obliged to engage in sustainable consumption behavior	I discuss sustainable products with my friends and/or family	We have a responsibility to avoid purchasing or using products that are known to be unsustainable	Sustainable consumption makes me more socially attractive
Cronbach's alpha if Item Deleted	.696	.681	.686	.759	.679

Appendix 6. Cronbach's Alpha if item deleted on perceived sustainability knowledge

	I am confident in making an objective assessment of the sustainability of a product	I know the meaning of and can use a sustainability label on a product when making a purchase decision	I am confused about the marketing claims companies make about their products' environmental and social impact	I know what activities in the value chain (from designing, production, distributing, and consumption) cause the most environmental and social impact when making a purchase	I am aware of the impact of my consumption behavior
Cronbach's alpha if Item Deleted	.612	.663	.723	.683	.647

Appendix 7. Coefficients for environmental concern

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
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(Constant)	−.825	.828		−.996	.321
It is important to purchase products with recyclable materials	.296	.165	.192	1.793	.075
It is important to purchase products packaged in reusable containers	−.044	.129	−.035	−.343	.732
Consideration for safety of the environment and people when making a purchase is not important	.003	.063	.003	.043	.966
It is important to purchase products compliant with environmental standards	.311	.129	.203	2.402	.018
I consider myself a sustainable person	.464	.096	.394	4.810	<.001
Age	.085	.196	.036	.433	.666
Gender	.120	.226	.042	.531	.596
Highest educational level completed	−.125	.150	−.069	−.835	−.405

Appendix 8. Coefficients for personal sustainability norm

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
(Constant)	−1.838	.803		−2.288	.024
It is important to purchase products with recyclable materials	.224	.153	.145	1.461	.147
It is important to purchase products packaged in reusable containers	−.069	.120	−.055	−.572	.568
Consideration for safety of the environment	.000 ^a	.057	.000	.001	.999

and people when making
a purchase is
not important

It is important to purchase products compliant with environmental standards	.146	.122	.095	1.195	.234
I consider myself a sustainable person	.240	.098	.203	2.458	.015
Age	.136	.178	.057	.765	.446
Gender	.184	.218	.065	.846	.399
Highest educational level completed	-.035	.142	-.019	-.243	.809
My surroundings (friends and/or family) expect me to be sustainable in my consumption	.154	.086	.150	1.793	.076
I personally feel morally obliged to engage in sustainable consumption behavior	.389	.099	.348	3.935	<.001
I discuss sustainable products with my friends and/or family	-.049	.075	-.055	-.646	.519
We have a responsibility to avoid purchasing or using products that are known to be unsustainable	.148	.089	.127	1.665	.099
Sustainable consumption behavior makes me more socially attractive	-.015	.090	-.014	-.168	.867

^a = 0.00004378

Appendix 9. Coefficients for perceived sustainability knowledge

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
(Constant)	-2.177	.802		-2.716	.008

It is important to purchase products with recyclable materials	.134	.154	.087	.870	.386
It is important to purchase products packaged in reusable containers	-.072	.121	-.058	-.597	.551
Consideration for safety of the environment and people when making a purchase is not important	.026	.057	.032	.462	.645
It is important to purchase products compliant with environmental standards	.168	.119	.110	1.419	.159
I consider myself a sustainable person	.184	.098	.156	1.876	.063
Age	.167	.179	.070	.930	.354
Gender	.085	.214	.030	.398	.691
Highest educational level completed	-.052	.139	-.029	-.374	.709
My surroundings (friends and/or family) expect me to be sustainable in my consumption	.067	.090	.065	.744	.459
I personally feel morally obliged to engage in sustainable consumption behavior	.429	.102	.384	4.215	<.001
I discuss sustainable products with my friends and/or family	-.074	.075	-.084	-.991	.324
We have a responsibility to avoid purchasing or using products that are known to be unsustainable	.130	.087	.112	1.499	.137
Sustainable consumption behavior makes me more	.027	.088	.025	.302	.763

socially attractive

I am confident in making an objective assessment of the sustainability of a product	-.091	.092	-.090	-.986	.326
I know the meaning of and can use a sustainability label on a product when making a purchase decision	.169	.090	.159	1.869	.064
I am confused about the marketing claims companies make about their products' environmental and social impact	.035	.074	.034	.470	.639
I know what activities in the value chain (from designing, production, distributing, and consumption) cause the most environmental and social impact when making a purchase	.185	.067	.219	2.754	.007
I am aware of the impact of my consumption behavior	-.012	.075	-.012	-.159	.874
