# Master thesis - Analyzing the attitude intention behavior gap for green fast-moving consumer goods in Denmark and Sweden

M.S Brand and Communication Management





Bea Hansson

Student number: S128938

Laura Hanfgarn Poulsen Student number: S127276

Supervisor: Jesper Clement

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#### **Abstract**

Climate change and global warming have become one of the most pressing issues in our modern society, and because of that, there is a need for consumption habits to change. Consumers generally show a positive attitude toward green products, but despite their good intention, there is a gap between their positive attitude and their actions — the so-called *green gap*. The purpose of this paper is to extend literature regarding consumption habits, examining the green gap towards green fast-moving consumer goods from an exploratory approach.

This Theis investigates what is causing the green gap. The research is based on both behavioral and rational economic theory, and the research takes a mixed-method approach, conducting both interviews and a survey. Both Denmark and Sweden are examined. Results from both interviews and the survey are combined and summarized in a conceptual model that highlights where the strongest and weakest connections are.

The results show to be consistent with prior research and point towards that price and knowledge are the biggest drivers of sales. Quality and price are the most important factors for most people, and many people choose not to buy green products because of the price premium. Knowledge has been shown to be one of the factors that could influence the purchase of green products. Many customers state that they lack knowledge about green products and their benefits.

Overall, the findings of this study point to the fact that while there are several barriers to green consumption, there are also many opportunities to promote environmentally-friendly behavior

**Key Words:** Attitude intention behavior gap, Green gap, Green Fast moving consumer goods, consumption, Theory of planned behavior, Eco-labels, cue utilization theory, Attitude behavior Context Theory, Value-Belief-Norm Theory, Contractual level Theory, Prospect theory

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#### Introduction

Global warming and new emerging environmental catastrophes are some but not exclusively, the effects of human's neglect of planet Earth. Climate change and Global warming have become one of the most pressing issues in our modern society. The average temperatures are rising, fueling increasingly intense wildfires, hurricanes, and other disasters that are now impossible to ignore. Unsustainable and harmful consumption is, in the same manner, a contribution to the addressed issue. Consumer goods and fast-moving consumer goods (FMCG) are one of the most polluting industries in the world (SLU, 2023). Food production accounts for 26% of global greenhouse gas emissions, and 70% of the world's freshwater is used for agriculture. FMCG is causing not only pollution and water use but also plastic waste. Therefore, there is a desperate need for consumption habits to change. However, habits and mindsets have begun to change, and people's view on sustainable shopping and ecological groceries has dramatically increased in the past many years (LivetsGoda, 2022). Despite this, a problematic gap between attitudes toward ecological consumption and actual behaviors regarding the same matter is very much present (Ecolabelling, 2018). Consumers are often quite aware of the benefits of sustainable consumption and ecological products. However, even if the intention of buying them is present, consumer behavior often points to the opposite (Ghina, Durif, & Dubé, 2020).

If we then move the focus to Scandinavia, where sustainability is perceived to be of high importance, and where many different actions have been taken to decrease the negative impact on the environment, we see a motivation to expand sustainable consumerism (Ghina, Durif, & Dubé, 2020). New ways to improve sustainable consumption are implemented on a government level as well as by small individual actors to grow the adaptation of green consumption collectively (Ecolabelling, 2018). This study will, however, have its focus on fast-moving consumer goods (FMCG) and green consumption in Sweden and Denmark exclusively. Furthermore, both Denmark and Sweden show high levels of moving towards sustainable consumerism, and Nordic ecolabelling confirms that the intent to engage in green consumption is present, as well as the assumption that the current consumption habit has a negative impact on the environment. Despite this, there is still a gap between what consumers choose to do and what they would like to do. This tendency is referred to as the green gap (Ecolabelling, 2018). Even if the Nordic countries are front movers for sustainability and green consumption, they fail to meet their own marks on the overall sustainability scale (co-operation, 2023).

To build on that, in 2022, "Madkulturen" conducted an investigation that clearly shows that Danish citizens see a connection between climate change and their current shopping habits regarding food. In this study, 73% of the Danes questioned answered that they find our food and drink become more sustainable and essential to combat the climate challenges. Here, 62% said they would like to eat more climate-friendly food. In addition, the survey also shows that 69% are willing to change their eating habits themselves for reasons of climate, environment, and sustainability. (Kvist, et al., 2022)

Similar results have been found to be present in Sweden, as consumers have an increased interest in shopping for more sustainable products and shifting their lifestyle towards being more climatefriendly (Ecolabelling, 2018). An article from 2022, based on research conducted by Kantar Sifo on a mission from Nestlé, found that almost half of all Swedes want to buy and eat more sustainable food (Ecolabelling, 2018). According to this research, 47% percent already considered themselves to engage in sustainable consumption, and 63% wanted to make more sustainable choices in the coming year. When asked what actions they were willing to take to live up to this statement, the following actions were included; Eat more locally grown products, plan meals to decrease waste of food, eat more ecological products, eat more food with a certified stamp (such as Fairtrade), and to eat more plant-based food (Ecolabelling, 2018). This shows that there is considerable interest in sustainable consumption and a clear motivation amongst Swedes to increase green consumption. However, the definition of sustainable consumption is rather vague, and many of the participants felt like they lacked the knowledge to engage in green consumption (Ecolabelling, 2018). This correlates well with the data retrieved from the report by Nordic Ecolabelling (2018), which states that interest in green consumption is present. However, many consumers deem themselves not to have sufficient knowledge of what product is regarded as sustainable or how they individually can change their consumption habits.

Moreover, during Copenhagen sustainability week (2023) The ministers from all the Nordic countries were gathered and held debates around the Nordic region's consumption and then the following carbon footprint related to it (co-operation, 2023) (Ecolabelling, 2018). Even if the Nordic countries are front movers, they are not meeting their targets yet. The Nordic countries' overconsumption and spillover effects not only their own sustainability process but rather increases the negative effects on the climate on a global scale. Therefore, all ministers stressed the newly adopted strategies to decrease

private overconsumption which is a great challenge all Nordic countries face. One of the strategies is named "Sustainable Lifestyles in the Nordic Region" and started in 2021 (co-operation, 2023). The debate concluded with the aim that sustainable consumption should be easy, and that we need to continue to work for increasing green consumption (Setterquist, Carstad, & Ejder, 23)

Continuing, consumers' willingness to change their purchasing behavior is hereby put in contrast to how we consume; the Nordic countries are overconsuming and producing to a great extent, and it affects sustainability action on a global level (Ghina, Durif, & Dubé, 2020). Existing research points to the fact that even if consumers perceive the added benefits of green consumption, many seem to fail to live up to it on a private basis, as Nordic citizens consume more than they need to (Ecolabelling, 2018).

The attitude-behavior gap is considered a pressing problem when attempting to increase the number of ecological groceries consumed. The ever-rising levels of inflation of consumer goods result in a topic that can be researched further. Even though there has been plenty of research done in this area, possible solutions for decreasing this gap are still needed (Ghina, Durif, & Dubé, 2020). Without a proper explanation for why the gap exists, one cannot find a solution or an improvement. By researching the most crucial factors contributing to the gap, the hope is to extend the literature in this area and thereby contribute indirectly to find actions that could be minimizing these exact factors, which would then increase the likelihood of changing consumers' everyday routines to be more sustainable and environmentally friendly.

#### **Thesis Motivation**

Sustainability and green consumption have become a big part of research being conducted nowadays, and new ways of sustainable improvements are needed in almost every sector and consumers' everyday life. Research done by the Research Institute of Organic Agriculture based on data from 2021 shows that there is an increasing demand for organic products and growth in the organic sector (Landbrugsstyrelsen, 2022; SLU, 2023). Consumer demands for organic food increased substantially during the COVID-19 pandemic, which continued in 2021 (Shahbandeh, 2022) However, despite the increase in sales and the generally positive attitude towards green products it has been shown that there is a gap between the positive attitude towards organic products and what consumers purchase when they are shopping, which means that the intention alone is not enough tact in a particular behavior (Ecolabelling, 2018). This then results in what is known as the attitude intention gap or green gap (Ghina, Durif, & Dubé, 2020). Examining consumption habits in Scandinavia, where every country is considered to represent the green future in areas such as energy and recycling, the current statistics show that consumption in the same countries is much too high in contrast to their sustainability goals. Which then contributes to a much more significant amount of emission that affects the environment on a global scale (co-operation, 2023). The question of what is causing this dissonance in the Nordic countries, despite their favorable view of green consumption and how to overcome this gap, remains unsolved.

To further elaborate, one might look at the current state of the world economy due to the war in Ukraine and assume that it might have some sort of effect on consumers' shopping behavior (Statista, Recession risk in the largest economies globally, 2023)(Statista, 2022) It is reasonable to believe that just like many other industries, this industry for green fast-moving consumer goods will most likely be affected by global challenges such as the energy and inflation crises as well as the repercussions of the war in Ukraine. It has not yet been apparent to what extent organic may be impacted by these factors. (FiBl, 2023)

To conclude, the motivation behind this thesis, therefore, is to explore what is causing the attitudeintention gap in order to understand what could be done to help overcome this gap and sell more green products, as this will positively affect the environment at large. Taking use of the theories from both the economic and the behavioral paradigm when examining samples of the Danish and Swedish population will contribute to added research focusing on Danish and Swedish consumption habits, even accounting for the current state of the world economy.

## **Research Background**

#### **Climate change - Macro perspective**

Climate change is a pressing problem and something of concern from both a macro and a micro perspective. This section will examine actions against climate change from both a macro and micro perspective in order to provide an understanding of how extensive the problem is and how actions need to be taken by both individuals and governments ect to help overcome the problem. This section is to provide an overview of climate change, as sustainable consumption is one of the main causes for its existence.

Actions against climate changes from a macro perspective are those taken by governments, organizations, and international bodies to address the global challenge of climate change. These actions typically involve policy, regulation, and investment at the national and international levels. Climate change has reached the point where it is a global concern. The climate crisis cannot be solved by individuals alone, and because of that, climate change from a macro perspective will be taken into account. One of the most significant initiatives taking against climate change is The Paris Agreement, which is a legally binding international treaty on climate change. The Paris Agreement was adopted by 196 Parties at the UN climate change conference (COP21) in Paris on 12 December 2015. The overall goal of the agreement is to hold "the increase in the global average temperature to well below 22°C above pre-industrial levels" and pursue efforts "to limit the temperature increase to 1.5°C above pre-industrial levels." (Unfcc. int, 2023). The Paris Agreement has been concluded because of the fear of frequent and severe droughts, heat waves, and rainfall. (Unfcc. int, 2023). According to scientific experts, if the Earth's temperature were to increase by two °C, it would result in a rise of sea levels by 56 centimeters, a 25% increase in heat days, and a risk of drought periods lasting up to four months. However, a temperature increase of 3°C is expected to cause significant disruptions to ecosystems, food production, and weather patterns. In contrast, a temperature increase of 4°C could severely restrict the habitable zones on Earth. (Buchholz, 2021). The Paris Agreement works on a five-year cycle of increasingly ambitious climate action carried out by countries. This requires that the countries that agreed to the Paris Agreement each set ambitious goals and plan how to follow

through with these goals. Despite the ambitious agreement, many countries miss the mark by a long shot. In contrast, others reject significant commitments on the international stage but still receive good marks for their greenhouse gas records. (Unfcc. int, 2023).

Taking actions against climate change from a macro perspective is crucial to protect the planet, preserve ecosystems, foster economic opportunities, and promote international cooperation. It is a collective responsibility to secure a sustainable future for current and future generations and this requires that all countries meet their standards.

#### **Climate change - Micro perspective**

Actions against climate change from a micro perspective are those taken by individuals and households to reduce their carbon footprint and contribute to the overall effort to mitigate climate change. These actions can include reducing energy consumption by monitoring light and heat consumption in their private home, using sustainable transport, reducing waste, eat plant-based. Meat consumption is one of the most polluting industries, so individuals can reduce their impact by adopting a plant-based or vegetarian diet, supporting renewable energy, educating others about climate change and lastly, choosing to buy sustainable products. Individuals can choose sustainable products, such as those made from recycled materials or products produced using renewable energy, to take action against climate change. This is of importance in this context as green consumption behavior is needed in order to reduce the pressing climate changes. Defining the actions that can be taken to decrease the effects on the environment and increase the adoption of green consumption, from a micro perspective, is of importance as studies show that the Nordic region has difficulty to adapt sustainability on a private level and that overconsumption is highly related to individual consumption (co-operation, 2023). Face their biggest challenge in sustainability. One must take individual actions into consideration when looking at sustainable consumption; only providing green or climate-friendly products will not be enough if consumers do not see any meaning in consuming them. The role of the consumers is considered especially interesting for this thesis as the consumers drive the demand and thereby have a vital role in regard to the reduction in carbon emissions. Even if individual actions may seem small in the grand scheme of things, they can add to significant reductions in carbon emissions when taken collectively. Additionally, individual actions can help raise awareness about climate change and encourage others to take action (co-operation, 2023).

#### **Comparison between Denmark and Sweden**

The Nordic countries are front runners on many sustainability points; however, there are differences between consumption measures for each country. This thesis focus will be on Denmark and Sweden. This section will evaluate and reflect upon the similarities and differences between Denmark and Sweden and why it is deemed relevant to include both countries in the study.

Even though the countries are neighbors and connected by a bridge, some differences are worth noticing. When looking at the size of the countries, Sweden has a larger population, around 10 million, while Denmark has about 5.8 million (Worldbank, Worldbank.org, 2021). In terms of culture, Danish and Swedish cultures share some similarities, but there are also differences. As an example, Denmark is known for its concept of "hygge," which emphasizes coziness and comfort, while Sweden is known for its "lagom" philosophy, which emphasizes balance and moderation (source). Regarding economic aspects, Sweden holds the larger economy looking at gross domestic product (GDP). In 2021, Sweden's GDP was estimated at around \$530 billion, while Denmark's GDP was estimated at around \$306 billion (Worldbank, Worldbank.org, 2021) (Worldbank, Worldbank.org, 2021).

However, even if certain things make the two countries different, other aspects make them very much alike. The main point of including both Danish and Swedish participants through surveys and interviews is the fact that countries are very closely connected, making it easier to use subjects from both countries in this study. This is to see if there is a distinct difference between the two while conducting this research, to not only find differences but also make room for further research topics. Furthermore, comparing Denmark and Sweden in terms of organic food, one can see that there is a difference. Denmark had about 11% of certified organic agricultural land in 2020 (Landbrugsstyrelsen, 2022), while Sweden accounted for about 20%, making Sweden the country with the largest percentage of organic farmland (Svensson, 2021). Overall, measures from organic food sales for Sweden reached EUR 1,638 million in Sweden in 2018, compared to EUR 1,522 million in Denmark in 2017, making the countries very similar in this matter (Pekala, 2020). Moreover, both countries encourage environmentally friendly farming practices, including organic

farming. Despite this, Sweden greatly emphasizes biodiversity and wildlife conservation in its organic farming practices. At the same time, Denmark focuses on reducing the environmental impact of agriculture through reduced pesticide use and improved nutrient management.

#### **Sweden and Denmark labels**

In a report from 2018, results from surveys that conveyed Danish and Swedish politicians' attitudes towards eco-labeling when new products are publicly purchased were compared to gain deeper insight into the importance of these actions. The Swedish survey was conducted by the organizations involved in the collaborative initiative ModUpp2020, which includes Bra Miljöval (Swedish Society for Nature Conservation), EU Ecolabel (Swan Labeling Sweden), Fairtrade Sweden, KRAV, Marine Stewardship Council (MSC), Svanen (Swan Labeling Sweden), and TCO Certified (TCO Development). It is worth noting that the survey results have not been statistically validated (Svanen, 2018). The survey was conducted to gauge the perspectives of individuals involved in procurement and sustainability matters in Swedish municipalities, government agencies, and county councils.

According to the Public Procurement Act (2016:1145), sustainability requirements should be prioritized in public procurement by the government sector. Although using labeling in public procurement has become more straightforward, it remains unclear whether these opportunities are being seized. This led to the Swedish survey "Demanding Labels in Public Procurement." The report, which is referred to, then compiles the results from the Swedish survey and compares them to the Danish study, "Analysis of Results from the Zero-Point Measurement." Currently, the potential for requiring labeling and certifications is comparable in both Sweden and Denmark. The survey results indicate that in Sweden, a majority of respondents recognize the advantages of using labels and certifications, such as avoiding the need to establish and validate requirements, supporting national and international sustainability objectives, and showcasing an organization's sustainability initiatives. However, although the public sector in Sweden is aware of the opportunities to use labels and certifications, it is not utilizing them to their full potential. The study reveals that 83% of respondents in Sweden agree that the public procurement law permits the use of labels, while in Denmark, 88% are aware of this possibility. It is worth noting that Swedish politicians are more inclined than their Danish counterparts to demand the use of labels. In Sweden, nine out of ten respondents believe that requiring labels in procurement provides significant benefits, including saving time and resources by having independent parties monitor sustainability standards. However, despite the fact that Swedish politicians want to make demands for labeling and certifications, they do not make use of them to the same extent as in Denmark. Only 34% in Sweden and 44% in Denmark frequently demand labeling in more than half of their procurement processes.

Additionally, 35% of respondents in both countries stated that they occasionally make demands for labeling and certifications. In Sweden, 12% never make such demands, and 18% are unaware if these demands are made at all. In Denmark, 5% never make such demands, while 15% are unsure if they use labeling at all. Concluding, even if both Denmark and Sweden are keen on eco-labelling, there is a distinction between what knowledge and attitudes politicians from each individual country can emphasize with, in terms of enhancing sustainable development.

#### Green fast moving consumer goods

Fast-moving consumer goods are products that sell quickly at a low cost. The products often have a short shelf life because of high consumer demand or because they are perishable. In general, these products are purchased frequently and consumed rapidly as they are used for everyday purposes. Consumer goods can be divided into three categories; durable goods, nondurable goods, and services. Fast-moving consumer goods are the largest segment of consumer goods and can be defined as nondurable goods as they are consumed immediately and have a short shelf life (less than three years). Nearly everyone purchases and consumes fast-moving consumer goods every day. They are the small-scale consumer purchases at the produce stand, grocery store, or supermarket. Despite the relatively low prices and low involvement in FMCG, the category accounts for more than half of all consumer spending (Kenton, Scott, & Clarine, 2023). Because of the quantity of this product category, the purchase behavior has a significant impact on the environment at large.

Green Fast Moving Consumer Goods (FMCG) are environmentally sustainable products that meet the needs of consumers looking for eco-friendly alternatives to conventional products. These products can include household cleaners, personal care items, food and beverages, and other consumer goods that are produced using environmentally-friendly processes and materials. They are designed to reduce the negative environmental impact and promote sustainability by conserving natural resources, reducing waste and greenhouse gas emissions, and supporting ethical sourcing and fairtrade practices. Green FMCG is also often labeled with certifications such as the USDA Organic or Fairtrade labels, indicating that they meet specific environmental and ethical standards. (Ecolabelling, 2018)

### **Research Question**

Research on sustainable consumption has gained much popularity in the past few years. Previously research has discovered an attitude intention gap in green consumption. The attitude-intention gap in green consumption refers to a situation where individuals express positive attitudes towards environmentally friendly products or behaviors but do not follow through with the corresponding actions. There have been conducted different reviews of the motivations and barriers of green consumption, but despite the different research in the field, there is still room for improvement in terms of metrology and Theory as the majority of the existing research follows the rational paradigm, and there is a lack of qualitative studies. This thesis aims to expand the literature by using a mixed-method approach and exploring both economic rational and behavioral Theory (Ghina, Durif , & Dubé, 2020).

Despite the many articles written on green consumption, the world has experienced enormous changes in the last four years as a result of both the global Covid-19 pandemic and the war between Russia and Ukraine. These changes have affected consumption habits at large, and it is therefore deemed relevant to explore how the changes have affected green consumption. Through the research on the topic, it became clear that most research uses rational Theory as the Theory of planned behavior. Despite the fact that this Theory has shown great potential in predicting human behavior in many contexts, in the context of green consumption, this Theory has failed its expectations as consumers who declare their positive attitudes and intentions to act in a pro-environmental manner do not transform these thoughts into actual behavior. This study, therefore, examines theories from the rational economic paradigm as the Theory of Planned Behavior and Value-Belief-Norm Theory, where the underlying assumption is that individuals seek to maximize their utility. And theories from the behavioral paradigm, such as construal level Theory and Prospect Theory. These theories, on the other hand, observe behavior with the underlying assumption that consumers deviate from the rational model and are highly influenced by emotions and cognitive biases. Based on this, the following research question has been formulated.

"What can influence the intention-behavior gap within green consumption of fast moving consumer goods in Denmark and Sweden?"

The overall goal of this thesis is to extend the literature on green consumption of fast-moving consumer goods by investigating and discovering what could influence the attitude intention gap that customer are biased by. In order to do so, it will be investigated how price, habits, knowledge and social norms affect the purchase decision. The definition of the green gap follows the same definition as (Ghina, Durif, & Dubé, 2020) who define the green gap as "the inconsistency between what the individual says regarding his/her growing concern about the environmental problems and what he/she does in terms of actions, behaviors, and contributions to lessen the consequences of these problem" (Ghina, Durif, & Dubé, 2020, page 5).

## **Project Design & Guide**

The aim of this thesis is to contribute to the literature by examining the green gap in Denmark and Sweden using a mixed-method approach. In order to answer the research question, the relevant literature and research will be evaluated in section 1. Based on the theories, different hypotheses will be formulated under hypothesis development in section 2. After the literature review, the methodology will be reviewed using the research onion in section 3. The research onion covers both research philosophy, research approach, research choice, research strategy, the time horizon of the project techniques and procedures, and data preparation and analysis. These different hypotheses will be statistically tested using a mixed-method approach. In order to test the hypothesis, different questions will be formulated based on the hypothesis. These questions will then be used in both a survey to collect quantitative data and in 8 semi-structured interviews conducted in both Danish and Swedish supermarkets to collect qualitative data. The survey will be conducted in both Denmark and Sweden. The aim of the survey is to get as many respondents as possible, as this will make the analysis of the result more reliable. When the survey has been responded to by enough respondents, the results will be analyzed using a chi-squared test. The interviews will be coded and used to gain more insight into the drivers and barriers to green consumption. The results of both the interviews and the survey will be presented in section 4. Based on the test results, the different hypotheses will be either accepted or rejected, and the results will then be critically reflected upon and discussed in section 5. This discussion will then lead to a conclusion in section 6. Lastly, limitations and further research direction will be discussed in section 7.

#### Literature review

In the following section, the literature that has been used as a base for this thesis aim to discover. The literature review is to be used for analyzing the published research regarding the green consumption gap in critical fashion. The literature review serves as a comprehensive summary and evaluation of existing literature which relates to the topic of this study. It will aim to identify gaps in the current literature and provide knowledge that suggests future directions of research topic. By doing this, the literature review is a valuable starting point for new research as it allows the researcher to build upon existing knowledge and synthesizing information from relevant sources to draw conclusions about the topic.

#### Purchase intention and intention gap - Green products

When looking at the results from a study done by Nordic Swan Ecometer in 2018, the results show that most of the respondents want to make more environmentally friendly choices and that they believe that we will be facing an environmental disaster if we do not change our habits quickly. (Ecolabelling, 2018) Interestingly, only 20% of all respondents say that politicians have the highest responsibility, and only 17% say businesses have the primary responsibility. The majority believes that individuals have the most considerable responsibility to protect the environment.

Consumption is a big part of our identity as it creates a sense of belonging to a larger context and belonging to a group. For the consumers in the Nordic countries specifically, making sustainable choices is integral in how we view ourselves (Ecolabelling, 2018). Despite this, consumers do not always do what they know is right, and this creates the so-called green gap. Only one out of three of the respondents in the survey by Svanene.se says that they choose sustainable market products and services to support responsible brands. (Ecolabelling, 2018)

The research shows that Sustainable consumer behavior is not solely driven by education and information but rather by the social and environmental context in which we live. Our behavior is heavily influenced by the groups we belong to, and individualism may not be as prevalent as we think. As a result, providing information alone may not always be effective in promoting sustainable behavior. People are more likely to imitate the actions of others and conform to social norms in order to avoid social risk. After all, humans are inherently social creatures with a natural inclination to follow the crowd. People want to do good, and with the right approach, companies can help them do so. (Ecolabelling, 2018)

#### **Economic crisis and green consumption**

It has been deemed relevant to examine green consumption again, as the pandemic and the war in Ukraine have massively affected the world economy, which could possibly affect the purchase intention of green consumption. (Luengo-Valderrey, Emmanuel-Martínez, Rivera-Reville, & Vicente-Molina, 2022) Have studied how times of well-being and crisis have different effects on psychographic factors such as motivation, attitudes, and perceived consumer effectiveness and external factors such as environmental information and marketing mix that influence ecological behaviors. Their study is carried out in Spain and distinguished between times of economic crisis (2008–2012) and times of well-being (2014–2019). Based on classical behavioral theories and recent research (Luengo-Valderrey, Emmanuel-Martínez, Rivera-Revilla, & Vicente-Molina, 2022) have identified several variables related to ecological behavior; internal psychographic factors such as attitude (Ajzen, 1991) perceived consumer effectiveness (PCE) (Ellen, Weiner, & Cobb-Walgren, 1991) and motivation (He, et al., 2020) and 2) external factors such as the environmental information available (Ritter, Borchardt, Guilherme, & Vaccaro, 2015) and the marketing mix of green products (Shabbir et al., 2020). These theories form the basis for the research. These behaviors examine the relationship between ecological behavior and its predictors at a particular point in time. This study digs deeper into the topic and takes a longitudinal perspective to address how the economic context moderates the relationships between ecological behavior and the above factors.

The study takes into account Inglehart's theory of Post- materialism (1983, 1995). The theory of post-materialism suggests that the growing public concern over environmental issues is due to a shift from materialistic values (related to economic aspects of people's life) to post-materialistic values (which include environmental protection), which are associated with industrialized or developed countries. Accordingly, consumers support environmental issues only after they reach a certain level of economic well-being (Franzen & Vogl, 2013). This theory is closely related to Maslow's (1943) hierarchy of needs, which suggests that individuals turn their attention toward environmental protection in wealthier countries. (Maslow, 1943)

Findings reveal that people adversely affected by the crisis are more likely to develop some types of ecological behaviors, such as saving water and energy or reducing the use of transport because this reduces the cost of living and saves the individuals money. People are less likely to be willing to pay for environmental causes. When people are affected by a crisis, they usually choose to allocate

economic resources to fulfilling basic needs. (Luengo-Valderrey, Emmanuel-Martínez, Rivera-Revilla, & Vicente-Molina, 2022) This is also consistent with the theory of Post-materialism, which holds that adverse welfare shocks shift the values of individuals closer to material security and away from post-materialist goals.(Inglehart, 1983, 1995)

Interestingly, their finding show that the economic context has a clear influence on behavior. The economic context serves as a moderating variable in the link between internal and external factors and ecological behavior. Psychographic factors and green activism influence green purchasing, and that influence is more pronounced in times of economic crisis. Looking at marketing variables, product and price have more influence on green purchasing than promotion and place in times of economic crisis, and price has no effect in times of well-being. They further conclude that the influence of environmental information is greater in times of crisis than in times of well-being. During economic crises the dissemination of environmental information among consumers plays an important role in environmental attitudes, which in turn influence green purchasing positively. Very interestingly, they found that the higher prices of green products affect the green purchasing negatively in times of economic crisis.

Understating how the economic crisis can affect the purchase of green products are extremely relevant to consider as there has been predictions that the recession and inflation could ultimately lead to a new financial crisis. It is unknown how the uncertain economic state will affect the purchase of green product, but is can already now be seen that people are more likely to develop some typos of ecological behaviors as saving energy, because of the rising energy prices, which is in line with the research. According to Norlys, did the consumer use 13% less energy in January 2023 compared to January 2022. (Kristensen, Dam, & Hjørringgaard, 2023)

Towards closing the attitude-intention-behavior gap in green consumption: A narrative review of the literature and an overview of future research directions

In their article, (Ghina, Durif, & Dubé, 2020)) reviews the literature made available on the "attitudebehavior gap" and systematically summarize the theories, methodologies, and paradigms adopted to assess the effect of these elements on intention-behavior inconsistencies. The article also provides an overview of the reasons behind the "green gap" in consumption and possible solutions to overcome this phenomenon. The paper starts with an explanation of the "green gap" phenomenon, which refers to the inconsistency between consumers' positive attitudes toward environmental issues and their possible lack of action. It is argued that the available literature on the attitude-behavior gap is deemed outdated or limited to specific sectors. Hence, this review intends to provide a comprehensive narrative review of the field with a focus on theories, methodologies, and paradigms. The authors analyze different theories and paradigms used in current research, including the theory of planned behavior, the rational economic paradigm, and the behavioral paradigm. The review does, in the same matter, including intervention studies aimed at overcoming the attitude-behavior gap. In all, the review contains 58 articles about the "green gap". The authors categorized the papers based on the framework suggested by Carrington et al. (2016) into four categories: (1) intrapsychic factors, (2) contextual factors, (3) prioritizing the self, and (4) coping mechanisms. The intrapsychic factors include psychological factors such as values, emotions, and personality traits, while the contextual factors include external influences such as social norms and situational constraints. The behavioral paradigm is highlighted as it is currently favored for explaining market behavior. (Ghina, Durif, & Dubé, 2020) then focus on the methodology and sampling used in the subcategory of articles that model the gap using intrapsychic factors, which includes 11 papers that use quantitative or qualitative methods with sample sizes ranging from 10 to 2000 participants. It is explained that various research methodologies, including quantitative and qualitative methods, and data collection techniques, including longitudinal panel data and intervention studies, are used in each article. Furthermore, the methodology and sampling of 14 papers using contextual and intrapsychic factors to model the green gap are described. It is suggested that the market can be segmented based on green behavior variables such as price sensitivity, quality perception, availability, and brand loyalty. The authors proceed by highlighting the importance of addressing consumer perceptions that green products are of inferior quality and the role of situational factors, such as the social and physical context of the purchase, in influencing behavior. It is argued that environmental concerns may not strongly influence purchasing behavior, but other factors like competitive advantage and behavior-based attitude are effective predictors of green purchase behavior. The authors found that the studies suggest that self-awareness and cost-consciousness may be effective in bridging the gap and that consumers use neutralization

techniques to justify their actions. (Ghina, Durif, & Dubé, 2020) Argue that in order to bridge the green gap, new strategies must be designed to align the consumers' self-interest and personal gain with eco-friendly behavior. Coping mechanisms that help consumers to neutralize their guilt should be investigated further, and self-awareness techniques might be effective in minimizing the gap. Moreover, it is argued that there is a need to categorize consumers into non-green, green, and green gapper groups to determine the most effective interventions. The limitations of the review include its focus on the commercial aspect of the green gap and the predominance of quantitative studies over qualitative ones. It is brought to one's attention that more research is needed in areas such as methodological errors, self-prioritization, and coping mechanisms. The article concludes by emphasizing the need for a holistic approach to understanding and resolving the phenomenon and suggesting future research avenues.

# A systematic review of drivers influencing consumer willingness to pay for organic food

The general assumption of consumer willingness to pay for certain products has been widely researched in different contexts and settings. Katt & Meixner (2020) took the approach to highlight and discusses the increase in consumption of organic food over the years, and the reasons for this increase include heightened environmental and health awareness. However, the authors point to the fact that higher cost and limited availability of organic food are significant barriers to its consumption, thereby focusing their research on possible factors that influence consumers' willingness to pay (WTP) for organic food (Katt & Meixner, 2020)The organic price premium in this context, can be defined as the maximum difference in the perceived value between organic and non-organic food. The article aims to provide an overview of the literature at the intersection of WTP research and organic food purchase behavior literature, which differs from other studies that focus on general consumer behavior and purchase intention for organic food (Katt & Meixner, 2020) Due to this, the researchers have conducted a systematic literature review aimed at understanding the factors that drive consumers' willingness to pay (WTP) for organic food items. The review covers the period from January 1999 to March 2019. It is based on an initial search of several databases using various combinations of terms related to organic food and the like.

Moreover, the authors stress the importance of understanding consumers' willingness to pay in terms of assigning appropriate prices and how different techniques of investigating the matter can influence the results (Katt & Meixner, 2020). Furthermore, by using a thematic synthesis approach, the authors

identify three clusters of WTP drivers, which result in consumer-related drivers, product-related drivers, and purchasing venue-related drivers. Key drivers are then categorized into these clusters according to the literature, and through this distinction, one can understand which factors that would have a positive influence on WTP. The studies included in this paper have found that demographic factors such as age, gender, income, and education, as well as values and attitudes like environmental and health concerns and ethical considerations related to animal welfare, are some of the factors that influence WTP (Katt & Meixner, 2020). In the same manner, the price, locality, quality, and food safety of organic food affect WTP. Other than that, organic labels and certifications, traceability, and promotional activity can also be concluded to have an effect on WTP. Finally, familiarity with the product, trust in the brand, and perceived health benefits are product-consumer relationship factors that affect WTP. Socio-demographics, on the other hand, are factors that have been found to not play a significant role in profiling green consumers. However, attitudes towards the environment and one's own health are significant in influencing organic food WTP (Katt & Meixner, 2020). Furthermore, Katt & Meixner (2020) argue for the fact that recent studies have shown that consumers who have more knowledge about organic food production are more willing to pay for it and that consumers that repeat their organic food purchasers are more willing to pay for it. This systematic literature review is of importance in this research context as it can be assumed that the factors influencing consumers' WTP can be correlated or equal to the factors influencing a possible attitude-behavior gap. Organic products tend to be labeled as more expensive than regular ones, resulting in a possible price premium (Katt & Meixner, 2020). Therefore it is reasonable to believe that willingness to pay amongst consumers can be influencing their choice to purchase organic products, even if they, in principle, intended to do so, resulting in an attitude behavior gap (Katt & Meixner, 2020). In coherence with that, having an overview of possible factors of influences WTP and if willingness to pay strongly influence the attitude-behavior gap, one can take use of factors influencing WTP to understand what factors influence the perceived gap in consumption (Katt & Meixner, 2020). Despite this, it is worthwhile to acknowledge possible limitations of this study, such as the time for publication, which is stated to be 2020. This is of importance as the literature review does not take the current increase in inflation into account, nor the Covid-19 pandemic, as it was published before these two major changes occurred.

#### Theoretical framework

The following literature will form a starting point for the hypothesis that will later be examined. The literature reviewed will cover literature from both the rational economic paradigm and the behavioral paradigm in order to provide an in-depth understanding of the topic from different angles. The theories that will be used to examine the green gap are the Theory of planned behavior, Cue utilization theory, Attitude behavior Context Theory, Value-Belief-Norm Theory, Contractual level Theory, and Prospect theory. All theories are carefully selected based on previous research, to build a useful theoretical framework, used for analyzing the results gained in coherence with this research paper.

#### Theory of planned behavior

The theory of planned behavior is a social psychological tool for determining people's underlying intention to perform a certain behavior. The theory is designed to explain and predicts certain human behaviors. This intention is the assumed to be the results of three important factors, these factors are expected to be attitudes, subjective norms and perceived behavioral control. Each of these factors can then be regarded as having different levels of strength to influence the overall intention.

The underlining assumption behind The theory of planned Behaviour is that intentions to perform behaviors of different kinds can be predicted with high accuracy from eaxmining the these three factors. Attitudes in this context is centered around the subjective positive or negative evaluation of that specific behavior, which is determined by the person's beliefs and the outcomes of that behavior (Ajzen, 1985, 1987). Next is the subjective norms, which is a person's perception of what others think they should do, and their motivation to comply with those expectations. The last factor is the perceived behavioral control, which refers to a person's perception of how easy or difficult it is to perform the behavior, based on their own abilities and the environmental factors that might facilitate or hinder the behavior (Ajzen, 1985, 1987).

The performance also to some degree also depends on non motivational factors as availability of requisite opportunities and resources. These factors represent peoples actual control over the behavior. If a person has the required opportunities and resources, and intends to perform the behavior this person should succeed in doing so. The importance of actual behavioral control is self-evident. This can vary across situations and actions. It has been shown that peoples behaviour is strongly

influenced by their confidence in their ability to performe it. According to theory of planned behaviour, precieved behavioral control and behavioral intention can be used together to directly predict behavioral achievement. The second predictor is a social factor termed subjective norm. This refers to the precieved social pressure to perform or not to perform the behaviour.

Together these intentions and precptions of behavioral control account for considerable variance in actual beaviour. Attitudes, subjective norms, and precieved behavioral control are shown to be related to appropriate sets of salient behavioral, normative and control beliefs about the behaviour. It is still unclear what the exact nature of these relations are. Value formations has shown to be only partly successful in dealing with these relations. Optimal rescaling of expectancy and value measures is offered as a means of dealing with measurement limitations. The theory has been found to be well supported by empirical evidence. (Ajzen, 1985, 1987)

General dispositions tend to be poor predictors of behavior in specific situation. General attitudes are not accurate enough to predict specific behaviors and in similar fashion there is a low empirical relations between general personality traits and behaviour in specific situations. In order to predict behaviour, there is a need for a more specific method. One proposed remedy for the poor predictive validity of attitude traits is the aggregation of specific behaviours across occasions, situation and forms of action. (Epstein, 1983; Fishbein & Ajzen, 1974) The underlying idea of the principle of aggregating is the assumption that any single sample of behaviour reflects not only the influence of a relevant general disposition, but also the influence of various other factors that is unique to particular occation, situation and action being observed. The aggregate represents a more valid measure of the underlying behavioral disposition than any single behaviour. Aggregation principle has shown that general attitudes and personality traits predict behavioral aggregates much better than they predict specific behaviours.

Aggregation theory is part of the underlying assumption of theory of planned behaviour. However, the principle does not explain behavioral variability across situations or permit predication of a specific behavior in a given situation. The Theory of Planned behavior is designed to predict and explain behavior in specific context. A central factor in the theory of planned behaviour is the individuals intention to perform a given behavior. Intention capture the motivational factors that

influence a behavior. The stronger the intention to engage in a behavior the individual have, the more likely should be its performance.

The theory of planned behavior has shown great potential in predicting human behavior. In the context of green consumption, however, the theory has failed its expectations. Despite the fact that consumers declare their positive attitudes and intentions to act in a pro-environmental manner, it has been found that this intentions does not necessarily transform into actual behavior. Furthermore, the theory of planned behavior has been applied to a wide range of behaviors, including health-related behaviors such as exercise and healthy eating, environmental behaviors such as recycling and energy conservation, and social behaviors such as voting and volunteering. It has been found to be a useful framework for developing effective interventions to promote behavior change, by targeting the factors that influence intentions and behavior. In addition to TPB, The Attitude-behviour-Context Theory and the Value-Belief-Norm Theory have been used to examine the green gap. These theories also falls under the rational economic paradigm where the underlying assumption is that individuals consciously seek maximize the utility through their consumption choice. On the other hand, theories from the Behavioral paradigm has also been examination the green gap. In this field of research construal Level Theory and the Prospect Theory is the most dominant. According to the behavioral paradigm the observed of consumers deviates from the observed behavior of consumers deviates from the ratioanl model ans is highly influenced by emotions and cognitive biases.

The article suggests that the TPB is well-supported by empirical evidence and that intentions to perform behaviors can be predicted with high accuracy using this theory. Furthermore, the article suggests that attitudes, subjective norms, and perceived behavioral control are related to salient behavioral, normative, and control beliefs about the behavior, but the exact nature of these relations remains uncertain. Additionally, the article suggests that including past behavior in the prediction equation can provide a means of testing the theory's sufficiency. Overall, the article concludes that the TPB is a useful framework for understanding and predicting human behavior.

# Habit, Attitude, and Planned Behaviour: Is Habit an Empty Construct or an Interesting Case of Automaticity?

In their article, Verplanken & Aarts (1999) wrote about new findings about habits and how these result can be related to current theories such as the theory of planned behavior and theory of planned action (Ajzen, 1991). According to the authors, habits are often treated as construct of marginal interest from a attitude behavior relationship research, and then proposed that habits rather should be regarded as learned goal-directed automatic responses, which infer boundary conditions of planned behavior. Furthermore, it is stated that cognitive orientation is in this chapter are reviewed as "habitual behavior" according to the authors (Verplanken & Aarts, 1999).

In their research Verplanken & Aarts (1999) demonstrate how that assumption stand true, through examining other researchers experiments in the same domain and their own conducted habit-behavioral tests. Moreover, the authors main intention with chapter is to test for a possible correlation between intention and habit, in terms of behavior and how the two differ in strength of influencing actual behavior. In accordance with this the emphasis of using past behaviour to predict future behavior is highlighted. The most prominent statement of the text, is centered around habits having the strength to overrule the possible effect intention is considered to have on actual behavior. Verplanken & Aarts (1999) state that when a action is new, an individuals is more aware of their behavioral choices, meaning that the exhibited behaviour can be explained by certain factors and processes, making models such as reasoned action and planned behaviour highly useful. However, if a strong habits has already been developed, the intention can be overruled by the habit in question. This as the findings demonstrate that habits will be strong if intentions are weak, and that the opposite is true, if habits are weak the intention will be strong. This understood after Verplanken & Aarts (1999) tested the assumption of habits against the theory of planned behavior and its.

Furthermore, it is emphasized that habits are formed when past behaviors has been repeated and achieved a certain satisfactory level for the individual. Meaning that habits are patterns of behavior that we learn through repetition, which become automatic responses to particular triggers. These behaviors serve a specific purpose and help us achieve certain desired outcomes or objectives. in the same sense, It is explained that a strong habit can make consumers skip process of making choices, stating the normal process for decision making, which revolves around 5 steps, will be skipped if a strong habit is present, arguing that the process of decision making is expected in new situations

where no habits have been formed. Moreover, the authors account for the fact that strong habits will effect the individuals selective information processing, meaning that strong habits can reduce the chance of consider alternative behaviors or other behavioral choices. Additionally, the authors state the uncertainty of predicting future behavior by understanding past behavior as many other variables might not be accounted for, thereby providing critique to whether habits can have the added benefit of predicting future behavior. Lastly, it is stated that most habits are controllable to some extent but can be really hard to break. Therefore, it is proposed that more emphasis to be put on persuasion models, as information alone might not have the power to change strong habits or habitual behavior, due to the fact that individuals might lack the motivation to acquire new knowledge. (Verplanken & Aarts, 1999)

#### **Eco-labels and cue utilization theory**

Many of the green FMCG are marked with different eco-labels. Eco-labels are symbols or certifications that are placed on products to indicate that they have been produced in an environmentally friendly way. Eco-labels provide consumers with information about the environmental impact of the product and can help them make more informed purchasing decisions. (Ecolabelling, 2018)

Eco-labels can cover a variety of environmental issues, such as energy efficiency, water conservation, waste reduction, and the use of renewable resources. They may also address social and ethical concerns like fair labor practices and animal welfare. Some examples of common eco-labels in Denmark include: The Swan Label (Svanemærket): This is a Nordic ecolabel used in Denmark to certify products that meet stringent environmental criteria. The label covers a range of products, including cleaning products, paper products, furniture, and textiles. The EU Ecolabel: This is a European Union-wide eco-label that is used in Denmark to certify products that meet environmental criteria. The label covers a range of products, including cleaning products, personal care products, and textiles. The Organic Label (Økologisk mærkning) This is a label used to indicate that food products are organic and have been produced using sustainable agricultural practices. The Energy Label (Energimærket) This is a label used to indicate the energy efficiency of appliances and electronics, such as refrigerators, washing machines, and televisions. Many of the same labels are present on the Swedish market, which include Bra miljöval, from the Swedish Society for Nature Conservation, which focuses on preserving the environment. KRAV – Label for sustainable food (Krav-märket) is another label focusing on purchasing and consuming suistainable food products. The other labels on the Swedish market are as followed: The Swan Label (Svanenmärket), The Energy Label (Energimärket), The EU Ecolabel (EU blomman) and the EU (Organic label), all of which are present both on the Swedish and the Danish market. A descriptive overview of the labels of each market can be found in appendix 1, page 1.

These are just a few examples of the eco-labels used in Denmark to indicate environmentally friendly products. Studies have shown that consumers look for these eco-labels when shopping in order to make sustainable choices. (Feuß, Fischer-Kreer, Majer, Kemper, & Brettel, 2022) The large-scale field experiment with more than 50,000 observations done by (Feuß, Fischer-Kreer, Majer, Kemper, & Brettel, 2022) offers several important insights. First, the results indicate a positive effect of eco-labels on consumer purchases providing empirical evidence for the effectiveness of eco-labels in

bridging the intention-behavior gap. This finding is also in line with cue utilization theory and corroborates the assumption that consumers perceive eco-labels as a positive extrinsic cue. Cue utilization theory is a psychological theory that explains how people use information in their environment to make judgments and decisions. According to this theory, individuals rely on cues or pieces of information in their environment to form impressions, make decisions, and take actions. From a cue utilization perspective, eco-labels can be defined as extrinsic cues. A product's extrinsic and intrinsic cues can be seen as signals for how consumers evaluate and respond to products (Teas & Agarwal, 2000) Extrinsic cues are not an inherent part of the product (e.g., the price of apparel), while intrinsic cues are (e.g., the fabric of apparel). Research shows that consumers strongly rely on extrinsic cues when they lack information on product characteristics (Atkinson & Rosenthal, 2014)

Cue utilization theory suggests that people use cues to help them process and organize information about the world around them. The cue utilization theory also explains how different cues have different levels of importance and how individuals may rely on different cues depending on the situation. Utilizing cues can make decision-making easier for individuals by simplifying the amount of information that they need to process in order to make a decision. Instead of considering every possible piece of information or option available, individuals can use cues to focus on the most relevant or important information, making the decision-making process more efficient and manageable. (Atkinson & Rosenthal, 2014) Cues also help individuals make decisions more quickly, as they allow for rapid processing of information. This can be especially helpful in situations where time is limited, such as when making quick decisions at work or in emergency situations. Additionally, utilizing cues can help individuals make more consistent decisions over time. By relying on consistent cues, such as past experiences or reliable sources of information, individuals can develop a consistent decision-making process and avoid making impulsive or inconsistent decisions. It has been shown that eco-labels will positively affect customer purchase intention, as they serve as a utilization cue. Overall, utilization cues make decision-making easier for the individual utilizing cues can make decision-making easier for individuals by simplifying the amount of information that they need to process in order to make a decision. Instead of considering every possible piece of information or option available, individuals can use cues to focus on the most relevant or essential information, making the decision-making process more efficient and manageable. While eco-labels can be helpful in guiding consumers toward more sustainable products, it is essential to be aware of potential "greenwashing," where companies may use misleading claims or labels to make their products appear more environmentally friendly than they actually are.

Consumers should look for third-party certifications and do their own research to ensure that the ecolabels they are seeing are legitimate and meaningful.

#### **Attitude-behaviour-Context Theory**

Influences on attitude-behavior relationships – a natural experiment with curbside recycling.

Guagnano et.al. (1995) conducted a social experiment related to the attitude-behavior gap in the middle of the 1990's. This experiment was conducted to test a scenario in which attitudinal factors and external conditions had in combination an influence on behavior (Guagnano, Stern, & Dietz, 1995). The paper starts off by stating other theories of the same theme, but simultaneously highlights their shortcomings and why their theory would fill the gap that other models did not account for. Previous theories either focused on external forces and attributes or they only accounted for internal processes, rather than incorporating both forces into the same model. Thereby making the A-B-C model more suitable for obtaining greater knowledge and depth as it makes use of both forces when investigating subjects behavior or attitude towards the topic at stake. The A-B-C model of behavior incorporates relationships of external conditions, attitudes, and behavior and involves the strategies for integrating internal processes and external conditions (Guagnano, Stern, & Dietz, 1995, s. 701) This model is a simplification from Stern and Oskamps model from 1989, which was more extensive and more in depth. However, this model takes behavioral change into consideration, where behavior can be studied as a function of external factors. Hence, it is regarded as a socio-economic theory that incorporates both external conditions and internal processes. Continuing, The authors relate to the fact that environmentally relevant action is an outcome of a series of causally linked external and internal factors (Guagnano, Stern, & Dietz, 1995). The model includes three main forces, where B stands for actions or behaviors which can be influenced by either A which denotes attitudes and C that denotes Conditions (Guagnano, Stern, & Dietz, 1995)

Scientists include regulations and taxes as external factors which can be used as methods to change behaviors. On the contrary, scientists of internal factors include education and persuasion as ways to change behaviors. Both internal and external factors range from extreme positive positions and extreme negative positions. A and C therefore have different forms of effects on B, depending on what forces are most prominent. This thus implying that if A+C is near 0 greater behavioral effects will be realized from any given variation in attitude within the group (Guagnano, Stern, & Dietz, 1995) The experiment, which was the core of the theory development, focused on providing blue

plastic bins in order to examine attitudes towards recycling, where there was a difference in convenience for the subjects to incorporate recycling in their everyday routine. From the experiment it was realized that Incentives can be good motivation for starters, but intrinsic motivation is needed to keep the desired behavior to be consistent. The authors draw attention to the possibility that external conditions can alter attitudinal processes and that responses to external conditions may be affected by cognitive and social-psychological processes (Guagnano, Stern, & Dietz, 1995). The reason for incorporating the A-B-C model in this study is because of the reach in factors that can be understood from using it in the context of sustainable shopping habits. The original experiment was aimed towards subjects' behavior, which was influenced by external and internal factors, in relation to recycling, which makes it even more suitable for this research topic. The hope is that the A-B-C model will shed light and explain what factors might affect consumers' shopping habits, and why, or if sustainable consumption is a desired behavior not being realized. This meaning, that various reasons will be accounted for, if the subject's behavior might deviate from their presumed attitudes and thereby provide useful data for possibly altering and explaining the attitude behavior gap.

#### **Value-Belief-Norm Theory**

This theory is part of the behavioral paradigm. The Value-belief-Norm theory is based on support for a social movement. The article presents three types of support; Citizenship actions, policy support and acceptance, and personal-sphere behaviors that accord with movement principles. The value-belief-norm theory draws on theoretical work on values and norm activation processes. Individuals who accept a movement's basic values believe that valued objects are threatened and believe that their actions can help restore those values, experiences, and obligations or personal norms for promovement actions that create a predisposition to provide support. Which kind of support is dependent on the individuals' capabilities and constraints. (Stern, Dietz, Kalof, Abel, & Guagnano, 1999)

Public support is one of the most important resources social movements mobilize in their efforts to overcome cultural inertia and the interests of powerful actors. (Stern, Dietz, Abel , Kalof, & Guagnano, 1999) Present a theory of public support for the environmental movement. The value-belief-norm theory specifically offers a theory of public support for the environmental movement that is congruent with both research on environmentalism and with the theoretical approaches. The analysis that the theory is based on suggests that support for the environmental movement can be

explained by social psychological theory that is congruent with social movement theory. Other contending theories of environmentalism have less explanatory power.

Social movements depend upon highly committed and engaged activists, but support from others is also important. General public support is considered to maybe be one of the most important resources for the environmental movement and one that is critical in struggles to define social problems. Public support in the form of widespread change in individual behavior among non-activist is necessary to achieve movement goals. Movement activists are defined as those who are committed to public actions intended to influence the behavior of the policy system and of the broader population. Committed activists are the core of a movement. For them, the movement becomes an important part of their life and a central element in their identity. Movement supporters are defined as those who are sympathetic to the movement and who are willing to take some action and bear some costs in order to support the movement. In order for a movement to succeed other, less intense, kinds of support are critical. One is low-commitment active citizenship. Movements are made easier if many people voluntarily make such sacrifice and support public policies that impose them all.

A third important kind of support involves behavioral changes in the personal or private sphere. Consumer behaviors such as reduction in energy use and purchases of environmentally benign products can make a considerable contribution if enough people do it. They also serve as a signal to government and industry regarding citizen concerns and consumer preferences. All three non-activist types of public support are essential to many movements. (Stern, Dietz, Kalof, Abel, & Guagnano, 1999) propose that the base for general movement support lies in a conjunction of value, belief, and personal norms. They state that feelings of personal obligation that are linked to one's self-expectations impeal individuals to act in ways that support movement goals. It is proposed that norm-based actions flow from three factors: acceptance of particular personal values, beliefs that things important to those values are under threat, and beliefs that actions initiated by the individual can help alleviate the threat and restore the values.

To sum up the value belief norm theory, it can be concluded that non-activist support for the environmental movement can be divided into three dimensions; consumer behavior, environmental citizenship, and policy support or acceptance. Seventeen behavioral measures collapsed into three factors that closely corresponded to these dimensions. Personal pro-environmental norms – the belief

that the individual and other social actors have an obligation to alleviate environmental problems are common to all three types of non-activist environmentalism. The underlying assumption is that personal norms create a general predisposition to support movement goals. The value belief norm theory builds on the strong associations of personal norms by adding an account of the social-psycholohical determination to accept those norms. (Stern, Dietz, Kalof, Abel, & Guagnano, 1999)

#### **Construal Level Theory**

Construal Level Theory (CLT) is a psychological theory that explains how individuals perceive and process information differently based on the psychological distance of the event or object being considered. The theory posits that the more distant an object or event is, the more abstractly it will be processed and vice versa. (Liberman, Trope, & Wakslak, 2007)

According to the CLT, psychological distance can be defined in four dimensions: temporal (how far in the future or past the event is), spatial (how physically close or far the event is), social (how socially close or far the event is), and hypothetical (how likely or unlikely the event is to occur).

The theory suggests that when an event is psychologically distant, individuals tend to think of it in abstract terms, focusing on the broad features and general concepts rather than the specific details. Conversely, when an event is psychologically close, individuals tend to think of it in concrete terms, focusing on the specific details and immediate consequences rather than the broad concepts.

The CLT has essential implications for decision-making, as it suggests that individuals may weigh the costs and benefits of a decision differently depending on the psychological distance of the options. For example, individuals may be more likely to choose a smaller immediate reward over a larger delayed reward when the delayed reward is psychologically distant but may choose the larger delayed reward over the smaller immediate reward when the delayed reward is psychologically close. The CLT provides a framework for understanding how individuals perceive and process information differently based on the psychological distance of the event or object being considered.

This is highly relevant in the case of environmental consumption. Based on CLT, a hypothesis can be formed. Consumers are well aware that green products are better for the environment. However, even though we are already feeling the consequences of climate change due to overconsumption, these consequences are too distant when choosing which product to buy. Especially when the green

product is more expensive than non-organic products. The small reward of saving money wins over the distant and more abstract reward of choosing a green product.

#### **Prospect theory**

Daniel Kahneman and Amos Tversky's prospect theory from 1979 was created through a study aiming at describing people's reactions and behavior, when having to make decisions while being aware of the risk following every decision (Kahneman & Tversky, 1979), Meaning that this theory can be regarded as a behavioral economics theory that seeks to explain how people make decisions under uncertainty. It challenges traditional economic theory, which assumes that individuals are rational and always make decisions that maximize their expected utility (Kahneman & Tversky, 1979). Their interest in the subject arose as they deemed current utility functions inadequate for testing the fundamental relationship between attitudes toward gains and losses. The prospect theory thereby proposes that individuals' decisions are influenced by their reference points (i.e., the status quo) and their attitudes toward gains and losses. To be more exact, individuals tend to overweight losses relative to gains, and they tend to make decisions based on changes in their current situation rather than on absolute levels. As consumers, we are very conscious of the little changes in our wealth, even if they are minor and out of proportion to our overall economic situation ( (Kahneman & Tversky, 1979).

Prospect theory assumes that individuals evaluate outcomes in terms of gains and losses relative to their reference point, which is most often defined by today's wealth, and that the shape of the value function that describes these evaluations is concave for gains and convex for losses (Kahneman & Tversky, 1979). Meaning that individuals are risk-averse when it comes to gains, implying that they are willing to take a smaller but certain gain over a larger but uncertain one. On the other hand, individuals are risk-seeking when it comes to losses, which implies that they are willing to take a larger but uncertain loss over a smaller but certain loss (Kahneman & Tversky, 1979)

Furthermore, prospect theory suggests that individuals tend to be loss-averse, which means they feel the pain of losses more strongly than they experience the pleasure of gains of equal weight. Losses are experienced to be perceived to weigh more heavily than the same amount obtained as gain. Simply explained, that if one gain 50 dollars, the same perceived joy that instance generates should be equal

to the joy one feels after gaining 100 dollars and then losing 50, as the concluding amount is the same. However, this theory shows the exact opposite to be true (Kahneman & Tversky, 1979)

This then prompts individuals to be more willing to take risks to avoid losses than to achieve gains. This is especially relevant when looking at buying behavior. Based on this assumption, if the green product is more expensive than the alternative, it has to compensate for the extra price by providing more significant benefits.

Concluding, prospect theory provides a more realistic model of decision-making under uncertainty than traditional economic theory, as it takes into account the influence of reference points, attitudes toward gains and losses, and loss aversion. This theory can thereby be helpful in predicting people's attitudes towards sustainability and ecological shopping habits if the gains are high enough to outweigh the probability when engaging in sustainable consumption. This model would be useful in investigating consumers' possible attitude-behavior gap towards sustainable consumption as the current economic landscape is taking a new shape. By applying this theory to this area of research, one might find it. (Kahneman & Tversky, 1979)

## **Hypothesis Development**

#### **Economy**

(Luengo-Valderrey, Emmanuel-Martínez, Rivera-Revilla, & Vicente-Molina, 2022) examines how the economic context influences ecological behavior and factors like psychographics and marketing. During economic crises, people are more likely to save water and energy and reduce transportation usage to save money, while green purchasing is influenced by psychographics and green activism. Environmental information has a more significant influence during economic crises, and higher prices of green products have a negative effect. This understanding is relevant for predicting how the uncertain economic state may affect green consumption. Based on these observations, the following two hypotheses are put forward:

H1: The increased inflation that results in higher prices will have a negative effect on the purchase of green products.

H2: Price is the key determiner of whether the customer buys the product to not.

#### Theory of planned behavior

The underlining consumption behind the Theory of Planned Behavior is that intention to perform behaviors of different kinds can be predicted with high accuracy from the attitude toward the behavior, subjective norms, and perceived behavioral controls. (Ajzen,1991) Together these intentions and perceptions of behavioral control account for considerable variance in actual behavior. The second predictor is a social factor termed subjective norm. This refers to the perceived social pressure to perform or not to perform the behavior. On that basis, the following two hypotheses are put forward:

*H3:* Strong purchase intention of green products will positively affect actual purchase behavior.

H4: Possessing a high level of environmental knowledge will positively influence a consumer's purchase intentions of green products.

## Eco-labels and cue utilization theory

Studies have shown that consumers look for eco-labels when shopping in order to make sustainable choices. According to Cue utilization theory, individuals rely on cues or pieces of information in their environment to form impressions, make decisions, and take action. From a cue utilization perspective, eco-labels can be defined as extrinsic cues. The eco-labels can help individuals make decisions more quickly, as they allow for rapid processing of information. (Feuß, Fischer-Kreer, Majer, Kemper, & Brettel, 2022) On that basis, the following hypothesis is put forward:

H6: Eco-labels will positively affect purchase intentions because they serve as utilization cues

# **Value-Belief-Norm Theory**

The value belief norm theory suggests that people's behavior is influenced by their values, beliefs, and the norms they follow. Values are an individual's general principles, beliefs are their opinions about specific things, and norms are the social rules that guide behavior. When these three factors align, they can strongly influence behavior. The theory suggests that promoting a shared set of values and beliefs, and creating social norms that encourage desired behaviors, can be effective in promoting positive behavior change. (Stern, Dietz, Kalof, Abel, & Guagnano, 1999) On that basis, the following hypothesis is put forward:

*H5:* Social norms will positively affect the individual to buy green products.

#### **Contractual level Theory**

Construal Level Theory (CLT) is a psychological theory that explains how individuals perceive and process information differently based on the psychological distance of the event or object being considered. The theory suggests that when an event is psychologically distant, individuals think of it abstractly, focusing on the broad features and general concepts rather than the specific details. The win of choosing a green product is too distant, and because of that, the small reward of saving money wins over the distant and more abstract reward of choosing a green product. (Liberman, Trope, & Wakslak, 2007) On that basis, the following hypothesis is put forward:

H7 - Because of cognitive limitations, consumers choose a cheaper product over a green product.

## **Prospect theory**

Prospect theory is a behavioral economics theory that explains how people make decisions under risk and uncertainty. The theory suggests that people's decisions are influenced more by the potential for gains or losses rather than the final outcome. The theory proposes that people weigh potential loss more heavily than potential gain and that people's risk tolerance changes depending on their perception of the situation. This theory can thereby be helpful in predicting people's attitudes towards sustainability and ecological shopping habits if the gains are high enough to outweigh the probability when engaging in sustainable consumption. (Kahneman & Tversky, 1979) Based on that, the following hypothesis is put forward:

H8: To justify the higher purchasing price of green products in contrast to regular ones, the green products must have an added benefit that compensates for the increase in expense.

# Methodology

In this section, the research framework will be presented. The goal is to imperially test the hypothesis presented in the last section of the paper. In this section, methodological choices and their consequences, possible biases, and limitations will be evaluated. The research onion will be used as the framework to structure the methodology.

#### The Research Onion

The Research Onion metaphorically represents the layers of complexity involved in the research process. It was first introduced by Saunders et al. (2007) in their book "Research Methods for Business Students." The research onion consists of multiple layers, each representing a different aspect of the research process. The layers are (1) Research philosophy, (2) Research approach, (3) Methodological choices, (4) Strategies, (5) Time horizon, and (6) Techniques and procedures. Overall, the research onion serves as a helpful tool for researchers to conceptualize the various layers of the research process and ensure that they have considered all of the necessary steps of their study. (Staunders, Lewis & Thornhill, 2018) A visual presentation of the research onion can be seen underneath.

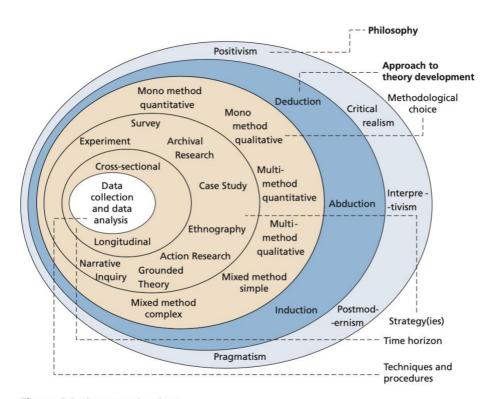


Figure 4.1 The 'research onion'
Source: ©2018 Mark Saunders, Philip Lewis and Adrian Thornhill

# 1. Research philosophy:

The outermost layer of the research onion is the research philosophy, which outlines the researcher's underlying assumptions and beliefs about the nature of the world and the role of research in generating knowledge.

Research philosophy refers to the researcher's beliefs and assumptions about the nature of the world and how knowledge is developed. It provides the framework for the research and influences the researcher's choice of research methods and approaches. (Burrell & Morgan, 2016)

Each research philosophy has its own ontology and epistemology. Ontology refers to the branch of philosophy concerned with the nature of existence or being. In research, ontology refers to the researcher's beliefs about the nature of reality. In other words, assumptions about the realities the researcher encounters in their research. (Thomas & Hardy, 2011) The are two types of ontology; Objectivism and subjectivism. Subjectivism is a belief that one cannot know an external or objective reality apart from one's subjective awareness of it; what we agree exists, exists for us, of, and in our intersubjective awareness. Ontologically, subjectivism states that reality is constructed through social interaction in which social actors create partially shared meanings and realities. In other words, reality is constructed intersubjectively. Objectivism, on the other hand, is the belief in an external reality whose existence is independent of knowledge of it; the world exists as an independent object waiting to be discovered. From an objectivist viewpoint, social and physical phenomena exist independently of individuals' views of them and tend to be universal and enduring in character. Epistemologically, objectivists seek to discover 'the truth' about the social world through observable, measurable facts, from which law-like generalizations can be drawn about the universal social reality. The ontology is closely linked to epistemology. (Crotty, 1998)

Epistemology, on the other hand, is the branch of philosophy concerned with knowledge and how it is acquired. In research, epistemology refers to the researcher's beliefs about how knowledge is generated and what counts as valid knowledge. The Epistemology is closely linked to the ontology and whether the author takes an objectivistic or subjectivistic approach. (Saunders, Lewis, & Thor, Research Methods For Business Students, 2019) It is crucial that the researcher is consistent when choosing ontological- and epistemological assumptions in order to underpin the methodological

choice, research strategy and data collection techniques and analysis procedures. This will allow for a coherent research project in which all elements are aligned. (Clark & Johnson, 2006)

#### 1. Research philosophy - Critical theory

There is not one research philosophy that is better than others. It all depends on the research area. Taking a pluralist approach, one would suggest that each research philosophy and paradigm contribute something unique and valuable to business and management research, representing a different and distinctive 'way of seeing' organizational realities (Morgan, 2006). Critical theory has been deemed the most relevant research philosophy for this research.

Critical theory is the scientific theoretical position that believes that the social sciences should criticize conditions such as inequality, pollution, and discrimination. The social sciences should take a clear standing point towards issues of social and economic injustice. The critical theory differs from other research philosophies by involving a controversial conception of science in that scientific issues have commonly been understood in opposition to political, ethical, and value issues. The perception here is that the social sciences differ from the natural sciences and the humanities by having an obligation to be critical. The critical theory, therefore, stands in contrast to, for example, positivism, where the ideal is to be value-neutral. Critical theory deals openly with the question of the choice of method. It is possible to use both quantitative and qualitative methods within critical theory. Critical theory criticizes positivism's one-sided monomethod approach with a focus on quantitative data. Therefore, both quantitative and qualitative methods are used in critical theory.

The ontology of critical theory can be characterized as limited realism. Here, the basic view is that if science is critical enough, it can obtain objective knowledge of the mechanisms that govern society. (Presskorn-Thygesen, 2021). According to critical theory, the social sciences should provide empirically-based analyses; the goal of these analyses is objective knowledge of the social contexts surrounding us. Here the view is that the objects of science exist independently of scientific observation but that the perception of these is often distorted by implicit values. Therefore, it is believed that reality consists of both objective material conditions and subjective perceptions. Epistemology is, therefore, also influenced by this view and can be characterized as a modified objective.

## 1.2 Reflections about Choice of Philosophy

When critically reflecting on the choice of philosophy, critical theory is being criticized for being too political and containing an ideological bias towards leftist politics. If the researcher holds a strong political agenda, it could compromise the validity of the research. In some cases, critical theory can also be criticized for lacking empirical support. Critics could argue that critical theory is often based on theoretical assumptions that lack empirical support and that critical theorists tend to rely on anecdotal evidence and personal experiences rather than systematic empirical research to support their claims. To overcome this criticism, it could also have been relevant to choose research philosophy positivism. The research goal of positivism is to describe phenomena and to establish causal laws that govern the world and society. Therefore, the view here is that objective knowledge is possible and is achieved through inductive methods, thorough data collection and empirical verifications of theories. Empirical observations must form the basis of knowledge. Therefore, only quantitative data is used here. (Presskorn-Thygesen, 2021) It has been assessed that critical theory will give the most nuanced picture, and therefore this form of Research philosophy is used. The critic does not invalidate critical theory as a whole, but they do highlight potential limitations and areas for improvement that will be carefully considered when conducting the analysis.

#### 2. Research approach

The second layer in the research onion is the approach to theory development, which refers to the researcher's overall strategy for conducting the research. The strategy approach can either be deductive, inductive, or abductive (Saunders, Lewis, & Thornhill, Research Methods For Business Students, 2018)

The deductive approach is a logical reasoning process from general principles to specific conclusions. It involves drawing conclusions based on known premises or facts, using logical rules such as syllogism. Induction, on the other hand, is a logical process of reasoning from specific observations or examples to general principles or theories. It involves inferring a general pattern or rule based on particular instances or evidence and making predictions based on that pattern. (Presskorn-Thygesen , 2021) lastly, Abduction is a type of reasoning that involves making an educated guess or hypothesis to explain an observation or set of observations. It involves using incomplete or uncertain information to create a plausible explanation or hypothesis for a given phenomenon. Abduction is often used in scientific inquiry as a way to generate new hypotheses or theories to explain unexplained phenomena. (Saunders, Lewis, & Thor, Research Methods For Business Students, 2019)

This paper uses a mix of inductive and deductive research approaches. A deductive approach is a research approach that begins with a theoretical premise or hypothesis and then tests it through empirical observations or data. In this method, the researcher starts with a general theory or hypothesis and then uses logic to derive specific predictions or hypotheses that can be tested through data collection and analysis. Based on several existing theories from both the rational economic paradigm and the behavioral paradigm, different hypotheses have been formed. These theories will then be empirically tested using a survey. The deductive method is often associated with quantitative research and is commonly used in natural sciences and other fields where a strong theoretical foundation exists. It is a structured and systematic approach that can provide precise and reliable results. However, it can also be limiting in that it may not account for unexpected or unexplained phenomena that do not fit within the initial theoretical framework, the so-called black swan phenomenon. The main characteristic of the deductive approach is generalization. The aim of this thesis is to explain and explore consumption habits among Danish consumers. In order to do this, a survey has been constructed. The aim of the survey is to get as many respondents as possible in order to make valid a generalizable conclusion as possible. The deductive process strives to discover specific problems, propose theories, and then seek to falsify the theories. For this thesis, the falsification can be seen through the test of different hypotheses. (Saunders, Lewis, & Thornhill, Research Methods For Business Students, 2018)

Induction is a process of logical reasoning that involves drawing general conclusions based on specific observations or instances. In other words, it is a way of inferring a general principle or pattern from a set of specific cases or examples. Inductive reasoning involves three steps: observation, pattern recognition, and generalization. In this case, observations are made of specific cases when interviewing individuals. Next, it is attempted to identify a pattern or commonality among these instances by transcribing and coding the interviews. The answers from the individuals will be compared to the answers from the survey. Finally, the patters will be generalized to make a more universal statement or principle. The aim of combining inductive and deductive reasoning is to use them in a complementary way, with each type of reasoning supporting and reinforcing the other. (Saunders, Lewis, & Tornhill, Research Methods For Business Students, 2018)

## 3. Methodological choice

The third layer is the research strategy, which describes the specific methods and techniques that will be used to collect and analyze data, such as surveys or interviews. In this layer, the researcher chooses between conducting a qualitative or quantitative study or a combination of the two. As mentioned, all layers are closely linked, and the research choice is therefore dependent on the Research philosophy and research approach. (Saunders, Lewis, & Tornhill, Research Methods For Business Students, 2018)

Critical theory is open to the discussion of what gives the most valid and reliable knowledge. Both quantitative and qualitative methods are used in critical theory. The goal of using both forms of the method is to strengthen the scientific basis for critical social analysis. This is done by combining quantitative data that can demonstrate correlations with statistical significance and qualitative research, which can illuminate the individual's subjective perception of a phenomenon. (Presskorn-Thygesen, 2021)

For this thesis, it has been chosen to use a mixed approach, collecting both qualitative and quantitative data by doing a combined observation and interview and conducting a survey. By combining both qualitative and quantitative methods, a mixed-method approach has been chosen. Qualitative and quantitative data can support each other in research in several ways. One of the main reasons to use both qualitative and quantitative methods is to verify and validate their findings. This process is known as triangulation and helps to ensure the reliability and validity of the research. Qualitative and quantitative data can complement each other by providing different types of information that can be used to gain a more comprehensive understanding of a research problem. In this case, quantitative data may provide information on the prevalence or frequency of a phenomenon. In contrast, qualitative data can provide insight into the experiences and perspectives of individuals affected by the phenomenon. The aim is to use the qualitative data to expand upon or explain quantitative findings. Based on the survey with many respondents, the aim is that this quantitative study can find a significant association between the different hypotheses and that the qualitative study can explore the underlying mechanisms or processes that contribute to this association. Lastly, qualitative data can provide context for quantitative data by highlighting the social, cultural, or historical factors that influence the research problem. This can help to ensure that. The quantitative findings are interpreted and applied appropriately in real-world settings. Overall, using both qualitative and quantitative data can help to provide a more complete and nuanced understanding of the research problem, leading to

more robust and actionable findings. (Saunders, Lewis, & Tornhill, Research Methods For Business Students, 2018)

# 4. Research strategy

The fourth layer of the research onion is the research strategy. Choosing the research strategy is dependent on whether the researcher aim to do a descriptive, exploratory or an explorative study. For this project is has been chosen to take an explorative approach to study the problem. When collecting the primary data, an explorative strategy has been chosen. This method focuses on a situation or a problem and are therefore deemed relevant for this study as it allows the researcher to collect quantitative data and based on that suggest possible reasons for particular relationships between variables. (Saunders, Lewis, & Tornhill, Research Methods For Business Students, 2018)

In this assignment, we partly want to nuance the picture of why people act the way they do by reviewing relevant theories and carrying out various types of research to better understand people's shopping habits. Based on the studies and the established hypotheses, an offer will be given on what can will most efficiently influence people to buy more sustainably. The task is, therefore, both exploratory, understanding and explanatory, and problem-solving. (Andersen, 2019) In order to examine the set-up hypotheses, both a questionnaire survey and a field study are carried out. The two types of research aim to complement each other by providing different types of data. The project is based on a mixture of inductive and deductive methods, as the two methods are closely connected. (Presskorn-Thygesen, 2021)

As part of the study, we have chosen to conduct a survey to examine people's attitudes toward the purchase of green products and to examine the hypotheses we have drawn up based on the relevant theory on the subject. The method can therefore be seen as a systematic way of examining reality. The questionnaire survey will contribute to the project with qualitative data. Here it will be possible to test the established hypotheses with several people. In addition to the fact that a questionnaire allows for testing the hypotheses with many people, it also allows for greater diversity in the respondents. The questionnaire has been posted in various Facebook groups in order to achieve a greater geographical spread among the respondents.

The positive aspect of using a survey to collect data is that it allows the researcher to collect data from a large number of participants, which increases the statistical power and improves the

generalizability of the findings. Surveys are efficient in collecting data as they can be distributed and completed quickly, which allows the researcher to collect data from a large number of participants in a relatively short period of time. For this project, the survey was responded by 318 people from Denmark and 148 people from Sweden, so in total, 466 people. This research method further allows for the standardization of data collection because et ensures that all participants are asked the same question in the same way. This reduces measurement bias and enhances the reliability of the results. Dette stiller dog store krav til udarbejdelsen af spørgsmålene, da alle respondenterne skal svare på det samme spørgsmål og ikke har mulighed for at stille spørgsmål til dette. Det er derfor meget vigtigt at alle spørgsmål er formuleret korrekt. The survey is answered anonymously and which may encourage participants to be more honest and open in their responses and increase their willingness to participate. Lastly, using a survey allows the researcher to access a diverse population. Surveys can be used to collect data from a wide range of participants, including those who may be difficult to access through other research methods. In this specific case, the survey has been sent to people in different regions of Denmark and Sweden to ensure geographic diversity.

It has been concluded to conduct interviews to supplement the data from the survey. Interviews have several positive aspects that make them a valuable tool when collecting data. Interviews allow for the collecting of detailed and in-depth information about participants' thoughts, experiences, and perspectives. This can provide rich insights into complex phenomena that may not be captured by quantitative measures alone. Interviews further allow for more flexibility than surveys as the interviews are a flexible research method that can be tailored to the specific research question and allow researchers to ask follow-up questions, clarify responses, and explore new areas of inquiry as they emerge. Because of that, it has been chosen to do semi-structured interviews as this enhances flexibility. Participants might have more engagement when engaging in an interview as it might make Participants may feel more involved in the research process and more willing to share their experiences and perspectives in a one-on-one interview setting. Lastly, interviews make the researcher able to take control over the sample to a larger degree than surveys, as They can select participants based on specific criteria and ensure that they have a diverse and representative sample.

## 4.1 Critical reflections on research strategy

When critical reflection on the use of surveys to collect data, participants can be biased by a response bias if they feel a social pressure to respond in a certain way and because of that might not respond truthfully. This will result in repones bias and inaccurate data. This is especially important in this case. Part of the attitude intention gap that we want to investigate consists precisely in the fact that people say they are very positive about buying green products, but when they stand in their local supermarket they do something else.

Surveys have a limited depth of information. Surveys are typically designed to collect quantitative data and may not provide in-depth information or insights into participants' thoughts and experiences. Because of this, it has been chosen to supplement the survey with a field study. Another possible downside of conducting a survey is that researchers may have limited control over who responds to the survey, which can result in a biased sample that is not representative of the target population. In order to overcome this, questions regarding age, gender and which region the respondent lives in has been included. This makes it possible to check if the respondents are diverse enough. Another possible pitfall of surveys is survey fatigue. Participants may become fatigued or disengaged after completing a lengthy or complex survey, leading to incomplete or inconsistent responses. In order to overcome this, it has been considered very important to make the survey easy to understand and possible to complete in less that 5 minutes. (Andersen, 2019) For this scientific project, the survey serves as a valuable research tool for collecting data from large and diverse populations in an efficient and standardized manner, all while preserving participants' anonymity and confidentiality. However, it is important to be mindful of the potential limitations and challenges inherent in utilizing surveys as a research method, such as response bias, and implement strategies to reduce biases and maintain accurate and valid data.

There are also possible limitations of interviews. One of the limitations of interviews are that they are very time consuming. First the interview has to be conducted and afterwards the answers has to be transpired and then analyzed. Interviews can also cause different biases for the respondents Interviewers may unintentionally bias the responses of participants through their questioning, body language, or tone of voice. Participants can also be biased be social desirability. Participants may feel pressure to give socially desirable responses, particularly if the interview is conducted in person or if the participant perceives the interviewer as having a position of authority. This can result in

inaccurate or unreliable data. Lastly Interviews have a limited generalizability because interviews typically involve a small sample size and are personalized to each participant, the findings may not be generalizable to the larger population. Using a semi-structured approach also makes the generalizability more difficult as the questions are personalized to each participant and may involve unscripted follow-up questions, they can be difficult to replicate, which may limit the ability to verify the findings. While interviews provide a personalized and thorough approach to data collection, it is important to be aware of their potential drawbacks and limitations and employ methods to mitigate biases and guarantee the precision and validity of their data. Overall, interviews are a valuable research tool in scientific projects because they offer opportunities for engaged participant responses and researcher control over the sample.

For this thesis, it is considered that interviews and surveys can serve as complementary research tools because they offer distinct advantages and disadvantages. It is possible to combine these methods to gather a more comprehensive and nuanced understanding of their research questions, utilizing the strengths of each method while mitigating the limitations and drawbacks. Therefore, combining interviews and surveys can be a powerful approach to generating high-quality scientific data. (Saunders, Lewis, & Tornhill, Research Methods For Business Students, 2018)

#### 5. Time horizon

Time horizon: The fourth layer is the time horizon. This layer deals with the time frame for collecting and analyzing data, such as a cross-sectional or longitudinal study. There are two different time horizons that the study can follow; a cross-sectional and longitudinal study. Cross-sectional explores a phenomenon in a shorter time and can be compared to a snapshot of reality. The longitudinal study, on the other hand, observes a phenomenon with a longer time frame and can be compared to a "diary." Due to the time restrictions on writing the master thesis, it is not possible to observe a phenomenon for a very long period of time, and because of the limited time, this thesis follows a cross-sectional time horizon. The thesis will, however, still contain elements from a longitudinal study as there have been used sources that date back in time. (Saunders, Lewis, & Thornhill, Research Methods For Business Students, 2018)

## 6. Techniques and procedures

The final layer of the research onion is the cores, which involve data collection and data analysis. Decisions about how to collect and analyze data are very dependent on previous research decisions. It has been decided to collect data through a survey and through interviews.

#### **Emperical data**

This thesis is based on a mix of primary and secondary data. As mentioned, the aim is to answer the research question with a multi-method approach that combines both qualitative and quantitative data. The data collection provides the primary data for the thesis. The secondary data used for the thesis is the literature and data that have been used to identify the research gap and form the hypothesis. The secondary literature has been used to generate the underlying theory and create the hypothesis that we aim to explore by collecting primary data. The secondary data mainly includes academic journal articles. In order to get a good overview of the literature and research on sustainable consumption and the green gap phenomenon, the article "Towards closing the attitude-intention-behavior gap in green consumption; A narrative review of the literature and an overview of future research Directions" (Ghina, Durif, & Dubé, 2020) has been used. The article uses a pre-assigned framework to categorize 58 articles addressing the green gap based on the theory, methodology, and paradigm applied in each article. The article has been used to identify research gaps and methods.

All articles used in the thesis have been carefully checked to ensure that their validity is accepted. In order to gain new knowledge, primary data has been produced. It has been chosen to conduct several interviews and a survey. The secondary data, therefore, consist of a mix of stimuli data from the observation/interviews and non-stimuli data from the survey.

# **6.1 Survey**

Part of the data has been collected through a survey. The survey was created through Qualtrics as this allows for easy collection and analysis of data. The program allows the user to analyze the data afterwards. The aim is to examine the consumption habits of Danish consumers. It will not be possible to examine the consumption habits of the entire population, and therefore only a group that is considered to be representative of the population will be included. The selection is partly random, as we have no direct control over who answers the questionnaire. (Andersen, 2019) However, it have been tried to achieve as great a geographical spread as possible by sharing the questionnaire in different local Facebook groups in all five regions of all countries.

When formulating the questions, there have been various things that have been deemed importance. The purpose of the questionnaire is to test the hypothesizes on a larger group. Emphasis has therefore been placed on formulating the questions in a way that ensures that the survey will get as many answers as possible. All questions are designed as closed questions, where the respondents must answer "Yes" or "No" or indicate whether they "Strongly agree, Agree, Neutral, Disagree, Strongly Disagree." This means that respondents can answer the questionnaire quickly, as they do not need to spend unnecessary time writing a longer answer. Closed questions also make it much easier to compare answers among the respondents. Since the purpose of the task is to examine the gap between what people say they would like to do and what they end up doing when they are in the supermarket, it has been chosen to design most of the questions so that the respondents take their last shopping trip. It is estimated that it makes it more concrete to answer based on one's last shopping trip rather than dealing with more general questions about the respondent's attitude to green products. If the respondents were to deal with general questions such as "Do you buy green products when you shop?" is our assessment that the answers will be less truthful, as they will show more of people's positive attitude towards green products rather than giving a picture of what people actually buy. Before the questionnaire was sent out, it was tested on 5 test persons to double-check for errors and ambiguity and ensure that the questions made sense to people who have not worked with the subject. When the subjects had answered the question, it was corrected and then sent out to a larger group. The subjects reported how long time it took them to answer all questions, and it could be concluded from this that it took between 3-4 minutes to answer. In total, there are 21 questions in the questionnaire. Two different questionnaires have been designed, one in Danish and one in Swedish. It was decided that it gave the best results to let the respondents answer the questions in their own language to avoid misunderstandings. A translation of the questions and answers is included in this assignment.

The questionnaire begins with the following text. "With this study, we want to examine the shopping habits of Danish/Swedish consumers. The questionnaire asks about "green products," which is meant products that are more environmentally friendly than alternative products. These can be, for example, organic products, products with the swan label, or fish with the MSC label, which is the label for sustainable fishing. By participating in the survey, you agree that we may use your answers in our thesis. All responses are 100% anonymous." In addition to this, the respondents were also made aware that the questionnaire was anonymous and that the expected response time was less than 5 minutes.

All questions have been formulated based on the hypotheses and are directly linked to a theory. Some questions are similar in their formulations. This has been included to ensure that the respondents are consistent when they answer the question (Andersen, 2019). A list of all hypotheses an questions can be seen in appendix. The survey also contains questions about the respondent's age, gender, and geographic location. This has been included to ensure that the results are as valid as possible.

# **Interview**

The second part of the mixed method approach that has been chosen to collect primary data interviews. The goal of the interviews is to support the data collected through the survey. The interview can give a more subjective angle to the research. The interviews follow a semi-structured approach. In a semi-structured interview, the researcher has a pre-determined set of questions to ask, but there is also room for follow-up questions and exploration of the topic being studied. The predetermined questions were based on the questions used in the survey to ensure that the answers could more easily be compared because of the degree of standardization. This approach was chosen because it allows for flexibility in the interview process and gives a depth of understanding. The open-ended nature of semi-structured interviews allows the researcher to gain a deeper understanding of the interviewee's perspective on the topic being studied. This can help to reveal insights and nuances that might not be captured through structured surveys or questionnaires. The interviews took place directly after the respondent had been grocery shopping. Their aim was to conduct the interview in less than 15 minutes. The interview was held short in order to be more time efficient. Short interviews can be conducted quickly, which can save time for both the interviewer and the interviewee. The aim was also to reduce respondent burden as it requires less time and effort, which reduces the risk of participant fatigue or dropout. Conducting short interviews allowed for increased sample size as it was possible to conduct more than one interview, despite the fact the interviews are extremely timeconsuming.

## **Preparing Data for analysis:**

The last part of the research onion is data analysis, which involves interpreting and analyzing the data using various statistical or qualitative methods. The was conducted 8 interviews in total. After the interviews was done, they were all transcribed, coded and analyzed. The questions asked in the interviews was based on the questions from the survey and because of that, it has been possible to

compare the answers. In the following section the validity and reliability of the research results will be analyzed.

Reliability refers to the degree to which a measurement or a test consistently produces the same results

#### Reliability

replicating the study.

over time and across different contexts. In other words, reliability measures the consistency and stability of a measurement or a test. It is important to ensure that the results are reliable because if not, the results may not be accurate or trustworthy. A reliable measurement or test is one that produces consistent and stable results over time and across different contexts. Reliability ensures that it will be possible for future researchers to replicate the study and research design and then achieve the same findings. (Saunders, Lewis, & Tornhill, Research Methods For Business Students, 2018) In order to ensure reliability all questions in the survey has been carefully phrased so.. der er lagt stor vægt på at formulere spørgsmålene så de ikke kan misforståelse og så der ikke kan opstå registreringsfejl. Valide data forudsætter at der er definitionsvaliditet imellem de teoretiske definerede begreber og de operationelt definerede variabler, samt at der er reliabilitet mellem de operationelt definerede variabler og de registrerede data som forskeren er i besiddelse af. (Andersen, 2019, s. 83) Før spørgeskemaet er blevet sendt ud, blev det testet af en række forsøgspersonen for yderligere at sikre reliabiliteten. Respondent anonymity among the respondent of the survey is also considered an important aspect of ensuring reliability as it can help overcome the social desirability bias. (Auger & Devinney 2007) this is especially important in this context as the social desirability bias might is a contributing factor to the attitude intention behavior gap. To ensure the reliability of the interview, it has been chosen to follow a semi-structured approach. This approach allowed for some degree of standardization, which is essential in this context. It is believed that future studies following the same research approach will result in the same results. Furthermore, the fact that both the questionnaire and the interviews were carried out both in Sweden and Denmark and with a great geographical spread in the two countries helps to ensure that the results obtained are more general and not just something that applies to a small population group. However, despite the effort to ensure reliability, it is essential to note that the study has been made using a cross-sectional timeframe and,

therefore, shows a snapshot of the world, making it more challenging to get the same result when

## Validity

Validity refers to the extent to which a measurement or a test accurately measures what it is intended to measure. In other words, validity is a measure of how well a measurement or test assesses the construct or concept it is supposed to measure. A valid measurement or test is one that accurately measures the construct or concept it is intended to measure. This is important because if a measurement or test is not valid, then the results may not accurately reflect the construct being measured, and any decisions based on those results may be unreliable or incorrect. (Saunders, Lewis, & Thornhill, Research Methods For Business Students, 2018) To ensure validity, all questions have been formed based on the theory used in the literature review. To ensure that the respondent understood the questions, the survey was first tested on a test group. The test group pointed out different things that could be misinterpreted, and the questions were then rephrased to ensure that the respondent understood the questions and did not respond incorrectly because they did not understand the questions. Despite this, it is important to note that the survey has been answered by people of different ages, gender, and background. It will therefore be possible that not all respondents understand the questions in the same way, and there will therefore be a small uncertainty associated with this survey method. Because the survey is one-way communication, it is not possible for the respondent to ask questions, and this makes it impossible to avoid all misunderstandings.

In order to Ensuring validity in an interview involves taking steps to ensure that the interview questions accurately measure the construct or concept being studied. First, it was deemed important to clearly define the construct or concept being studied. Before conducting an interview, it is important to have a clear understanding of the construct or concept being studied. In order to do this, all literature and hypotheses formulation was done prior to the survey and interviews. The interview question was carefully formulated so that they were open-ended and non-leading. This allows the interviewee to provide detailed and specific responses and avoid using leading questions that suggest a particular answer or bias the interviewee's response. The interviewee did not have any prior knowledge about what the interview was about, despite consumption habits among Danish consumers. It has been considered important that the respondent did not know that the research is about green consumption, as this might affect their shopping behavior due to the social desirability bias.

## Reflections about the Techniques and Procedures

It is important to note that there are limitations and pitfalls to all research philosophies and methods and that this highlights the need for researchers to carefully consider the strengths and limitations of critical theory and to employ appropriate research methods to mitigate potential challenges. It has been considered that the potential pitfalls to be aware of when using Critical Theory as the research philosophy is that this theory places a strong emphasis on theory, which can sometimes lead researchers to prioritize theory over empirical evidence. There can potentially be a political bias, which can lead to a lack of objectivity and an overemphasis on social justice issues at the expense of other important research questions. In line with this, it is also important to avoid value judgment. The critical theory involves analyzing power dynamics and challenging dominant social norms, which can make it difficult for researchers to avoid making value judgments. This can raise concerns about the objectivity and impartiality of research conducted using critical theory. Lastly, using Critical theory can result in a lack of generalizability and cause some methodological challenges. Critical theory often involves studying complex and nuanced social phenomena, which can be difficult to measure and analyze using traditional research methods. This can make it challenging to design and implement studies that produce meaningful and reliable results. Despite these possible challenges, Critical theory is still deemed the most relevant research philosophy as it allows for a mixed-method approach and thereby allows for a holistic approach. Critical theory emphasizes the importance of studying complex and nuanced social phenomena, taking into account multiple factors that contribute to the issue being studied. This can lead to a more comprehensive understanding of the issue at hand.

## **Summary of the Methodology**

The research onion and the six layers that the model consist of have been used as a framework to structure the methodology. The research philosophy chosen for this study is critical theory. This method is chosen because it allows for a mixed-method approach which allows for a more nuanced picture of a complex social phenomenon. Therefore, the research approach is both inductive and deductive. The methodological choices involve a mixed-method approach conducting both a survey and several observations/interviews. This allows for both qualitative and quantitative primary data. Despite the primary data, secondary data in the form of articles and statistics have also been used. Because of the limited time, this thesis follows a cross-sectional time horizon. The overall strategy for the study is exploratory. The techniques and procedures describe how the interview and the survey have been planned to ensure valid and reliable results. The data derived from the survey has been analyzed using Qualtrics, and the data from the interviews have been transcribed, coded, and analyzed. The result that the survey and interviews have produced is then used to reject or accept the formulated hypotheses.

# **Results**

In this section, the results of the data obtained from the survey and the interviews will be analyzed and studied. As the thesis aims to analyze consumption habits in both Denmark and Sweden, the survey has been conducted in both Sweden and Denmark, and this also applies to the interview. There has been a total of 466 respondents who have answered the survey. 318 respondents from Denmark and 148 respondents from Sweden.

To begin with, the results of the descriptive statistics will be analyzed in order to get an overview of the demographics of the respondents. Secondly, the most important buying characteristics, according to the respondents, will be identified. Then the statistical analysis of the survey results and how the variables were tested will be presented. Lastly, the results will be summarized in a model that includes the different hypotheses. The qualitative results obtained from the interviews will also be presented in this section.

The survey data from both Sweden and Denmark has been gathered through Qualtrics. In order to analyze and process the data, Qualtrics and Excel have been used. Qualtrics allow for many different statistical tests. The  $Chi^2$  test was chosen, as this test was deemed the most relevant in this context. The  $Chi^2$  test is used to accept or reject a hypothesis, and as this has been the goal of the research, the  $Chi^2$  has been deemed the most relevant. It could be argued that other statistical tests could also have been relevant as a t-test: The t-test is used to compare the means of two groups. It is commonly used when the data is normally distributed, and the sample sizes are small. The t-test is used to determine whether there is a statistically significant difference between the means of two independent groups, whereas a chi-square test, on the other hand, is used to determine whether there is a statistically significant association between two categorical variables. The  $chi^2$  test is chosen because we have two categorical variables and want to test if they are associated with each other and not whether there is a statistically significant difference between their means. Before the analysis has been conducted, the data has been carefully checked to ensure that the data are valid.

# **Descriptive Statistics**

Descriptive Statistics - Demographics												
Denma	ark (n=318)		Sweeden (n=148)									
Total amount of res	spondants:	318	Total amou	unt of respondants:	148							
Gender	Frequency	%	Gender	Frequency	%							
Male	46	14%	Male	31	21%							
Female	214	67%	Female	105	71%							
Other	2	1%	Other	2	1%							
Age	Frequency	%	Age	Frequency	%							
15-25	35	11%	15-25	15	10%							
26-35	40	13%	26-35	30	20%							
36-45	30	9%	36-45	21	14%							
46-55	57	18%	46-55	31	21%							
56-65	56	18%	56-65	17	11%							
65-75	37	12%	65-75	17	11%							
76-85	8	3%	76-85	7	5%							
86-95	0	0%	86-95	0	0%							
96-105	0	0%	96-105	0	0%							
Region	Frequency	%	Region	Frequency	%							
Region Hovedstader	92	29%	Götaland	99	67%							
Region Sjælland	3	1%	Svealand	26	18%							
Region Syddanmark	126	40%	Norrland	7	5%							
Region Midtjylland	39	12%			0%							
Region Nordjylland	1	0%			0%							
Outside Denmark	2	1%			0%							

The first part of the questionary was questions regarding age, gender, and geographical location. These questions served to gain an overview of the demographic of the respondents. It was chosen not to include questions about income and education level, as income is a personal and sensitive topic, and some people may not feel comfortable sharing this information. Asking about income can make respondents feel uncomfortable, defensive, or embarrassed and might result in the respondents not completing the survey. It was further decided that this information was not considered very important to the analysis. Analyzing the demographic variables for Denmark shows that there are significantly more women that have answered the questionnaire than men. 67% of the respondents are women, and 14% are men. 1% of the respondents do not identify as male or female. A similar distribution was seen in Sweden, where 71% of the respondents were women and 21% were men. Also, here, 1% of the respondents did not identify as male or female.

Looking at the age of the respondents from Denmark shows an even distribution. The largest segments are 46-55 (18%) and age 56-65 (18%). This is considered positive, as a report done by Landbrug & Fødevarer based on 1007 respondents shows that 60% of women say that they are

primarily responsible for the grocery shopping in their household. (Landbrug & Fødevarer, 2013). The results received from Sweden show that more young people have answered the questionnaire. The distribution from Sweden shows that the largest segment is age 46-55 (22%), followed by age 26-35 (20%).

Looking at the geographic distribution of the respondents in Denmark, most of the respondents are from Region Syddanmark (40%) followed by Region Hovedstaden (29%). There are very few respondents from Region Sjælland and Region Nordjylland. Looking at Sweden, most of the respondents are from Götland (67%), followed by Svealand (18%) and thereafter Norrland (5%) The survey has been posted in different Facebook groups with different geographic reach, but in some of the groups, the survey was deleted by the administrator of the group. This is possibly the explanation for why there are no respondents from these regions. Despite this, the results are still deemed valid, as the respondents are both from the capital Copenhagen and smaller cities. This distribution is considered important because only respondents from Copenhagen could be misleading. An analysis done by Danmarks Statistik shows that people in the countryside are less interested in ecology than is the case in the cities. (Danmarks statistic, 2016) (Kvist, et al., 2022)

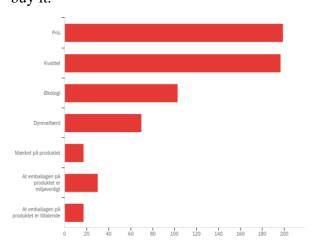
## **Descriptive statistic's – Interview**

	Descriptive Statistics - Interviews												
	Denr	nark		Sweden									
Interview	Gender	Age	City	Interview	Gender	Age	City						
1	Male	50	Glamsbjerg	1	Male	56	Åhus						
2	Female	25	Copenhagen	2	Female	23	Malmö						
3	Kvinde	27	Copenhagen	3	Male	28	Kristianstad						
4	Male	28	Glamsbjerg	4	Female	30	Malmö						

For the survey, the aim was to get as many respondents as possible because a larger sample size allows for more accurate and representative data. With a larger sample size, the margin of error decreases, increasing the reliability of the results. Many respondents further allow for diverse perspectives as a larger pool of respondents often contributes to a more diverse range of perspectives. Many respondents further increase the statistical power and make the results more generalizable as the results, thereby are more likely to be representative of the population as a whole, making it easier to draw conclusions and make predictions about the population. While there is no control over who answers the questionnaire, the respondents chosen for the interview are carefully selected to represent different customer groups. There have been conducted 8 interviews in total. 4 in Sweden and 4 in Denmark. 4 of the respondents are male, and 4 of the respondents are female. The respondents both cover people from larger cities such as Copenhagen and Malmø, but also people from smaller cities such as Glamsbjerg and Åhus. The chosen respondents also cover different age groups to ensure validity and reliability. It is deemed important to ensure diversity among the respondents for several reasons. Diversity ensures different perspectives and experiences that allow for a comprehensive understanding of the topic. Different perspectives can shed light on different aspects of the topic, helping to create a more nuanced and complete picture. The diversity increases validity and can help overcome different bias. Interviewing only people from one demographic can lead to bias in the findings. By including people from diverse backgrounds, the study is less likely to be biased. Lastly, diversity among respondents can lead to a deeper understanding of the topic, as people from diverse backgrounds may have different experiences, knowledge, and perspectives that can provide unique insights into the topic being studied.

## **Buying Criteria**

The next important question in the survey is what the respondents consider most important when shopping. The respondent could choose between "Price," "quality," "brand of the product," "The product was sustainably packed," "that the product was esthetically pleasing," "organic," and "animal welfare." The respondent could choose more than one if they wanted to. In Denmark, the most important criteria were quality, then followed by price. That the product was organic was the third most important criterion, and then came animal welfare. These results agree well with the analysis done by (Landbrug & Fødevarer, 2013). In their report, price was deemed the most important factor that affected purchase behavior. The second most important factor was the perceived quality of the product. After this, the product produced in Denmark was considered important. This factor was not included in our survey but could also have been relevant to include. That the product is organic, and animal welfare is considered equally important. Looking at the results from Sweden show a similar pattern. Here the respondents range quality over price. Price is the second most important factor, and then that the product is organic is the 3rd most important factor. The respondents from the interview show similar preferences. Many of the respondents answer that price is the most important factor when they are shopping. One respondent further elaborates on this and explains that to him, quality and price are closely linked. If the quality of the product is high, he is willing to pay a premium for the product, and if the quality of the product seems bad, even though the product is cheap, he will not buy it.





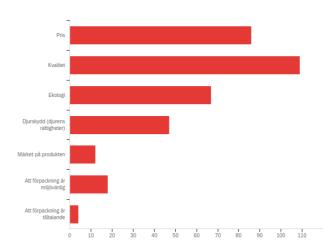


Figure 1 - Results Sweden buying criterias

# **Survey Statistics**

#### Survey characteristics

All questions in the survey has been formulated based on the hypotrophies formulated based on the theory from section 1. A list of which questions relates to which hypothesis can be found in appendix. It is challenging to formulate questions that relates directly to the hypothesis, but does not bias the respondents to answer in a certain way. The questions has been formulated so that the essence of the question can be related to the hypothesis, but they are not directly formulated as the hypothesis. This methos has been chosen, because it was considered that it would result in the most valid answers. Despite this, it is important to be aware that this could also result in confusion among respondents and result in misleading results (Newbold, Carlson, & Thorne, 2013).

In order to test the hypotheses a crosstabulation has been done using StatsIQ in Quantics. The aim of the statistically test, is to test whether to variables are significantly corelated or not. In order to check this, a dependent and an independent variable are chosen (Newbold, Carlson, & Thorne, 2013). For the analysis, it has been chosen only to check to variables at a time. Only checking if two variables are correlated makes the analysis simpler. Increasing the number of correlated variables will make the analysis more complicated and have a higher degree of uncertainty. In the analysis it is tested if the hypothesis is significantly correlated to the chosen independent variable (Newbold, Carlson, & Thorne, 2013).

In order to take use of the correlation analysis, the answers retrieved from the survey had to be numerical, therefore the answers what categorized from 1 to 5 with 5 being the highest and 1 being the lowest. The answer "Don't agree at all" was labelled 1, "do not agree" was labelled 2, "neither" was labelled 3, "agree" was labelled 4 and "strongly agree" was labelled 5. The analysis builds on having question number 21 as a "key" variable, this meaning that certain actions or behaviors are positively or negatively correlated with the answer retrieved from question 21. The Key variable in this. For the analysis we wanted to see what factors an effect on consumers choice of organic/green products the last time might have they were shopping, thereby making question 21 the key variable to be tested against.

#### Cross Tabulation

This paper focuses on various responses from two different surveys, these responses are then in turn, divided into and used a categorical values for the sake of testing for correlation amongst responses from different questions. Due to this, the cross tabulation test for statistics was used to test for possible correlation between the variables, as this is a statistical technique used to analyze relationships. This is also known as a contingency table for testing the frequency distribution of both variables together (Newbold, Carlson, & Thorne, 2013). The tables that was used for analysis contains rows and columns, with one variable displayed along the rows and the other variable displayed along the columns. Each cell in the table represents the number of cases that fall into a particular combination of categories. The crosstabulation test being used was conducted along with the Chi-square analysis, which was used to identify if the variables of the study are independent or related to one another.. If the two variables are independent, the results are regarded as insignificant, and the study would confirm the null hypothesis. By creating a cross-tabulation table and using statistical tests, the goal was to see which variables had a positive correlation with the independent variable. to conclude, for almost every quantitative study where the assumptions are met, Qualtrics will recommend a crosstabulation test. The p-value is then the determinant of the whether or not the two variables statistically correlation with one another (Newbold, Carlson, & Thorne, 2013).

#### Chi^2 test

A chi-square test ( $\chi 2$  test) is a statistical test that measures whether there is a significant difference between expected and observed frequencies in one or more categories of a categorical variable. The test is used to compare observed and expected results. In this case, the expected results are the hyphotesis and the results are the results from the survey. The  $\chi 2$  test is used to determine whether the observed data from the survey deviates significantly from the expected data, based on a null hypothesis that assumes there is no significant relationship between the two variables being tested (Newbold, Carlson, & Thorne, 2013).

The test involves calculating the difference between observed and expected frequencies, squaring them, and dividing by the expected frequency. These values are summed across all categories to obtain the test statistic. The test statistic follows a chi-square distribution with degrees of freedom equal to the number of categories minus one. The p-value associated with the test statistic can then

be calculated, which indicates the probability of observing the test statistic under the null hypothesis (Newbold, Carlson, & Thorne, 2013).

If the p-value is less than a predetermined level of significance (0.05), then the null hypothesis is rejected and it is concluded that there is a significant difference between the observed and expected frequencies. The test compares the observed frequencies in the table to the expected frequencies under the assumption that the two variables are independent. If the chi-square test indicates a significant association between the two variables, then one can conclude that there is a relationship between the variables (Newbold, Carlson, & Thorne, 2013).

#### The null hypothesis

The null hypothesis builds on the notion that there is no statistically significant relationship between two variables being tested. In this paper the null hypothesis will state exactly that assumption, that there is no correlation between the chosen variables for testing. This hypothesis will then either be rejected if the p-value is above 0,05, or confirmed, if the p-value is below 0.05 (Newbold, Carlson, & Thorne, 2013).

#### R-squared

When conducting a linear regression R-squared is the measurement of the possibility of one variable to predict future values for variable number 2. Meaning that X can be predict future values of Y. R-squared is then the measurement of how likely this assumption is to be true and to what extent the independent variable can explain the variance of the dependent one. An R-square of 0.7 and above is considered to be statistically significant (Newbold, Carlson, & Thorne, 2013).

#### Statistical significance

Statistical significance is the indicator to whether the variables, here responses from surveys, can be considered to be correlated with one another, meaning that as one value for one variable changes, the second variable changes in the same sense (Newbold, Carlson, & Thorne, 2013). This then indicate that there is a positive or negative effect and/or relationship between the variables tested.

#### P-value

As this study take use of a crosstabulation test to investigate correlations between the variables, the P-value is used to see if the assumptions or correlation between the variables had any statistical significance. If the P-Value results in a value below 0.05, the correlation can be deemed statistically significant, meaning that if a value below 0.05 is retrieved the correlation is unlikely to be a coincidence. The P-value is the indicator of whether there is as correlation to be found between the variables being tested, if the p-value is deemed higher than 0.05 the null hypothesis can be confirmed, and if the p-value is below 0.05 the null hypothesis can be rejected (Newbold, Carlson, & Thorne, 2013).

#### Effect Size

Effects size is measured in relation to the likelihood of the statistics retrieved from the study to be effective or descriptive in a study conducted on a larger scale, hence, if the relationship derived can be effective in a practical sense (Newbold, Carlson, & Thorne, 2013). The effective size measurements used in this study is Pearson's and Cramér's V. Pearson's r is the most common measurement to interpret a linear regression, having values range from -1 to 0 to 1. In this sense, values between -1 and 0 equals a negative correlation, values of 0 equals no correlation, and values between 0 and 1 equals a positive correlation. Cramér's V is the effective size measurement for the Chi-square test, to test for independence between two variables. The test measures is used to interpret the relative strength of association between the two (Newbold, Carlson, & Thorne, 2013).

#### Confidence interval

The confidence interval is defined to be the margin of error around the effect size, meaning that the smaller the sample size, the wider the range and thus a greater uncertainty of retrieving the "true" value of the correlation. The same is true for the opposite, the greater the sample size the narrower the confidence interval will be, and thereby make a more accurate estimation of the result retrieved from the study. In this case a 95% confidence interval was used, meaning that 95% of all data points found in the study will be found between the lower and the upper half of the value range calculated. The confidence interval is the measure of the margin of error from the effective size, the wider the confidence interval the more uncertain the true value of the correlation is (Newbold, Carlson, & Thorne, 2013).

The independent variable - Question 21 and 7:

The main topic of this research paper is to gain an understanding of what factors that might positively influence green consumption behavior. The focus is to investigate what actions/intentions that positively relates to green consumption and would be useful when trying to decrease the attitude behavior gap in green consumption. Therefore, in the survey conducted, question 21 from the Danish survey and question 7 from the Swedish was chosen as the independent variable when testing for correlations. This due to the fact that the question was designed to have respondents' grade how well they emphasize with the following statement "I generally buy green products" (appendix 1, page 15).

For the Danish survey the whole statement for question 21 was "Hvor enig er du i følgende udsagn 'Jeg køber generelt mange grønne produkter'" and for the Swedish survey the equivalent question 7 was "Till vilken grad håller du med om följande påståenden 'jag handlar generellt mycket gröna produkter'" both questions translates to "To what degree do you agree to the following statement "I generally buy many green products when I am grocery shopping""(appendix 1, page 8).

The reason for using these as independent variables when conducting cross tabulation tests was that the survey question was designed to have respondents state whether or not they usually bought green products. This statement is then stated to cover the consumers usual habits without focusing on the last one or any shopping trip in particular (Newbold, Carlson, & Thorne, 2013). It was so have data collected on the general overview of the respondents consumer behavior in terms of green consumption. The question was then used to be tested against the remaining questions, having the responses collected as datapoints categorized as the independent variable, this to see if there was a positive or negative correlation between consumers usual purchases and the responses we received in terms of specific green consumption related questions. The tests that resulted in a positive correlation could then be used to indicate what action that would be favorable to put focus on for increasing green consumption (Newbold, Carlson, & Thorne, 2013).

## Coding

To take use of the interviews conduced in relations to this research, the interviews were coded. The coding was conducted to look for similarities between the responses from each interview, in order to interpret possible patterns amongst the interviewees. When coding the interviews the following steps

was taken, firstly, the interviews was transcribed accurately and translated if needed. The transcripts were then read through the multiple times to understand the content and identify any themes or patterns that emerge. Whereafter a coding scheme was developed, which is a set of categories or themes that will be used to organize the data. The codes used was to reflect the key themes and concepts that emerged from the interview. The data was then coded by assigning codes to segments of the transcript that correspond to the themes and categories identified in the coding scheme, which can be found on page 14-15. in the appendix. Findings were then interpreted by drawing conclusions and making connections between the data and the research questions or objectives. The last step was to analyze the finding, which was then presented and used through-out this paper. These steps was followed as the method coding qualitative interviews is a valuable method for analyzing data and gaining insights into people's experiences and perspectives (Newbold, Carlson, & Thorne, 2013).

#### Results – Test 1-14

**Test 1**Question: "To what extent do you agree with the following statement: "I often buy the same products when I shop"

	TABLE 1. (DK: Q21&7 DK) (SE: Q7&Q6 SE)													
		Correlation	Chi-square test											
	P-value	ES (P)	CI	95%	SS	$R^2$	P-value	ES(CR)	SS	CS	DOF			
			Lower	Upper										
DK	0.361	-0.0565	-0.176	0.0649	263	0.00320	0.467	0.122	263	11.7	12			
SE	0.998	0.000190	-0.176	0.177	124	0.00113	0.720	0.154	124	8.79	12			

The table above presents the results collected from testing question Q21 in relation to Q7 in the Danish market, and in the Swedish survey the equivalent of these two questions was Q7 and Q6 which was tested in the same manner. On the Danish side, the result was that the correlation did not exhibit any statistically significant between the chosen variables. The same result was found on the Swedish market, as there was not any significant relationship found between the two variables. The result from using a cross-tabulation test for the relationship between the values collected from these questions resulted in a p-value of 0.361, a  $R^2$  value of 0.00320 and an effective size confidence interval between -0.176 and 0.0649 in the Danish survey. Whilst on the Swedish side the results accounted for was p-value of 0.998, a  $R^2$  value of 0.00113 and an effective size confidence interval between -0.176 and 0.177. In both surveys the p-value was greater than 0.05, meaning that there is no statistically significant relationship between Q21 and Q7 (DK) nor between Q7 and Q6 (SE). The confidence interval was rather wide for both tests and the  $R^2$  was significantly low. Therefore, it is reasonable to assume that there is no correlation or relationship between the chosen variables, both the cross-tabulation test and the chi-square test confirms this statement.

Result: No statistically significant relationship confirmed

Test 2

Question: "To what extent do you agree with the following statement "I bought many organic products on my last shopping trip"

	TABLE 2: (Q21Q9 DK) (Q7Q8 SE)													
	C	orrelation	Chi-square test											
	P-value ES (P) CI 95%		SS	$R^2$	P-value	ES(CR)	SS	cs	DOF					
			Lower	Upper										
DK	< 0.00001	0.717	0.653	0.771	263	0.515	< 0.00001	0.445	263	208	16			
SE	< 0.00001	0.685	0.577	0.770	121	0.470	< 0.00001	0.462	121	103	16			

The second test was conducted in the same manner as the first one, but the dependent variable was changed to include Q9 for the Danish survey and Q8 from the Swedish one. The data used here was collected as results from when question 9 and 8 and was sat as the dependant variable which was tested against Q21 and Q7. Here, in contrast from Hypothesis number 1, the correlations between the data from both questions was deemed statistically significant for both the Danish and the Swedish market. With a p-value below < 0.00001 in both the chi-square test and the crosstabulation test for both questions, indicate that there is a significant relationship. The possibility of this being a coincidence is highly unlikely. The  $R^2$  is at 0.515 for the Danish survey and the 0.479 for the Swedish one which is considered to be rather adequate. The confidence interval are sat at 0.653 to 0.771 for the Danish test and 0.577 to 0.770 for the Swedish, which are narrow enough to deem the correlation to be statistically significant. The low p-value, the seemingly average  $R^2$  and the small confidence interval is enough to assume that these variables are strongly correlated.

Result: Statistically significant relationship confirmed

**Test 3**Question "To what extent do you agree with the following statement "I had an intention to buy green products the last time a went shopping."

	TABLE 3: (Q21Q10 DK) (Q7Q11 SE)													
	Co	Chi-square test												
	P-value	ES (P)	CI 9	95%	SS	$R^2$	P-value	ES(CR)	SS	CS	DOF			
			Lower	Upper										
DK	< 0.00001	0.642	0.565	0.708	263	0.412	< 0.00001	0.458	263	221	16			
SE	< 0.00001	0.517	0.372	0.637	120	0.267	< 0.00001	0.360	120	62.1	16			

Test 3 was tested in relation to question 11 from the Swedish survey and question 10 from the Danish survey. This to see if the respondent had an intention to buy green products beforehand and whether it effected their final purchase decision. The p-value received from the Danish test was < 0.00001 and the same value was found on the Swedish side, and the p-value this low was accounted for in both the chi-square test and the cross-tabulation test. The  $R^2$  for the Swedish market was 0.267 for Sweden, whilst the  $R^2$  for Denmark was 0.412. The confidence interval was between 0.565 to 0.708 for the Danish survey and between 0.372 to 0.637 for the Swedish survey. Even if the p-value resulted in such a low value for both surveys the other indicators was not as high as expected, despite this it is reasonable to believe that the relationship between the variables are considered statistically significant. The result shown in the table above confirms the assumption that the variables tested for has a statistically significant relationship and a correlation with one another and that similar results was directed in both tests.

Result: Statistically significant relationship confirmed

**Test 4**Question: "To what extent do you agree with the following statement "Do people in your close circle (family and close friends) buy green products?""

	TABLE 4: (Q21Q11 DK) (Q7Q12 SE)												
	(	Chi-square test											
	P-value	ES (P)	CI 95%		SS	$R^2$	P-value	ES(CR)	SS	CS	DOF		
			Lower	Upper									
DK	< 0.00001	0.420	0.315	0.515	263	0.177	< 0.00001	0.333	263	58.2	8		
SE	0.462	0.0678	-0.113	0.244	120	0.00460	0.432	0.183	120	8.02	8		

Continuing, from the Danish market results from question 21 was tested against results from question 11. On the Swedish side the same results from each question were tested, here using question 7 and question 12. The responses received here was in relation to the question 11 and 12 where respondents could choose between "yes" "no" or "I don't know". The response was set to be 1 for yes, -1 for no and 0 for I don't know. From the analysis the p-value for both correlation test and the chi-square test were found to be < 0.00001, indicating a strong correlation between the responses for each question. The confidence interval ranged from 0.315 to 0.515, and even if the numbers are low, the difference in the range is not that big and the confidence interval does not contain the value of 0, which can then indicate that there is a correlation present between the responses. R-squared was found to be 0.177 however, as the study is not geared towards finding what variables that can predict future values for the independent variable, we only acknowledge the fact that it is low. In contrast to the Danish results, the correlation between responses from the same questions from the Swedish survey showed no signs of statistical significance. The cross-tabulation test provided a p-value of 0.462, well above the benchmark of 0.05. Even when using the chi-square test the results pointed towards the fact that there was no statistically significant relationship between the results received in the Swedish study, as the p-value was found to be 0.432. The statement of the correlation not being of statistically significance is further confirmed by the confidence Interval ranging between -0.113 to 0.244 which is rather large, and thus contain the value of 0, indicating that there is no relationship between the responses. Furthermore, the R-squared resulted in a value of 0.00460, further indicating that there no statistically significant correlation between the responses.

Result: No statistically significant relationship confirmed on Swedish side, but confirmed on the Danish side

**Test 5**Question "To what extent do you agree with the following statement "I feel that I make a difference by purchasing green products."

	TABLE 5: (Q21Q12 DK) (Q7Q13 SE)													
		C	Chi-square test											
		P-value	ES (P)	CI 95%		SS	$R^2$	P-value	ES(CR)	SS	CS	DOF		
				Lower	Upper									
D	K	< 0.00001	0.570	0.483	0.647	263	0.325	< 0.00001	0.410	263	177	16		
S	E	< 0.00001	0.496	0.346	0.622	117	0.247	< 0.00001	0.399	112	53.5	12		

Responses gathered from question 21 were tested against responses from question 12 from the Danish survey, and results from question 7 and question 13 from the Swedish was tested against each other in the same manner. Here the dependant variable were answers collected from question 12 and 13 where participants could state on a scale how well the emphasized with the statement. The p-value that resulted from the correlation test and the chi-square test was found to be < 0.00001 for the result from the Swedish and the Danish survey. The Confidence interval then ranged between 0.483 and 0.647 from the Danish survey, and between 0.346 and 0.622 for the Swedish survey. The range between the interval can be considered as rather small and as neither of the intervals contain the value of 0, it can be understood that there is a correlation present between the variables. The  $R^2$  value from the Danish survey resulted in 0.325 and in 0.247 for the Swedish one. As  $R^2$  is low enough to be considered as non-significant, however as our main goal is to see if there is any correlation between the results rather than testing if the results can explain one another in future predictions, the r-square is then not considered to be as vital as the p-value.

Result: Statistically significant relationship confirmed

**Test 6**Question "To what extent do you agree with the following statement "I am often influenced by the shopping habits of those in my close circle of friends".

	TABLE 6: (Q21Q13 DK) (Q7Q14 SE)													
	Correlation (cross tabulation test)							Chi-square test						
	P-value	ES (P)	CI 95%		SS	R <sup>2</sup>	P-value	ES(CR)	SS	CS	DOF			
			Lower	Upper										
DK	0.0464	0.123	0.00198	0.240	263	0.0151	0.261	0.135	263	19.2	16			
SE	0.0297	0.201	0.0203	0.369	117	0.0404	0.284	0.202	117	14.3	12			

Continuing this process, the results from question 21 was then tested against results from question 13 from the Danish market, and the equivalent was done for the Swedish market with results from question 7 against question 14. The dependent variable here was the response obtained from respondents' emphasis with the following statement above. In this context the p-value for Denmark resulted in 0.0464 and in 0.0262 for the Swedish survey. Even if, these result in practise can be deem statistically significant, both values are just below the 0.05 mark. The confidence interval for the Danish question was between 0.00198 to 0.240 and the Swedish had a result of 0.0203 to 0.369. There is a larger span between these confidence intervals making the estimation less precise, despite this, none of the intervals contain the value of 0. The R-squared retrieved from the tests 0.0151 for the Danish survey and 0.0404 for the Swedish, confirming that the future values of the independent variable cannot be predicted by the independent one. Then after testing the same value from the respondent for both countries, the chi-square test deemed the variables in neither survey to have any statistically significant relationship as the p-value resulted in 0.261 for the Danish questions and 0.284 for the Swedish ones. From interpreting the results alone, the cross-correlation test indicates that there is a positive correlation between the two variables that can be deemed to be statistically significant using a cross-tabulation test on both the Swedish and the Danish surveys. Despite this, after conducting the chi-square analysis the result point to the opposite. It can be concluded that the values from both tests are to a small extent positively correlated, and the values obtained from the test must be interpreted with caution.

Result: Statistically significant relationship confirmed to some degree, but it is more likely that we need to reject this hypothesis and confirm the null hypothesis.

**Test 7**Question "To what extent do you agree with the following statement "I would buy more green products if they were more available".

	TABLE 7: (Q21Q14 DK) (Q7Q15 SE)														
	Co	rrelation	(cross ta	bulation	test)		Chi-	squa	re test						
	P-value	ES (P)	CI 95%		95% SS		P-value	ES(CR)	SS	CS	DOF				
			Lower	Upper											
DK	< 0.00001	0.366	0.257	0.467	263	0.134	< 0.00001	0.271	263	77.0	16				
SE	0.0331	0.197	0.0162	0.366	117	0.0389	0.0597	0.241	117	20.4	12				

As one can see in the table above the next question that was tested was question 14 for the Danish market and the equivalent question 15 from the Swedish. The question was regarding whether respondents felt that they could relate to the statement above. On the Danish side, the p-value resulted in a value of < 0.00001 making the responses form question 21 and 14 positively correlated. The same p-value was retrieved in the chi-square test making the relationship statistically significant. The Confidence interval falls between 0.257 to 0.467 and does not contain the value of 0 for the Danish market and the  $R^2$  resulted in 0.134. The confidence interval is not perceived that large and even if  $R^2$  is rather low, the p-value deems the variables to be correlated even if the chance of explaining future values of the dependent variable is not present. Furthermore, when analysing the same responses on the Swedish survey the P-Value is not as low, and results in a value of 0.0331. The pvalue does technically fall within the range for assuming that the variables are positively correlated, however, when conducting a chi-square test, the p-value results in 0.0597 confirming that there is no statistically significant relationship between the two variables. Other than that, the value of  $R^2$  is lower at 0.0401 meaning that there is almost no chance of the independent variable to predict future value for the dependent one. Other than that, there is a larger gap in the confidence interval between 0.0162 and 0.366 resulting in a less accurate estimate of the sample size.

Result: No statistically significant relationship confirmed on the Swedish side, but it is confirmed on the Danish side

**TEST 8**Question "To what extent do you agree with the following statement "The increasing inflation has affected my shopping habits in relation to green products."

	TABLE 8. (DK: Q21 & Q15) (SE: Q7&Q26 SE)													
			Correla	tion (cross		Chi-squar	re test							
		P-value ES (P) CI 95%					$R^2$	P-value ES(CR) SS CS				DOF		
				Lower	Upper					•				
Ι	K	0.975	-0.00192	-0.123	0.119	263	0.00000369	0.0547	0.162	263	20.7	12		
S	SE	0.0101	-0.239	-0.404	-0.0585	115	0.0571	0.216	0.216	115	10.8	8		

Test 8 revolved around the statement that the current inflation would have affected consumers shopping habits. Therefore, the participants of the survey were to state on a scale of how well they relate to the following assumption "Increasing inflation has affected my shopping habits in relation to green products." The options to choose from was "yes – I buy more" "yes – I buy less" "No – it has not changed." and "I don't know." Each option was then coded to numerical values ranging from 0-4 test for a possible correlation. One can see from the results presented in table 8 that there is a negative correlation between the responses gained on from the Swedish survey, as the p-value equaled 0.0101 indicating a correlation. The results from the Danish survey points to the opposite as the pvalue resulted in 0.975 and thereby indicating that here is not correlation. The confidence interval on the Danish side ranged between -0.123 and 0.119, confirming that no correlation is present as the range contains the value of 0 (Newbold, Carlson, & Thorne, 2013). The Swedish survey on the other hand had a confidence interval between -0.404 and -0.0585, which indicates a negative relationship. However, if we look at the chi-square test result, then the p-value is lower on the Danish side, resulting in a value of 0.0547, however, not low enough to confirm a significant relationship. Even if there is a negative correlation between the responses from the Swedish survey, the p-value of 0.216 from the chi-square test does, however, point towards the fact that there is no statistically significant relationship. The r-square from the Danish survey resulted in a value of 0.00000369 and r-square for the Swedish survey resulted in the value of 0.0571, here both value of r-squared are almost nonexistent.

Result: Statistically significant relationship partly confirmed. SE had correlation but no chi-square. No correlation on DK.

**Test 9**Question: "To what extent do you agree with the following statement "I know a lot about global warming and climate change".

	TABLE 9: (Q21 Q16 DK) (Q7 Q16 SE)														
	C	Correlation	(cross tal	oulation t		Chi-square	e test								
	P-value	ES (P)	CI 9	95%	SS	R <sup>2</sup>	P-value	ES(CR)	SS	CS	DOF				
			Lower	Upper											
DK	< 0.00001	0.290	0.176	0.397	263	0.0843	< 0.00001	0.281	263	83.0	16				
SE	0.00309	0.271	0.0944	0.432	117	0.0736	0.0520	0.236	117	26.1	16				

Next, response from question 16 was tested against question 21 from the Danish survey and question 7 from the Swedish survey. When responding to question 16 in both the Swedish and the Danish survey, participants were asked to what degree they could relate to the statement above. The results show that there is a positive correlation between the variables when testing the responses for both the Swedish and the Danish survey. This is confirmed by the p-value extracted for both tests, which resulted in a value of < 0.00001 for the Danish survey and a value of 0.00309 for the Swedish survey. Both p-values are low enough to conclude that there is a correlation between the chosen responses from each survey. Despite this, the confidence interval from the test of the Swedish survey ranged between 0.0944 and 0.432, which is a big difference as the wider the interval the less accurate are the estimates derived from the test. On the other hand, the confidence interval ranged between 0.176 and 0.397 for the result of the Danish survey, which supports the assumption that there is a positive correlation between the responses. R-squared had a value of 0.0843 for the Danish survey and a value of 0.0736 for the Swedish survey, which verify that the response variables would not be useful to predict future values. Moreover, the Chi-square test confirms that there is a statistically significant relationship between the responses from the Danish survey as the p-value equalled < 0.00001. However, the results from the chi-square test from the Swedish survey indicate that there is no significant relationship between the chosen responses as the p-value equal 0.0520 and is therefore not perceived as statistically significant. So here the results obtained differ between the surveys.

Result DK: Statistically significant relationship confirmed

Result SE: No statistically significant relationship confirmed only correlation, not chi-square

**Test 10**Question: " To what extent do you agree with the following statement "I would buy more green products if the price were lower".

	TABLE 10: (Q21 Q17 DK) (Q7 Q17 SE)														
		Correlat	ion (cross	Chi-square test											
	P-value	ES (P)	CIS	95%	SS	$R^2$	P-value ES(CR) SS C			CS	DOF				
			Lower	Upper											
DK	0.951	0.00384	-0.117	0.125	263	0.0000147	0.150	0.144	263	21.8	16				
SE	0.987	-0.00151	-0.187	0.184	112	0.00000229	0.623	0.172	112	9.92	12				

Table 10, which is presented above, tested question 21 against question 17 from the Danish survey and question 7 against question 17 from the Swedish survey. Question 17 from both surveys was asking respondents to which degree they could relate to the statement above. Here the test cannot confirm a statistically significant relationship. One can see that when examining the p-value, which resulted in 0.951 for the Danish survey and 0.987 for the Swedish survey, that there is no correlation between the responses from either question. In the same sense the confidence interval confirms that there is no correlation, as the interval ranges from -0.117 to 0.125 for the Danish survey and from -0.187 to 0.184 for the Swedish survey. The test for both surveys include the value of 0 in the confidence interval, which indicates that there is no correlation present. Furthermore, the chi-square test provided similar results for both surveys, providing a p-value of 0.150 for the Danish survey and a p-value of 0.623 for the Swedish survey, again confirming that there is no statistically significant relationship between the variables. R-squared equalled 0.0000147 for the Danish and 0.00000229 for the Swedish survey and both are considered to be non-existent as the value is so low.

Result: No statistically significant relationship confirmed

**Test 11**Question "To what extent do you agree with the following statement "I look for green labels such as the Øko label for ecology, fair trade or Rainforest Alliance when I shop"

	TABLE 11: (Q21 Q18 DK) (Q7 Q18 SE)													
,	Ce	orrelation	(cross tab	ulation te		Chi-square	e test							
	P-value	ES (P)	CIS	95%	SS	R <sup>2</sup>	P-value	ES(CR)	SS	CS	DOF			
			Lower	Upper										
DK	< 0.00001	0.708	0.642	0.763	263	0.501	< 0.00001	0.475	263	238	16			
SE	< 0.00001	0.609	0.476	0.714	111	0.371	< 0.00001	0.460	11	94.0	16			

The table above presents the results obtained from testing the independent question against question 18 from both surveys. The respondents were asked to grade their emphasis with the statement above. When conducting this test, the results show that the relationship is statistically strong for both the Danish and the Swedish survey. The p-value obtained from the test was < 0.00001 for both surveys, indicating that there is a positive correlation between the responses of each survey. The Confidence Interval ranged between 0.642 and 0.763 for the Danish survey, and between 0.476 and 0.714 for the Swedish one, there is a larger range between the values obtained from the Swedish survey, however, the intervals are rather small, which indicate a more certain estimation of the values. R-squared equalled 0.501 in the Danish survey and 0.371 in the Swedish survey, which was the largest value of R-squared obtained from testing all questions. Despite this, the r-square value is not high enough to assume that the variables could interpret future values. Moreover, the chi-square test yielded similar results, providing a p-value of < 0.00001 for both surveys, thereby indicating a statistically significant relationship between the responses from each chosen question.

Result: Statistically significant relationship confirmed

**Test 12**Question: "To what extent do you agree with the following statement "I bought what I planned to buy the last time I shopped".

	TABLE 12: (Q21Q19 DK) (Q7Q21 SE)													
		Correlatio		Chi-squa	re test	;								
	P-value	ES (P)	CI 9:	5%	SS	$R^2$	P-value	ES(CR)	SS	CS	DOF			
			Lower	Upper										
DK	0.219	0,0760	-0.0453	0.19	263	0.00578	0.284	0,133	263	18,7	16			
SE	0.672	-0,00697	-0.147	0.225	113	0.00165	0,104	0,233	113	18,4	12			

As presented in the table above, question 21 was tested against question 19 from the Danish survey and question 7 was tested against question 21 from the Swedish survey. Here, the statement respondents were asked to grade on which degree they can relate to it was phrased "I bought what I planned to buy the last time I shopped". When reviewing the result one can see that the p-value for both tests indicate that there is no statistically significant relationship between any of the responses received in the Danish nor the Swedish survey. The p-value was 0.219 for the Danish survey and 0.672 for the Swedish survey, neither of those results are deemed to be statistically significant. The confidence interval confirms this assumption, as the range was between -0.0453 and 0.19 in the Danish survey and between -0.147 and 0.225 for the Swedish survey. Bothe intervals contain the value of 0, therefore it is reasonable to conclude that there is no correlation between the responses. R-squared equals 0.00578 for the Danish market and 0.00165 for the Swedish market, stating that the variables cannot be used to predict future values. The chi-square test showed similar results, providing a p-value of 0.284 for the Danish survey and a p-value of 0,104 for the Swedish survey. Both to be considered not to be statistically significant.

Result: No statistically significant relationship confirmed

**Test 13**Question: " To what extent do you agree with the following statement "If I pay more for a product, I expect the quality to be significantly better than a cheaper but similar product.".

	TABLE 13: (Q21Q20 DK) (Q7 Q24 SE)													
		Correlati	on (cross	tabulation		Chi-squa	re test	,						
	P-value	ES (P)	CI	95%	SS	$R^2$	P-value	ES(CR)	SS	CS	DOF			
			Lower	Upper										
DK	0.206	-0.0782	-0.197	0.0432	263	0.00612	0.0498	0.163	263	21.0	12			
SE	0.403	-0.0805	-0.264	0.108	110	0.00649	0.933	0.131	110	5.64	12			

As it can be seen the table above question 21 was tested against question 20 from the Danish market and question 7 against question 24 for the Swedish. The response was collected in relation to respondents grading their emphasis with the statement above. Here it was found that there was no correlation between the responses from the two chosen questions in neither of the surveys. This is confirmed by the p-value resulting in 0.206 for the Danish survey and the p-value resulting with 0.403 on the Swedish survey, meaning that both p-values are too high to be considered significant. This is strengthened by the confidence interval for the Danish survey to be between -0.197 and 0.0432, and between -0.264 and 0.108 for the Swedish survey. In both cases the confidence interval contains the value of 0, indicating that there is a chance of no correlation at all between the chosen variables. The  $R^2$  received for the Danish survey was 0.00612 and 0.00649 for the Swedish survey. Once again indicating that the relationship between the variables could predict future values. The Chi-square test provided a p-value of 0.933 for the Swedish survey, which concluded that there is no statistically significant relationship between the variables. The Chi-square test for the Danish survey on the other hand provided a p-value of 0.0498, which is below the 0.05 mark and can indicate a statistically significant relationship between the variables. However, even if the p-value is low enough the analysis can be deemed to be inconclusive as data points were missing when conducting the test, which can then indicate that there in fact is no statistically significant relationship present.

Result: No statistically significant relationship confirmed

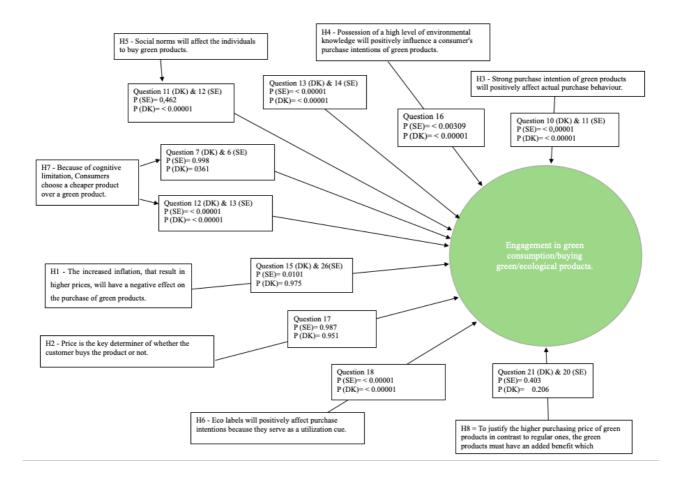
**Test 14**Question "To what extent do you agree with the following statement "I really want to buy more green products"

	TABLE 14: (Q21 Q24DK) (Q7 Q28 SE)														
	Co	rrelation	(cross tab	ulation te		Chi-squa	re tes	t							
	P-value	ES (P)	CIS	05%	SS	$R^2$	P-value	ES(CR)	SS	CS	DOF				
			Lower	Upper											
DK	< 0.00001	0.390	0.282	0.488	263	0.152	< 0.00001	0.320	263	108	16				
SE	0.000470	0.329	0.151	0.487	109	0.109	0.0199	0.271	109	24.1	12				

Question 28 from the Swedish market and Question 24 from the Danish market were the final questions in the survey. Respondents were asked to grade how well they can relate to the following statement "I really want to buy more green products". Testing the results obtained from both the Swedish and the Danish market, resulted in a p-value of < 0.00001 for the Danish survey and a pvalue of 0.000470 in the Swedish one. In both cases the p-value is low enough to conclude that there is a positive correlation between the variables. However, the confidence interval for the Danish test was between 0.282 to 0.488, showing a rather small range, whilst from the Swedish test it resulted in a confidence interval from 0.151 to 0.487, which results in a more uncertain estimation. The Rsquared for the Danish question was 0.152 whilst it resulted in 0.109 for the Swedish questions, pointing to the fact that the variables are not suited for future predictions. By then conducting a Chisquare test it was found that both the Swedish and the Danish variables could be regarded as having a statistically significant relationship between the responses from each question. The Swedish test resulted in a p-value of 0.0199 and the Danish test resulted in a p-value of < 0.00001. Despite this, it is critical to mention that the Danish results contained enough data points for an accurate analysis whilst the Swedish did not. This has to be noted whilst reviewing the results as this might indicate that the relationship might not in fact be statistically significant. The Danish results are on the other hand conclusive.

Result: Statistically significant relationship confirmed

# Model of Influences:



# Summary of test 1-14.

The chi-squared test of all the questions shows that Denmark and Swedish consumers show a very similar attitude towards green consumption and have similar consumption habits. Only in one question was it possible to show a statistically significant relationship between the question and the statement "I usually buy many green products" for Denmark, and not possible to show a statistically significant relationship between the same questions in Sweden. Most of the test results showed a positive correlation between the questions, and it could be concluded that there was a statistically significant relation. This shows that many of the hypotheses linked to the questions can be accepted. (A list of questions and hypotheses linked to them can be seen in the appendix page 111).

Concluding the result section of the survey, the main consideration that should be emphasized are the following. The tests resulted in no correlation, which was confirmed both by the crosstabulation test and the chi-square test questions 1, 13, 12, and 10. These were the tests that came back with no correlation for either the Swedish or the Danish market. Continuing, when testing many of the responses with the independent question from each survey, the results differed between the countries in many instances. Tests 11 and 4 showed statistical significance on the Danish side but did not show any statistical significance on the Swedish side. Looking at Test 9, resulted in a statistically significant relationship for the values of the Danish survey, but in contrast, the Swedish p-value only resulted in a positive relationship through the crosstabulation test, whilst there was no statistical significance from the Chi-square. Similar results were seen in tests 8 and 7; however, in these tests, the Swedish survey pointed to a correlation, and the Danish survey did not. Continuing. In tests 8 and 7, the crosstabulation test pointed towards a correlation, but the chi-square test indicated that there was no statistically significant relationship (page 72-73).

Moreover, Table 6 showed results were of statistical significance to some. However, the value was on the verge of indicating the opposite. Therefore, the results gained from this table need to use with caution. In addition to that, the chi-square test in Table 6 showed results of no statistical significance. Therefore, it is more to deem this result as not statistically significant. Furthermore, the test where results were found to support both a correlation and a statistically significant relationship was tested 2, 3, 5, and 14. In these three tests, the results confirmed statistical significance in both the Danish and the Swedish tests. The strongest correlation amongst the tests, was found in test 5 where question the "To what extent do you agree with the following statement "I feel that I make a difference by

purchasing green products", was tested to see of the assumption that "one does good" influenced the general intent to engage in green consumption. As this test conveyed to strongest values for each independent measure, it can be concluded that the feeling of making a difference positively increase the intent to engage in green consumption. R-square was the highest in test 11 where it resulted in a value of 0.501 in the Danish survey and 0.371 in the Swedish survey (page 70). Even if test 11 conveyed the highest results of r-squared, the values does not reach the benchmark for predicting future values.

Moreover, despite included all questions in the survey to gain insights, not all questions were used for hypothesis testing. Question 1 and 2 was mainly used to gain insights about people's attitudes toward and/or if they perceived them self as shopping out of habit. Test 1 referred to the question if respondents would relate to the statement, "I often buy the same products when I shop" (Table 1. Page 66). The results were tested to gain insight rather than to confirm or deny one of the stated hypotheses.

Test 2 which referred to testing of question 9 and Question 10, "To what extent do you agree with the following statement "I bought many organic products on my last shopping trip" resulted in a statistically significant relationship. However, this test was not included to confirm or reject the stated hypotheses, but rather to evaluate if respondents' answer in the survey was consistent. The result that the indicate that the respondent of the survey had agreed to emphasize to the majority of green consumption statements. (Newbold, Carlson, & Thorne, 2013)

# **Results – Interviews**

## SWEDISH INTERVIEWS/OBSERVATION

## **Interview 1**

Male, 56, Åhus

The observations of different people during their regular shopping trip was conducted to get a more detailed view of individual consumers attitude and thoughts toward fast moving consumer goods. Observation number 1 in Sweden was conducted in a small village near the sea called "Åhus". The participant of the study is male and 56 years old. The participant takes his usual trip down to ICA the local grocery store in the village. He has brought his own bag and uses a self-scanner to make the trip less time-consuming when paying at the check-out. He has made a list of the products he needs to buy beforehand as he finds that important, which he states in the follow-up interview shortly after (Transcript, appendix, page 1-2). The first few products that was bought was picked up with very little hesitation, it is clear that he already has a set route and know what kind of products he want to purchase. The whole shopping-trip is rather standardized and the only time the participant stopped to review options was when choosing cheese, as he looked for the best price for the goods he wanted. This is consistent with his statement in the follow-up interview as he stresses that he usually stick with the same brands due to experience, quoting ""It's probably quite often that I stay with the same brands because then you know what you will get." (Transcript, appendix, page 1-2). The vegetables and fruits he buy are labeled ecological but there does seem to be of any major importance on his part. One can clearly see the connection between his choices when shopping, his way of shopping and his later provided answers in the follow-up interview. He seems to rely very heavily on habit and time management whilst shopping, knowing what products are good beforehand and not spending more time than needed collecting the products he needs. Furthermore, he explains that he does not look for ecological or fairtrade labeled products and that price is this only attribute that he cares about at this moment (Transcript, appendix, page 1-2). As a final note he mentions that if there were more information available, so that, as a consumer, you can trust that the products are ecological or the alike, he would have purchased more of those products and he think that is true for many people (Transcript, appendix, page 1-2).

## **Interview 2**

# Female, 23, Mamö

To change the setting in contrast to observation 1, the second observation was conducted in Malmö, and the participant was a 23 year old woman. Similar to interview number 1 she used a scanner for easier and faster check-out when paying and brought her own bag to carry the groceries home afterwards. During the interview, she stresses that what she buys very much depends on price, and what products are in season at the time, mostly in terms of vegetables. She elaborates that she usually plans what she is going to buy beforehand, using apps from grocery stores and alike to find the best offers. She makes lists and goes through what she has at home to make sure that she only buy what she needs. She explains that as she is still a student, she does not have the luxury to buy very expensive products, which then affects her consumption habits, stating, "mmm, no, not that I choose it over another product, erm, as a student, I usually choose what is most economical and which product comes in the size where I don't waste food" (Transcript, appendix, page 2-3). This is confirmed from the observed shopping trip, as she bought many products that was reduced in price and did not spend any greater amount of time choosing between ecological or regular products (Transcript, appendix, page 2-3). During the observation, one of the first things she bought was carrots from the stores own brand and which was in fact ecological. However, as in observation 1, she did not seem to think about it that much, and the action itself can be defined as rather standardized. During the interview, she then explains that she shops out of habit when it comes to vegetables, milk, and frozen products (Transcript, appendix, page 2-3). However, she likes testing new things in terms of vegetarian and vegan products, to see if it tastes better or if she will save money. She does not see herself as someone engaged in green consumption, however, she states that she chooses ecological products when she has the option. In that sense, she explains that the economical state has affected her shopping habits, and that many groceries in her usual store that are reduced in price, are mostly vegetarian products, so she ends up eating less meat now than before, which she does not mind (Transcript, appendix, page 2-3). When asked in the interview, she explains that she is not affected by how people in her close circle shop or eat, rather she is mostly the one to influence others to shop more after season and locally produced products (Transcript, appendix, page 2-3). When asked if she believe that green products have been down prioritized due to the economical state of the world, she clearly state that she think that green products always has been down prioritized, regardless of the state of the world (Transcript, appendix, page 2-3). She proceeds to explain that she believes that more people would buy green products if they received more knowledge of the benefits, and that she thinks there is a lack

of information generally. When asked during the interview, one of her own suggestions for increasing people's engagement in green consumption could be to provide more information about the products and design the grocery shops in a better sense so that more consumers notice and are exposed to green products.

#### **Interview 3**

Male, 28, Kristianstad

Interview 3 was conducted in Kristianstad, and the participant was a man at the age of 28. He as well as the other participants brought his own bags for chopping and used a self-scanner. In his interview he states that the most important thing about going grocery shopping is knowing what you need to buy beforehand in order to not overbuy or forget something (Transcript, appendix, page 4-5). This was also the case when conducting the observation, he had a detailed list of what he was supposed to buy before going into the store. When asked what kind of factors influence his purchasing decisions, he stated that he mostly shops the products where he believes he will get the most out of the money he is spending. however, he states that the products should be of quality. quoting "Erm, that which is, where you get the most for your money, so to speak, but it should still be quality" (Transcript, appendix, page 4-5). This was in the same matter confirmed during the observation, as he did not exclusively go for the cheaper products, but rather took his time when choosing. Continuing, when asked, he answered that he does not perceive himself as someone engaging in green consumption. however, he explains that he sometimes looks for sustainable/green labels, but he does not do it frequently. This statement matches his behaviour, as he bought a few organic/green products, but did not really put any attention to it, it looked more like a standardized behaviour where he rather bought what he usually buys out of habit. When asked if the inflation has affected his habits, he explained that his consumption habits had been effected and that he would buy more green products if he perceived that the product would be worth the price(Transcript, appendix, page 4-5). As the questions about what he believed would increase green consumption he quickly answered "Erm yes, but I reason a bit like, they want you, they want you to buy organic and locally produced and green and so on, but those goods are usually more expensive than those that are not organic and then it falls a little" (Transcript, appendix, page 4-5). When asked, he explains that he does not believe that green product is being deprioritised right now, despite this, he believes that the government can do more to increase green consumption. According to him, there could be more focus on helping distributors of the products, making it easier and cheaper to produce green groceries (Transcript, appendix, page 4-5).

# **Interview 4**

Female, 30, Malmö

The last participant amongst the Swedish interviews was a woman in her 30s living in Malmö. She was the only Swedish participant to not bring her own reused bags to carry her groceries when going home from the store. However, she was the participant that without a doubt purchased the most ecological products and took her time when choosing amongst brands and quality of the products. According to her, this was a "big" shopping trip where she purchased food for the whole week, which made the observation rather time-consuming. During the observation the participant devoted a lot of time to choose between different vegetables and choose ecological products every time she could. During the interview she states that the most important attribute when buying groceries are the fact that they are fresh and look good. The interviewee emphasized that purchasing fresh, eco-friendly, and clean products is the most crucial factor when grocery shopping. She identified herself as a conscientious consumer who is committed to green consumption, particularly in terms of food and cleaning items (Transcript, appendix, page 5-6). The interviewee expressed concern that inflation has led to a decrease in the prioritization of green products, as people may not have the financial means to afford them. She firmly believes that price is the driving force behind consumer decisions, and that in order to encourage greater consumption of green products, changes must be implemented at the government and societal levels to make them more affordable (Transcript, appendix, page 5-6). For example, she suggested that alterations in the supply chain could reduce the cost of green products. As a final thought she states that she believes that being healthy is a luxury these days, quoting "unfortunately, I think it's designed like health is a luxury today, so I think it's very difficult because everything is driven by price" (Transcript, appendix, page 5-6).

# **DANISH INTERVIEWS:**

#### **Interview 1**

Male, 50, Glamsbjerg

During the first observation conducted on the Danish side, a 50-year-old man was interviewed in Glamsbjerg right after finishing his shopping. When asked about his shopping preferences, the man stated that both product quality and price are important factors to him, as he cannot justify buying expensive products solely for their quality. He defined a green product as one that has a minimal impact on the environment and stated that he tends to look for green labels while shopping. Despite considering himself a green consumer, the man confessed to having limited knowledge about global warming. He also stated that his shopping habits have not been affected by the current state of the world, which is consistent with the observation, as he exclusively buys ecological products, except when the store is out of stock on his usual items. According to him, green products are often overlooked, and their high cost is a barrier to wider adoption. He emphasized the importance of affordable pricing in persuading more consumers to choose environmentally friendly products, quoting "Yes, of course if people have to choose between having heat in the house or buying green products, then I think it is clear that you will lower the priority if you cannot afford it" (Transcript, appendix, page 6-7). The final question was in regard to whether he felt that the shopping habits of close family and friends would affect his own, he firmly replied that it did not have any influence on him. He acknowledges that people in his social circle buy green products, but it does not significantly influence his own choices.

## **Interview 2**

Female, 25, Copenhagen

In the second observation conducted on the Danish side, a 25-year-old woman living in Copenhagen was interviewed. Following her answers to the questions being asked, it was understood that the interviewee primarily buys the cheapest products and plans her shopping trip by looking for products on sale in advance. She stated that she considers price and quality to be the most important factors when shopping and looks for products that appear fresh and haven't gone bad. This was confirmed during the observation, as she only bought products with a reduced price. She defines green products as those that are more sustainable, including plant-based products, seasonal or locally made items, and ecological products. Although the interviewee doesn't seek out eco-labels when shopping for

food, she pays more attention to them when buying soap or deodorant. She acknowledges that her family didn't prioritize ecological products while she was growing up, but she has been influenced by their purchasing choices to some extent, quoting "I have been influenced by my family, but not by my friends, then it is more in terms of lifestyle or eating direction that I am influenced by my close friends. But not in terms of my purchases, they are so ingrained in me from my childhood" (Transcript, appendix, page 8-9). However, her current shopping habits are largely a matter of habit and familiarity. While the interviewee often buys the same products, she would choose more ecological or green options if they were cheaper. She sometimes buys ecological products if they are on sale, but otherwise tends to stick with her usual purchases. She believes that clearer information about the benefits of green products is needed to increase awareness and encourage more consumers to buy them. Finally, the interviewee notes that the current economic state of the world has made her more inclined to buy products that are reduced in price, but she still buys what she needs. She believes that price and information are crucial factors in persuading more people to buy green products and suggests that students, in particular, tend to shop based on price (Transcript, appendix, page 8-9).

#### **Interview 3**

Female, 27, Copenhagen

Interviewee number 3 on the Danish side was a 27 year old woman living in Copenhagen.

When it comes to groceries, the biggest factors for this participant are that the products are fresh and look good. She explains in her interview that she does not want to buy something just because it's reduced in price, at least not when it comes to vegetables. She defines green products as ecological and produced with consideration for animal welfare. When asked if she looks for something in particular, she states that she looks for ecological and animal welfare products when shopping, particularly when it comes to meat, which she deems very important. When asked if she thinks there are attributes to look for when buying groceries she replies, "Yes, I feel it is. Especially when it's meat, I look to see if it's organic and if it has the animal welfare label." (Transcript, appendix, page 10-11). She continues to explain that she actively looks for green labels such as the "nøgle" mark and ecological labels, as well as animal welfare labels, such as the "dyrevelfærd" label (Transcript, appendix, page 10-11). This was confirmed during the observation as these were the kind of products she looked for and bought with consideration. She continues to explain that the current economic state of the world hasn't really affected her way of shopping, other than noticing that she pays more. She believes that other people may down-prioritize green products due to rising prices, but she would

like to buy more green products. She states that if she knew more about the production and how the animals have been treated, she would be more likely to buy these kinds of products. She would also buy more if they were more readily available and if she knew they were made in consideration of animal welfare. She explains that usually, she buys the same products out of habit, knowing that they are good. For the final question regarding possible actions to implement to increase green consumption, she answers that she believes that consumers would buy more green products if they were cheaper, even if she doesn't look for the price herself (Transcript, appendix, page 10-11).

## **Interview 4**

Male, 28, Copenhagen

The last interview conducted in Denmark, was centered around a 28-year-old male respondent living in Copenhagen. When asked what attributes of products that are considered to be the most important ones for him, he quickly states that the most important factor for him when shopping is the price, and possibly the calories, as he prefers buying lighter versions (Transcript, appendix, page 11-13). This is confirmed through the observations, as he only purchased products of this kind. He tends to buy the same products repeatedly. He briefly defines a green product as sustainable one, having no negative impact on the environment during production, but admits that he is not very engaged in the matter. He states that he does not have any particular preferences when shopping and does not actively seek eco-labeled products as they tend to be pricier than regular ones. He continues to explain that if he had to choose between two products with the same price, and one of them was green, he would choose the green one. However, he does not prioritize green consumption, and if the price is higher, he would not buy it. He explains that the promotion of green products as being more environmentally friendly than they actually are, which makes him uninterested in the matter. He does not believe that green production is important and thinks that buying green products with extra money spent will not make a difference in the long run. He believes that people's intentions are real, but it will not have any significant impact, quoting "It is important to me, no. But again, you can say that you choose to support one purpose or another with our wallet, but since I don't really think that it is supported when you do it, it is not very much money that you want to spend on that. But again, if I had the choice again and it costs the same, I would probably take the green product." (Transcript, appendix, page 11-13). As a final thought, he mentions that he would be more engaged in green consumption if he were convinced that his purchases would make a difference, but he is dependent on the price. He

believes that people in his close circle engage in green consumption, but he is not affected by how they choose to consume (Transcript, appendix, page 11-13).

# **Summary of interviews**

These interviews were conducted with participants from Sweden and Denmark to gain an understanding about their shopping habits and attitudes towards green products, thereby also making room for a possible comparison. The majority of Swedish interviewees brought their own bags to the store when they were shopping, this did not occur amongst the Danish Interviewees. The greater part of the Swedish participants perceives the lack of information about green products and their production to be the biggest obstacle for green consumption. Three out of four participants on the Swedish side prioritize planning their shopping trips and believe that green products should be prioritized more on a national level. Overall, men were less likely to prioritize green products due to skepticism about their environmental benefits, this is in regards to both the Danish and the Swedish participants as three out of the four men shared similar thoughts (Transcript, appendix, page 1-13). Price and quality were important factors for younger participants both on the Danish and the Swedish side. Both Swedish and Danish women in this study in their early 20s, prioritize planning their shopping and look for promotions on groceries, as they are still students. Price was the most vital attribute for these participants, 2 Swedish side and 2 Danish side, however, they stated that green products were important and that they would engage in green consumption if the prices were lower. The same similarities was seen between interviewee 4 Swedish side, interviewee 3 Danish side, they both choose which products to buy when they arrived at the shop, not being prepared. They both perceived organic products as being the most important and stated that the prices were not the main issue for them (Transcript, appendix, page 1-15). Lack of knowledge about green products was seen as a major obstacle to consuming them according to the majority of participants from both countries. Participants agreed that green consumption would increase if prices were cheaper.

# **Discussion**

In the following section each assumption or claim related to the result from each individual country will be noted with a shortening for each country. This to make it easier for the reader to understand which results refers to which countries responses. Result the Danish survey will be noted with (DK) and results from the Swedish survey will be noted with (SE).

H0 – There is no positive correlation between green products and actual purchase behavior.

H3 - Strong purchase intention of green products will positively affect actual purchase behavior.

To test hypothesis 5 and gain an understanding of the possible effect intention might have on green consumption, question 10 (DK) and question 11 (SE) was designed to have respondents' grade to which extent they agreed to have the intention to buy green products the last time they were shopping. Thereafter, responses from question 10 (DK) were tested against question 21 (DK), and question 11(SE) was tested against question 7 (SE). Both in the correlation test (crosstabulation test) and chisquare test, it was shown that the values of each variable from the responses to question 21 (DK) were strongly positively correlated with the values of the variables from the responses in question 10 (DK). The same correlation was seen on the Swedish side when testing questions 7 and 11 in the same way (table 3, page 68). By this means, it can be assumed that a strong intention to buy green products will most likely result in a consumer that engages in green consumption. This trend could be seen throughout the interviews in the same matter, as all the respondents who to the greatest extent, looked for and bought green products stated that this was their intention beforehand when asked during the interview (Transcript, appendix, page 1-13). However, all interviewees were perceived to have a positive attitude towards green products, despite this, only 3 interviewees engaged in the behaviour of buying, and looking for green products whilst the observation was conducted (Transcript, appendix, page 1-15).

Continuing, Ajzen (1991) theory of planes behavior explains that if an individual holds a favorable perception of behavior, perceives that societal norms expect them to engage in it, and feels capable of performing the behavior, they are more likely to intend to engage in the behavior, and consequently, more likely to engage in it (Ajzen, 1991). Thereby, in this circumstance, following the theory of planned behavior, it can be assumed that a positive intention toward green products will

result in a positive attitude toward green purchasing behavior (Ajzen, 1991). To further elaborate on hypothesis 5, the insights gained from the analysis of question 24 (DK) and question 28 (SE) will be used (table xx.). These responses are in relation to the following statement "I really want to buy more green products." These responses were then tested against question 21 (DK) and question 7 (SE). The results obtained pointed to a correlation and a statistically significant relationship between the responses and the independent variable, which is responses from question 21 (DK) and 7 (SE) (table 14, page 80). As the result pointed towards a positive correlation in both instances, one can assume that consumers who actively want to buy more green products, will try to engage in green consumption behavior. This statement was confirmed by most of the interviewees, as all but one (interview 4 DK) said that they would be willing to buy more green products if the prices were lower and more information about green consumption was available (Transcript, appendix, page 1-15).

Moreover, despite the positive correlation when testing each collected response from each survey, it is important to note that intention to buy a green product does not always translate into behavior (Ajzen, 1991). A strong purchase intention toward green products is an important predictor of actual purchase behavior. However, it is not a guarantee (Ajzen, 1991). Many factors can influence whether or not a consumer follows through on their intention and actually purchase the green product. In accordance with this, as many responses from both the survey and the interview deem green products to be of a higher price, the perceived behavior control, here referring to not having the income required to engage in green consumption, can be considered outway the perceived power of intention (Ajzen, 1991). To continue by referring to (Ajzen, 1991) work on the theory of planned behavior, the same assumption holds true when relating to social norms, as this actor can minimize the chance of engaging in the proffered behavior (Ajzen, 1991). This then explains why only intentions as the single factor may not be enough to result in more favorable behavior. The value of social norms in this context will be further discussed on later.

To conclude, the results gained through this study are, in fact, enough to favour the hypothesis that a "Strong purchase intention of green products will positively affect actual purchase behavior," as the hypothesis does not revolve around consumers' actual consumer behavior but rather focuses on what influences it. Both the results from the surveys and the interviews conducted, here referring to results from both Sweden and Denmark, confirm that the intention to engage in green consumption can be seen as rather strong amongst consumers. The individual's intention to perform a given behavior is a

central factor in the theory of planned behavior (Ajzen, 1991). Intention captures the motivational factors that influence behavior. The stronger the intention to engage in a behavior the individual has, the more likely it should be its performance. This does then, in fact, conclude that hypothesis 3 can be favoured in this context, and hypothesis 0 can be rejected (Ajzen, 1991). However, as the theory of planned behavior is a social psychological theory applied in many circumstances, the theory might not hold the range to explain every aspect of green consumption behavior.

H0- There will not be any relationship between environmental knowledge and consumer's purchase intentions of green product.

H4 - Possession of a high level of environmental knowledge will positively influence a consumer's purchase intentions of green products.

Hypothesis 4 which relates to consumers' general understanding of global warming and the current state of the environment. The assumption in this context is that consumers that persist with a relatively high knowledge about climate change will be more prone to engage in green consumption than other consumers. For testing this hypothesis, question 16 in both the Swedish and the Danish survey was designed to have respondents state to what degree they could emphasize the following statement "*I know a lot about global warming and climate change*."(appendix 1, page 14) The responses were then tested with question 7 (SE) and question 21 (DK). Based on the result displayed in Table 9 (page 75.), it can be assumed that there is a positive correlation between having knowledge about climate change and global warming and generally buying green products. Thereby indicating that a high level of knowledge about environmental changes and global warming will positively affect the purchase intentions of green products.

Following the theory of planned behavior, the attitude has a strong influence on intention which directly affect the behavioral outcome (Ajzen, 1991). However, despite the assumption that environmental knowledge could have the power to increase green consumption behavior, it is critical to note that even if an adequate amount of information was available, and educating consumers in green consumption would were the standard practice, the social norms, and perceived behavior control must be taken into consideration (Ajzen, 1991). The fact that the price of green products is higher might still be the determinator of whether consumers choose to engage in green consumption or not (Ajzen, 1991). Or perhaps the social norms surrounding them might be against green

consumption, which will then lead to a minimized possibility that the consumer will engage in green consumption (Ajzen, 1991). Many participants from the interviews conducted support this claim, as almost all of them mention lack of information to be the biggest obstacle to the adoption of green consumption. During the interviews, it was consistently stated that lack of information is a key factor to why they believe that green products are being neglected (appendix, transcript, page 1-13.).

Concluding, Hypothesis 4 can, based on the results collected, be favoured as the values from the tests are perceived to be of statistical significance (Table 9, page 75). And hypothesis 0 can therefore be rejected. However, the Chi-square test conducted on the Swedish side resulted in a p-value of 0.0520, which is not deemed statistically significant. However, as the hypothesis is developed to investigate the possible influence greater knowledge of global warming and climate change might have on green purchase behavior, rather than establishing if green consumption is present amongst the respondents, the hypothesis can be favoured, as the results indicate a correlation between the variables. Research done by Simanjuntak (2023), support this these finding, to quote "the empirical results indicate that environmental knowledge significantly affect environmental care attitudes" (Simanjuntak, o.a., 2023). Despite this, one must take the low p-value resulting from the chi-square test in the Swedish survey into consideration. This as the results are not reliable when tested as a chi-square test (Newbold, Carlson, & Thorne, 2013).

H0 - There is no relationship between social norms and purchasing green products.

H5 – Social norms will affect the individual to buy green products.

To test hypothesis 5 in this study, question 11(DK), 13(DK), 12(SE), and question 14(SE) was used from the surveys, as these questions were designed to gather insights in terms of green consumption and social norms (Appendix 1, page 10 and 14). Table 4 conveys the results gathered when testing responses from question 11 (DK) and question 12 (SE) against responses from the questions used as the independent variables, respectively (table 4 page, 72.). Here respondents were asked to state if their close circle of family and friends engaged in green consumption (appendix 1, page 14). The resulting point to the fact that there is a correlation between the responses from the Danish survey, but there is no correlation between the responses from the Swedish survey (table 4 page 72.). Analyzing the results using the Value belief norm theory by Stern et al. (2007), one might form the assumption that social norms and values are regarded to have an effect on consumers' tendencies to engage in green consumption. The Value-Belief-Norm theory is developed as a social psychology

theory, which aims to explain how personal values, beliefs, and social norms interact to influence attitudes and behavior toward environmental issues (Stern, Dietz, Kalof, Abel, & Guagnano, 1999). The theory centers around the assumption that people with strong environmental values are more likely to develop strong beliefs about environmental issues and feel a sense of personal responsibility to act in environmentally friendly ways. This, in turn, leads to the development of environmental norms, or the belief that one should act in an environmentally friendly way. Thus, the theory is useful for understanding the complex relationship between personal values, beliefs, and social norms in shaping attitudes and behaviors toward environmental issues and can guide interventions aimed at promoting pro-environmental behavior (Stern, Dietz, Kalof, Abel, & Guagnano, 1999). Relating this back to the result, it can be understood that there is a correlation between consumers who usually buy green products and whether their close circle engages in green consumption, as their close circle might influence their personal values, making them feel socially responsible for engaging in green consumption. One might argue the fact that many might inherit their consumption behavior from their parents, which they then exploited during their childhood (Verplanken & Aarts, 1999). This statement is confirmed by one interviewee on the Danish side, as she states that some products she buys out of habit because her parents used to buy them (interview 2, appendix page 8-10.).

# Q13

To further elaborate, question 13(DK) and 14(SE) was designed to have respondents state to what degree they emphasize the statement "I am often influenced by the shopping habits of those in my close circle of friends" (survey, appendix). According to the results seen in Table 6, there is a correlation between the variables from both the Danish Survey and the Swedish survey. Which would then indicate that the respondents feel influenced to engage in green consumption by their close circle, meaning that the social norms are strong enough to make respondents prone to engage in green consumption (Ajzen, 1991) (Stern, Dietz, Kalof, Abel, & Guagnano, 1999). However, this does not exclude the fact that the respondent must value and believe in green consumption in a positive way, as all three attributes are considered to influence attitude and behavior (Stern, Dietz, Kalof, Abel, & Guagnano, 1999). Research has shown that social norms are one of the reasons that people buy green products (Stern, Dietz, Kalof, Abel, & Guagnano, 1999). We get influenced by the people that surround us, and because of that, if they have a positive attitude towards green products, we will get influenced by this. Furthermore, other reasons for consumers' purchase behavior to be influenced by family and friends are closely related to childhood memories and what kind of groceries parents used

Despite this, it must be considered that some purchasing behaviors might be unconscious, and respondents might not even be aware of the effect family and friends have on their consumption behavior. In interview 3 on the Swedish side, the interviewee states that society wants us to buy green products when shopping, arguing for the fact that it is more socially acceptable to engage in green consumption and thereby making a norm from a social construct (Stern, Dietz, Kalof, Abel, & Guagnano, 1999)(interview 3, transcript appendix page 4-5.). In contrast to this, most interviewees state that they do not feel that the behavior of their close circle might influence their own behavior (transcript, appendix, page 1-15.). Furthermore, the results from the survey showed that the respondents of the Danish survey are more prone to have their close circle affecting their consumer behavior than their Swedish neighbors. Despite this, as the p-value is the indicator of whether there is a correlation between the variables tested, the hypothesis can only partially be favoured, as the values from the Swedish survey did not indicate a correlation, meaning there is a difference between the two countries being tested. To conclude, as the results only account for a correlation on the Danish side, the null hypothesis cannot be rejected.

H0 – There is no relationship between the fact that consumers choose cheaper products due to cognitive limitation.

H7 – Because of cognitive limitations, consumers choose a cheaper product over a green product.

## Q 12

To investigate hypothesis 7, two sets of questions were used in order to look for cognitive limitation amongst respondents and how they would let price be the determinator of what products they purchased. The first questions to be tested were question 7 (DK) and question 6 (SE), which here referred to how all respondents could relate to the statement that they usually bought the same type of products when shopping (table 1, page 62). The results from testing the responses with the responses from the independent one (Q21 & Q7) are displayed in Table 1, and one can then see that there was no correlation between the variables from either survey nor was there any statistically significant relationship found (table 1, page 62.).

Continuing, this hypothesis is to be analyzed in relation to the Construal Level theory, which explains how individuals perceive and process information differently based on the psychological distance of

the event or object being considered. CLT suggests that individuals weigh the cost and benefits of decisions differently depending on the psychological distance. The hypothesis was formulated based on the idea that the consequences of not choosing a green product, or the reward of doing so, is too distant for people, and because of that, people would choose a cheaper product and take the immediate "win" of saving money now, instead of the abstract reward in the future. Analyzing the responses to the question "I feel that I make a difference when I buy a green product" it can be understood that most people 36% DK and 34% SE says that they agree to this. Almost just as many people state that they don't know, this could indicate that people are unsure about what difference they make when they buy green products (Descriptive statistic, page 58). This uncertainty was also something that some of the respondents pointed out to be one of the reasons why they did not focus more on buying green products when shopping. When we asked what the respondents think could be done to influence people to buy more green products, one of the respondents answered "... The price. But also, to draw attention to what the difference actually is, to make it very clear what the difference is." (Interview 3, transcript appendix, page 7-9). When asked if she felt that she had a good knowledge of what the difference between an organic and a conventional\* product was, she answered that "...it becomes very undefinable for me and I could use some clearer setups that made it clear what it does for me, but also what difference it makes to society if I buy one or the other" (Interview 2, transcript appendix, page 7-9). The same opinion is shared by interviewee 1 and 2 from the Swedish interviews as they both emphasised that more information is needed to increase green consumption (appendix, transcript, page 1-13). This statement can in the same sense relate to the attitude behaviour context theory as the context or environment where the green products are purchased could in fact have a positive effect on green consumption behaviour (Ajzen, 1991).

In addition to the test in Table 1, the test for Table 5 containing questions 12(DK) and question 13(SE) will be used for investigating this hypothesis. Reviewing the results, one can see that there is a strong statistically significant relationship between question 12 and question 21, which means that if people feel that they make a difference when they buy green products, they will be more likely to do so. The same is true for the opposite; if people feel that it does not make a difference when they buy green products, they will be less likely to engage in green consumption (table 5, page 72). Construal level theory is based on how people individually tend to think about events, objects, and experiences in terms of their psychological distance from the present moment. In this sense, it is assumed through this theory that the way we think about things can be categorized into two different levels: the concrete

level and the abstract level. Using this assumption for analyzing the responses, it can indicate that if people do not perceive that it will make a difference whether they engage in green consumption or not, it will make the thought of accomplishing something seem like an abstract thought when deciding on what groceries to shop for. In the same sense, if the reasons for spending extra money now on something, that at this moment in time, seem like an abstract thought will lead to consumers being more reluctant towards engaging in green consumption (Liberman, Trope, & Wakslak, 2007).

This, as CLT suggests that our mental representations of objects and situations can have a significant impact on our behavior and decision-making processes. Furthermore, CLT proposes that people tend to think more abstractly or more concretely depending on various factors, such as their level of familiarity with the object or situation, their personal goals and motivations, and the context in which the object or situation is presented. Meaning that if one lacks information or motivation to engage in green consumption, it will most likely lead to a disinterest in organic or green products (Liberman, Trope, & Wakslak, 2007).

Concluding, as test 1 showed no signs of statistical significance between the variables in either survey, it resonates with the action to reject hypothesis 7 and not reject hypothesis 0. Despite this, Table 5 indicates the opposite, displaying results that support a correlation. However, as test 5 contained outliers and which then made the results more uncertain, the most reasonable action is to not reject the null hypothesis and rather emphasize the need for more data in this context (Newbold, Carlson, & Thorne, 2013).

H0 - There will be no relationship between the increased inflation and purchasing of green products.

H1 - The increased inflation, that result in higher prices, will have a negative effect on the purchase of green products.

Comparing results from question Q24 How much do you agree with the following statement "*I would like to buy more green products*" and question Q15 How much do you agree with the following statement "Increasing inflation has affected my shopping habits in relation to green products" has been done differently than the other test, as the statements differs from the other questions as respondents had to state on a scale of how well they relate to the following assumption "Increasing inflation has affected my shopping habits in relation to green products." The options to choose from were "Yes – I buy more," "Yes – I buy less," "No – it has not changed." and "I don't know." Each

option was then coded to numerical values ranging from 0-4 to test for a possible correlation. The results showed that there is no statistically significant correlation between Q24 and Q15 for Denmark and a negative correlation for Sweden. Because the question is formulated as it is, a positive correlation between questions 15 and 24 would indicate that people buy more green products now that inflation has made the products more expensive. This would be unexpected. A negative correlation points to the fact that people now buy fewer green products because of the higher prices, which was also what was expected. Looking at Sweden, where there was no correlation, simply indicates that inflation does not affect the purchase intentions of green products. Looking at the result from the survey shows that on the Danish side, 53% of the respondents stated, "No – it has not changed," and 40% stated, "Yes – I buy less" For the Swedish respondents, a similar pattern is seen. Here 54% of the respondents agree to "Yes – I buy less," and 43% of the respondents agree to the statement "No - It has not changed." The results support the findings by (Luengo-Valderrey, Emmanuel-Martínez, Rivera-Revilla, & Vicente-Molina, 2022) that reveals that people adversely affected by the crisis are more likely to develop some types of ecological behaviors as saving water and energy or reducing the use of transport because this reduces the cost of living and saves the individuals money. People are less likely to be willing to pay for environmental causes. When people are affected by a crisis, they usually choose to allocate economic resources to fulfilling basic needs, which is also consistent with the theory of Post-materialism, which holds that adverse welfare shocks shift the values of individuals closer to material security and away from post-materialist goals (Inglehart, 1983, 1995). Many people have been affected by inflation, but the economic situation is not yet at fatal as during the economic crisis in 2008, and it is still unknown how the economy will be affected by the uncertainty the world is currently facing. If the inflation rises even further, we will possibly experience people buying fewer green products in line with the finding by(Luengo-Valderrey, Emmanuel-Martínez, Rivera-Revilla, & Vicente-Molina, 2022). It will only be possible to know all the consequences of the uncertain economic situation when we can look back on it and know exactly how it has developed. Therefore, it will only be possible to come up with a final conclusion on this in a few years. The study done by (Luengo-Valderrey, Emmanuel-Martínez, Rivera-Revilla, & Vicente-Molina, 2022) has also been conducted in retrospect. However, it is possible that even if the economic situation continues to develop for the worse, we will not see quite as significant a decrease in the sale of green products, since there has been a large development in the price of green products. Many supermarkets today offer organic or green private-label products that are far cheaper than other alternatives. Therefore, people will still be able to afford to buy green

products to some extent if they buy the products that the supermarkets themselves produce. In addition, it is important to note that the study conducted by (Luengo-Valderrey, Emmanuel-Martínez, Rivera-Revilla, & Vicente-Molina, 2022) was conducted in Spain. Denmark and Sweden have a very similar system for social support and because of that all citizens would be able to receive social support if they lose their job or are unable to work. In general, the amount of unemployment benefits in Denmark is relatively high compared to other countries. The maximum amount of social support benefits in Denmark is currently around 19,800 DKK per month (approximately 2,650 EUR). However, the amount of benefits you receive may be lower than the maximum, depending on your individual circumstances. (HK.dk, 2023) Spain have a similar system, but the citizen will not receive as many money as a citizen in Denmark or Sweden would. In general, if you have lost your job in Spain, you may be eligible for one of two types of unemployment benefits: contributory or noncontributory. The maximum amount of contributory unemployment benefit in Spain is currently €1,098.09 per month and for non-contributory unemployment. The amount of this benefit is currently set at €451.92 per month. (SEPE.ES, 2023) Living cost are higher I Denmark compared to Spain. As of May 2023, the overall Cost of Living Index for Denmark is 93.27, while the index for Spain is 57.94. This means that the cost of living in Denmark is approximately 61% higher than in Spain, based on this index. (numbeo, www.numbeo.com, 2023) In times of economic crisis, this means that people in Spain, looking at their purchase power, have less money to spend than people in Denmark or Sweden would. Because of that, in times of economic crisis, it is possible that people from Spain would be more likely to use their money to fulfilling basic and deprioritize buying green products. But because of the social support system in Denmark and Sweden, people do get their basic need covered and would still, if they prioritize it, be able to buy some green products, despite the fact that they lost their job or was unable to work. Concluding, as results are vague and not final, it is not possible to either accept or reject the hypothesis. This does thus mean that the null hypothesis is not rejected.

*H0 – Price* is not the key determiner of whether the customer buys the product to not.

*H2 - Price is the key determiner of whether the customer buys the product to not.* 

All of the participants from the interviews stated that price was an important factor when purchasing groceries; however, not all of them stated that price was the most important factor for them per se. However, they deemed price to be the most important factor overall when looking at green

consumption. Looking at what people deemed the most important when shopping (See figure 2&3, page 57), price was the second most important factor in both Denmark and Sweden. This pattern has further been confirmed by an analysis done by MadKultur, where people also deemed price the second most important factor. (Kvist, et al., 2022)

Testing question 21 and 17 how much do you agree with the following statement "I would buy more green products if they were cheaper" shows that there is no statistically significant relationship between them for either Denmark or Sweden making the price of the product a less pressing issue than suspected (appendix 1, page 15). That there is no connection between these two, which makes good sense. People who say they would buy more green products if they were cheaper are not necessarily people who already buy green products. On the other hand, it can be just the other way around, that people who say they would buy more green products if it were cheaper are people who do not already buy green products, perhaps because they cannot afford it. If you look at the statistics for Denmark, it can also be seen that 38% of the respondents state that they strongly agree with this statement. 33% answer that they agree. This means that 71% of respondents say they would buy more green products if they were cheaper. A similar pattern can be seen when looking at the results from Sweden. Here, 46% respond that they strongly agree with this statement. 34% answer that they agree. This therefore supports the hypothesis that people would buy more green products if they were cheaper, because price is one of the most important things that can drive sales. This is both consistent with the economically rational theory, which predicts that the consumer is economically rational and therefore chooses the cheapest product in order to maximize their utility. This is also supported by the result from the question about what was most important when people shopped. Here the result was that price and quality were the two things that people thought were most important. Looking at the conducted interviews, it was very clear that price is a key determiner of which product to buy for many of the respondents. That price is a key determiner of whether the customers buys green products or not, can further be explained by (Luengo-Valderrey, Emmanuel-Martínez, Rivera-Revilla, & Vicente-Molina, 2022) who in line with Maslow (1943) and post-materialism, explains that When people are affected by a crisis, they usually choose to allocate economic resources to fulfilling basic need which is also consistent with theory of Post-materialism, which holds that adverse welfare shocks shift the values of individual closer to material security and away from post-materialist goals. (Inglehart, 1983, 1995). Concluding, we, therefore, do not reject the null hypothesis.

H0 - Eco labels will not affect purchase intentions because they serve as a utilization cue. H6- Eco labels will positively affect purchase intentions because they serve as a utilization cue.

To test hypothesis 6, question 18 for both Swedish and the Danish survey was designed to have respondents state whether they looked for eco-labels whilst shopping for groceries. Both the surveys showed values indicating a correlation and a statistically significant relationship between the responses regarding looking for eco-label and usually being green products. Using the framework for the Cue utilization theory, which the main function is to explain how people use various cues from their environment to make decisions and form judgments. The theory proposes that people integrate different cues based on their relevance and reliability. Here relating to cues regarded as eco-labels used for promoting green consumption. Continuing, consumers' cognitive abilities, such as attention, perception, and memory, also play a role in how they weigh and integrate cues. The extent to which cues are utilized depends on the complexity of the task, the nature of the decision being made, and the individual's cognitive resources. Relating it to the results gained from the survey, it can be fairly urged that eco-labels can be used as cue-utilization in a positive matter. Thereby indicating that the cues will increase the possibility for further engagement in green consumption. Furthermore, 4 of the interviewees stated that they look for eco-labels; however, even though these were the same interviewees to engage in green consumption during the observation, one must account for the possibility that eco-labels only serve as a cue when the consumer in question already has the intention to buy green products, or if they buy green products out of habit. Moreover, in interview 2 from Sweden, the interviewee explains as follows; "generally stores, I like everything here with how you set up the store, eh, I can buy things based on what it is I see and what looks interesting so, as long as you present good information about the product, possibly put at some discounts, buy two to get this price, eh, and front it well, it can turn around I think" (Appendix, Transcript, page 3), further supporting the claim that eco-labels and display can be used for promoting green consumption if utilized properly. Concluding, based on the analysis, it can be concluded that the hypothesis can be favoured and that the null hypothesis can be rejected. Eco-labels will most likely positively affect consumers' purchase intention. Eco-labels serve as utilization cues which makes decision-making easier for customers when they are shopping. The unitarization cues simplicity in the amount of information that the customer must process and makes the decision-making process quicker, as they allow for rapid processing of information. This is especially useful in situations where time is limited, which is very often the case when grocery shopping (Verplanken & Aarts, 1999).

H0 – There will be no relationship between the green products added benefit and increase in price in terms of purchase.

H8 - To justify the higher purchasing price of green products in contrast to regular ones, the green products must have an added benefit which compensates for the increase in expense.

There is no statistically significant relationship between Q21: How much do you agree with the following statement, "I generally buy a lot of green products," and Q20: How much do you agree with the following statement Q20 How much do you agree with the following statement "If I pay more for a product, I expect the quality to be significantly better than a cheaper but similar alternative" It can be difficult to compare the two things. The fact that people want to be compensated for buying a more expensive product does not necessarily mean that they buy more green products. On the other hand, this shows that people expect a product that is expensive to be significantly better, which is in line with prospect theory. The theory here is that because people are generally risk averse, they must be compensated for the risk they take by being able to win more than they can lose. This can be transferred to the purchase of organic goods by the fact that if people have to pay more for an organic product, they expect that they will get something extra. Although a connection between the question and people buying a lot of green products cannot be influenced, the result shows, if you only look at what people have answered, that 37,5% say they strongly agree and that 51,6% say they agree. This shows that people, in line with what prospect theory says, would like to be compensated for spending extra money when they shop. When testing if there would be any correlation between the question of whether consumers would buy green products if they considered the price to be worth the increase in price, this hypothesis is hard to reject and confirm as outside influences may affect the results, and the risk of respondents misinterpreting the question when answering is very high. The null hypothesis is in coherence with this not rejected.

# The ABC-model and Habits

To finalize the discussion, there has been no hypothesis created to relate the attitude-behavior context model, nor in terms of habits; however, it is important to acknowledge the possibility of a relation between the results and the power of habit, as well as how the results can be analyzed using the ABC model. Therefore the following section will have its focus on the ABC model and habits to further discuss the findings. The attitude behavior context model, also known as the ABC model, was

developed as a theoretical framework for predicting behavior based on attitude, behavior, and context and is thereby useful when analyzing the respondent's consumption behavior. In the same sense as the theory of planned behavior, the ABC model makes use of positive or negative attitudes toward objects, situations, or people to predict how consumers might behave in certain contexts. The ABC model then differs as it accounts for behavior towards that specific product or person and relationship to the context where the situational factors may influence the final behavior (Guagnano, Stern , & Dietz, 1995).

Relating the ABC model to the result obtained through this paper, the ABC model will assume that these three factors are vital for the consumer to resemble a green consumption behavior. These factors are assumed to influence each other and the overall behavior, meaning in this context that consumers with a favorable attitude towards green consumption and/or have exhibited behavior that is in favor of it will be more likely to engage in it. Despite this, both the theory of planned behavior and the ABC model can be regarded as not fully predicting behavior in terms of green consumption, as the result obtained in this paper indicate that the greater part of all consumers share a positive attitude towards green consumption and regarded to be in an environment that promotes green consumption. Despite this, many consumers actively disengage, making the case that intention and environment are not enough to increase green consumption (Guagnano, Stern, & Dietz, 1995).

Furthermore, relating the results back to Verplanken & Aarts's (1999) work on habits and habitual behavior, one can see a strong connection between habits and green consumption, even more so than with intention. One can make the assumption that consumers often go by habits when shopping for groceries. Their findings suggest that strong habits make consumers less susceptible to new information and cues, thereby indicating that changing habits amongst consumers by displaying more information and or making them more exposed to eco-labels or green consumption cues most likely will not serve its purpose. However, in contrast to that statement, the findings in the same sense resonate with the belief that consumers that already have strong habits of purchasing green products will continue doing so (Verplanken & Aarts, 1999). This can be supported by the results; many of the interviewees executed such actions during the observation, not noticing buying organic products or just going straight for a specific brand when choosing a product (appendix, page 118-131). One can assume that most consumers seem to have developed habits and engage in standardized habitual behavior when shopping for groceries, as most might shop in a stressful environment or during time pressure, leading consumers to act on habit rather than deciding between different behavioral choices.

Making the action of increasing green consumption by trying to influence the consumer rather difficult. To change consumers' strong habits towards behaviors that involve green consumption, consumers first must have the motivation to engage in the favorable behavior in order to be susceptive to the information and knowledge being provided. As a final thought, it can therefore be argued that habits and their relationship with persuasion frameworks are the most useful behavior to research and make use of when developing actions for the sake of having more consumers engage in green consumption (Verplanken & Aarts, 1999).

# Conclusion

This study has found that despite the widespread consequences of climate change, there is a significant gap between consumers' expressed positive attitudes towards green products and their actual green consumption behavior. This attitude-intention gap can be attributed to several factors. Firstly, while positive intentions toward green products can result in positive attitudes toward green purchasing behavior, it is not always enough to change consumer behavior. Utilization cues such as eco-labels that simplify decision-making can be helpful, but cognitive limitations can also play a role in consumers' lack of interest in organic or green products.

Secondly, the study found that knowledge about climate change and global warming is positively correlated with the purchase of green products. This indicates that consumers who are more aware of the environmental impact of their choices are more likely to make environmentally-friendly purchases.

Additionally, other research has shown that social norms play a strong role in influencing consumers to engage in green consumption. However, this study shows conflicting results as to whether this assumption stands true or not. Despite this, social norms cannot be regarded as having no impact on purchase behavior, which is an important concluding thought to bear in mind.

Furthermore, price emerged as one of the most significant drivers of green consumption. Many consumers choose the cheapest product when shopping, and if they are to purchase a more expensive product, it needs to have an added benefit beyond being organic or environmentally friendly. Although intention and utilization cues might hold great potential to increase green consumption, these factors are not always enough to change behavior, as people are not purely rational, have competing priorities, and most like engage in habitual behavior.

Finally, this study highlights the importance of information and education in promoting environmentally-friendly behavior, which holds promising potential to encourage consumers to buy more green products. The critical thought to remember here, is that how this information should be displayed is of importance, as consumer might have have limited attentionspan due to strong habits.

This study contributes to the literature on green consumption by examining the attitude-intention gap among consumers by taking an explorative approach based on both behavioral and rational theories introducing a model that examines consumption habits in Denmark and Sweden. Overall, the findings of this study point to the fact that while there are several barriers to green consumption, there are also many opportunities to promote environmentally-friendly behavior. By addressing the factors that positively influence consumer behavior, such as price, knowledge, and social norms, amongst others, it is possible to increase green consumption and contribute to a more sustainable future.

### Limitations

This study, like most research this study has its own limitations, which will be discussed in the following section. The first note to make in terms of limitations is the use of unstructured interviews. Unstructured interviews come with different kinds of negative aspects, one of which is the lack of standardization. Even if the aim was to use the same questions during the interviews, not every interview contained the same questions, which in turn makes it hard to compare and contrast responses across different participants. Moreover, unstructured interviews can be influenced by interviewer bias, meaning that interviewers may ask leading questions or make assumptions based on their own biases, which can then impact the responses. Reliability must, in the same matter, be considered when looking at unstructured interviews; different interviewers may ask different questions or interpret responses differently, leading to inconsistent results. This makes it difficult to assess the validity of the responses and the interview itself. However, the choice to use a casual setting for the interviews was deliberate in order to keep them as close to a normal conversation as possible, and to reduce the risk of interviewees being biased or feeling prompt into answering in a specific way. In relation to that, rather than choosing a set of random people for the observations, the chosen participants knew the interviewer beforehand to make the participants feel comfortable and less likely to change their behavior due to the interview. This fact can as well be regarded as both a limitation and an advantage.

Furthermore, the statistical results may contain limitations as a regression model was not used for analyzing the data gathered from the survey. This, as a regression analysis using the R-square, can be used as a statistical test for analyzing a correlation between variables. Nevertheless, even if a regression model could have been used, it was excluded from the analysis due to the fact that the

overall goal was not to predict values or future interpretations but rather to test for what factors might have a positive influence on green consumption behavior. Thereby deeming the cross-tabulation test to be a better statistical test in this context.

Moving on, In order to gain enough respondents, the Swedish survey has also been posted in several Facebook groups in order to ensure respondents from different places in Sweden and with different characteristics, such as age, income, and education. It was more challenging to get enough people to answer the survey in Sweden, as the access to certain online groups for a wider was limited. Furthermore, one must note that the questions from the survey could be misinterpreted by the respondents. This as the survey is a one-way communication line, where there is no possibility for explaining the question further if any doubt arises. One such instance could be in regards to the definition of green products, as this statement can have a different meaning for different individuals. However, a definition of green products was stated at the beginning of the survey, in an attempt to avoid misinterpretation in this sense. Continuing, as mentioned by Verplanken & Aarts (1999), behavior in terms of self-reports can suffer invalidity, as respondents are asked to rely on memory when answering. This is memory many times only can be temporarily accessible. Despite this, as the questions were designed to relate to the respondent's last shopping trip, relying on their memory would not be regarded as the biggest issue.

Concluding, this research focuses on fast-moving consumer goods as a whole, and it could be argued that the findings would have been more concrete and specialized if the focus was put on individual products instead. Despite this, the fast-moving consumer goods as a whole were chosen to make the research more generalizable. One final thing worth considering is the current state of the world; during the past couple of years, many changes and the overall state of the world has been changing rapidly. This thus makes it difficult to assess to which degree the findings in this research are due to those circumstances. Therefore, it would be useful to conduct similar research in the future for a comparison between the results.

### **Further research**

This study has been centered around investigating the attitude intention gap in Denmark and Sweden. Because of the time limitations, the study took an cross-sectional approach. It could be interesting for further research to conduct a longitudinal analysis that compared results from the economic crisis in 2008 to the current unsure economic state to see if people still react to the economic crisis as in 2008 or if people are more positive towards green products now and if the reactions thereby have changed. It could also be interesting to examine how the four classic policies of the marketing mix – product, price, promotion, and place, would affect the purchase of green products. Products Research done by Bangsa and Schlegelmilch (2020) states that the link between green product attributes and consumer decision-making has been demonstrated in several research studies. Consumers show intention to purchase products based on the perceived combination of the attributes offered (performance, cost, quality, and value) that meet their needs.

Price. In regard to the price of the product, another interesting avenue to follow could be to investigate alternative barriers to green consumption as greenwashing. A study by (Lee et al., 2018) has shown that suspicion of greenwashing by companies decreases consumer willingness to pay a price premium. Promotion. Research has shown that Increasing green product promotion can stimulate green product adoption by mitigating one of the barriers to adoption, namely the lack of information (Annunziata and Scarpato, 2014; Zou et al., 2021). These findings are in line with the finding of this paper, which shows that lack of information is one of the most prominent reasons causing the gap and could, therefore, be interesting to investigate further. Place. Place policy is involved in making products available to consumers at the usual place of purchase. The place effect on green products has been studied less than the effects of the other three Ps of the marketing mix and would therefore be interesting to study. According to Carvalho et al. (2016), the availability and accessibility of green products are directly related to green purchase behavior.

In this paper, the focus were solely on Denmark and Sweden. It could be interesting to expand the study to cover Sweden, Denmark, Finland, Norway, and Iceland. The Nordic countries are small individually but aligned. The importance of them as a group is considerable. The combined gross domestic product makes the Nordic Region the world's twelfth-largest economy. (Svanen.se) The countries in the Nordic region have similarities in demographic and sociographic similarities and could therefore be compared. Further research could be conducted in terms of the price to investigate

if the price, in fact, is the most pressing factor when trying to increase green purchasing behavior. As an example, this could be executed by conducting a randomized test in supermarkets, by placing regular product side by side with their sustainable counterpart, which in this instance is set at the same price, to see if consumers behave according to their statements. A short interview could be done before conducting the test to ask participants if they would buy green products if the price was reduced.

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## Appendix

1. Hypothesis and questions linked to them

# H1: The increased inflation, that result in higher prices, will have a negative effect on the purchase of green products.

Q15 How much do you agree with the following statement "Increasing inflation has affected my shopping habits in relation to green products"

#### H2: Price is the key determiner of whether the costumer buys the product to not.

Q17 How much do you agree with the following statement "I would buy more green products if they were cheaper"

# H3: Strong purchase intention of green products will positively affect actual purchase behavior.

Q24 How much do you agree with the following statement "I would like to buy more green products" Q1 How much do you agree with the following statement "I think it is important to buy green products"

Q10 How much do you agree with the following statement "I had an intention to buy green products on my last shopping trip"

# H4: Possession of a high level of environmental knowledge will positively influence a consumer's purchase intentions of green products

Q16 How much do you agree with the following statement "I know a lot about global warming and climate change"

## H6: Eco labels will positively affect purchase intentions because they serve as a utilization cues

Q9 How much do you agree with the following statement "I bought a lot of organic products on my last shopping trip"

Q18 How much do you agree with the following statement "I look for green labels such as the  $\emptyset$  label for ecology, fair trade or Rainforest Alliance when I shop"

#### H5: Social norms will positively affect the individual to buy green products

Q13 How much do you agree with the following statement "I am often influenced by the shopping habits of those in my close circle of friends"

Q11 Do people in your close circle (family and close friends) buy green products?

### H7 - Consumers choose a cheaper product over a green product due to cognitive limitation

Q12 How much do you agree with the following statement "I feel that I can make a difference by buying green products."

# H8: To justify the higher purchasing price of green products in contrast to regular ones, the green products must have an added benefit which compensates for the increase in expense.

Q20 How much do you agree with the following statement "If I pay more for a product, I expect the quality to be significantly better than a cheaper but similar alternative."

#### **Questions regarding habits**

Q7 How much do you agree with the following statement "I often buy the same products when I shop."

Q19 How much do you agree with the following statement "I bought what I planned to buy the last time I shopped"

### Questions regarding availability of green products

Q14 How much do you agree with the following statement "I would buy more green products if they were more available."

#### Questions to check consistently in responses.

Q21 How much do you agree with the following statement "I generally buy a lot of green products." Q8 How much do you agree with the following statement "I bought a lot of green products on my last shopping trip"

## Transcribing and coding

## Themes:

To use the qualitative data gathered throughout the interviews and observation, a coding system was developed to categorise each section of the interviews. This was done in order to clearly see what action, opinions, and beliefs that were re-occurring amongst interviewees and how/if the statements related to one of the chosen frameworks used in this thesis.

The first theme presented is action. Here the interviews were coded to see patterns of action the interviewees takes during their grocery shopping route, or what they state in the interview that they.

#### **Actions:**

- Shopping out of habit
- Shop to fit lifestyle
- Shop to serve a cause
- Shopping due to social norms

Opinions are the next theme as it aims at providing a pattern between the belief each respondent share with one another.

#### **Opinions:**

- Price is the most important feature when shopping for groceries
- Quality is the most important attribute of products
- Organic products are the most important ones
- The shopping trip must be planned in advance
- Other people will influence my shopping habits.

Beliefs are the third themes, which aims as providing and overview of patterns exhibited during the interviews. these are claims or statement participants made and relate to during the interview.

#### **Beliefes:**

- Green consumption does not make any difference
- Green products are being de-prioritized
- There is not enough information about green consumption
- Green consumption is too expensive to engage in
- Green consumption is socially accepted
- Society as a whole must contribute to green consumption
- It is up to the government to regulate and increase green consumption

For the coding section, the responses gathered throughout the interview were coded to match the corresponding frameworks presented earlier in the paper. However, there will be a more extensive emphasize of the use of framework towards the result and responses in the main document.

#### Theories/frameworks:

- Theory of planned behaviour
- Cue utuilization theory
- ABC-Model
- Prospect theory
- Value belief norm theory
- Habits and Habitual behavior

### Overview of Eco-labels Denmark

#### Selected Danish eco-labels

- The Aquaculture Stewardship Council (ASC)
   (Opdrættet ansvarligt) / Marine Steward
   Council (MSC) (Bæredygtigt fiskeri)
- 2. The Swan Label (Svanemærket)
- 3. The Energy Label (Energimærket)
- 4. The EU Ecolabel (EU blomsten)
- 5. EU Organic (EU's grønne blad)
- 6. The Ø-mark (Ø-mærket)



### Overview of Eco-labels Sweden

### Selected Swedish eco-labels

- Bra miljöval (Swedish Society for Nature Conservation)
- 2. The Swan Label (Svanenmärket)
- 3. The Energy Label (Energimärket)
- 4. The EU Ecolabel (EU blomman)
- 5. EU Organic (EU märket)
- KRAV Label for sustainable food (Kravmärket)











