Consumers' perception of climate-smart wine packaging

– A case study on Systembolaget

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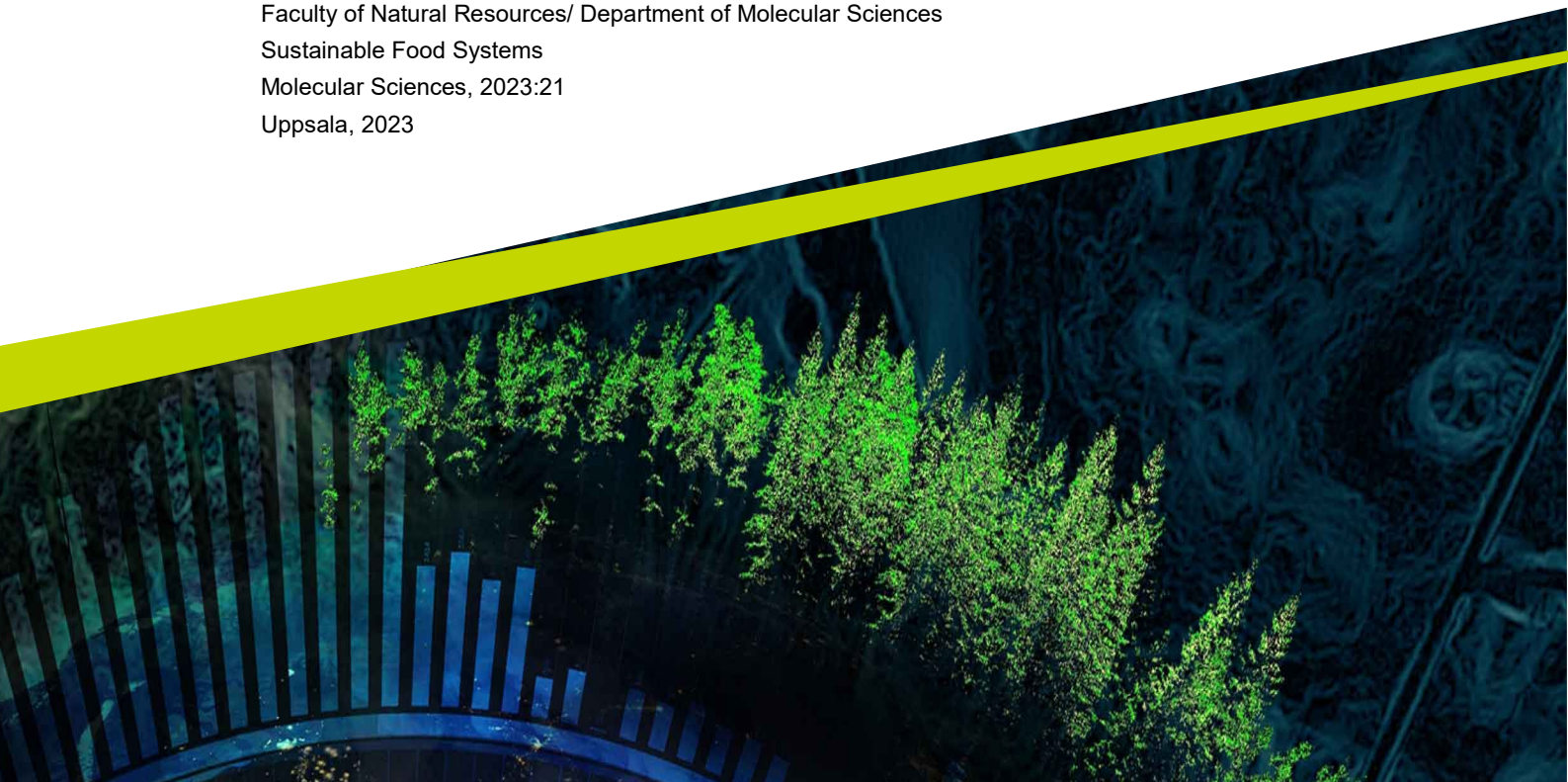

Consumers' perception of climate-smart wine packaging – A case study on Systembolaget

Konsumenters uppfattning om klimatsmarta vinförpackningar – En studie om Systembolaget

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Abstract

Environmental concerns in the wine industry are getting more attention worldwide, making it important to shift to more sustainable practices. One of the most significant CO_2e emissions originates from wine glass bottles as packaging material. More climate-smart packaging alternatives are emerging as a response, but challenges remain to encourage consumers to make the shift, as the glass bottle is associated with quality, history, tradition, art, and history, being the norm. Following corporate social responsibility, companies in the wine industry have a responsibility to integrate sustainable practices into their businesses and provide an encouraged framework for consumers to make conscious choices. Systembolaget, the Swedish state-owned company with a monopoly on the retail trade of alcoholic beverages, aspire to increase climate-smart wine packaging in their assortment. However, a challenge remains in encouraging consumers to leave the glass bottle and change their behaviors. This project is on commission by Systembolaget and aims to explain the conditions for altering packaging materials for a food product. The thesis followed a qualitative research method based on three focus group interviews with ten consumers and two semi-structured interviews with store employees, to enhance comprehension regarding consumers' perception of climate-smart wine packaging. The theoretical framework encompassed marketing theories such as the four C's and Sustainable Business Models (SBM), whereas the conceptual framework, the *Alphabet Theory,* derived from social psychology.

The findings revealed a discrepancy between the consumers' interest in sustainability and their actual purchasing habits. The obstacles to adopting climate-smart packaging were substantial, indicating a green gap or attitude-behavior gap. There exists a lack of knowledge about wine in climate-smart packaging, leading to concerns over potential compromises in quality and functionality. Due to the norm of the glass bottle, barriers were also related to presenting climate-smart options in social settings. Consequently, it limited their information-seeking process about climate-smart wine packaging. However, consumers expressed a preference for innovative product designs that adhered to the conventional "glass bottle norm" in terms of shape and material, emphasizing the significance of innovation according to what feels familiar. To increase the incentives to purchase climate-smart packaging, the education of consumers is crucial, which can be achieved through employees' expertise or communication campaigns that employ a combination of educational incentives and social comparison to alter norms. Nudging incentives in stores can simplify consumers' decision-making process, making the climate-smart choice the easy choice. However, challenges arise when attempting to integrate sustainability goals within a state-owned company governed by regulations. Balancing brand neutrality with the promotion of climate-smart options presents inherent conflicts, revealing a need for additional educational tools and support from the Systembolaget headquarters. With increased knowledge attempts, consumer understanding can increase and have a reinforcing effect. Norm changes within a strongly norm-based industry are complex, but not impossible. As with any behavior, it is a co-creation between the individual and her societal environment, which adapts and shapes with time.

Keywords: Wine packaging, climate impact, consumer behavior, sustainability labels, CSR, Alpabeth Theory

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Abbreviations

ABC	Attitude-Behavior-Context
BiB	Bag-in-Box
CO_2e	Carbon dioxide equivalents
CR	Corporate Responsibility
CSR	Corporate Social Responsibility
GHGs	Greenhouse gases
LCA	Life-cycle assessment
PET	Polyethylene Terephthalate
SBM	Sustainable Business Models
TBL	Triple Bottom Line
VBN	Value-Belief-Norm
WTP	Willingness to pay

1. Introduction

This first chapter presents a problem background to global challenges within the food systems and food packaging. Then, a description of the wine industry and the environmental issues with packaging materials is presented. Followed by the aim, research questions, and commission. Lastly, an outline of the thesis is presented.

1.1 Problem background

The global food system has drastically changed in the last 50 years. During the current geological epoch of the Anthropocene, food is considered the greatest health and environmental challenge posing humanity (Willett *et al.* 2019). The food system is estimated to contribute 20-30% of anthropogenic emissions of greenhouse gases (**GHGs**), which encompasses agricultural production, processing, transport, packaging, storage, consumption, and waste disposal. The latter stages of the food system contribute around 5–10% of global GHGs, such as packaging, retail, transport, processing, food preparation, and waste disposal combined (Garnett *et al.* 2016).

As the population has increased, global consumption patterns have changed as a result. Production and consumption are interrelated in food systems, where consumption patterns drive production demand, and production creates supply (Garnett *et al.* 2016). Therefore, altering consumption patterns and consumer behavior could change the food system and reduce its related GHG emissions. Changes in food consumption and behavioral change are suggested as necessary for the transition to a low-carbon society and as a critical approach to climate mitigation (Popp *et al.* 2010; Creutzig *et al.* 2016). In a more recent study, Moran *et al.* (2020) estimated that shifting consumer behavior could potentially lead to a decrease in the European Union's carbon emissions by 25%. Consumers have a vital role within the food system and how behavioral change can impact GHG emissions throughout the entire life cycle of a food product, including upstream activities such as the production, the behaviors associated with the use-phase, as well as downstream activities such as waste disposal (Grubb *et al.* 2020).

The food system on a global scale is complex and intricate, building food supply chains comprising a variety of components and interdependencies (Nayak & Waterson 2019). Given the complexity of the food system, it is a bold assumption to expect that consumers can fully understand the impact of their behaviors on emissions and climate change. Previous studies (Camilleri *et al.* 2019; Wynes *et al.* 2020; Thøgersen 2021) have shown the complexity

between consumer behavior and consumers' underestimation of foods' environmental impact. Consumers often struggle with understanding the extent of their impact, as well as deciding which changes in behavior would be most effective in reducing emissions (*Ibid.*). In addition, there is a discrepancy between consumers' expressed support for eco-friendliness and sustainability and their actual purchasing habits, known as the *green gap* (Schmitt 2021), or attitude-intention gap (Kollmuss & Agyeman 2002; Tawde *et al.* 2023). Factors creating the behavior gap are important to identify to understand consumer behavior regarding green purchases (Ritter *et al.* 2015).

Consumers play a crucial role in the food system, but it must be emphasized that they do not operate in isolation. Consumers are actors who are influenced by several stakeholders for instance, governments (politics, laws, legislations, taxes, subsidies), and companies (suppliers, business partners, marketing, employees, models, and strategies) (Belz & Peattie 2012). Companies in the food system face increased external pressure from stakeholders, to actively work with environmentally related questions within their operation (Mark-Herbert *et al.* 2007). Corporate Responsibility (**CR**) or Corporate Social Responsibility (**CSR**) refers to corporations' environmental, financial, and social responsibility and accountability. As stated by Mark-Hebert *et al.* (2007), there is no one commonly accepted definition of CSR, but the integration of context-bound CSR is something that companies are expected to work with (*Ibid.*). Thus, companies have a responsibility to integrate sustainable practices into their businesses, thus providing a framework for consumers to make environmentally conscious choices. However, the complexity of the food system can make it difficult for consumers to fully understand the concept of sustainability when making food choices.

1.2 Problem

Food packaging has an essential role in the food system. Packaging fulfills several functions; it acts as a protective device, ensures food safety, and is used to communicate the content of the food product (Ahmed *et al.*2005; Lindh *et al.* 2016; Herbes *et al.* 2018). However, food packaging poses a threat to the environment and contributes to climate change. Different food packaging materials generate various degrees of CO_2e emissions (Lindh *et al.* 2016). Due to the emergent state of environmental degradation, various alternative packaging or climate-smart packaging has risen in the food production sector (Herbes *et al.* 2018). Consumers are more aware of their consumption patterns and their related emissions, including choices of packaging (*Ibid.*).

Furthermore, consumers' attitudes towards packaging alternatives shape the supply of packaging alternatives since manufacturers are guided by the demand (Herbes *et al.* 2018). With this logic, consumers shape their packaging preferences. However, manufacturers, food producers, and companies (suppliers) still face barriers internally and externally in switching towards more climate-smart packaging alternatives (*Ibid.*).

There exists confusion in the definition of a "sustainable packaging alternative", from both a consumer and supplier perspective (Herbes *et al.* 2018). When calculating the environmental aspects of packaging, a life-cycle assessment (**LCA**) is the most common tool. Yet, within packaging LCA research, differences in methodology and considered aspects create different outcomes and answers to the question of the most sustainable packaging alternative. For example, it is important to not only include the direct environmental impact related to production and life length of packaging, but also the indirect environmental impacts in the scope, related to food waste, recyclability, and the overall impact the packaging has on the contents' life cycle (Molina-Besch *et al.* 2019). Further, a difference exists in evidence from LCA and research findings on sustainable packaging, and how they are interpreted by consumers (Boesen *et al.* 2019; Otto *et al.* 2021). Often, emotions and feelings are used when judging a packaging's environmental performance, rather than cognitive reasoning or knowledge based on research. As a consequence, the purchase is less sustainable than planned (Otto *et al.* 2021). Thus, a gap exists in research on consumers' relation to climate-smart food packaging (Ketelsen *et al.* 2020), implying more need for research in this area.

Packaging about consumer behavior is also context-dependent; for example, different food products can alter different attitudes among consumers (Otto *et al.* 2021), and different CSR claims on food products differ among geographical markets (Mueller Loose & Remaud 2013). Further, when discussing packaging in relation to consumer behavior, there is a need to consider the differences in markets, cultures, and social practices. Thus, the behaviors of consumers can differ worldwide, even if it regards the same food product (Ahmed *et al.* 2005; Lindh *et al.* 2016; Herbes *et al.* 2018).

To summarize, the food system encompasses a significant amount of packaging, and consumer choices concerning food packaging have a significant impact on companies' sustainability management and corporate social responsibility efforts. Companies have a key role in making it easier for consumers to make sustainable choices. It is therefore essential to understand consumer behavior in relation to choices of more climate-smart food packaging. Consumers' green purchase intentions do not often convert into actual green purchasing actions, following the *green gap*. By comprehending the underlying motivations behind consumer choices, opportunities may be revealed for companies to improve their business models and strategies to encourage consumers to choose more sustainable packaging options.

1.2.1 The wine industry

The sustainability-related issues in the wine industry are getting more attention among consumers and producers (Szolnoki 2013; Flores 2018). Environmental concerns confront the wine industry in several ways; the industry causes environmental impacts along the whole supply chain and is exposed to them which threatens production (Christ & Burritt 2013; Santos *et al.* 2020). The environmental impacts linked to wine production include water usage, energy consumption, chemical use and leakage, water quality, waste disposal, greenhouse gas emissions, land use, and its impact on ecosystems (*Ibid.*). The success of a wine region is

determined by the balance between climate, soil, and human influence known as terroir. Grape cultivation relies on these favorable conditions. However, climate change is expected to bring challenges that may alter these conditions (Santos *et al.* 2020). The top wine-producing countries (based on average production volume) include Italy, France, Spain, Germany, Chile, USA, Australia, Argentina, and South Africa (International Organization of Vine and Wine 2022). The wine industry is also an important socio-economic sector in these countries, generating further socio-economical sustainability challenges arising from climate change (Santos *et al.* 2020).

Wine, as a food product, is associated with a complex product that is related to social settings in which it is consumed (Lockshin & Corsi 2012; Ferrara & De Feo 2018). From a consumer perspective, wine holds a unique position and is a highly differentiated product (Fabbrizzi *et al.* 2021). Consumers consider numerous factors before making a purchase decision, such as the country and region of production, price, brand, type of grape, recognition through awards, and advertising efforts (Lockshin & Corsi 2012; Fabbrizzi *et al.* 2021). To maintain its practices over time, there are incentives in the wine industry to move towards more environmentally conscious methods. Though incorporating innovative processes, can drive new market strategies and help gain competitive advantages in the wine industry (Flores 2018). However, the wine industry has deep roots in traditional methods and practices, which can make the transition difficult (Ferrara & De Feo 2020; Ferrara *et al.* 2020).

Integrating a cradle-to-grave perspective, several research points out the impact of packaging materials within the wine industry. However, the commonly held belief that glass is the most climate-smart material is challenged (Ferrara & De Feo 2020). There is a shared understanding among recent studies that glass bottles have the most environmental impact (Ferrara *et al.* 2020; Otto *et al.* 2021; Ruggeri *et al.* 2022). Single-use glass bottles generate high levels of carbon dioxide equivalent (**CO_2e**) emissions compared to other packaging alternatives (Ferrara *et al.* 2020). Nowadays, wine in alternative environmental packaging is becoming more common, such as Polyethylene Terephthalate (**PET)** bottles, aluminum cans, Bag-in-Box (**BiB**), or Tetra Pak (Nesselhauf *et al.* 2017). Earlier studies have shown the difficulties for consumers to move away from glass to a more climate-smart alternative with lower GHG emissions when purchasing wine (Ferrara & De Feo 2020; Ferrara *et al.* 2020). Nevertheless, Ruggeri *et al.* (2022) state that even though the wine packaging industry has an initiative to both develop and commercialize other packaging materials for wine, there is little knowledge of whether consumers would appreciate and consume wine in packaging other than glass bottles (*Ibid.*).

1.2.2 Packaging materials

Certain environmental aspects have been identified when comparing different packaging for wine; more climate-smart packaging such as PET bottles, aluminum cans, aseptic cartons, and BiB; points to the need for re-assessing the choice of packaging material with several sustainability-oriented aspects in mind (Ferrara *et al.* 2020) see *Table 1.*

Table 1. Environmental impact of different packaging materials

Packaging	Environmental impact
Glass bottles	Consumer demand for glass packaging has increased globally in the last couple of years, as it is considered more climate-smart and sustainable; consumer assessment is primarily based on the packaging material and end-of-life without any consideration of production and transportation environmental impact (Ferrara & De Feo 2020). Recent studies have shown that glass bottles are not as sustainable as commonly believed. From a sustainability perspective, wine glass bottles have the highest environmental impact in the manufacturing stage due to a large amount of CO_2e- emissions, caused by heavyweight transportation (Ferrara *et al.* 2020), and high energy consumption in the production as glass melts at high degrees around 1400 – 1600°C (*Ibid*.).
PET bottles	LCA studies show PET bottles have less than 45% global warming potential compared to glass bottles (Ferrara *et al.* 2020). Although PET bottles have a less environmental impact, measured in CO_2e -emissions, other environmental impacts must also be considered. PET bottles have a high environmental impact on the production process of plastic (in purified terephthalic acid production), related to aquatic ecotoxicity, eutrophication, and water consumption (Ferrara & De Feo 2020). However, PET bottles for wine are made of multiple layers and are not pure PET. To prevent the wine from oxidizing and to maintain its quality, a thin interlayer of nylon secures the barrier properties against oxygen mitigating through the material (Internal document, Systembolaget, 2023). The problem with the nylon layer is during the recycling process, when the bottle is melted the nylon layer turns yellow-brown and discolors the recycled PET material (*Ibid*.). Therefore, to prevent the multilayer PET bottles from entering the pure PET bottle system, there is a requirement that all bottles with a nylon layer must be green-colored so that they can be sorted separately (*Ibid.*)
Aseptic carton	An aseptic carton is composed of multilayer packaging made of three materials: "paperboard, polyethylene, and [aluminum]" (Ferrara *et al.* 2020). Each layer provides different types of protection for the food. The paperboard gives stability and smoothness to the printing surface; polyethylene acts as a liquid barrier and protects the food from outside moisture and acts as a glue to stick the paperboard to the aluminum foil, which covers the food from light, odor, and oxygen. From a sustainability point of view, aseptic cartons have the least environmental impact and are also more convenient from an economic as well as logistic point of view (*Ibid.*)
Aluminum cans	Aluminum cans are made of 100 percent recyclable material, are more compact and less fragile than e.g., glass bottles, and weigh less which makes transportation and packaging more convenient (Ruggeri *et al.* 2022).
Bag-in-Box (BiB)	Bag-in-Box contains of an outer container of cardboard, with an inner container composed of plastic laminate and low-density polyethylene or ethylene vinyl acetate (Ferrera *et al.* 2020). It is the most climate-smart packaging seen to used material per volume wine (Ferrara & De Feo 2020).

Table 1 gives an informative illustration of the different packaging alternatives' properties and environmental footprint expressed in CO_2e emissions.

1.2.3 Research gap

A significant amount of research has been conducted on consumer behavior towards wine with other sustainable characteristics; organic and natural wine for example (Schäufele & Hamm 2017; Galati *et al.* 2019; Gassler *et al.* 2019; Mauracher *et al.* 2019; Jorge *et al.* 2020; Lanfranchi *et al.* 2020; Migliore *et al.* 2020; Fabbrizzi *et al.* 2021). The research covers consumers' willingness to pay (WTP) for wine with sustainability characteristics in relation to place of origin, grape variety, price, label information, taste, or quality. Others have evaluated consumers' WTP and perception of wine in sustainable packaging (Barber 2010; Nesselhauf *et al.* 2017). Barber (2010) profiled consumers who expressed a willingness to purchase wine in climate-smart packaging. Nesselhauf *et al.* (2017) based the research on German consumers' perception of innovative wine packaging. Furthermore, Ferrera *et al.* (2020) conducted a study on Italian consumers' attitudes toward wine in climate-smart packaging. However, the study of consumer behavior and the examination of sustainable packaging alternatives for wine is a relatively new field of research. The ongoing emergence of innovative packaging options within the wine industry (Nesselhauf *et al.* 2017) holds significant promise for the future growth and development of this research field.

Previous research has centered on consumer behavior in large wine markets, such as Italy, the USA, and Germany, in regard to innovative wine packaging studies (Nesselhauf *et al.* 2017; Ferrara & De Feo 2020; Ferrara *et al.* 2020; Ruggeri *et al.* 2022). However, there are limited studies of the Swedish or Scandinavian market. This could be due to these geographical locations having a different cultural relationship with wine and being significant wine producers. Given that consumer behavior is influenced by market and cultural factors (Ahmed *et al.* 2005; Mueller Loose & Remaud 2013; Lindh *et al.* 2016; Herbes *et al.* 2018), it is of interest to investigate the Swedish consumer's perspective on climate-smart wine packaging.

1.3 Aim, research questions, and commission

This project aims to explain conditions for altering packaging material for a food product. To address the aim, the following research questions have been identified.

1. *What factors can influence consumers' decisions to purchase wine in climate-smart packaging?*
2. *What improvements can be identified in a company to increase incentives for consumers to choose more climate-smart packaging?*

Systembolaget is a Swedish state-owned company that has a statutory monopoly on the retail trade of alcoholic beverages such as wine, spirits, and beer (>3.5% alcohol) (Systembolaget

n.d.e). As a statuary monopoly, Systembolaget has to follow certain rules according to the law, made by the Swedish government building on the EU commission, and cannot commercialize or encourage consumers to more alcoholic consumption (Ibid). Systembolaget's sustainability strategy encompasses four perspectives; environment and climate, people, society, and business with associated goals that extend to 2030. By 2030, Systembolaget aims to reduce the climate impact of its value chain by 50% in accordance with science-based targets and the Paris Agreement, which corresponds to 300.000 tonnes of carbon dioxide equivalents. This involves cutting down on emissions generated during cultivation, production, packaging, and transportation, incorporated in scope 3 (*Ibid.*). To be able to reach this goal, their customers need to switch from glass bottles to more sustainable packaging with lower GHGs such as PET bottles, aluminum cans, or aseptic cartons. Further, other tools involve communication practices and the decisions on what products and how much Systembolaget are purchasing in their stores (Systembolaget n.d.e; n.d.i).

The introduction of sustainable packaging alternatives is on the rise at Systembolaget, there are a lot of new options entering each quarter (Systembolaget 2022). This new emergence of alternatives creates a research gap. After a thorough search, limited research on the Swedish market's perception/attitudes toward climate-smart packaging for wine has been conducted, as well as how Systembolaget's marketing, communication, and strategies can affect consumers' decisions. Considering consumers that have difficulties moving from the glass bottle in the wine sector, the case of Systembolaget makes an interesting ground to investigate consumer behavior in relation to packaging alternatives for wine in a Swedish context. Additionally, owing to the statutory monopoly of Systembolaget and its mission, it provides comprehensive data, statistics, and insights into consumer attitudes and behaviors related to beverage consumption, in comparison to other geographical markets.

A commission was developed by representatives from Systembolaget to identify what incentives are shaping their consumers' willingness to purchase climate-smart wine packaging alternatives. Furthermore, identify improvements to increase consumers' incentives to choose more sustainable packaging. This project is on commission of Systembolaget, but the project is owned by the authors.

1.4 Outline

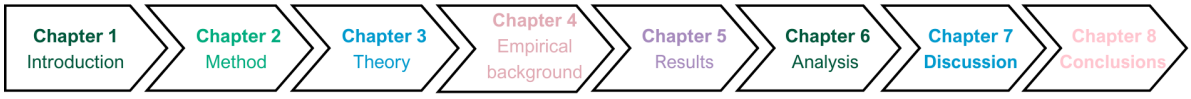

Figure 1. An overview of the different chapters in this thesis.

This thesis is organized into several chapters that address the aim, see *Figure 1*. In *Chapter 1* the introduction presents the research problem, along with the research gap, aim, research question, and commission of the study. *Chapter 2* introduces the theoretical- and conceptual

framework that will be used throughout the thesis. *Chapter 3* explains the research methods used and the motives behind the chosen approach. *Chapter 4* presents the empirical background and provides a more detailed and deeper knowledge regarding the issue of the case study. *Chapter 5* offers the results of the empirical data collection. In *Chapter 6* the primary data presented in *Chapter 5* are analyzed through the lens of theoretical and conceptual frameworks developed in Chapter 2. *Chapter 7* presents the research question and explores its relationship to previous studies. Finally, *Chapter 8* answers the aim, and of the thesis and suggests possible avenues for further research.

2. Theory

Chapter 2 provides a theoretical background for the theories and concepts to support the study. The conceptual framework at the end will serve as a guide for the collection of data.

2.1 Micro-and macro environments

Companies do not act in isolation in society, they are placed in a dynamic and complex environment, where the macro environment affects the microenvironment in which they operate. The marketing environment, described by Belz and Peattie (2012) is the arena where marketers, consumers, and competitors coexist and engage with one another. *Figure 2* provides an illustration of this arena, the environment of companies, that shows different actors in relevance for companies in different dimensions in the context.

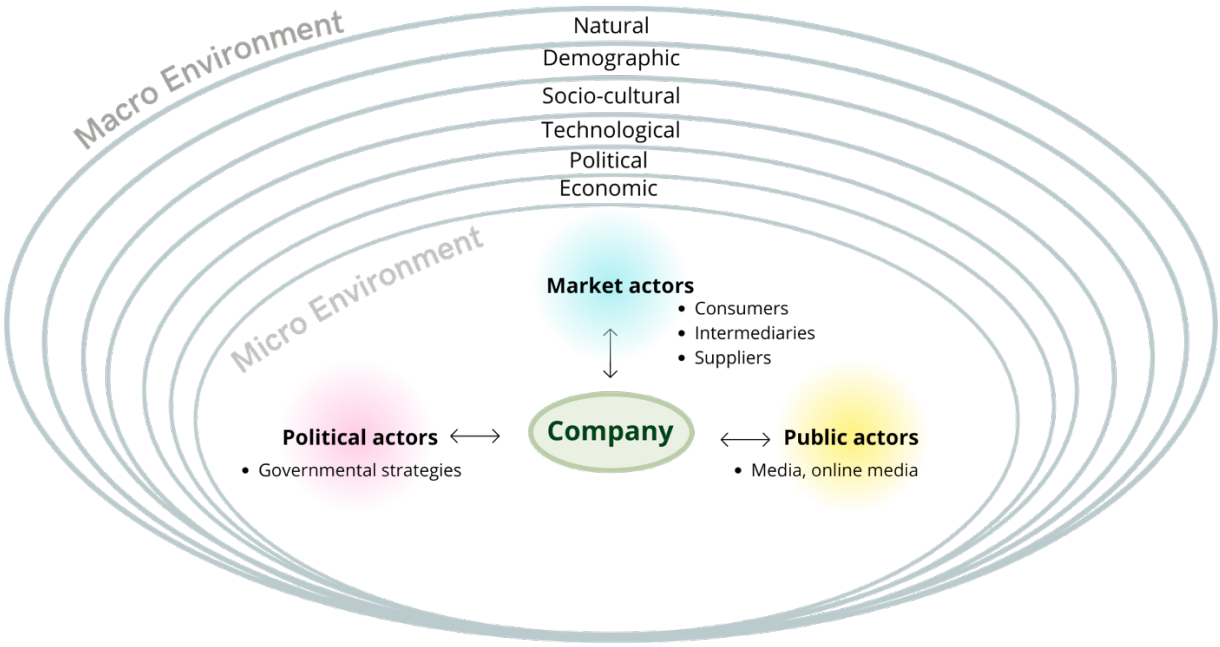

Figure 2. Actors in the micro- and macroenvironment of companies (Belz & Peattie 2012:141. Originally from Brezet H., and vam Hemel, C. (1997) Eco-Design: A promising approach to sustainable production and consumption, United Nations Environment). Minor adaptation by the authors.

The microenvironment refers to the market a company operates within, and the various actors with whom it regularly interacts. The macro environment is concerned with the larger-scale

external factors that can impact the microenvironment, such as the natural environment, demographical variables, socio-cultural conditions (including values and social norms), technological developments, the political climate, and economic environment (Belz & Peattie 2012).

The microenvironment consists of political actors, market actors, and public actors, all interacting and affecting the conditions for the company (Belz & Peattie 2012). Within political actors, governmental strategies aim to increase economic and social benefits for the company while regulating it to reduce or mitigate negative impacts on society or the environment. Strategies include regulations (banning of products); financial regulations (e.g., taxation); encouragement of self-control and self-management (e.g., labels); or the offering of the necessary societal structure or framework the company needs (e.g., sustainability research or education) (*Ibid.*). Furthermore, the market actors consist of consumers, intermediaries, and suppliers. Consumers are one of the actors, with a key role in how companies shape their strategies toward a more sustainable agenda (*Ibid.*). The consumer response to the company's practices can serve as an important indicator of the quality of the performance, as well as a sign of the direction of new strategies. Through intermediaries (retailers or wholesalers), the products offered by the company reach the consumers. Services provided by the intermediaries can include communication or sharing of information with the consumers. The intermediaries possess purchasing power in their decision on what to present on the store shelf and shape the assortment. In this way, retailers can serve as important actors in the context of sustainability (*ibid.*).

Suppliers play a crucial role for companies, where the suppliers' provision decides the characteristics of a company's products. The embedded social and environmental performance in the supply chain is what serves as the ground for a company's sustainability agenda (Belz & Peattie 2012). Distribution of a product is a part of the supply chain, while packaging creation and related emission levels are regarded as a major part of the environmental issues in the supply chain. Public actors, such as the media, serve an important function for companies, such as the utilization of online media for marketing and communication purposes are more common and can serve as a tool for reaching consumers (*Ibid*).

2.2 Corporate Social Responsibility

Corporate Social Responsibility (CSR) refers to the premise that companies or businesses are held accountable for their social, ethical, and environmental performance by actors interacting within the company's environment, including consumers, employees, governments, or supply chain partners (Maloni & Brown 2006). There is an array of motivations for why companies adapt to CSR practices. For example, engagement with CSR can assure a competitive positioning in the market as well as strengthen the brand. It also serves as a good foundation for marketing and innovation purposes (*Ibid.*). Consumers and supply chain partners play a vital part as main stakeholders in shaping CSR motives. For instance, consumers' response to

companies' integrated CSR work mirrors its importance for the audience. Considering that integrated CSR questions are important for maintaining competitive advantage (*Ibid*.).

Considering and applying CSR strategies through the supply chain within the food industry is a vital activity. Maloni and Brown (2006) developed a CSR framework within the food industry and identified eight key strategic management areas across the food supply chain; *animal welfare; biotechnology; community; environment; financial practices (fair trade); health and safety; labor and human rights; and procurement* (Maloni & Brown 2006). If the following supply chains are considered in the company, they will have ethical and financial benefits long-term and are also considered suitable for maintaining a competitive actor within the market (*Ibid*.). In the light of investigating grounds for altering packaging alternatives for a food product, the area of *the environment is* especially interesting. The environmental aspects within the CSR framework, developed by Maloni and Brown (2006) reflect a wide set of activities. The environmental impacts from the food industry are severe, with examples of impacts related to agricultural practices and pollution. Further, the framework includes packaging, food miles, and related fuel emissions. Retailers operating within the food industry must not only ensure that the products in the shelf space are eco-friendly, but also that environmental practices are considered throughout the whole supply chain, distribution, and packaging included. Environmentally responsible logistics in this sense can include recycling (*Ibid*.). Companies can facilitate the conditions for consumers to recycle, through label information on how to recycle, or only selling products that are easy to recycle through sustainable product design choices (World Economic Forum 2015).

The consumer perception and valuation of CSR claims are further important to evaluate the effectiveness of a company's strategy. Mueller Loose and Remaud (2013) performed a cross-cultural study about consumer valuation on CSR claims related to environmental and social aspects of wine choices, related to awareness and consumer trust. In their findings, Mueller Loose and Remaud (2013) concluded that CSR claims related to environmental impacts had higher consumer valuation than claims related to social values. Further, consumer valuation differed between geographical markets, and different consumer segments reacted differently to different CSR claims. This implies that food companies need to adjust their CSR communication to the social context and market in which the company operates (*Ibid*.). Cowan and Guzman (2020) asked the question; of *how valuable a good reputation is,* in the context of CSR communication in companies; their findings showed that consumer reputation is vital for a company to have good domestic performance. Consistent and positive repetitive messages or brand reputation cues that serve as an indication of trust, credibility, and reliability in the company, are important to strengthen domestic performance in larger companies. The findings also showed that the consumer perception of sustainability within a company actually is more valuable for growth than the real sustainable or CSR messages (Cowan & Guzman 2020). This further implies that consumers need to know and be aware of the sustainability efforts and work of the company otherwise, their reputation is at risk. Finally, communication from the business to the consumer is important to increase the consumers' knowledge of sustainability efforts (*Ibid*.). It should however be noted that communication is not enough. Companies need to

'walk the walk' to avoid greenwashing, which can damage the reputation and image even more (Mark-Herbert *et al.* 2007). Thus, establishing and performing sustainability within the business model is crucial for the long-term success of the company (Bocken *et al.* 2014).

2.3 Business Models and Strategy

Companies as stakeholders have an important role in altering innovations that ensures a more sustainable way of doing business (Bocken *et al.* 2014). 'Business-as-usual' was first introduced as a conceptual apparatus to depict a scenario where companies continue with their regular practices without reducing their CO_2e emissions (Hausfather & Peters 2020). Business as usual has been treated by researchers, policymakers, and the media as the outcome of IPCC's future scenario RCP8.5 (Riahi *et al.* 2011; Hausfather & Peters 2020). Approaching John Elkington's framework *Triple Bottom Line* (**TBL**) (Elkington 1997; Elkington 2018), *Sustainable Business Models* (**SBM**) compresence a wide set of stakeholders' interests. SBM is essential for companies' implementation of innovation, striving for a more sustainable way of doing business (Bocken *et al.* 2014). Moving towards a sustainable economy may require a holistic approach and could feature a system in which consumption pattern shifts, where closed-loop systems exist to minimize the emergence of waste, where function and experience are in focus rather than product ownership, or where economic growth is not the only desired outcome, but where environmental and societal values are equally encouraged (*Ibid*.). Porter and Kramer (2011) expressed that for companies to incorporate an effective sustainability approach, shared values must be a part of the strategy. Shared values indicate that both financial and social sustainability will be enhanced and act supportive of each other. The connection between businesses and society will therefore be strengthened and will result in economic welfare (Porter & Kramer 2011).

There are several ways of defining a business model. To conclude, it is a crucial tool for a company and serves as the foundation for its operations and strategies. It encompasses various factors such as the offered product or service, pricing, production cost, competitors' differentiation, and integration with other shareholders throughout the supply chain, including knowledge or assumptions about customers, their needs, and behavior (Bocken *et al.* 2014). Building a business model with economic revenue while still providing social and environmental benefits can be a challenge. Yet, in a world where companies are more controlled by regulations, more external expectations on CSR, climate change, and longer supply chains, companies seem to strive to change the way to do business to gain a competitive advantage (*Ibid*.). Thus, innovations for increased sustainability can be integrated within business models and aims for creating reduced negative impacts on the environment and society, through altering the organizations' value network or value propositions (*Ibid*.).

In the literature and practice review by Bocken *et al.* (2014), eight sustainable business model archetypes are presented; Maximize material and energy efficiency; Create value from waste; Substitute with renewables and natural processes; Deliver functionality rather than ownership;

Adopt a stewardship role; Encourage sufficiency; Repurpose the business for society/environment; Develop scale-up solutions (Bocken *et al.* 2014). In order to shape their own transformation towards a sustainable structure, companies can choose and combine a collection of model archetypes suitable for their business (*Ibid.*). The use of the sustainable business model archetypes is relevant as a contextual framework due to its ability to explain the company's value proposition, value creation and delivery, and value capture. Value proposition reflects the product or service that is sold in the company and generates economic profit and could encompass the ecological or social value derived from that. Value creation and delivery concerns the core of the business model and how it searches for new markets or new ways to reach profits. Value capture concerns how to reach a profit or earn revenue, involving the provision of products or services, information, and consumers. In the light of investigating the conditions for altering packaging material for a food product within a company, six model archetypes are of relevance and especially of interest (*Ibid.*). *Figure 3* illustrates this with examples.

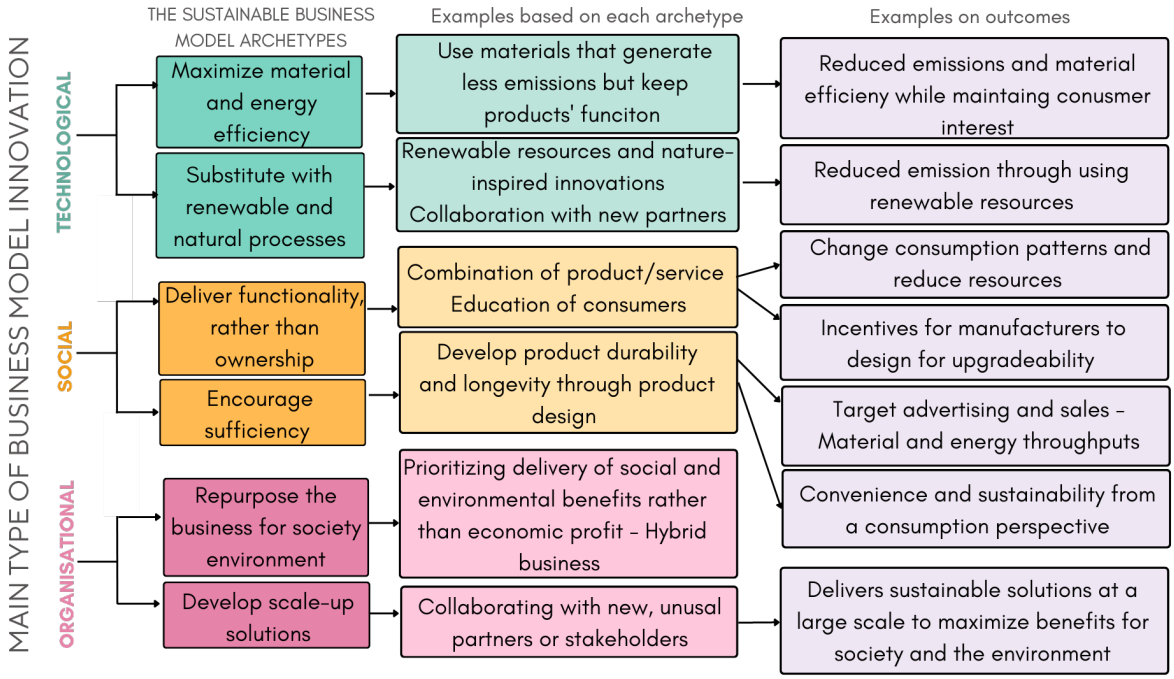

Figure 3. The six sustainable business model archetypes, with categorizations and examples (Bocken et al. 2014:48; adapted by the authors).

Figure 3 presents the six different archetypes, which are categorized based on the main type of business model innovation; organizational, social, and technological, with examples based on each archetype, and examples of outcomes. The six examples are selected based on their relevance to a company's conditions for altering packaging material for a food product, according to the aim of this thesis.

2.4 Consumers in Context

Recognizing and distinguishing customers based on their requirements and reactions to the marketing mix is crucial in business management. Market segmentation, first introduced by Smith (1956) suggests that diverse markets should be divided into smaller groups. Rather than using a single marketing approach for all customers, businesses should segment their audience and customize their marketing efforts to meet the specific needs of each segment (Smith 1956). Building on Smith's (1956) conceptualization, Wind (1978) proposed that managers always should make informed decisions through the lens of segmentation, which helps improve customer satisfaction and increase efficiency (Wind 1978).

Consumer segmentation has touched on factors such as demographic, psychological, behavioral, or environmental (Belz & Peattie 2012). Even though it is important for companies to conduct thorough research in order to understand and segment their market, it should be acknowledged that consumers as actors can act inconsistently and that some consumption patterns are driven by expectations. Hence, contextual factors play a significant role in creating consumer behavior. Thus, the consumer needs to be understood from a holistic approach. In the lens of the *attitude-behavior gap*, elaborated further down in this chapter, marketers should consider multiple factors when segmenting the market, to account for the uncertainty and unpredictability of consumers (*Ibid*.).

2.4.1 Marketing mix – the four C's

The marketing mix was originally described as the four P's: Product, Promotion, Price, and Place, and takes on the seller's point of view (McCarthy *et al.* 1987; Belz & Peattie 2012). The same concept has evolved to give the customer's perspective, the *four C's,* proposed by Lauterborn (1990), is a development of the four P's, aiming to reflect the consumer's needs better. The *four C's* are classified as a sustainability marketing mix and consist of *Customer solutions*, *Communication*, *Customer cost*, and *Convenience* (Lauterborn 1990; Belz & Peattie 2012), visualized in *Figure 4*.

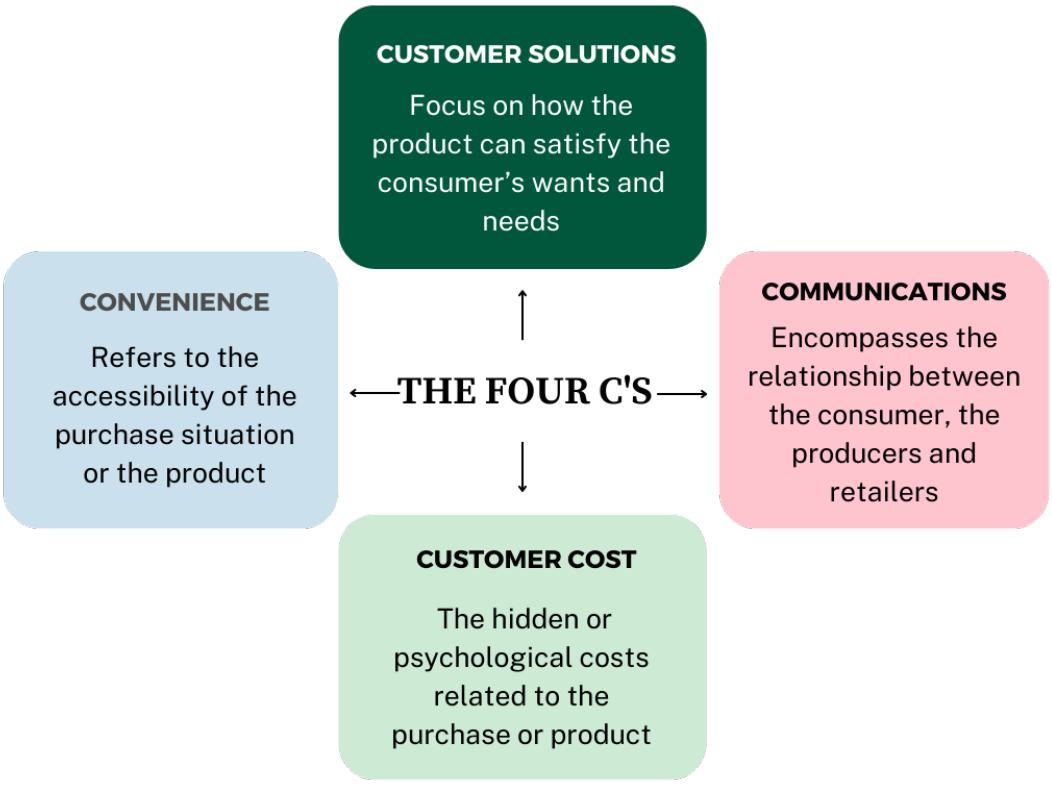

Figure 4. The four C's. Authors' own illustration, adapted from Belz & Peattie (2012: 31).

Figure 4 provides a summarized overview of the *four C's,* where the concept of *Customer solutions,* focuses on how the product can satisfy the consumer's wants and needs and presents solutions to fit those needs. It is merely connected to the definition of a sustainable product and gives implications on how to balance customer satisfaction and still ensure environmental improvement (Belz & Peattie 2012). *Communication* involves the relationship between the consumer, producers, and retailers. However, it requires a balance between carrying the message to the consumer while still avoiding being associated with environmental or social impacts (*Ibid.*). *Customer cost* refers to, not only the actual price of the product but also the hidden or psychological costs related to the purchase or product. *Convenience* captures the accessibility of the product, and how the meaning of convenience and accessibility have changed in a system where more of the products are being purchased in a placeless place, in an online world. In other words, convenience is something that is appropriate in time and place and makes the purchase situation or product easy for the consumer to purchase and use (*Ibid.*).

2.4.2 The Consumption Process

According to Jackson (2005), consumers can often find themselves in unsustainable patterns, which can be influenced by a variety of factors whether it is social, institutional, or psychological. Consumers' consumption behaviors take place in the unnoticeable everyday decision-making process (*Ibid.*). There is a lack of consistency between consumer behavior and attitude within their consumption process, as it depends on circumstantial factors and

situational influences (Belz & Peattie 2012). Factors that can influence consumers are not necessarily oriented by the individual display, but rather about "[…] convenience, habit, practice, and individual responses to social norms and institutional contexts" (Jackson 2005:13). Jackson (2005: xii) argues that a refined policy approach to achieve a pro-environmental behavior change is needed for "[…] ensuring that incentive structures and institutional rules favor sustainable behavior, enabling access to pro-environmental choices, engaging people in initiatives to help themselves, and exemplifying the desired changes within Government's own policies and practices" (Jackson 2005:iii).

Belz & Peattie (2012) discuss how communities shape people's behavior for sustainability and give an example of how the availability of public transport can shape transport decisions within a community, and how local waste-handling provisions can influence waste- and recycling behavior. This entails that individuals do not act alone and that multiple factors can have an influence on consumers' consumption behavior. When it comes to sustainability, the overall lifestyle and consumption activities within a joint household determine the consumption patterns individuals make. Therefore, conventional approaches and the research linked to consumption behavior for a specific type of product cannot always be applied to sustainable products, as people are influenced by their surroundings, which in turn will affect their lifestyles and their consumption (*Ibid.*).

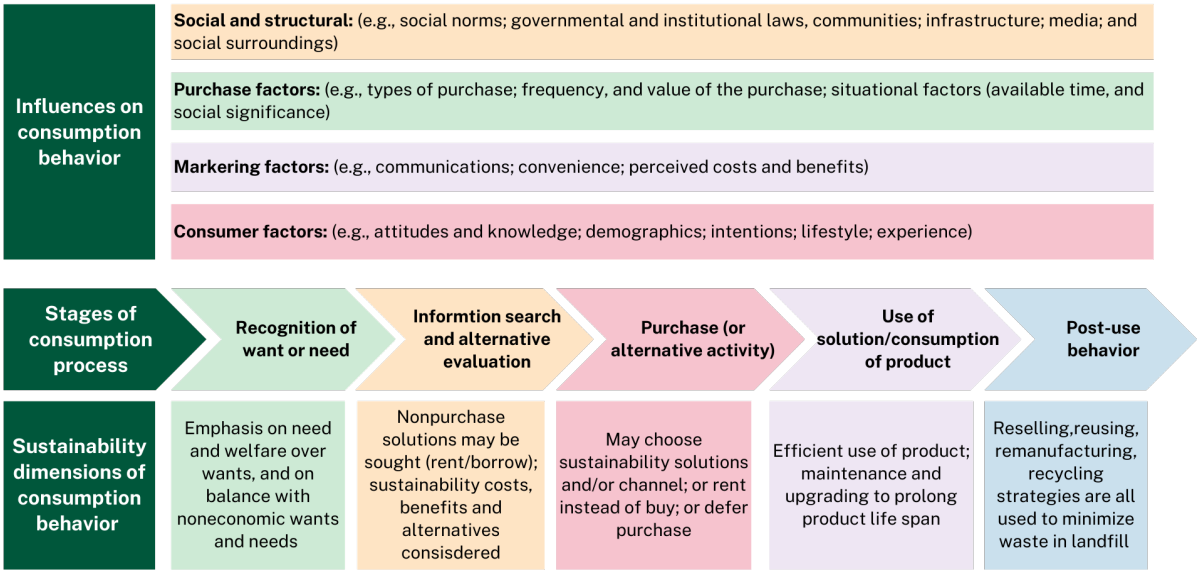

Figure 5. Influences on the consumption process (Belz & Peattie 2012: 97; adapted by the authors with minor modifications).

Figure 5 seeks to illustrate how different factors e.g., governmental laws, types of purchases, communication, and attitudes can influence consumer behavior, and how those factors can extend across the various stages of the consumption process. The figure gives examples of how sustainability concerns can influence consumer behavior throughout the consumption process. *Figure 5* is divided up into three categories, the *Influences on consumption behavior*; *Stages of the consumption process*; and the *Sustainability dimensions of consumption behavior*. In the

first section of *Figure 5*, the *Influence on consumption behavior* has been divided up into four categories: *Social and structural contexts; Purchase fact*ors; *Marketing factors; and Consumer factors.* This section exemplifies what types of influences can affect consumers' consumption behaviors. The next section, *Stages of the consumption process*, gives a visual illustration of the various stages a consumer goes through in their consumption*:* 1) *Recognition of want or need*; 2) *Information search and alternative evaluation*; 3) *Purchase (or alternative activity); 4) Use of solution/consumption of product; 5) post-use behavior.* Lastly, linking to the two previous sections to the *Sustainability dimensions of consumption behavior*, how consumers may prompt to different or new responses to sustainability.

2.4.3 The four C's through the Consumption Process

The consumption process, see *Figure 5* explains how the consumer goes through different stages when purchasing, including behaviors linked to the pre-purchase, purchase, use, and post-use phase. In the following section, examples from the *four C's* will be applied and explained to the various stages of consumption. *Customer solutions* will not be exemplified, within this context, because it covers the wants and needs of consumers in a broader sense. *Figure 5* shows the joint figure of both the consumption process and the *four C's,* how the consumer may experience the process of purchasing a product, and how the company or business may behave or react in response. As stated by Belz and Peattie (2012), the consumer viewpoint, problems, and solutions throughout the consumption process can enable sustainable innovation, since it is providing opportunities for marketers and companies to understand identity and upgrade their offerings. *Figure 6* aims to explain this process.

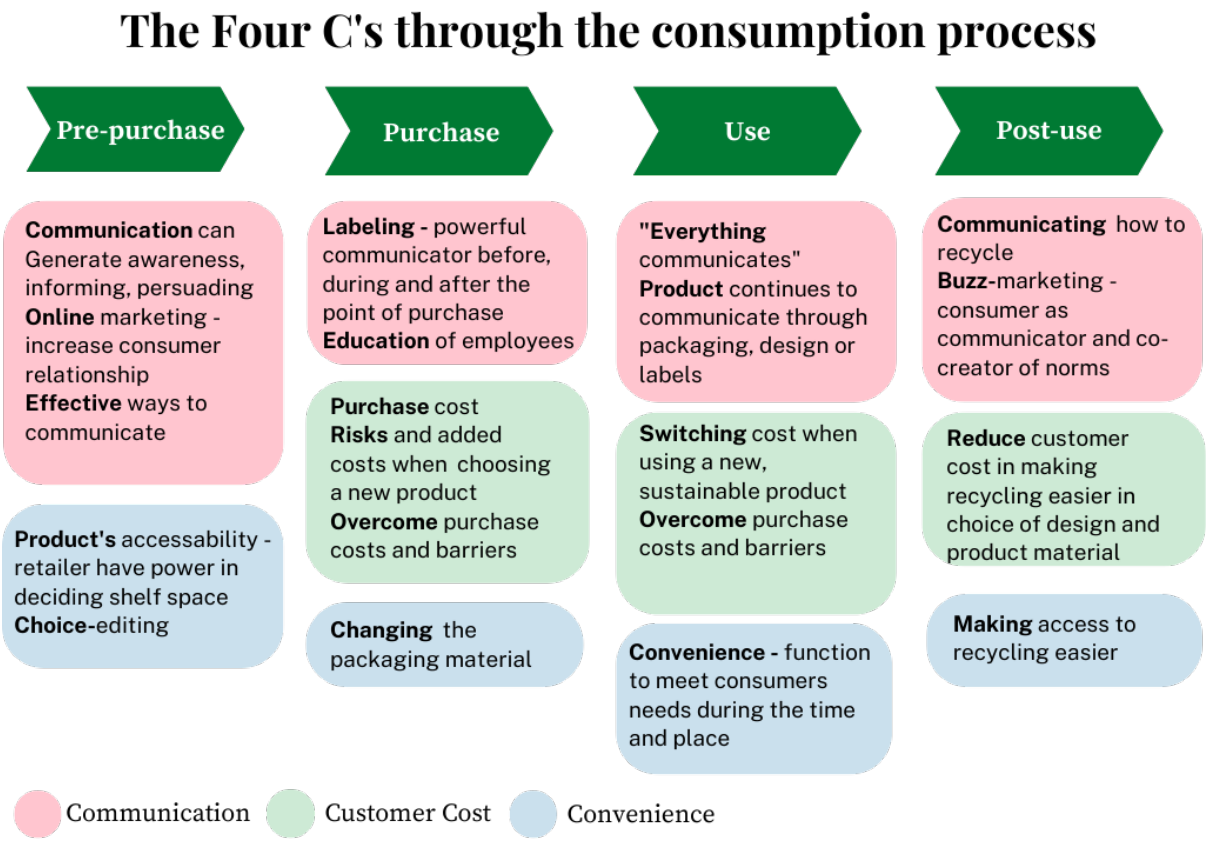

Figure 6. The four C's through the consumption process. Authors' own illustration, adapted from Belz & Peattie (2012).

In the following sections, *Figure 6* is interpreted and explained.

The pre-purchase phase

Consumers constantly want to satisfy their wants and needs, in which sustainable products can both fulfill these desires, and at the same time contribute to solutions for social or environmental issues (Belz & Peattie 2012). The pre-purchase phase features the process before the purchase, as also seen in the first and second stages within the consumption process, e.g. 1) recognition of want or need and 2) information search and alternative evaluation. Within these two stages, out of a sustainability point of view, the consumer will first prioritize their needs and well-being over wants, and secondly seek non-purchasing options such as borrowing or renting, but also take into account sustainability costs and benefits when making a decision (*Ibid.*).

In the pre-purchase phase, communication generates awareness about the product, informs the consumer about its availability, and persuades consumers to change their habits and try new products (Belz & Peattie 2012). In today's marketing environment, the use of online media is a vital part of communication. It enables not only a presentation of the company's work but also conversations with consumers, in which the dialogue strengthens their relationship (*Ibid.*). However, there are sometimes challenges in how consumers respond to marketing messages

about sustainability-related issues, such as climate change or CO_2e emissions. In the report by Rose *et al.* (2007), they implicate that consumer who seeks others' approval in their purchasing patterns are not motivated by guilt or fear related to marketing messages. Instead, for promoting changes in consumption patterns, it was shown to be more effective to make the problem more personalized and relevant for the individual, focusing the purchase on financial savings and increased convenience, increasing the association to the changed behavior with a greater perception of self. Lastly, interaction and playfulness along with sharp information about the product showed to be effective as marketing messages (*Ibid.*).

A part of the definition of convenience is the products' accessibility, and during the pre-purchase phase, retailers have a vital role in deciding what to put on the store shelves, as the mediator between producers and consumers (Belz & Peattie 2012). The concept of "choice-editing", meaning that retailers remove products with the highest environmental impacts, is increasingly becoming more attractive to consumers. From the consumer's perspective, the high amount of marketing messages or information about sustainability in-store can be stressful, and choice editing can therefore increase consumer convenience before entering the store (*Ibid.*).

The purchase phase

During the purchase phase, consumers are facing multiple choices and messages, making the decision process complex. The critical event of purchase is determined by a variety of factors, such as psychological, demographical, geographical, sociological, and norms, among others (Belz & Peattie 2012). Packaging constitutes an essential part of the convenience and has the great capacity to act as a communicator towards the consumer. Changing the packaging material to favor emissions is a favorable act since the content of the product can remain the (*Ibid.*).

Labeling serves as a powerful communicator toward consumers, it informs consumers of the product's environmental credentials or how to recycle the product, aiming to increase the recycling rate (Belz & Peattie 2012). Labeling can be mandatory or voluntary and may include several social or environmental matters. Sustainability labels have the power to communicate to the consumer during the whole consumption process. An issue related to labels is that consumers may have issues navigating between all sustainability labels. In addition to labels, an effective way to communicate the sustainability work within a company is through the education of employees, as they can serve as a personal provider of information about environmental or social benefits of the product or service (*Ibid.*).

Decisions consumers make are determined by evaluations of cost, instead of price, to refer to a more nuanced and dynamic concept, including hidden or psychological costs (Belz & Peattie 2012). During the purchase phase, costs could be the most crucial part, especially when choosing new and sustainable products. It must be mentioned that customer cost is highly individual and determined by circumstantial factors (*Ibid.*). Purchase costs can include costs for searching for a new product (search cost), the collection of information on the products' special features or the price (information cost), and the point of finding or purchasing the

product (transaction cost). Another way to distinguish this process is provided in the theory of information economics, where three product qualities are described: search, experience, and credence qualities. Search qualities can be evaluated before the purchase (e.g., design or price). Experience qualities can only be evaluated after the purchase (measured in the experience of using the product). Finally, credence qualities (sustainability claims) cannot be evaluated by the consumer but are dependent on trust towards the company providing the sustainability claim (e.g., sustainable packaging. Compared to non-sustainable products, or conventional products, the purchase costs are higher, due to added components in the product's life cycle or added values (*Ibid.*).

Consumers who decide to buy sustainable products may encounter various risks when selecting a new product. The risks are subjective and may encompass financial (potential negative impact on the consumer's finance), performance (a possible decrease or improvement in its performance), social (potential for negative feedback from the consumer's social circle), or psychological risks (risk for post-purchase emotions, such as nervousness or worries about a potential disappointment) (Belz & Peattie 2012).

There are several factors weighing into how much a consumer is willing to pay a premium price for a sustainable product (Belz & Peattie 2012). Factors include:

- The products' nature and the differentiation on the market. Products can be differentiated on performance, style, design, or sustainability aspects.
- The profile of the sustainability issues. Some sustainability issues generate stronger feelings than others.
- The company's credibility, and how well the sustainability is communicated.
- The price sensitivity among consumers, and how much they care about sustainability.

To summarize, there are challenges in reducing the purchase costs for products with sustainability characteristics, to be able to compete with conventional products and overcome the barriers in switching to a more sustainable product (Belz & Peattie 2012).

The use phase

The use phase enables opportunities to continue the communication process for the consumers. *"Everything communicates"*, expressed by Jon Bernstein (see Belz & Peattie 2012: 219), meaning that taking a holistic approach to communication is crucial. During the use, packaging, design, and labels continue to act as a messenger about the product (*Ibid*.). The switching cost refers to the perceived costs related to changing one product to another. This implies changes in habits, which can generate psychological barriers. For consumers to overcome these barriers, the product must be easy to handle both during the use and post-use phase (Belz & Peattie 2012). Convenience in a product's features is a key factor in why consumers will use the product. Convenience within the use phase can also be described by the function of the product to meet the consumers' needs and are appropriate at that exact time and place (*Ibid.*). The sustainability dimensions within the consumption process, 4) use of solutions/consumption of a product, can be linked to the use-phase, which is efficient usage, maintenance, and upgrading can help prolong the lifespan of a product (*Ibid.*).

The post-use phase

Communication during the post-use phase includes how the product disposal is communicated to the consumer (Belz & Peattie 2012). Further, the consumer can function as an important communicator in the post-use of the product. "Buzz-marketing" refers to how the consumer talk about the product. They are carriers of words and have the power to be co-creator of norms (*Ibid.*). Costs related to the post-use phase include the costs of handling the packaging and disposal. To reduce consumer costs, the product design and the material used are crucial for providing good recycling opportunities (*Ibid.*). In the last stage of the consumption process, the sustainability dimensions highlight what consumers can do in the *pose-use phase*, for example, reusing, remanufacturing, reselling, or recycling are methods to be used to minimize waste (*Ibid.*).

2.5 The Green Gap

The *green gap* is a gap that shows how consumers' positive attitudes toward environmental protection and sustainability do not, in practice, reflect on their actual consumption behavior (Schmitt 2021). Coşkun (2017) emphasizes understanding why consumers' positive attitudes toward the environment do not necessarily lead to desirable environmentally friendly behaviors. What consumers do and what they say has, according to polls and surveys, shown that people express their interest to purchase more sustainably but in actuality, there is an inconsistency between attitudes and sustainable behavior (ElHaffar *et al.* 2020), there are however other factors which can affect this discrepancy to why consumers choose the less sustainable options. Belz and Peattie (2012) interpreted Hughner *et al.* (2007) explanation of this gap and phenomenon as being part of consumer skepticism, but also habits, lifestyles, and financial constraints can limit consumers' to act on their intentions or attitudes toward sustainable purchases (*Ibid.*). Old brand loyalties can also contribute to the uncertainty consumers have about new products. Belz and Peattie (2012) explain that there are multiple issues to be considered before relying on anecdotal information about consumers' interests in sustainable products (*Ibid.*).

> A consumer may have very genuine sustainability concerns and a desire to consume more sustainably, but there may be a variety or psychological, sociological, practical and circumstantial issues that need to be addressed before their behaviour will change to reflect this (Belz & Peattie 2012: 100)

Belz and Peattie (2012) underline that there are multiple barriers preventing consumers to change from unsustainable lifestyles and consumption, which has become a social norm, to more sustainable consumption behaviors. There is a need to understand, not only what motivating factors can change consumer behavior, but also understand other barriers that consumers may face, for instance, practical, social, psychological, and economic barriers that hinder consumers to change their behaviors Belz and Peattie (2012). The connection between intentions and behaviors is not by any means straightforward, on the contrary, the translation process can be affected by many errors, influences, and distractions (Gruber & Schlegelmilch 2014).

The inconsistency between attitudes and behavior has been studied in social psychology and consumer behavior literature for more than 30 years (Coşkun 2017). Despite many studies, there is no consensus on the connection between green attitudes and pro-environmental behavior (*Ibid*.) Sustainable consumer behavior needs to be understood from a broader context. Belz and Peattie (2012:105) highlight that purchasing behavior changes can contribute to the development of sustainability, however, this progress is dependent on changes throughout society and within consumer lifestyles. Given that notion, there must be a shift in the market in which consumers and producers collectively work toward more sustainable production and consumption systems (*Ibid.*).

There are multiple ways of defining green attitudes: "[…] environmental attitudes, ecological attitudes, environmentally-friendly attitudes, and environmentally sustainable attitudes, all of which conceptualize individuals' evaluative judgments" (Coşkun 2017:52). McNally (2011) explained the *green gap* "A green gap involves the separation between what consumers believe should be done to protect and improve the environment and what he or she actually does to help protect and improve the environment" (ElHaffar *et al.* 2020:4).

There are multiple factors influencing the *green gap*, Schmitt (2021) identified the three most influential factors; Firstly, consumer decision-making (product evaluation criteria, and situational factors), secondly, consumer conviction (perceived consumer effectiveness), and lastly, consumer knowledge (consumer attitude measurement, and lack of knowledge). By identifying the antecedents, one can find potential solutions to close the green gap (Schmitt 2021). In light of understanding consumers' actions, attitudes, knowledge, and skepticism toward wine in sustainable packaging (PET bottles, cans, and aseptic cartons) the *green gap* provides a useful framework in combination with the conceptual framework which will be presented next.

2.6 Conceptual Framework

This study's conceptual framework is based on a social psychological theory. Zepeda and Deal (2009) formed the *Alphabet Theory*, a combination of the *Value-Belief-Norm* (**VBN**) theory and the *Attitude-Behavior-Context* (**ABC**) theory (Zepeda & Deal 2009). The *Alphabet Theory* is a comprehensive framework that seeks to provide a deeper understanding of why consumers choose to purchase sustainable and environmentally friendly products. Thus, this theory is a suitable framework to explain behavioral factors related to purchases of climate-smart packaging for wine. *Figure 7* shows an illustration of the conceptual framework of the *Alphabet Theory*. The figure gives an overview of the three different theories: VBN theory, ABC theory, and the combination that makes up the *Alphabet Theory.*

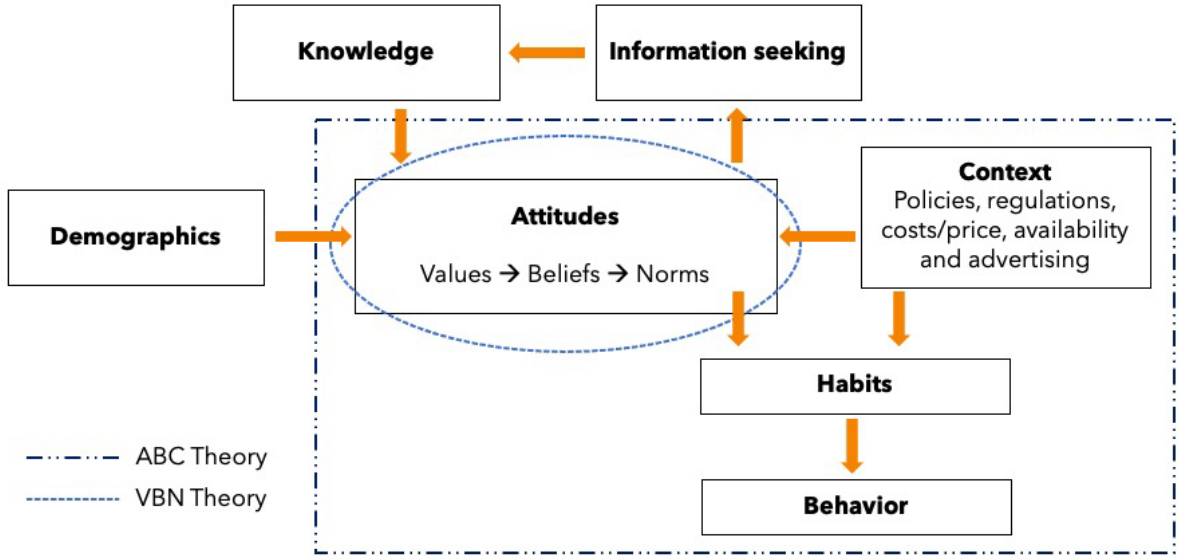

Figure 7. Conceptual framework of Alphabet Theory (Zepeda & Deal 2009, with minor modifications by the authors).

The ABC theory, originally developed by Guagnano *et al.* (1995), aims to describe and predict pro-environmental consumer behavior and suggests that when the context is neutral, attitudes affect behavior (Guagnano *et al.* 1995; Zepeda & Deal 2009). In other words, attitudes only correspond with behavior depending on the context, which makes context a mitigating factor (*Ibid.*). Context includes policies, regulations, costs or price, availability, and advertising (Guagnano *et al.* 1995). According to Stern *et al.'s* (1999) *Value-Belief-Norm* (VBN) theory, values influence norms through the individuals' beliefs, making norms and values interrelated (*Ibid.*). In addition, norms then determine behavior (Zepeda & Deal 2009). In short, the VBN theory aims to explain environmental-motivated behaviors (*Ibid.*). Zepeda and Deal (2009) found that lack of trust, lack of knowledge, and lack of information seeking were one of the factors in why consumers did not want to purchase sustainably, deriving from the personal belief system (VBN) (*Ibid.*).

The *Alphabet Theory* was then created to fill the gap in the existing theories about environmentally significant consumer behavior to address and explain organic and local food purchases (Zepeda & Deal 2009). The additional factors added to the combination of VBN- and ABC theory are *Knowledge, Information seeking, Habits,* and *Demographics.* Within the first categories, *Knowledge* and *Information seeking,* are two factors that lead consumers to more in-depth knowledge about environmental issues, and the pre-existing environmental behaviors that can increase the purchase to support their beliefs of the environmentalist norm (*Ibid.*). For example, *Information seeking* entails gathering information online and through books about the sustainability issue or purchases. In addition, *Habits* are influenced by both *Context* and *Attitudes*, and refers to the habitual act of purchasing food products. Thus, *Habits* are a part of the decision-making process that can determine sustainable purchases (*Ibid.*). Lastly, *Demographics*, are used as proxies for preferences and can be viewed as potential influences on attitudes (*Ibid.*). For example, Schäufele and Hamm (2017) found that women

are more likely to have behavioral intentions for sustainability aspects. However, earlier studies that have developed demographic profiles for sustainable food purchases, have had conflicting results with difficulties indicating specific demographic variables that affect consumers (Zepeda & Deal 2009).

According to the *attitude-behavior gap*, the consumer is seen as irrational because consumers do not always do what they say they will do (Coşkun 2017), and the same notion will be implemented when analyzing the results of this case study. The *Alphabet Theory* aims to understand why consumers purchase environmentally friendly products and can also be used to understand the *attitude-behavior gap*.

3. Method

This chapter presents the methodological approach and the motivations for the selected methods and analyses. Starting with approaching the research design, the process of reviewing the literature, the choice of case, and the collection of data. In the latter part, ethical considerations, the analysis of data, and limitations are portrayed.

3.1 Research Design

This study covers the subject of, on one hand, consumer behavior in relation to products with sustainability characteristics, and on the other hand, how companies can increase the incentives for consumers to choose more products with sustainability characteristics. Through the evaluation of consumers' behaviors, the clues of improvements from the company's perspective can be releveled.

This study uses an abductive research approach, in which theory and empirical material are used in an iterative and collaborative manner (Bryman 2018). This approach is well-suited to the aims of the study, as the collected empirical data will be analyzed and interpreted through the lens of relevant theories. The abductive approach is appropriate when studying groups or populations with behaviors related to a specific context. The use of a deductive approach could, for example, be difficult due to insufficient knowledge about the specific population in their specific context. A generalization and randomization are therefore not plausible or effective. Instead, the empirical findings in studying a population's behaviors in their specific context in combination and collaboration with theoretical background, create a nuanced basis for gaining prominent insights and knowledge (Kardes *et al.* 2022). Lastly, Yin (2009) suggests using a theory when conducting a single case study, as it ensures external validity (Yin 2009).

3.2 Literature Review

A comprehensive literature review was conducted to acquire a deeper understanding of the research subject. A literature review is vital for several reasons. As suggested by Lim *et al.* (2022) and Yin (2009), it serves as a foundation for theoretical support and justifies the need for the research area. Additionally, it aims to identify research gaps and research areas that can be improved. Finally, it is vital to acknowledge and build upon the work of previous researchers in the field, contributing to the progression of knowledge and the development of new

understandings (Yin 2009; Lim *et al.* 2022). Since this study is of empirical nature, the literature review provided the foundation for understanding the significance of the study and the research's aim.

The aim of this study is to explain conditions for altering packaging material for a food product. The multidisciplinary themes that related to the aim (and who also build the research questions) include on one hand, consumer behavior in wine packaging, and on the other hand, business models to acquire sustainability within a food company, in which both the theoretical framework and the empirical background builds upon. In the search phase, related keywords were combined in the databases Primo, JSTOR, and Web of Science. Most of the articles used in this study originate from leading journals on the subject of sustainability within the food sector and sustainable business, including the Journal of Cleaner Production, Foods, International Journal of Wine Business Research, and British Food Journal. This ensures that the findings in the literature review are of good quality, which increases the credibility of this study's background, on which it is mainly built.

3.3 Case Study

When the research questions seek to explain and understand a social phenomenon, case studies are a suitable and relevant method. Case studies enable a holistic approach to real-life events, such as small group behavior or organizational and managerial processes, that have not been explored yet (Yin 2009). Case studies are studied over a period to collect a variety of data (Creswell & Creswell 2018) and can involve a detailed investigation of a specific organization or company (Bryman & Bell 2011). Thus, the case study, using a company as the chosen case, in this study Systembolaget, is a suitable method for portraying how consumers behave in a specific context. Further, the study uses a single case study design, which is appropriate when using a formulated theory, in which the empirics enable testing or development of that theory. The theory should have a fixed set of proposals, in which the specific context it concerns are meeting the expectations to be accurate. Single case studies can confirm or challenge the existing theory (Yin 2009). Single case study designs also enable multiple units of analysis in a single organization, with consideration to multiple structures in the chosen case, employees, and smaller groups of individuals associated with the organization, for instance. *Figure 7* aims to illustrate this. Using multiple units of analysis can enrich the analysis and provide more nuances (*Ibid*). To carry out a case study several methods are used, in this study semi-structured interviews, focus groups, literature review, survey, and internal documents from Systembolaget are used (Bryman & Bell 2011).

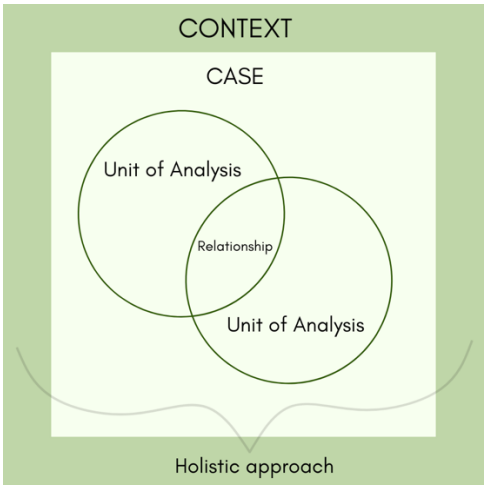

Figure 8. Single case study with multiple units of analyses, presenting the dynamics of the context (Yin 2009:46; with minor modifications by the authors).

However, there are risks associated with investigating multiple subunits concerning losing sight of the larger picture or unit of analysis that the project aims to study. For example, if only interviewing consumer behaviors in a specific setting in the organization, but the aim is to investigate the organization's structure, the organization suddenly has become the context, but not the study's target (Yin 2009). To avoid this, the researcher has to pay careful attention to the holistic and dynamic picture of the unit of analysis and provide an explanation of the subunits' relationship dynamics, affecting the environment in which they operate (*Ibid.*), as illustrated in *Figure 8*.

Yin (2009) suggests that case studies present a challenge in terms of their methodology, as they do not follow a routine procedure. This lack can make it challenging to use case studies as a method, requiring researchers to be flexible and adaptable to uncertain situations. Other advantageous researcher behaviors that ease the case study procedure are to *1) ask good questions,* implying the importance to design the questions in the way they continue the conversation and learning process*, 2) be a good listener*, implying the importance to ingest much information without being biased, *3) adopt a flexible mindset*, meaning the ability to adapt to uncertain arising situations, and the knowledge of how to overcome potential biases (*Ibid.*). Paying attention to the latter, Yin (2009) designed a set of criteria for ensuring and evaluating the quality of the case study. These include construct validity, internal validity, external validity, and reliability. To conduct good quality, these criteria need to be accounted for during the whole process of the case study (*Ibid.*). A more detailed description of this is found in *3.7 Quality assurance.* Additionally, Knights & McCabe (1997) suggest combining qualitative methods in a case study, to rely on several approaches and perspectives (Knights & McCabe 1997). Yin (2009) further suggests using several sources of evidence, to ensure construct validity. With this in mind, this study conducts and approaches two methods, focus groups with consumers, and semi-structured interviews with store employees in the chosen company for the case. In the next chapter, the case is presented more closely.

3.4 Choice of case and unit of analysis

In consideration of the case study's suitability when explaining and understanding early unexplored phenomena in a social context, enabling a holistic approach in small group behavior or organizational processes (Yin 2009), Systembolaget was chosen as the case. Relating to their sustainability goals (Systembolaget n.d.e), the understanding of consumers' behavior in relation to more climate-smart packaging in their wine sector needs more attention. To make changes within companies it is vital to know consumers' preferences, attitudes, and behaviors (Maloni & Brown 2006). To gain a nuanced understanding, the problem is examined from several perspectives, both in regard to theory and methods. From a theoretical perspective, the *Alphabet Theory* (Zepeda & Deal 2009), used as the conceptual framework, has been proven to serve as a good framework for investigating consumer behavior in relation to food purchases with sustainability characteristics, enabling multiple, potential explaining factors for answering reasons for the *green gap*. As briefly explained, two qualitative methods were conducted to avoid a single approach (Knights & McCabe 1997). Three focus groups were created, with a smaller group of Systembolaget's wine consumers. In addition, two semi-structured interviews were conducted with Systembolaget's store employees in a store in Stockholm City. The questions, both for the focus groups and for the semi-structured interviews with the store employees, are constructed with consideration to the different factors following the conceptual framework.

3.5 Data Collection

For credibility within case studies, it is recommended to use several sources of data and methods (Knights & McCabe 1997; Yin 2009). Thus, this study builds on secondary data such as statistics on consumer segmentation and articles, and primary data, such as focus groups and semi-structured interviews. The collection of empirical data in combination with the theoretical framework aids to add to the evidence from the literature review, which can contribute to the progression of knowledge and the development of new understandings (Lim *et al.* 2022).

3.5.1 Statistics on Consumer Segmentations

Systembolaget is a state-owned company with a statuary monopoly on selling alcoholic beverages in Sweden (Systembolaget n.d.e). Owing to their position and mission, data, statistics, and insights into consumer attitudes and behaviors related to beverage consumption have previously been conducted by them. By 2021, a comprehensive analysis of Systembolagets' consumers was made, the division of 8 consumer segments. The statistics, conducted in 2021, are built on answers from a survey consisting of 80 questions and statements from 2700 individuals. The results are representative of the population of Sweden. The survey questions covered demographic variables, such as age, education, income, and gender, and collected information and opinions about consumption habits and their relationship to the work of Systembolaget. The last part of the survey included *"mark questions"*; guiding

questions that serve as the basis for the final categorization of the 8 consumer segments. The mark questions covered attitudes and interests among alcoholic beverages (Internal document, Kundsegment, 2021).

The secondary data on statistics on consumer segmentation provided detailed and deep insights into Systembolaget's consumers. *Table 2* presents an overview of the different consumer segments, with a focus on the 6 segments that were relevant to this study. Consumer segment statistics were used mainly for the process of recruiting members to the focus groups *(see process 3.5.2 Focus groups),* but also for giving information about attitudes and preferred beverages.

Table 2. Systembolagets consumer segment. (Internal document, Kundsegment, 2021; adapted by the authors)

Consumer segment	**Consumer traits**	**Preferred beverages**
Wine enthusiasts	- Is very interested in wine, it's a hobby. - It is important to drink the right kind of wine and follow the latest trends. - Would rather buy new products than ones you have tried before.	Red wine, white wine, and sparkling wine
Enjoyer of life	- Don't think there is too much snobbery/snobbishness about wine. - Often has alcohol at home and thinks a glass of wine while cooking and thinks it can be good for health. - Buys repeatedly the same products.	Rosé wine, white wine, and red wine
Folksy	- Likes to drink wine, but has no interest in wine, so the variety doesn't matter. - Doesn't follow any wine trends and think there is too much snobbery around wine. - Does not choose drink based on label or shape.	Spirits, white wine, and beer
Etiquette	- Often choose a drink based on the design on the bottle and label. - Has no wine or beer interest.	Cider, spirits, Rosé wine.
Party people	- Never have alcohol in stock at home but shop for the weekend. - When the weekend is over, so is the alcohol. Don't think wine is good for health. - I think there is too much drinking in Sweden. - Usually have no alcohol at home and rarely have a glass of wine while cooking.	Beer, Cider
Traditionalists	- Has no interest in trying new types of drinks. - Rarely have alcohol at home and seldom take a glass of wine while cooking food.	Cider and mixed drink

Table 2 gives a summary of certain key features of each consumer segment (Internal document, Kundsegment, 2021). In detail, *wine enthusiasts* are the consumer segment that is most willing to try new things and follow the latest trends. Their preferred alcoholic beverages are several types of wine (red wine, white wine, and rosé wine). *Wine enthusiasts* tend to prepare themselves before buying, on Systembolaget's channels/website. *Wine enthusiasts* are a relevant group to examine due to their interest in wine and current trends and could potentially be malleable to try new packaging alternatives for wine. They think that wine is to enhance the taste experience of the food.

Enjoyer of life tends to buy the same type of products and does not plan before purchasing. They drink wine every day with food. They care about traditions, the local community, and enjoyment. Frequent and low-level involvement consumers characterize this demographic. They do not have a perception of wine, along with the use of glass bottles, as a luxury item. This can serve as a catalyst for a shift in their consumption habits towards climate-smart packaging.

*Folksy***,** like to drink often and does not choose spirits according to design or labels, does not follow trends, and finds that there is too much snobbery around it. They think that it is healthy to drink and think that it tastes good. This consumer segment is probably most likely to purchase wine in other types of wine packaging.

Etiquette rarely drinks spirits, and when they do it is for special occasions or with friends/family. Design and labels are important when choosing wine. They do not have a special wine or beer interest. But they drink alcoholic beverages because they think it tastes good and want to indulge.

Party people have mostly more reasons to consume, however, they only buy what they need and do not think that wine is good for their health. They think it is fun to drink, but they do not think that wine is good for their health.

Traditionalists, a distinctive reason is that they do not want to feel left out. They do not have an interest to try new beverages and think there is a high alcoholic consumption in Sweden. *Traditionalists,* as the name suggests are consumers who value health, and equality and like things the traditional way.

3.5.2 Focus Groups

Focus groups were chosen for data collection to facilitate deeper discussions about consumers' perceptions of climate-smart wine packaging (Wibeck 2000). It is a suitable method when investigating interactions between the selected participants, opening discussions to reveal different thoughts, opinions, behaviors, and attitudes among them (*Ibid.*). In comparison to other qualitative research methods, focus groups rely on a collective insight into the participants' perspectives (Dahlin-Ivanoff & Holmgren 2017). Individuals' opinions may be highlighted, but it is the collective interplay that provides the foundation of knowledge.

Through shared experiences among the participants, a focus group method facilitates an understanding of their opinions and the reasoning behind them in a dynamic environment (*Ibid.*).

The focus group method is built upon several elements that form its core. Before building the groups, certain aspects must be taken into consideration relating to the selection of participants, the recruitment process, and the group constellation. The selection of the participants followed a purposive sample, meaning that the participants were selected based on the study's aim and research questions (Wibeck 2000). The study's mission is to answer research questions concerning consumers' behaviors to climate-smart wine packaging and identify opportunities for improvement to increase incentives to purchase climate-smart wine packaging within Systembolaget. Given the mission, the focus group format was highly suitable, to provide a stage for the consumers to enable their opinions to be expressed. Thus, Systembolaget's consumers formed the basis for the sample.

The recruitment of participants followed a random sampling. When the participants are wished to have certain common interests or purposes, random sampling within the chosen population is beneficial. The recruitment process when building focus groups can take the form of an open solicitation, meaning that the participants themselves can announce their interest. The risk of this method is that only people with enthusiastic interests, knowledge, or opinions about the discussion subject will participate. Nevertheless, this approach guarantees that the individuals involved will engage with authentic enthusiasm, displaying a sincere commitment of time, effort, and presence (Wibeck 2000).

The participants in the focus groups for this study were recruited based on a survey, posted on the social media platforms LinkedIn and Facebook. The survey, called "Vilket kundsegment tillhör du?" *(English translation: Which customer segment do you belong to?),* were based on the statistics on Systembolaget's consumer segments, explained in *3.5.1 Statistics on consumer segmentation*. The primary objective of the survey was to find out the respondents' consumer segment category and to obtain their consent for potential inclusion in a focus group interview. Additionally, this process proved to be engaging and interactive for the respondents as they discovered their consumer segment category in an e-mail sent to them shortly after they responded to the survey. Our survey reached over 500 individuals, with 24 respondents completing the form. Ten of these respondents expressed an interest in participating in the focus group interviews. Finally, three focus group meetings were held with three and four participants in each group, all with different consumer segments. A total of two men and eight women participated. See *Table 3* for a more detailed overview of the focus groups.

Table 3. Overview of the participants and consumer segments

Focus group #	Duration	Date of focus group	Respondent ID	Gender	Age	Occupation	Consumer Segment
Focus group 1	2 hours	29th of March	Consumer 1	M	Under 30	Student	Wine enthusiasts
			Consumer 2	F	Under 30	Student	Etiquette
			Consumer 3	F	Under 30	Student	Party-people
Focus group 2	2 hours	4th of April	Consumer 4	F	Under 30	Student	Traditionalists
			Consumer 5	F	30–39	Full-time worker	Party-people
			Consumer 6	F	Under 30	Student	Party-people
Focus group 3	2 hours	5th of April	Consumer 7	M	Over 60	Full-time worker	Traditionalists
			Consumer 8	F	Under 30	Full-time worker	Traditionalists
			Consumer 9	F	40–49	Full-time worker	Enjoyer of life
			Consumer 10	F	50–59	Job seeker	Folksy

Table 3 illustrates which focus group each participant participated in and was given a respondent ID, to respect the participants' anonymity. The first focus group meeting consisted of one male and two female participants, with the consumer segments *wine enthusiasts, etiquette,* and *party people*. The second focus group meeting consisted of three female participants, with the consumer segments, *party people,* and *traditional.* The third focus group meeting consisted of one male and three female participants, with the consumer segments *folksy, traditional,* and *enjoyers of life*. In total, the respondents were 20% men and 80% women, an overrepresentation of women in the study. The interviewees' occupations were mostly students and full-time workers. There was a variety of ages among the participants and the study had at least one person from each age category.

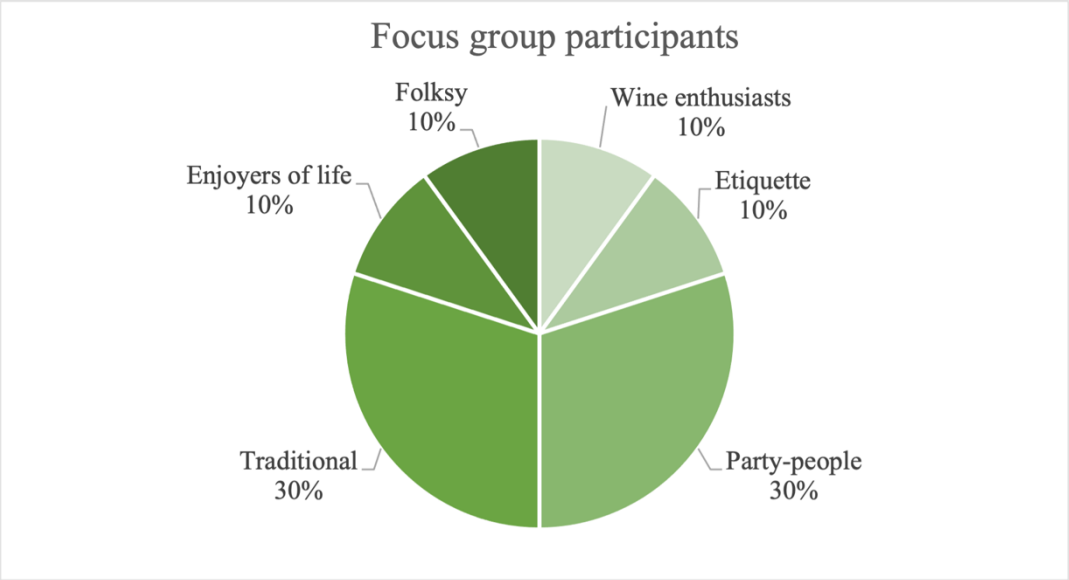

Figure 9. An overview of the percentage of respondents belonging to each consumer segment.

Figure 9 shows the variation of the different consumer segments that participated in the three different focus groups. The figure shows that *traditional* and *party–people* were overrepresented in the study, and the rest: *folksy, wine enthusiasts, enjoyers of life,* and *etiquette* were underrepresented, with only one person from each category.

The number of participants in focus groups is a subject that has been up for debate for a long time. Dunbar (1997) mentions the closeness among the participants as a part of the focus groups' nature, which limits the number to 4 participants in order to create balanced interactions. Svedberg (1992) highlights the benefits of a group triad (a group of three). First, the experience of *affinity* and *influence* increases for each individual in a triad setting, with a perceived sense of a larger space and field of experience, which in turn increases engagement. Second, the feedback and time management improve as fewer participants allow for more in-depth, longer conversations with better communication (Svedberg 1992). However, as pointed out by Wibeck (2000), triads pose a risk of one participant becoming the mediator between the other two, which can create tension. Thus, the recommended number of participants is four to six. To reduce the risk of potential tension, the moderators have an important role in meditating, listening, and giving all participants space to express themselves, while staying engaged yet unbiased (Wibeck 2000). To summarize, even if triads have their benefits in regard to more closeness within the group, and stimulating more in-depth conversations, group numbers of four to six are recommended within focus groups. Due to difficulties to obtain enough participants, the first three held focus groups for this study had three participants in each. To overcome potential tension, we as moderators ensured a safe space and evenly distributed the word, with support from a structured interview guide (read more down below), designed based on the factors explained in this study's conceptual framework.

The participants are a homogeneous group in the way in which they are consumers of wine at Systembolaget (differences within the group are also known as control characteristics), but

they are heterogeneous in the way that all participants belonged to different consumer segment categories, (similarities within the group is also known as break characteristics) (Knodel 1993; Wibeck 2000). The benefit of having heterogeneous groups is to avoid the participants agreeing with each other, creating homogeneous answers. This can help solve the empirical problem of the difficulties to generalize answers from too narrow groups discussing a broader problem (Bauer & Gaskell 1999). Though, generalization within focus groups cannot be generalized by its nature, compared to large surveys (Wibeck 2000).

The focus groups were held on Zoom on the 29th of March, the 4th of April 2023, and the 5th of April. All focus group discussions took two hours to complete, with ten minutes break. The choice of holding interviews on a digital platform enabled more flexible participation (Robson & McCartan 2016; Creswell & Creswell 2018), which was necessary due to the participants' differences in geographical location. The interviews were recorded after oral consent from all participants (*Ibid.*). Figure 8 illustrates the procedure of the interview, which was based on the *four C's* and the *Alphabet Theory.*

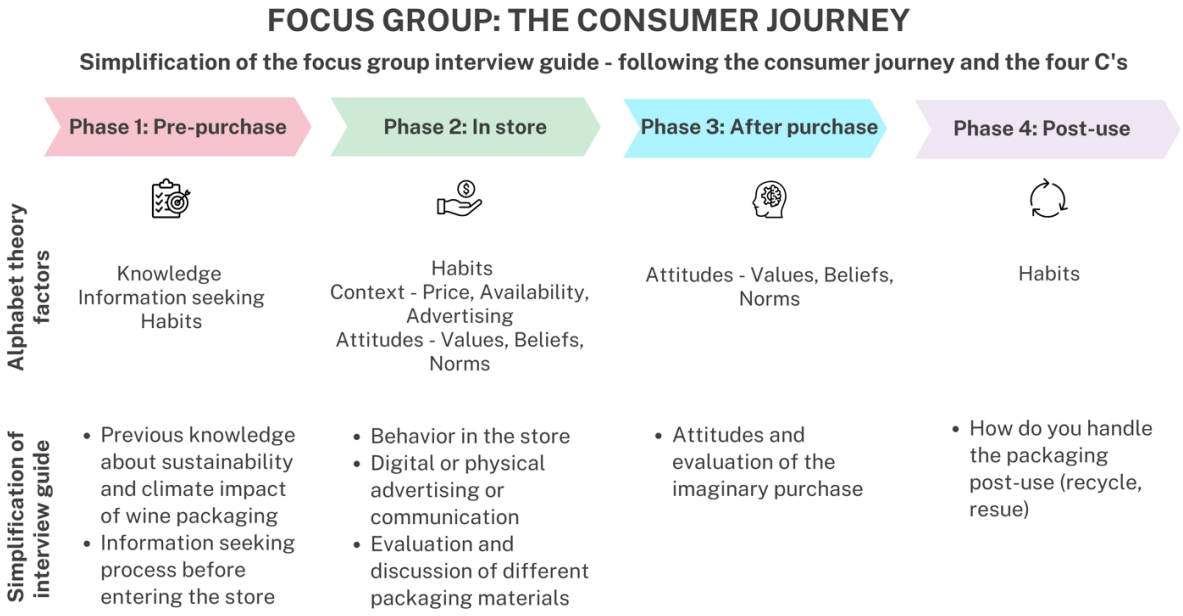

Figure 10. Simplification of the focus group interview guide, based on the four C's and the Alphabet Theory.

The interview guide, as seen in Appendix 1, followed 'the consumer journey' – the journey the consumer makes when purchasing a wine bottle at Systembolaget. It was designed as an interactive scenario, to make the focus group discussion as interesting and interactive as possible, illustrated in *Figure 8*. Starting with the pre-purchase, aspects before entering the "imaginary" store were discussed. Then, the in-store behaviors were discussed more deeply, with stimuli material in the form of pictures (Wibeck 2000), including the digital and physical communication provided by Systembolaget, as well as discussions on different types of packaging designs and materials. The in-store phase constituted the largest part of the discussion, as they were the "key questions" (*Ibid.*). Then, we entered the after-purchase phase, including an evaluation on why the imaginary purchase was made, and factors related to the

purchase choice. Finally, the post-use phase included questions related to recycling and reuse. Along the journey, factors explained in the *Alphabet Theory* were imbedded like invisible strings, to ensure that the questions were held in the frame of the conceptual framework but were not implicitly expressed to the participants.

3.5.3 Semi-structured interviews

An added method was conducted, two semi-structured interviews with store employees at Systembolaget's store in Stockholm, see *Table 4*. Within case studies, several sources of evidence are recommended to ensure construct validity (Yin 2009). The aim of the semi-structured interviews was twofold; first to gain deeper insights into the consumers' behaviors from a store perspective from the employee's daily consumer interactions, and second to evaluate Systembolaget's work of creating incentives for sustainability purchases (relating to research question 2[1]). The semi-structured format enabled us, as interviewers, to sustain a balance between structure and flexibility. An interview guide was used as a checklist to cover all topics and in what order the questions would be asked (Robson & McCartan 2016). There is a certain flexibility with semi-structured interviews, where wording and the order are modified throughout the interview based on the flow of the conversation, also additional and unplanned questions were asked as follow-up questions (*Ibid.*). Therefore, an interview guide, following predetermined themes in line with this study's aim (Bryman 2018) was utilized to ensure a pre-set framework while allowing room for improvisation and encouraging the interviewees to share and express themselves freely.

Table 4. Interviews with store employees at Systembolaget

Respondent ID	Gender	Role at Systembolaget	Worked for	Store location	Date of interview	Length	Type
Employee 1	Male	Responsible for white wine assortment	3 years	South city center of Stockholm	22-03-2023	23:37 min	Personal
Employee 2	Male	Team manager and responsible for beer assortment	20 years	South city center of Stockholm	22-03-2023	26:07 min	Personal

Table 4 provides an overview of the two semi-structured interviews in one of Systembolaget's stores in Stockholm South City Center. The interviews began with two personal questions; their role at Systembolaget and how long they have worked at Systembolaget. The interviewees were conducted with a store employee (Employee 1) whose responsibility is for the white wine assortment, and the team manager (Employee 2) who handles the beer assortment. The length of the interviews was set to be a maximum of 30 min, however as seen in *Table 4,* the length varied slightly between 23-26 minutes.

[1] *What improvements can be identified in a company to increase incentives for consumers to choose more climate-smart packaging?*

3.5.4 Ethical Considerations

The ethical considerations when conducting research are of utmost importance for several reasons. Taking inspiration from Robson & McCartan (2016), Bryman (2018), and David and Sutton (2016), this study conducts a dynamic view of the ethical concerns, relating to the research process and the area in which the case study takes place.

This study's chosen case is Systembolaget, with its consumers as the main unit of analysis. This creates ethical concerns in itself. Firstly, Systembolaget's position being a state-owned company obtaining a statuary monopoly of alcoholic beverages in Sweden, makes their mission sensitive in terms of social marketing (Kennedy & Parsons 2014). Marketing within a social setting remains an influential and important tool to alter social behavior, yet it creates sensitiveness with consideration to democracy and privacy, making citizens' choices of utmost importance *(Ibid.).* For example, an ethical issue within this context is the risk of companies pursuing profits in disguise of showing concern for citizens within the society (Hastings & Angus 2011). To overcome this risk, social marketers will have to adopt a critical and adaptable approach and ensure that the intended outcome validates the approach taken (Kennedy & Parsons 2014).

Ethical concerns also apply to the participants' integrity, consent, and confidentiality (Robson & McCartan 2016; Bryman 2018). Since the subject of alcohol consumption can be a sensitive topic and disrupt personal integrity, the focus group participants ensured that alcohol consumption habits were *not* the aspiration or intention of the held discussions. Further, all respondents in this study were given the opportunity to give consent in their participation, the recording of the interviews, and the analysis process of the transcribed material (Robson & McCartan 2016; Bryman 2018). The participants were made aware that anonymity may not be fully guaranteed, but anonymity would be assured concerning names and other sensitive personal information. To ensure this, each participant was provided a respondent ID in the transcription and analyzation process, following suggestions by Robson & McCartan (2016). But ethical issues still remained within the focus group discussions, since the participants were not anonymous during the interview. However, the respondents were aware of this and agreed to peruse their participation. In the focus groups, all participants received the same treatment and were provided space to express their opinions freely while staying within the scope (Robson & McCartan 2016). As the role of moderators, neutrality remained, and personal opinions and sensitive information about the case study were not expressed (*Ibid*.).

In the interviews with the store employees at Systembolaget, certain awareness needs to be addressed relating to their role as professionals within the study area, and reflections of their workplace may be colored by their attitudes towards it (David & Sutton 2016). The potential issue was moderated by providing an explanation of the interviews' purpose (*Ibid*.). In addition, research ethics principles also relate to the researchers' awareness of reflexivity (Bryman 2018; Creswell & Creswell 2018) and encompass the social and cultural context in which the study has been conducted (David & Sutton 2016). The opposition between values and facts, objectivity and subjectivity, and the researcher's approach to comprehending social reality,

could be seen as a reflection of their epistemological orientation (Yin 2013; David & Sutton 2016). Considering the balance between objectivity and subjectivity (that may be colored by the respondents) in the analysis is thus pertinent to ensure a thoughtful approach (*Ibid.*). However, when researching social settings, such as consumers' behaviors, it is important to gain subjective, personal opinions and experiences through an interview format (David & Sutton 2016).

3.6 Thematic Content Analysis

To identify and extract relevant themes from the interviews and the focus group discussion, a thematic content analysis was performed. Thematic analysis, as described by Nowell *et al.* (2017), is a method for identifying key features and organizing raw data to extract themes. The process was divided into six phases, according to *Figure 11*. In phase 1, the data, in this case, the transcriptions of the interviews, were thoroughly read and familiarized with. In phase 2, initial codes were developed to identify important quotes and messages, while maintaining the participants' anonymity. Each respondent got a respondent ID, later used to visualize the results. In Phase 3, the quotes were organized according to their relevance, and preliminary themes were identified and reviewed in Phase 4. In phase 5, the themes were defined and named. This phase is crucial, as it reflects the summarized data in a communicative way. In phase 6, the refined themes were theorized and supported. Finally, the study was produced (Nowell *et al.* 2017). The thematic analysis was appropriate in this study to process the raw data, and it was used as a structured tool to extract relevant themes to mirror the patterns found in the focus groups and interviews. A division of themes, derived from the raw data, provides a result to communicate the results to the reader (*Ibid.*).

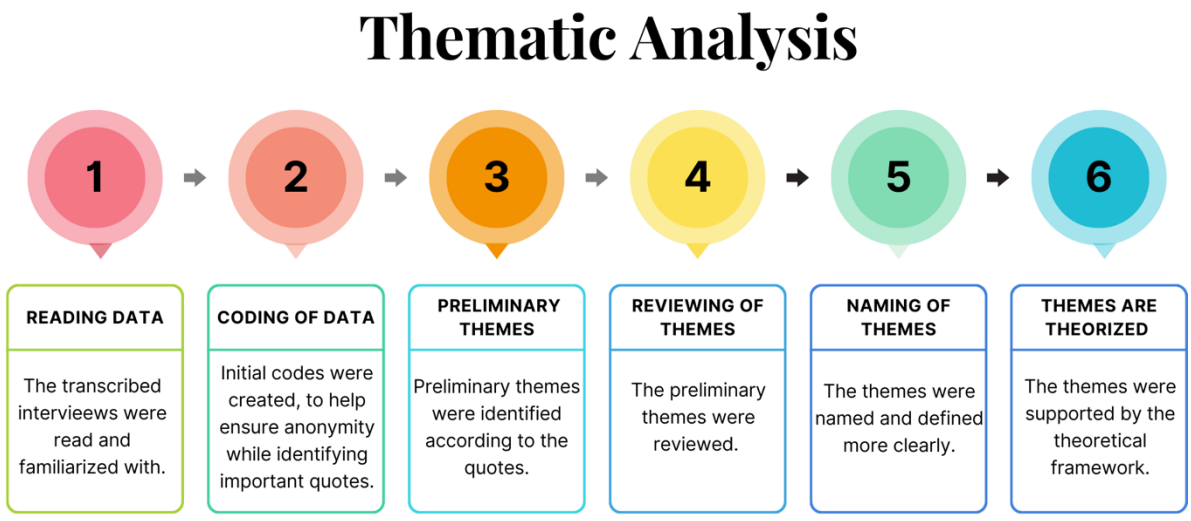

Figure 11. The process of thematic analysis. Authors' own illustration, interpreted by Nowell et al. (2017).

3.7 Quality Assurance

In the process of research, it is vital to attain reliability and validity. Through identifying and using strategies, the researcher can verify the accuracy of the results and obtain transparency (Creswell & Creswell 2018). Riege (2003) identified several techniques and strategies for ensuring reliability and validity within case studies *(visualized in Table 5)* which was used as a protocol for documentation through the progression of the research.

Table 5. Design tests for validity and reliability within case studies (Based on Riege 2003: 78-79. Modifications by the authors)

Design tests	**Purpose**	**Case study techniques**	**How the techniques are applied in the case study**
Construct validity	Confirmability	Use several sources of evidence during data collection	Conduct triangulation through employing diverse interview techniques, methods and data origins
		Create chains of evidence in data collection	Interviews are converted into text through transcription, and relevant information from secondary data sources is carefully documented
		Seek input from key informants to review case study findings	The draft was shared with the supervisor, Systembolaget and a student group during the writing process
Internal validity	Credibility	Explain the analysis by visualize concepts and findings in illustrations and tables	The findings were explained and visualized through illustrations and tables originated from the theoretical framework
		Assure that findings and concepts are systematically related	Consistency through application of frameworks across all data sources.
External validity	Transferability	Establish firm boundaries and a defined scope	Described in chapter 1 and 3
		Compare findings with existing literature	Completed though the abductive approach; empiricism and theory in interaction
Reliability	Dependability	Explain theories and concepts in detail	The theories and concepts used in the case study were carefully described. If feasible, multiple sources were used to provide a nuanced description
		Assure awareness between the research issues and the characteristics of the study design	The study's' limitations are described in chapter 3
		Establish an automated database for systematic data recording and storage, record data	Interviews and focus group discussions were recorded on multiple devices and transcribed
		Utilize and show parallelism of the findings across several sources of data	A consistent application of theoretical/conceptual framework in the focus group discussions and interviews
		Incorporate peer review and examination as part of the evaluation process	Ensured though opposition and peer-reviews

Table 5, to assure construct validity, several sources of evidence and methods (focus groups, semi-structured interviews, and secondary data have been used to acquire multiple viewpoints from different actors. The interviews were transcribed verbatim, and secondary data were documented with consideration of their relevance. To make sure to get input on the findings, the draft report was continuously shared with the supervisor, fellow students, and Systembolaget. In order to guarantee internal validity, the findings were presented using visual aids such as illustrations and tables derived from the theoretical framework. Further, all empirical collections (focus groups, interviews) were designed and analyzed in the same way, based on the theoretical framework. To conduct external validity, the study's scope was examined, and the results were checked against earlier performed research. The reliability of the study was assured by nuancedly describing the theories and concepts, raising awareness about the limitations within the study, keeping a systematic record of the data, applying consistency across the application of framework on the data, and finally, allowing the study to be examined and peer-review and incorporate that as an evaluation process. However, in terms of reliability, as qualitative research accentuates the potential for diverse interpretations (David & Sutton 2016), the results may vary, thereby rendering the conclusions non-replicable. This phenomenon can be elucidated as the paradox inherent in qualitative research (*Ibid*.).

3.8 Delimitations

An overview of the different delimitations: *empirical*, *theoretical*, and *methodological* is presented in this section to answer the aim and research questions in the study.

3.8.1 Empirical Delimitations

This case study on Systembolaget encompasses research on climate-smart packaging alternatives for wine, aiming to gain new insights about their consumers' incentives to purchase climate-smart wine packaging, forming the first research question[2]. By answering this, the thesis can provide Systembolaget with insights on opportunities for improvement to increase these incentives, forming the second research question[3].

Wine accounts for a significant part of sales in terms of volume/liter (215 million liters, 38.4% of total sales in 2022) (Systembolaget 2022: 56). Beer accounts for the largest sales volume, but unlike wine which often sells in a glass bottle, beer is predominantly sold in climate-smart aluminum cans. This leaves wine by far the largest range where the sales challenges can be derived, and accounts for the "volume of importance" (*Ibid*.). Given these circumstances, it was logical to narrow the scope of this thesis exclusively to the wine assortment.

[2] *What factors can influence consumers' decisions to purchase wine in climate-smart wine packaging?*
[3] *What improvements can be identified in a company to increase incentives for consumers to choose more climate-smart packaging?*

This thesis also has geographical delimitations, in terms of the store location where interviewed store employees work. With consideration of the store employees' schedules, in-person interviews were preferred since the interviews took place during their work hours. This only allowed interviews in a geographical location close to the authors' residences. Thus, the store employees can only reflect the consumers' behaviors in the specific area of south Stockholm. The outcomes can therefore be colored by demographical variables in that area (e.g., knowledge or interest in sustainability). However, their insights provide an important snapshot, an example, of consumers in a large city in Sweden.

In addition, the focus groups respondents were composed of six different consumer segments, based on a survey from Systembolaget's statistics. The purpose of recruiting a variety of consumer segmentations is to get a wider collection of consumer groups, all with different habits and attitudes, to capture as many viewpoints as possible. Even though not all consumers are interested in wine or consume wine often, it reflects a realistic picture of the consumer composition visiting Systembolaget's stores in real life, even though the answer from this study is not possible to generalize, as discussed throughout this chapter.

Altered consumer behaviors account for an important part of Systembolaget's journey towards reaching their sustainability-related goals. However, consumer purchases are dependent on several variables, such as communication efforts and what Systembolaget chooses to put on the shelf. Furthermore, the packaging decisions made by wine *producers* play a critical role in the supply system but are heavily influenced by consumer demand in various geographic markets as well. Additionally, the actions of Systembolaget are determined by regulations and governmental laws at both the national and international levels, which dictate the actions of the organization. In summary, it is possible to point out a range of factors influencing how consumers behave. To narrow the scope, this study's empirical data collection only encompasses *consumers* of Systembolaget, as well as *store employees* who interact with consumers on a daily basis and could provide us with deeper knowledge of Systembolaget's efforts in integrating climate-smart packaging in the daily interactions with consumers. Thus, the wine producers or other important key actors in Systembolaget's have not been interviewed, due to the narrowed focus on consumers' attitudes and values. However, the theoretical framework in the thesis has captured important key factors, such as communication and zooming out to a broader scope, to highlight the complexity of consumers' behavior. In the next section, this is discussed more deeply.

3.8.2 Theoretical Delimitations

Consumer behavior is complex, sometimes unpredictable, and is affected by multiple factors (Jackson 2005; Mont *et al.* 2014). Thus, the research on consumers builds a difficult and delicate task, with many potential aspects and features influencing the behavioral outcome. Relating back to the research questions, the theoretical framework required theories from both a narrower social behavioral perspective, as well as a broader perspective covering marketing

and corporations to capture the environment consumers are operating within. However, this requires certain theoretical delimitations.

Several economic- and social-psychological theories aim to understand and explain consumer behavior, many of them developed over the years (e.g., *Rational Choice Theory* by Homans (1961); Elster (1986), or the *Theory of Reasoned Action* by Ajzen (1991)). The chosen conceptual framework, the *Alphabet Theory*, developed by Zepeda and Deal (2009) builds on Value-Belief-Norm (VBN) theory (Stern *et al.* 1999; Stern 2000) and *Attitude-Behaviour-Context* (ABC) theory (Guagnano *et al.* 1995; Stern 2000), but invites additional factors to fill the gap in the explained theories to address and explain organic and local food purchases. The *Alphabet Theory* was chosen as the conceptual framework within this study as it can be applied to analyze research gaps within wine sustainability characteristics as seen in Schäufele and Hamm's (2017) study about consumer perceptions, willingness-to-pay (WTP), and preference for sustainability aspects of wine.

By choosing this as a conceptual framework, it ensured a more recent framework with a narrowed scope within food choices, as well as including multiple factors to explain behaviors e.g., by looking at more in-depth information about consumer perceptions about their knowledge, attitudes, information seeking, demographic, habits, context, which will eventually lead to behavior. However, it must be mentioned that other influential factors are not accounted for.

In addition, to capture the broader environment in which companies operate, the *four C's,* Corporate Social Responsibility (CSR), and archetypes of Sustainable Business Models (SBN) were chosen. The *four C's* is a widely applied model for marketing, building on Lauterborn's (1990) development of McCarthy *et al.* (1987) the *four P's.* A selection of factors was chosen to make it relevant to the research questions and the problem background of wine and consumer behavior.

3.8.3 Methodological delimitations

The method included gathering empirical data from two semi-structured interviews in person and three focus groups held on a digital platform, Zoom. Usually, focus groups are intended to be conducted personally to gain more flow with face-to-face conversations. Beforehand, the authors intended compensation for the voluntary participants, however, the offer was not possible, and therefore there was a change of plans. Due to that reason, the participants that voluntarily participated would then have to travel to Stockholm at their own cost and spend approximately two hours of their free time without getting compensated. However, after gathering information about the participants' geographical location, it was decided that since the participants live in different parts of Sweden. According to Robson and McCartan (2016), it is time-consuming to conduct interviews, and the actual length of the interviews varies. Anything over an hour may have unrealistic demands on voluntary interviewees and could therefore affect how many would be willing to participate in the interview, which could lead to biases in the study (*Ibid*.).

According to Robson and McCartan (2016), a digital interview was more flexible and convenient to set a date and time that would work for everyone participating, from their chosen space/location. A digital interview enabled a more relaxed setting, where the participants could choose their preferred location (*Ibid*.). If the interview was held physically, a sample of the climate-smart packaging would be difficult to display as the authors do not want to favor alcoholic consumption, since the products contain alcohol. By having digital interview, pictures of different climate-smart packaging were shown digitally to the participants to get their instant feedback and reactions and give them more time to reflect on their opinions (*Ibid.*).

Semi-structured interviews on the other hand were held physically in one of Systembolaget's stores in the South of Stockholm. The reason for choosing a physical setting was to gain more in-depth conversations with the employees. Two separate interviews were conducted with two employees so that they would not affect each other's answers and also give each individual the space to express their professional opinions.

4. Empirical background

The following chapter gives a brief introduction government-led social marketing, as well as marketing campaigns for pro-environmental behavior. Further, consumer behavior for wine packaging and innovations within that field are presented. Lastly, the case of Systembolaget gives an overview of their goals and ambitions for climate-smart packaging.

4.1 Government-led Social Marketing

Marketing campaigns connected to the government can have a complex relationship with consumers or citizens (Hastings & Angus 2011; Kennedy & Parsons 2014). Social engineering is an activity any government performs and encompasses codifying the society's moral, value, and belief structure. Social marketing refers to the reinforcement of this structure through actions that either encourage or discourage this structure. However, the individual determines the boundaries between when social marketing is perceived as 'bad', as in propaganda or social fabrication, or 'good', as in encouragement to change supporting the society. This subjective perception reflects the individuals' attitude towards the existing regime or discourse in society (Kennedy & Parsons 2014). Thus, social marketers need to obtain awareness around this potential issue, especially when the marketing concerns questions about public health, such as alcohol (Hastings & Angus 2011). The purpose of marketing alcohol is not to eliminate it, but to moderate consumption to favor public health, pointing to a social responsibility and sustainability mission. Campaigns can be interpreted as controversial, as the line between responsibility and advertising can be blurred (*Ibid.*).

4.2 Marketing Campaigns for Pro-environmental Behavior

According to Kollmuss and Agyeman (2002) pro-environmental behaviors are not due to increased knowledge or awareness, communication campaigns still base their assumption that more knowledge will lead to changed or enlightened behaviors. However, changing behaviors or even small habits is difficult. Kollmuss and Agyeman (2002) interpreted Rajecki's (1982) different cases of the attention-behavior gap, and one of them is the *Normative influences:* people's attitudes are influenced by social norms, cultural traditions, and family customs, e.g., if one's culture is dominant by an unsustainable lifestyle then the likelihood of developing a pro-environmental behavior will be less likely, and the attention-behavior gap will widen. Ajzen and Fishbein (1980) highlighted that attitudes don't have a direct influence on behavior,

but they do, however, impact our behavioral intentions, which then shape our actions. Our intentions are shaped not just by attitudes but also by social pressures.

Marketing campaigns aiming to alter climate-smart behaviors differ in their effectiveness depending on the mitigation intervention. In a recent study, Bergquist *et al.* (2023) found that elements such as *social comparison* and *financial incentives* were most effective in making people adjust their behaviors for a climate-smarter outcome. Furthermore, mitigation interventions aiming at *appeals* and *commitment* showed potential but with weaker effects. The smallest effects were shown by *feedback* and *education* interventions (Bergquist *et al.* 2023). Their results provide practical and theoretical guidelines for climate change mitigation interventions. In the following sub-headings, the incentives will be discussed further. In addition, the concept of *nudging* and its benefits and challenges are presented.

4.2.1 Social Comparison and Financial Incentives

Social comparison incentives include the strong influence other peoples' pro-environmental behaviors have on our own behaviors, which are the catalyst for altering social norms (Bergquist *et al.* 2023), also confirmed by Constantino *et al.* (2022). This points out how people affect each other in the desire to fit in the societal norms *(Ibid.)*, which have been shown to be most effective and influential when they are communicated implicitly rather than explicitly. The difference can be exemplified as followed; explicit norms include a sender, an outer voice that communicates the norm. The risk then is that the sender gets more attention to the norm itself and that people are feeling pushed in a certain direction against their own will. Implicit norms, on the other hand, are communicated in a way that the sender is not as obvious or easy to identify, making the message more susceptible (Bergquist *et al.* 2019).

Financial incentives encompass the monetary rewards for acting or behaving sustainably and were found to have a positive effect on pro-environmental behavior but with certain implications (Bergquist *et al.* 2023). For example, Khanna *et al.* (2021) financial motives showed to be most influential in reducing energy consumption, yet the size of the monetary incentive mattered and affected the results. In addition, the effectiveness of financial incentives is also dependent on the participants' personal values, identities, and norms, showed by van den Broek *et al.* (2017). Their findings showed that people with strong personal norms have a higher likeliness to be persuaded by environmental messages rather than financial incentives, due to the feeling of moral responsibility to act according to the person's beliefs. In contrast, people with weak personal norms did not feel the same moral responsibility on a personal level to act pro-environmentally. As a result, they are more likely to respond to messages that favor personal benefits, such as financial incentives. Personal norms can be defined as an individual's sense of moral duty towards engaging in environmentally friendly actions (Schwartz 1970). According to the *Value-Belief-Norm* (VBN) theory (one of the composing parts of the *Alphabet Theory*), values influence norms through the individuals' beliefs, making norms and values interrelated (Stern *et al.* 1999). Thus, the difference between norms and values must be highlighted. Personal norms are defined as the level of responsibility an individual feel about

acting pro-environmentally, and not only what an individual thinks is important, making the belief the intermediate factor to the intended behavior (van den Broek *et al.* 2017). In sum, the financial incentive can greatly affect pro-environmental behavior, but with consideration of the size of the monetary incentive, and personal values, identities, and norms (van den Broek *et al.* 2017; Khanna *et al.* 2021; Bergquist *et al.* 2023).

4.2.2 Education and Feedback Incentives

Moreover, Bergquist *et al.* (2023) found that *feedback* and *education* were the least effective incentives to promote pro-environmental behavior. *Feedback* refers to the additional information given to individuals about their past behavior, e.g., recycling patterns in a household. *Education* refers to increasing individuals' knowledge and providing information about sustainable behavior, including labels, statistics, or practical suggestions *(Ibid.).* Despite its weaknesses, both *feedback* and *education* incentives can be more effective under specific conditions, for example, using direct, immediate, and expressing feedback frequently has had positive effects in altering pro-environmental behavior. *Feedback* has shown to be most successful when the barriers to acting environmentally are low, and the advantages of performing environmentally are high *(Ibid.). Education* incentives should not be used in isolation but have been more successful in combination with other incentives, particularly when the motivation is low for acting pro-environmentally, and the barriers are high, e.g., the combination of social comparison and education could be a desirable method *(Ibid.),* proved by Khanna *et al.* (2017).

In contrast, improved education toward consumers through communication is a climate mitigation strategy recommended for sustainable food chains. Knorr and Augustin (2021) point out the importance of improving consumer information and communication about food values and propose training employees as an effective channel for dialogue and increased education. Wynes *et al.* (2020) also highlight educating consumers as a climate mitigation strategy, in the context of increasing individuals' ability to understand the association between the carbon footprint expressed in numbers to their purchase, known as 'carbon numeracy'. Several pieces of evidence in their study show that consumers are unable to make trade-offs of different actions related to climate impacts (e.g., to express a number of hamburgers as equivalent to flying airplanes). With better educational attempts, the public could achieve a greater ability to make informed trade-offs (Wynes *et al.* 2020).

Educational elements (such as labels or carbon numeracy) or *financial* incentives (e.g., prices), can be seen as tools to make climate-friendly behavior an easy behavior, as proposed by Thøgersen (2021). The leading implication lies in simplifying consumers' decision-making process regarding climate-smart products, focusing on minimizing complexity and maximizing ease. Shedding light on a combination of incentives suggested above holds a promising key to strengthening the likelihood of opting for climate-smart choices *(Ibid.).*

4.2.3 Nudging

In this context, the concept of nudging is relevant. Nudging is an application derived from behavioral science and behavioral economics, which can be described as a behavioral change strategy. The use of nudges has demonstrated its efficacy in supporting policymakers across various sectors to systematically incorporate behavioral insights into the process of policy design (Mont *et al.* 2014). This approach involves applying tools to influence individuals' behaviors and encourage them to make choices that are consistent with their interests and those of society as a whole (*Ibid*.). Mont *et al.* (2014) discussed tools for nudging used to alter food consumption: 1) simplify key information and increase accessibility through labeling or displays; 2) use social norms to portray the behavior of other individuals; and 3) alter the psychical environment to increase convenience and encourage favorable purchase choices, (*Ibid.*). To increase the likeliness of changed behaviors, simplified, customized provision of information to make a choice more favorable is a well-known nudging tool. Using labels or displays to compare variables has previously been proven successful, for example with variables on food miles.

Additionally, nudging tools showed the most promise in controlled environments, such as stores, when not disturbed by other campaigns. Systembolaget's alcohol-free assortment is provided as an example by Mont *et al.* (2014) on a successful nudging story in which the psychical environment is altered to encourage favorable choices. Positioning in store, and how choices are placed in a psychical space plays a vital role in how consumers behave. This can be viewed in Systembolaget's stores, where alcohol-free assortment is often placed further ahead in the store, and the liquor is often placed further back in the store. Systembolaget makes an interesting place for nudging. Due to their monopoly and societal mission, the nudging tools are designed to encourage responsible alcohol consumption, which strictly limits other marketing campaigns in the stores. This makes the stores a controlled environment, with an absence of influences from other market forces with several nudging tools that potentially could be disturbing for the consumers (*Ibid*.). In such a setting, Systembolaget can operate independently and encourage behaviors in a controlled environment. In addition, it enables a cost-effective way for the government to practice nudging to reach broader societal goals, such as social sustainability in curbing alcohol consumption. However, nudging tools show the most promise in combination with other policy tools to increase their efficiency, and not by themselves (*Ibid*.).

4.2.4 Sustainablity Labels

Sustainability-related labels, logos, and information have been over the past three decades communicated through private as well as public initiatives, and among them are the more prominent labels e.g., Fair Trade, and Carbon Footprint (Grunert *et al.* 2014) and the private labels are more a way to communicate sustainability initiatives. Ottosson and Parment (2016) highlight that sustainability labels have become an essential part of companies' marketing communications and for consumers to change their consumption patterns and choose sustainable products. There is however a general confusion, according to Boesen *et al.'s* (2019)

LCA study, about understanding the sustainability aspects of eco-labels as consumers have limited general knowledge about their meaning especially when multiple sustainability labels are combined (Ottosson & Parment 2016).

Carbon labeling can reflect the CO_2e emissions each product contributes to and can be a useful tool for consumers to change their lifestyles and consume low-carbon products (Zhao *et al*. 2018). Showing products' carbon footprint is used as a marketing strategy for companies to increase their competitiveness in the market as well as improve their green image. Taking it a step further, presenting a carbon footprint makes it a feasible strategy for companies to work on their corporate social responsibility (*Ibid*.). However, previous studies found that consumers have difficulties and confusion comprehending information about carbon emissions labels (Upham *et al.* 2011). Another study (Shuai *et al.* 2014) showed two influencing factors through which consumers' monthly income and level of education affected their willingness to pay for carbon-labeled products. Nonetheless, low carbon consumption should be communicated more to consumers to better understand the benefits of buying carbon-labeled products (Zhao *et al.* 2018). Although consumers do not have a full understanding of what carbon footprint entails, it is, however, a familiar label to many consumers (Gadema & Oglethorpe 2011) which is used for various types of products.

4.3 Consumer Behavior for Wine Packaging

Consumers' perception of food packaging according to Boesen *et al.* (2019) has been perceived to have a negative environmental impact. Although food packaging preserves and prolongs foods' lifetime it also prevents food waste, which makes it essential for food preservation (*Ibid.*). Boesen *et al.* (2019) interpreted van Dam and van Trijp's (1994) study about Dutch consumers' perception of the environmental aspects of beverage containers, their results indicated that consumers considered glass packaging and paper packaging to be more environmentally friendly than e.g., plastic, carton containers, and tins. Van Dam (1996) also found that consumers determine a product's sustainability by its material type and ability to re-use. According to Lindh *et al.* (2015), among Swedish consumers, paper packaging is seen as the most environmental food packaging, while metal and plastic as the least. On that note, recent studies by Otto *et al.* (2021) showed that consumers are unaware of different packaging materials' environmental performance, making the purchase less sustainable than intended. Otto *et al.* (2021) found that consumers overestimate the environmental impact of glass and biodegradable plastic, and underestimate plastic packaging, but that paper and metal were in accordance with scientific results. This is based on criteria such as natural-looking material and the design of the packaging. Thus, consumers interpret different packaging materials differently, and their interpretations do not always correspond to scientific evidence (Boesen *et al.* 2019; Otto *et al.* 2021).

Ketelsen *et al.* (2020) recognized various barriers when consumers purchase environmentally friendly packaging. Consumers primarily look at the material and eco-labels, but also design elements, for instance, colors and pictures of nature on the packaging. Other attributes such as

product quality and price are according to Ketelsen *et al.*'s (2020) study more important for consumers than environmentally friendly packaging. However, previous studies show that consumers are more willing to buy products with less packaging or more environmentally friendly packaging than products with standard packaging (*Ibid.*). Orlowski *et al.* (2022) found that previous studies suggest that the perception of intrinsic wine attributes is associated with external packaging cues e.g., weight, where some consumers associate heavier bottles with higher quality. Consumers are met with a variety of attributes through visual design cues on the beverage packaging to attract attention (Orlowski *et al.* 2022). However, when it comes to beverages or food, consumers need more information about the product and its intrinsic qualities e.g., taste, and aroma. This creates limited information which requires consumers to base their evaluation on physical attributes (the extrinsic qualities) e.g., price and packaging in their decision-making process (*Ibid*.). Orlowski *et al.* (2022) interpreted van Esch *et al.* (2019) who highlighted that expectations about sensory characteristics are created by packaging cues, this entails that consumers judge the product by its external packaging cues first. Brand perception and purchase intentions can be influenced by design elements on wine labels as typefaces, colors as well as illustrations can evoke different meanings (Orlowski *et al.* 2022).

Alternative wine packaging, on the other hand, is met with skepticism among Italian consumers, Ferrara *et al.* (2020) conducted a study in Italy to explore wine consumers' attitudes and willingness to pay for wine in other packaging materials than glass bottles. They found that alternative packaging solutions, such as more climate-smart packaging, have not been successful in Italy, which could be due to stakeholders in the wine sector still claiming that glass bottles are the most suitable packaging to preserve the wine quality over time, to avoid deterioration of the wine quality. But perhaps because of the deeply rooted traditions, wine should be stored in glass bottles (*Ibid*.).

In conclusion, depending on where in the world consumers consume wine, their perception of what is environmentally friendly and what is not varies. However, traditions, design, and packaging material play a part in consumer's willingness to pay for a product that comes in climate-smart packaging.

4.4 Innovation and Product Design

Climate-smart packaging for wine is on the rise due to environmental concerns. Innovation to create other types of packaging than glass bottles has been more difficult within the wine sector as opposed to other food sectors (Ferrara & De Feo 2020; Ferrara *et al.* 2020). Wine has through centuries represented more than just a drink, it has a long history in art and literature (Ibid.). However, according to tradition, wine is primarily stored in glass bottles, and is seen as a premium product with high-quality packaging by consumers (Soares *et al.* 2022). There is a difference in the acceptance of alternative wine packaging among consumer groups. From the findings of Ferrara *et al.'s* (2020) study, the less traditionalists had less prejudices and were not as sensitive about changes in the wine sector, they were also less affected by producers, country of origin, and label information, and glass bottle characteristics such as shape, weight,

or color. In addition, less traditionalists were categorized as low-involvement consumers, meaning that they drank less than one wine glass a day. In similarity, Nesselhauf *et al.* (2017) found that low-involvement consumers easier can be more affected by information about new and innovative packaging, in contrast to highly involved consumers that are less responsive to such information when making purchasing decisions. In summary, their study could present a potential group of consumers, less traditionalists, and low-involvement consumers, with lower purchase barriers, more willingness to behavioral change, and higher likeliness to purchase wine in alternative packaging. These findings are useful for producers seeking to differentiate themselves from competitors and tap into untapped market opportunities (Nesselhauf *et al.* 2017; Ferrera *et al*. 2020).

The unfamiliarity of non-traditional forms of wine packaging is more prone to negative responses from consumers which can lead to a form of diminished product appeal to such novel products (Orlowski *et al.* 2022). Ferrara *et al.'s* (2020) study investigated consumers' attitudes toward multiple types of climate-smart packaging e.g., PET bottles, BiB, and aseptic cartons. Whereas Ruggeri *et al.* (2022) researched to investigate how Italian wine consumers' attitudes toward wine in aluminum cans. Their results (Ferrara *et al*. 2020; Ruggeri *et al.* 2022) showed that only a minority of the respondents would consider buying canned wine, and the majority would not (*Ibid.*). The majority of the respondents were not willing to purchase canned wine because they believe that it is a low-quality product. Others mentioned that aluminum cans are not suitable for conserving wine. Ruggeri *et al.* (2022) concluded that the majority of consumers had little knowledge about canned wine before and that lack of knowledge about wine in alternative packaging other than glass bottles is a major limiting factor in favor of canned wine. Novel products and especially when new approaches for complex products such as wine appear, resistance and confusion are part of the response among consumers, this negative feedback on innovative approaches to wine can be linked to product phobia (Orlowski *et al.* 2022).

Nevertheless, innovative products could become the norm, an example of that is when Systembolaget in Sweden launched a version of the Bag-in-Box wine in 1996 (Systembolaget n.d.a). In the beginning, this packaging was met with skepticism during the 80s and 90s from consumers as well as from Systembolaget as it was not seen as a health risk to sell cheap wines in light cardboard packaging and plastic. However, now centuries later the BiB wine has become a standard packaging on the shelves in Systembolaget's stores (*Ibid.*).

One example of innovation within wine packaging, not currently in Systembolaget's wine assortment, is a bottle made of an outer layer of paper/cardboard, and an inner layer of a plastic bag, similar to a Bag-in-Box bud shaped as a bottle. In comparison to a single-use glass bottle, this bottle has a six times lower carbon foot and is five times lighter than glass (Frugalbottle n.d), with 92 grams of CO_2e/l (When in Rome n.d.a)

As recent as this year (2023), this product design won the price in global packaging innovation awards (Packaging Guruji 2023). Wine brands using this kind of bottle have expressed the vision of a combination of "[…]all the eco advantages of bag-in-box wine with the time-

honored ceremony of a traditional bottle" (When in Rome n.d.b). *Figure 12* visualizes a summary of the different packaging materials emissions, expressed in grams of CO_2e per liter.

Figure 12. Different wine packaging's related emissions (*g CO2e/l*).

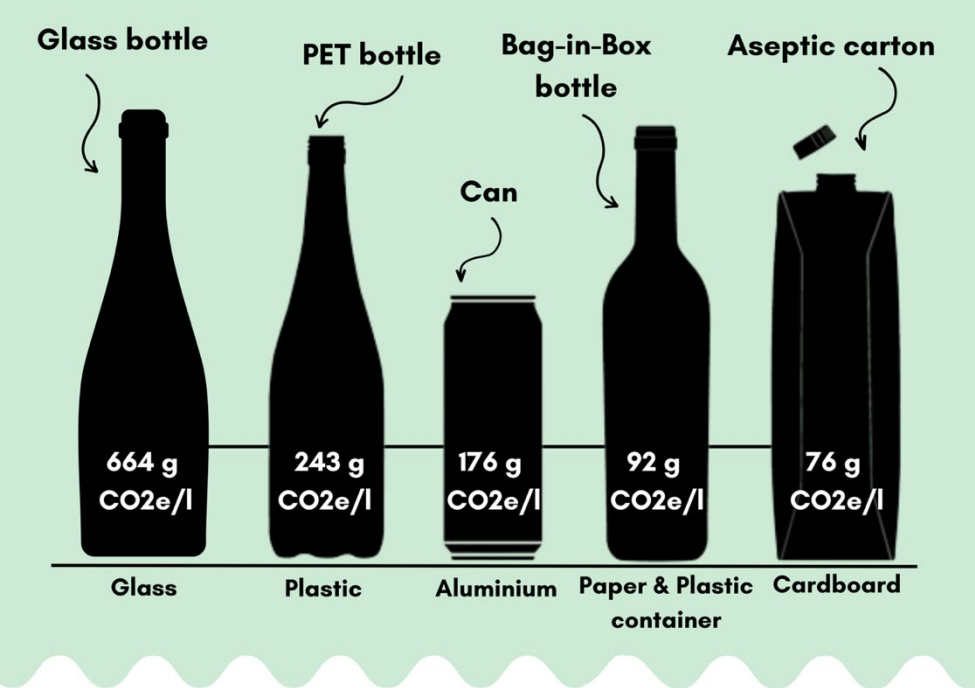

Figure 12 shows a scale, from the wine packaging with the highest emissions to the alternative with the lowest emissions.

4.5 The case of Systembolaget

Systembolaget philosophy differentiates itself on the market with no promotional prices and sells alcohol without interest in profit (Systembolaget n.d.j). Systembolaget is dedicated to promoting a positive environmental and climate impact across its entire value chain, which involves collaborating with growers, producers, suppliers, industry experts, and certification bodies (Systembolaget n.d.f). Through various initiatives focused on climate-smarter packaging, transportation, cultivation, and production, Systembolaget aims to foster a more sustainable industry on a global scale (*Ibid.*).

The largest climate impact of Systembolaget is indirect and relates to the production of packaging materials (Systembolaget n.d.f). Since the manufacturing process of glass is highly energy-intensive, switching packaging materials to cardboard cartons, PET bottles, or aluminum cans is preferable. Therefore, it is imperative that Systembolaget proactively engages in initiatives to identify more sustainable alternatives to traditional glass bottles. Aseptic cartons, plastic bottles, and aluminum cans not only have a lower weight but also offer better logistics, leading to reduced climate impact during transportation (*Ibid.*).

Systembolaget aims to become a fossil-free and circular business by 2030, extending this target to its operations. In every aspect of its operations, including stores, warehouses, and offices, Systembolaget is implementing circular flows to minimize its environmental impact (Systembolaget n.d.f). This encompasses several initiatives such as discontinuing unnecessary activities, reducing resource and energy consumption, relying solely on renewable energy, prioritizing reuse and recycling, and sustainable material selection (*Ibid.*).

Although sustainability aspects are one of Systembolaget's main objectives to improve in the upcoming years, climate-smart packaging has some advantages such as reduced CO_2e emissions in the production stage, and some disadvantages with the recyclability of PET bottles for wine in Swedish recycling stations (Systembolaget, Internal Document, 2023). PET bottles for wine contain a very thin middle layer of nylon to secure the barrier properties against oxygen migrating into the material, however, PET bottles for wine are colored and collected for recycling into new plastic products, currently not into new beverage bottles, but into transportation packaging such as cardboard stipes (*Ibid*.). This poses one of the barriers to the recycling of PET bottles as they cannot become new bottles for beverages, which is something that Systembolaget is currently trying to find a solution for (*Ibid.*).

4.5.1 Systembolaget's supply system

Systembolaget operates globally with a complex supply chain, with a majority of roughly 900 active beverage suppliers and their sub-contractors, who in turn have their own sub-contractors (Systembolaget 2022). Systembolaget is state-owned and has a monopoly on selling alcoholic beverages to consumers in Sweden. Systembolaget's operations are governed and shaped by several laws and regulations. Some examples include EU legal rules for monopolies; the Alcohol Law; compliance laws that require a systematic approach to regulatory compliance and risk management in areas such as corruption and data protection; and the state's ownership policy for companies with state ownership. These laws and regulations are important for ensuring that Systembolaget operates responsibly and follows applicable laws and regulations (*Ibid.*).

What gets decided to end on the shelves, Systembolaget conducts an analysis of market trends and insights to create its product range (Systembolaget n.d.h). The range is designed to be unique in its variety and depth and tailored to customer demand. Furthermore, it is important for Systembolaget to promote trends that encourage customers to make more informed choices, such as offering products with lower alcohol content, smaller packaging, and those that take into account environmental and fair labor practices. Each year, Systembolaget develops a product range strategy that serves as the foundation for its launch plan. The launch plan determines the types of beverages that will be in demand. For each launch, Systembolaget requests quotes from beverage suppliers that specify the type of drink it is seeking (*Ibid.*)

Systembolaget is subject to competition law regulations and must conduct its operations in a non-discriminatory manner towards all of its beverage suppliers (Systembolaget n.d.h). One of the fundamental principles of Systembolaget is brand neutrality. In order to maintain this

neutrality, three factors are applied: 1) transparency is a key factor, by applying non-negotiable purchase conditions that are the same for all suppliers; 2) Non-discriminatory, treating all suppliers equally; 3) removing brand and bottle in the selection process to remain objective and free of any bias, to focus solely on sensory evaluation.

4.5.2 Systembolaget's Sustainability Labels and Communication Channels

Systembolaget works actively through its sustainability labels and other communication channels, such as visual campaigns in-store as well as digital campaigns. Systembolaget currently has three sustainability labels: *Sustainable Choice, Organic, and Climate-smarter packaging* that are used as shelf-speakers in store (Systembolahet n.d.W), see *Table 6.*

Table 6. A list of three of Systembolaget's sustainability labels

Label	Definition
Sustainable Choice 'Hållbart val' 	Three criteria must be met to be labeled as a Sustainable Choice (Systembolaget n.d.g): 1) Environmentally certified cultivation and production 2) Packaging with a lower climate footprint 3) Approved result in our analysis of working conditions in cultivation and production
Organic 'Ekologiskt' 	The EU has set up certain rules for a product to be labeled as organic, firstly no chemical pesticides or artificial fertilizers may be used, when it comes to wine fewer additives are allowed in the production (Systembolaget n.d.b). The Organic label means that an independent control organization has certified the drink.
Climate-smarter packaging 'Klimatsmartare förpackning' 	Products labeled as climate-smarter packaging are aseptic cartons (Tetra Pak), cans, PET bottles, pouches, and returnable glasses with PANT (Systembolaget n.d.c) Climate-smart packaging has the least climate footprint (CO_2e emissions) during the production of the packages.

Table 6, part of Systembolaget's sustainability initiatives is to be more sustainable for people and the environment. The labels *Sustainable Choice, Organic,* and *Climate-smarter packaging* presented in the table are three of the most common labels seen in Systembolaget's stores as well as their online webshop.

Systembolaget uses other communication channels to present a variety of campaigns about climate-smart packaging (see *Figure 13*) in-store, on their online webpage, and on the Systembolaget app.

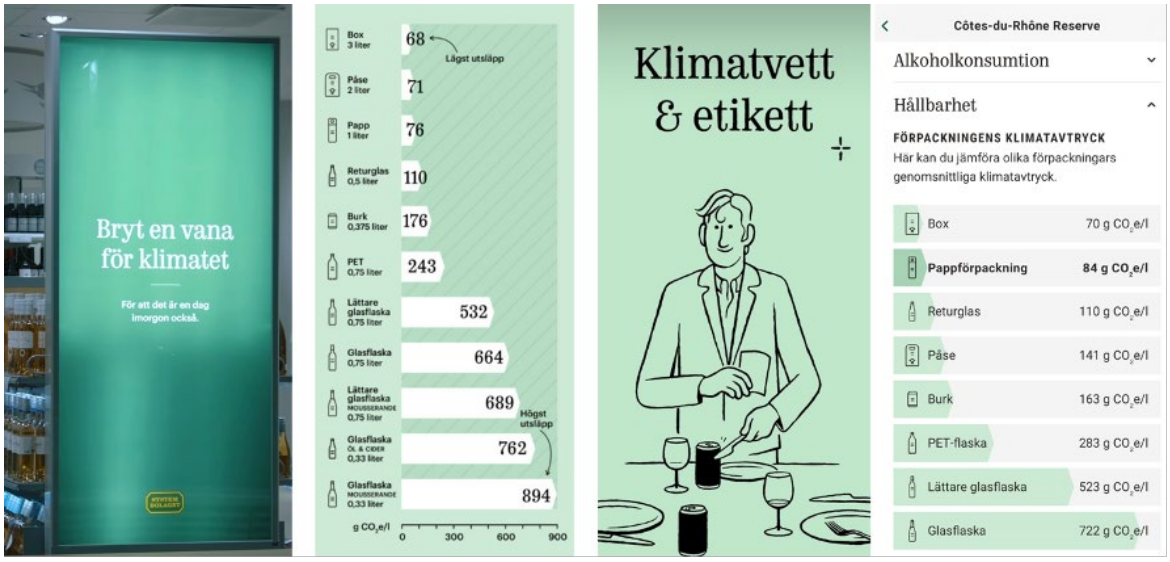

Figure 13. Communication campaigns on climate-smart packaging. From the left: 1. "Break a habit for the climate", 2. "The Graph", 3. "Climate awareness & etiquette", 4. Screenshot from the Systembolaget app on CO_2e emissions on the packaging choice. Source: Systembolaget.se

The first campaign, *Break a Habit for the Climate (in Swedish, Bryt en vana för klimatet)* is portrayed in Systembolaget's story and aims to encourage the consumer to change habits for the climate (Systembolaget n.d.d). The second campaign was referred to as *The Graph* by the consumers and the employees and shows a comparison of different packages' carbon dioxide emissions expressed in CO_2e emissions. *The Graph* is a calculation based on the weighted median of the sales volume in 2021. The data were then transformed into carbon dioxide equivalent emissions per liter of beverage for comparability purposes (*Ibid*.). *The Graph* is portrayed on the website and in smaller versions in the stores. The third campaign, *Climate awareness and etiquette (in Swedish, Klimatvett & etikett),* is a guide conveyed by Systembolaget on how to transform new habits regarding climate-smart packaging. The guide contains suggestions in chronicles, written by well-known Swedish public figures in the area of festivities, human behavior, and etiquette, on how to present PET packaging and cans on the table at dinner, and how to respond when dinner guests express disapproval towards aseptic carton packaging (*Ibid*.). *Climate awareness and etiquette* are presented on Systembolaget's webpage and interested consumers can also order a guide to be delivered to their homes. The final and fourth picture presented to the consumers is a screenshot from Systembolaget's app. The screenshot is from the filter function of a wine product, in which you can see the products' CO_2e emissions on average. This function is only available on the app.

5. Results

This chapter presents the results gathered from the focus groups with Systembolaget's consumers and store employees. The results are divided into four themes: Level of Knowledge; Design and Function; Communication; and Circumstances during Purchase. Each theme presents perspectives from employees and consumers, to give an overview of the different perspectives. The chapter begins with a visualization of how the green gap is present in this matter, which only presents results from consumers.

5.1 Presentation of the participants

The results of the study highlight both the consumer perspective and the employee perspective to give an overview of two perspectives on the same subject. One of the people behind the employee perspective has worked at Systembolaget for 20 years and the other for 3 years, this gave an overview of how sustainability campaigns and evolution have happened within those 20 years and if there has been a change and how. The participants in the focus groups were residents in different towns of Sweden, and are not consumers of the same stores. None of the consumers have visited the store where the employees work.

The focus groups were divided into three groups, all had different consumer segments: *folksy*; *traditionalist*; *the enjoyers of life*; *wine enthusiasts*; *etiquette*; and *party people*. The overall result from the focus groups indicated certain differences in attitudes and willingness to change behavior. Firstly, *etiquette* and *party–people* gave an overall impression to be more willing to try new and novel products, as they look more at design, packaging, and labels as indicators for quality. *Traditionalists* were more skeptical of novel wine packaging, indicating a fear of worse quality in other packaging for wine than glass bottles. *Wine enthusiasts* are very interested in wine and believe that wine is a pleasurable experience and have a lot of knowledge about the latest trends and flavor and quality are important attributes for them. They however prefer wine in glass bottles and would not consider buying wine in climate-smart packaging. *Folksy* do not care about trends in wine and prefer the packaging to be convenient rather than traditional. *Enjoyers of life* are open to being more sustainable but are skeptical about changing habits due to fear of declining quality and function. In summary, different consumer segments have different willingness, motives, and likeliness to "move the hand" from glass to alternative packaging.

5.2 The Green Gap

One of the questions in the survey: *I am interested in sustainability, and would like to buy climate-smart packaging when I shop,* the respondents were presented with four options; 1) I am very interested in sustainability and often buy climate-smart packaging; 2) I'm a little interested in sustainability and sometimes buy climate-smart packaging; 3) I am not at all interested in sustainability and do not buy climate-smart packaging: 4) own suggestion, see *Table 7*.

Table 7. Overview of the participants interest in climate-smart packaging

Focus group #	Gender	Age	Gender	Age	Occupation	Interest in climate-smart packaging
Focus group 1	Male (Consumer 1)	Under 30	M	Under 30	Student	I am interested in sustainability but do not buy sustainable packaging
	Female (Consumer 2)	Under 30	F	Under 30	Student	I'm a little interested in sustainability and sometimes buy climate-smart packaging
	Female (Consumer 3)	Under 30	F	Under 30	Student	Interested in sustainability but do not often choose packaging/product based on this
Focus group 2	Female (Consumer 4)	Under 30	F	Under 30	Student	I'm a little interested in sustainability and sometimes buy climate-smart packaging
	Female (Consumer 5)	30–39	F	30–39	Full-time worker	I'm a little interested in sustainability and sometimes buy climate-smart packaging
	Female (Consumer 6)	Under 30	F	Under 30	Student	I'm a little interested in sustainability and sometimes buy climate-smart packaging
Focus group 3	Male (Consumer 7)	Over 60	M	Over 60	Full-time worker	I'm a little interested in sustainability and sometimes buy climate-smart packaging
	Female (Consumer 8)	Under 30	F	Under 30	Full-time worker	I'm a little interested in sustainability and sometimes buy climate-smart packaging
	Female (Consumer 9)	40–49	F	40–49	Full-time worker	Little interested in sustainability but do not often choose packaging/product based on this
	Female (Consumer 10)	50–59	F	50–59	Job seeker	I am very interested in sustainability and often buy climate-smart packaging

Table 7, in this section, statements reflecting the consumers' interest in sustainability are presented. Out of the ten participants, six (Consumer 2, Consumer 4, Consumer 5, Consumer 6, Consumer 7, Consumer 8) showed little interest in sustainability and sometimes bought climate-smart packaging. Three participants (Consumer 1, Consumer 3, Consumer 9), wrote their own suggestions, they are interested in sustainability but do not buy climate-smart packaging/sustainable packaging, and it is difficult to know how to behave in-store to make the right choice. One participant (Consumer 4) is very interested in sustainability and often buys climate-smart packaging.

5.3 Level of Knowledge

The first identified theme presents statements concerning consumers' levels of knowledge about sustainability, climate-smart packaging for wine, and wine quality. In summary, the results show that a gap in knowledge exists on sustainability in the wine industry in general, about different packaging materials, and quality differences. The theme is divided into subthemes to capture the nuances within knowledge.

5.3.1 Sustainability in the Wine Industry

In the focus group discussions, a discovered topic related to their knowledge about sustainability within the wine industry compared to their knowledge about sustainability for other foodstuffs, such as meat, bananas, or coffee.

> "Compared to, for example, bananas and coffee, it has been taught that it should be bought sustainably, but I feel that I have never heard of sustainability problems in the wine industry, it doesn't feel like they exist" **Consumer 8**

> "I don't know what a sustainable wine or climate-smart wine is if it's not organic" **Consumer 2**

> "I had never thought that there were sustainable bottles or packaging when it comes to wine, it's not something I really thought existed. I thought all was equally good or bad. The focus for me has been to choose something organic" **Consumer 4**

> "I've been thinking about organic labels for several years. But when it comes to sustainable packaging, I think it's probably only the last year that I've noticed it" **Consumer 6**

As a sustainability indicator, some consumers mentioned their knowledge about 'organic' labels. However, when asked about sustainability aspects within the wine industry in general and then specifically about climate-smart packaging, there seemed to be a gap in knowledge among the respondents about the sustainability issues around it.

There seemed to be a gap in knowledge regarding the sustainability aspects of the wine industry in general, and climate-smart packaging in particular. However, Campaigns for organic products have been marketed for a long period of time in society for different foodstuffs,

compared to climate-smart packaging options in Systembolaget, which have been marketed and labeled during the last year.

> "A year ago, when the climate-smart drive started, it was clear from the headquarters that they expected us to have some kind of communication with consumers about what it means" **Employee 2**

Thus, the comparison between 'organic' and 'climate-smart packaging' as campaigns are different to compare, due to the differences in time and longevity. Yet, insufficient knowledge about sustainability within the wine industry remains, and the problems behind the production of wine glass bottles.

5.3.2 Wine Quality

Quality aspects of wine in climate-smart packaging in comparison to wine in glass bottles were an apparent topic from both employees and consumers. One employee described how they must be completely convinced that the packaging does not play any role in the quality of the wine. If they believe it, they can convey the message to consumers and help them make a more sustainable choice.

> "As an employee, I experience the challenge to convince the consumer that the quality of climate-smarter packaging is unchanged. It is important that we as sellers are trained well so that we can demonstrate the quality difference between wines that we are convinced of. When we are convinced, so is the consumer" **Employee 1**

The implication is that the employees need a good education as well as more wine tastings, to gain more knowledge about the taste and quality of wine in climate-smart packaging. After working with wine and food for an extended period of time, the employees too can experience internal barriers towards climate-smart packaging as individuals.

> "As a private individual, I find it difficult to be completely convinced that the quality of the wine in climate-smart packaging is as good as in the glass bottle, even though I know that is not true. And that's part of the problem" **Employee 1**

The problem arises when Systembolaget's goals are not perfectly transferred to the employees' personal beliefs since the employees are a product of social norms too. But through better employee training and education, this obstacle could be corrected. On the consumer side, the fear of declining wine quality showed to be a strong factor in why they would not purchase climate-smart packaging.

> "It is a bit of a fear, choosing wine in paper packaging that the wine does not have the same quality" **Consumer 4**

> "I would never buy wine from alternative because I am afraid that the quality will decrease, and taste bad, like plastic" **Consumer 9**

The term 'quality' is a subjective mention, but was referred to a fear of declining taste, and that the wine would not meet the expectation compared to wine in glass bottles. Discussions were

also held about the learned narrative about alternative packaging, especially in terms of aseptic cartoon and PET bottles, that have been in the stores for several years but are associated with cheap, bad-quality wine.

> "PET packaging is a clear quality indicator, it is a simpler, cheap, younger wine, it is not suitable to store wine in PET for a long time" **Consumer 1**

The term 'quality' can also differ. On one hand, it can encompass the consumers' subjective experience. On the other hand, it can encompass the level of complexity of the wine. As mentioned by one consumer, alternative packaging is a clear quality indicator in the way that it is suitable for younger wines, something that one employee also mentioned.

> "If a consumer wants to buy wine from Barolo or Châteauneuf-du-Pape they have to buy heavy glass bottles, there are no alternatives. This is because certain wines must be aged for years in a bottle" **Employee 1**

In other words, more complex wines from certain wine regions are only allowed in glass bottles, leaving the less complex wines to climate-smart packaging. From a consumer perspective, this can possibly imply a connection between "less complex wine" and "bad wine". With more alternatives entering Systembolaget each year, this conception may change over time. It must also be mentioned that the volume that sells the most and is most important to sell in climate-smart packaging, is within a price span that does not allow more complex wine (Systembolaget, Internal Document, 2023). Thus, the majority of consumers usually purchase younger wines but may perceive them as high-quality wines due to their familiarity, pointing out the complexity of consumers' choices.

5.4 Design and Function

Statements concerning climate-smart packaging design and function are collected under this theme. The first subheading collects topics about the designs' importance. The latter subheadings present attitudes towards different packaging options, shown in the focus groups. In the focus groups, the participants got to write down their immediate thoughts when seeing the packaging. Associated words are therefore presented. The different packaging options for wine are sold in Systembolaget, except for *5.4.5. Wine in Cardboard and Plastic – "BiB-Bottle",* which only comes in a bottle of liquor from a specific brand.

5.4.1 Design

The design was proved to have an essential role in the willingness to purchase climate-smart options, accordingly to employees and consumers. Here, design is defined as the outer look of the packaging, including labels. The exterior of the product is the only thing that consumers can judge since they cannot reveal what is inside the package. Therefore, design elements such as color, shape, and size are all part of the external packing cues. Thus, design can function as a creation of "consumer identity", and therefore a key factor in the creation of safety, familiarity, and habit.

An issue that is identified by one employee is that some wine producers frequently alter their packaging but with identical wine. For instance, one day it may come in a long, regular bottle, and the next day it may be in a round bottle.

> "It is important that producers use the same type of bottle for an extended period of time, as consumers who purchase the same bottle out of habit will get confused" **Employee 1**

This statement points out the importance for producers or wine marketers to create a long-lasting relationship with the consumers, especially concerning food products that are loaded with emotions, such as wine. The design of the wine bottle and labels are two of the most prominent attributes consumers first look at. Some respondents expressed their opinions and mention how when in doubt they look for a nice-looking bottle.

> "I go by label a lot – it has to be a nice bottle" **Consumer 2**

> "Sometimes you feel like trying something new. How the bottle looks are the first thing that attracts you, and then comes price and taste" **Consumer 3**

> "When I look among the bottles, I search for something that looks good, maybe award-winning etiquettes on the label" **Consumer 4**

> "I definitely care about how the bottle looks; it is a part of the experience" **Consumer 9**

A thread of evidence points out the importance of design and labels, functioning as external packaging cues. In the next sections, different climate-smart packaging options are visualized, and the attitude towards the design, material, and function are presented.

5.4.2 Wine in cans

Five different examples of canned wine were shown to the consumers, visualized in *Figure 14*. In summary, consumers showed skepticism towards canned wine (volume 200 ml, 250 ml, 375 ml). However, it was a favorable choice during certain circumstances. The consumers associated wine in cans with words such as *"suits different contexts", "beer", "lonely", "expensive" and "nice design"*. Several of the participants had not seen it before.

Figure 14. An illustration of wine in cans in various volumes (200 ml, 250 ml, and 375 ml). The bottles are not representative of the current collection at Systembolaget.

One consumer associated the packaging with beer and cider, which often is served in aluminum cans, and did not find it suitable for wine.

> ”It doesn’t feel appealing at all for wine. It feels like beer and cider” **Consumer 2**

Two consumers stated their unfamiliarity with the product and expressed unwillingness to purchase it.

> “Is that for wine? I would never buy it” **Consumer 9**

> “I've never noticed canned wine, so I imagine I'll never buy it. But it's only one portion, for one person. I don't drink wine alone, I share wine with people and then I buy something bigger” **Consumer 6**

Additionally, the smaller portion size was discussed. Some consumers stated that it was a single portion, something that does not fit all occasions when drinking wine. Wine is meant to be shared with others, then a larger portion size is more appealing. The price in comparison to the smaller portion size became a discussed topic as well. It would be too expensive to purchase many of them if you want to drink them with others.

> “Is the idea to drink the wine? It would be more suitable if you're going to cook food and need a smaller amount” **Consumer 3**

> “It is a picnic wine on the go” **Consumer 1**

Canned wine was favorable for certain occasions e.g., when cooking food, bringing to a picnic, or traveling, as it was seen to be more convenient in weight and not as fragile as glass.

5.4.3 Wine in PET bottles

Four different examples of wine in PET packaging were shown to the consumers, shown in *Figure 15.* The discussion about wine in a PET bottle circled around the quality of the wine and material. The consumers associated wine in a PET bottle with words such as *“cheap”, “looks like a glass bottle” “bad taste”, “better volume” and “picnic”.*

Figure 15. Four different PET bottles for wine with a volume of 750 ml. The bottles in the picture are not representative of the current collection at Systembolaget.

The PET bottle was a favorable option for occasions such as travel, picnic, or if you need a more lightweight bottle.

> "If you are going to travel a long way or if you are going out on a picnic and need to carry a lot of stuff, it might be practical to have this kind of packaging rather than the glass" **Consumer 5**

The weight seemed to be the factor of PET packaging that was most positive. However, quality aspects were most discussed. One consumer expressed how the wine in a PET bottle is a quality indicator, relating back to the results under *5.2.2 Wine quality.* If consumers are looking for more complex wines, the fact that the wine is served in PET indicates that the wine is younger and simpler. In addition, many consumers expressed a fear of plastic affecting the taste, or the shelf life.

> "I get a little worried if the plastic affects the taste, and if it would affect the taste of the wine or the shelf life, for example" **Consumer 4**

Further, according to an employee, many climate-smart packages do not feel satisfying to hold in the hand. For example, the plastic used feels "poor in quality". A suggestion provided is that producers should invest in designing bottles of better plastic, for example, hard plastic that feels like a lighter glass bottle.

> "By imitating the glass bottle as best as possible with the labels in the same place, it shouldn't matter as much to the consumer, they should be delighted to realize that they are contributing to a better environment, and a plus is that it is easy to carry" **Employee 1**

This statement corresponded to one consumer's perception which associated the PET bottle for wine with a juice bottle, which did not feel appealing for wine.

”The plastic bottle is soft when you hold it. When you pour, it feels a bit cheap, like pouring juice and not wine” Consumer 4

A topic relating to the material and the discourse about plastics’ environmental impact, in comparison to glass, was brought up by both the employees and the consumers. One consumer brought up health-related concerns about plastic chemicals affecting health.

“When a consumer buys a plastic bottle instead of glass, I always say "climate-smart packaging choice!", But a lot of consumers are surprised because they have only heard the bad narrative about plastic” **Employee 2**

“It feels like plastic packaging is worse than glass, I had no idea that it is the contrary” Consumer 8 “Is this really climate-smart?” **Consumer 9**

“Plastic is so diversified if it comes from oil - no, but if it comes from other sources - yes. I don't know where I stand in the climate debate” **Consumer 3**

It feels like plastic in general should be avoided. I also think about if chemicals in the plastic can affect the wine. I am thinking about health perspectives and not just the environment” **Consumer 4**

Thus, consumers’ perception of plastic as “bad for the environment” or “bad for the health” in comparison to glass catches a broader discussion and debate on materials’ environmental and social impact, in which consumers’ knowledge or personal conviction will matter.

5.4.4 Wine in Aseptic Carton

Three different examples of wine in an aseptic carton were shown to the consumers, visualized in *Figure 16.* The consumers associated wine with aseptic cartons, or cardboard, with words such as *“juice bottle”, “bad quality” “good for large events”, “climate-smart”* and *“practical”.*

Figure 16. An illustration of wine in an aseptic carton (Tetra Pak) is currently displayed at Systembolaget.

A concern regarding the quality, storage, and taste of wine in an aseptic carton was expressed.

> "I am concerned that the cardboard packaging will affect the taste of wine, even if it might be good wine, that it will deteriorate" **Consumer 4**

> "I associate it with cheap wine, and not very good either. I have not been impressed by the wines I have tried in cardboard" **Consumer 2**

Additionally, it was associated with cheap wine, and the assortment was not decent enough. Despite the concerns about taste and quality, it is associated with the most climate-smart alternative. However, a wish for better wines in the aseptic carton assortment still remained.

> "It seems to be one of the most climate-smart options, so I will definitely continue to buy packages like this and hope I find one that tastes good too" **Consumer 6**

> "Tetra has a low status in the wine world yet it is the best option from an emission perspective. You must make it elegant and have the same form and feeling as a glass bottle of wine. And it must be clear that there is no difference in taste" **Consumer 7**

One consumer expressed the need to make the aseptic carton more attractive, by designing it more similar to the glass bottle, and communicating that the quality will not decrease. In similarity, this was stated by a store employee.

> "Exclusive cardboard packaging design would probably be something to develop. But also, increase the information that cardboard packaging is an incredibly good way, not to store wine, but to keep wine" **Employee 2**

With over 20 years of working in Systembolaget's store, the employee suggested using aseptic cartoon packaging but designing them exclusively. Furthermore, the employee spoke about the need to educate consumers about the aseptic carton packaging great capacity to keep wine. Since the packaging shield is not transparent, the wine's characteristics will not get declined by light.

5.4.5 Wine in Cardboard and Plastic – "BiB-bottle"

Four different examples of wine in cardboard and aluminum were shown to the consumers, as well as an example of how to recycle it, visualized in *Figure 17.* The final packaging is composed of plastic as the container and an outer shield of cardboard. In other words, it shows similarity to Bag-in-Box (BiB) in its composition, but with a bottle design. The consumers associated wine in the BiB-bottle with words such as *"nice design", "climate-smart", "innovative", "table-friendly"* and *"modern".*

Figure 17. An innovative packaging for wine made out of a plastic container (inner layer) and paper/cardboard (outer shield). Source: (Packaging Guruji 2023); (When in Rome n.d.b).

The general attitude towards the BiB-bottle was positive among the consumers. One consumer expressed the need to design according to the glass bottle, the habit.

> "I believe in the Bag-in-Box variant. They need to work towards something that looks like a bottle, a norm, a habit" **Consumer 1**

The design was also appealing, with an appreciation for the "new way of thinking" with the material.

> "I think it's a very nice design, noticed it right away. It was cool that the bottle was in a material that no other bottle is in and a new way of thinking" **Consumer 5**

One consumer expressed interest in the BiB-bottle due to its table-friendliness, by combining the look of the glass bottle with the composition of a Bag-in-Box, it creates an accepted product.

> "I think it is innovative and a modern way of thinking forward when it comes to packaging. It shows awareness of consumers' preferences for glass bottles. It looks like a bag-in-box, although this is a little nicer, you can put it on the table" **Consumer 4**

Another consumer put more emphasis on the product's shelf life; how long time it is suitable to store after opening the product. Since BiBs have the greatest shelf-life after opening compared to the other alternatives, a longer shelf-life would make an excellent selling point, with sustainability being a bonus.

> "If it had the same shelf-life as regular Bag-in-Boxes, I would definitely buy it" **Consumer 7**

Despite the overall positive attitude, consumers who were more wine interested would still not purchase it, pointing out the important notion that not all consumers will be able to switch products and change their behaviors. Consumers with wine as an interesting desire more complex wines not able to produce in climate-smart packaging.

One consumer expressed that more producers should switch to more climate-smart packaging, because at the moment, a limited assortment of climate-smart packaging is available at Systembolaget, and consumers expressed that more alternatives should be made available to have more options to choose from. Therefore, a suggestion by the interviewees is that producers of the more famous brands should sell their alcoholic beverages in more climate-smart packaging to increase the incentives for purchasing an alcoholic beverage that the consumers are already familiar with, but in a more climate-smart packaging.

> "But it is also important with the quality of the wine, the price, are the climate-smart alternatives affordable, is it any good? Is the wine of good quality? If someone I usually buy wine from were to switch to one of the alternative packaging, then maybe one would have more confidence to purchase wine in climate-smart packaging" **Consumer 4**

5.5 Communication

The theme of communication encompasses three topics. First, thoughts on the strategy of the employee functioning as a communicator, or as a provider of information, are presented. It contains statements on challenges and discussions on desirable tools to increase the efficiency of employees being communicators. Second, consumers' and employees' knowledge and attitudes on Systembolaget's communication campaigns or channels about climate-smart packaging are conveyed. Lastly, desired communication campaigns are expressed, to provide suggestions for future outlooks.

5.5.1 The Employee as a communicator

From the perspective of the employee, it is an expectation from the headquarters that the store employees are communicators or providers of information regarding climate-smart packaging. As employees, they recommend wine in their daily meetings with consumers and are trained to recommend a more sustainable choice.

> "A year ago, when the climate-smart drive started, it was clear from the headquarters that they expected us to have some kind of communication with consumers about what it means. We got some informative video clips, but not much more" **Employee 2**

> "In my role as an employee, I try to promote climate-smart packaging and educate consumers about the amount of carbon dioxide they can save when choosing between two wine alternatives. Nonetheless, conveying this information can be challenging at times" **Employee 1**

The employees have expressed that the educational initiatives offered by the headquarters to help them inform the consumers are inadequate, leaving the communication task slightly

difficult. In addition, certain trade-offs need to be made regarding Systembolaget's law-bound guidelines (brand neutrality) and sustainability-related goals. This contradiction makes the task a challenge, expressed by both employees.

> "For me, it feels like I am not following the law's philosophy when promoting climate-smart wine packaging because, at Systembolaget, we have brand neutrality. This makes it challenging for me to influence consumers towards a particular choice, as we have to remain neutral and unbiased between the available options" **Employee 1**

> "The boundary between recommending climate-smart and not rewarding any particular product, e.g., brand neutrality, is difficult. It is an active, ongoing discussion within Systembolaget. It is a legal issue relating to the EU, so it is difficult to solve. But there are not really clear guidelines on how we should act around it, and the big challenge is really to get every employee on board. I think if every employee communicated it clearly towards the consumers, it would have a greater and more effective effect on them" **Employee 2**

In similarity, one consumer stated that it sometimes can feel weird that the employees try to bring up packaging in their meetings.

> "It can also be… I don't think it's good to push too hard either. It feels a bit strange that they suddenly have a monopoly on packaging as well and have to stand and talk about packaging in some way" **Consumer 1**

Another challenge regarding conflicted goals is regarding the selling of BiBs. It is the most climate-smart option and the cheapest counting price per volume. However, alcohol consumption will increase, which makes it a trade-off between social and environmental sustainability. One of Systembolaget's missions is, after all, to reduce overconsumption of alcohol.

> "Alcohol consumption goes up 30% if you buy a box, it's a trade-off" **Employee 2**

In order to make communication about climate-smart packaging as easy as possible, the employees at the specific store have developed a reference system on CO_2e emissions to provide consumers with relevant information. The reference system compares the CO_2e emissions of packaging, with the CO_2e emissions of a car ride or eating meat. This tool is something that they have built in their own interest and is not something provided by the headquarters. According to the employees, it works and has a reinforcing effect. Now, many consumers at that specific store know more about climate-smart packaging.

> "When a consumer purchases a climate-smart option, I say "climate-smart choice there!" and provide them with information on how much CO_2e they save by making that choice. This is something that was not communicated at all from the headquarters, it was us, some of the employees at this store, that decided to create a quick reference system or variables in which we referred the saved CO_2e to driving a car or eating meat. It works, it's something intuitive that people understand. But I do it out of my own interest. We haven't received any training on it from the headquarters, most of the things we communicate are systems we've built ourselves" **Employee 2**

> "Now we have mentioned it so many times that consumers mention it themselves. We often hear that the climate-smart alternatives are easier to carry, but now we hear more about their positive climate impact, too. I think we are an important source of that" **Employee 2**

From the employee's perspective, it would be helpful with better educational support from the headquarters. Despite the successful effect, the employee still mentions that there are many consumers that get annoyed by this, leaving the feeling of a big responsibility on the employees regarding these questions. From the consumers' perspective, many of them cannot recall conversations about sustainability or climate-smart packaging with the employees in the stores where they purchase their wine (distributed in different cities in Sweden). On the other hand, many of them usually don't speak with them during their visits.

> "I don't remember the employees saying anything about sustainability in my meetings with them. But I never ask for wines with sustainability characteristics. After all, you get the answers to the questions you ask" **Consumer 3**

> "I don't usually talk to the employees that much, I usually check the shelves, they have such good descriptions on the shelves of what the wine is suitable for. I think it's rare that the employees are free, they are usually so busy manning the tills" **Consumer 5**

One consumer discusses that the employees often are busy, but that the shelf speakers are good enough to provide information about the product.

> "I ask the employees when feeling confused, or if they know something more that I might not know if I should choose between two bottles" **Consumer 4**

> "I usually don't talk to the employees, but since I trust their judgment, I would believe them if they presented information about how the quality doesn't get affected by alternative packaging, for example" **Consumer 9**

If the consumer is experiencing confusion about two options, the employees' judgment matters. Another consumer mentions that the employees' judgment is trusted; that they serve as trustworthy figures with their knowledge and information.

5.5.2 Communication Campaigns

In this section, examples of different communication campaigns in Systembolaget of climate-smart options are provided. The examples were shown in the focus groups as a visual material to stimulate discussion about their knowledge and impression of them. First, three shelf speakers with different information (*Organic, Climate-smart packaging, and Sustainable choice*) were shown to the consumers, visualized in *Figure 18*. The shelf -speakers are located next to the bottle in the store, to provide the consumer with additional information about the wine's sustainability characteristics.

Figure 18. Shelf speakers at Systembolaget. From the left: 1. Organic, 2. Climate-smart packaging, 3. Sustainable Choice. Source: Systembolaget.se

The overall effect of the shelf speakers as a communication channel is that the "Organic" speaker was most known, the "Sustainable choice" speaker was least known, and the "Climate-smart packaging" speaker was known, but the association to what it means differed. Some consumers felt confused about the different messages and about the potential greenwash effect.

> "But yes, it is informative because it is green, you can see that it is good. But does it even make a difference, is it even better?" **Consumer 8**

> "There are many different combinations of labels and different choices, so it is difficult to know which one is the very best sometimes" **Consumer 5**

From the perspective of an employee, the shelf speakers provide a collective impression of "greenness" but imply that the message that "something is good" is not sufficient information. There is a need for numbers, or something to relate to, to really attach information.

> "I absolutely believe that the collective, total impression of the shelf speakers gives some kind of effect. However, the message that "something is good" is not good information. The consumers need to be involved in the information" **Employee 2**

Further, four campaigns or communication channels about climate-smart packaging were shown to the consumers in the focus groups, visualized in *Figure 19*. The examples are a mix of campaigns presented in-store, at Systembolaget's online webpage, and on the Systembolaget app.

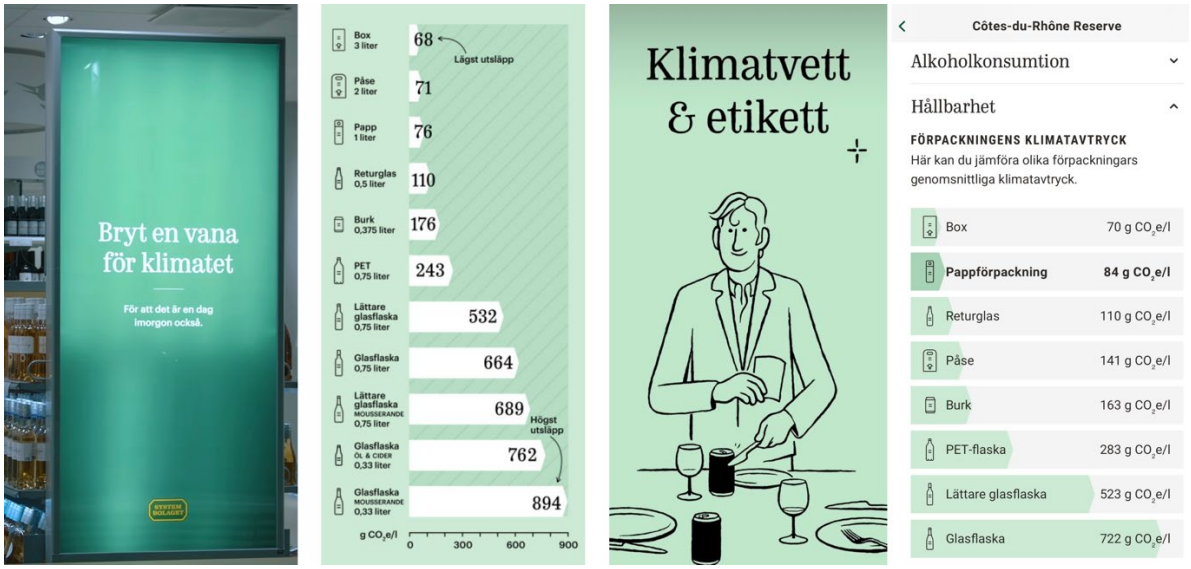

Figure 19. Communication campaigns on climate-smart packaging. From the left: 1. "Break a habit for the climate", 2. "The Graph", 3. "Climate awareness & etiquette", 4. Screenshot from the Systembolaget app on CO_2e emissions on the packaging choice. Source: Systembolaget.se

Instantly, many participants reacted to 2. "The Graph", is where the majority of the discussion took place. One consumer stated that "Break a Habit for the Climate" did not make a significant impression, but The Graph seemed interesting and telling.

> "The one on the left (Break a Habit for the Climate, eds. note) is like any advertisement, noting special. The second one I definitely haven't seen (The Graph, eds. note), but if I would see it, I would definitely have looked at it and studied it. I have no prior knowledge about this, it is interesting" **Consumer 3**

> "I think the one with numbers (The Graph, eds. note) is good, it's very telling. If you are a consumer who wants to make a difference, then there is a pretty strong case for a certain type of packaging" **Consumer 1**

The discussions also encompassed individuals' knowledge of CO_2e equivalents as variables, since "The Graph" expresses the different packaging alternatives with CO_2e equivalents as variables on a scale. One consumer had a notion that it is important to have something to relate to the numbers, and not rely on consumers' knowledge about equivalents.

> "Then the picture of emission is better (The Graph, eds. note) but you need the scale and not only numbers because CO_2e is quite difficult to put into perspective if you have nothing to compare it to" **Consumer 8**

Another consumer pointed out that the individuals' knowledge can strengthen their ability to understand such numbers.

> "Yes, as someone familiar with carbon dioxide equivalents, I would absolutely say that I understand what it means" **Consumer 3**

In similarity, one employee discussed the advantage of having something to relate the numbers to, in other words, a reference system to translate CO_2e equivalents to consumers without knowledge. In the employee's experience, many consumers lack knowledge about its'

meaning, implying that more, easier information would make their task easier. In addition, the employee suggested that “The Graph” should be visualized more in-store.

> “It is not enough to say "climate-smart products are good", people want numbers. You have to be able to argue against the arguments we encounter. However, the thing is that no one knows what carbon dioxide equivalents are, it's completely uninteresting really from a consumer perspective. I think the graph that exists is good, it should be shown more for the consumers in store. But it would have been better to have a quick reference system for argument purposes, it wouldn't hurt if there was a car on that graph too, explaining or giving visualizations for consumers so they will be able to compare or grasp the number in an easier way” **Employee 2**

The fourth communication channel for climate-smart packaging showed a filter function on the app, that enables a comparison of the chosen products’ packaging emissions expressed in CO_2e equivalents. Not all consumers used the app, and for those who did, not all knew about the app’s filter function for packaging. One consumer used it as a quality indicator to ensure that only glass bottles were a part of the choice. Additionally, the consumer did not notice the carbon dioxide equivalents.

> “I use the packaging filter every time I'm on Systembolaget's app and website, but I honestly didn't think about it saying carbon dioxide equivalents under there. I just choose the glass bottle as a quality indicator” **Consumer 1**

Another consumer stated that the individuals’ needs are more prudent when choosing packaging, rather than sustainability characteristics, implying a suggestion to develop a collected place for the climate-smart wine instead.

> I believe that many individuals, including myself, tend to focus more on choosing the packaging that suits their specific needs rather than considering its environmental impact. Perhaps, it might be prudent to create a separate subcategory for sustainability aspects” **Consumer 3**

None of the participants knew about the third campaign “Climate awareness & etiquette”, but one consumer got interested in the campaigns’ chronicles during the focus group and searched for them. However, the consumer did not find the chronicles effective and suggested shorter and more commercialized ways to reach consumers’ interest.

> “They are too long and difficult to find. They need to make it shorter, with a punchline, and make it more trustworthy” **Consumer 7**

5.5.3 Desirable Communication for Future Outlooks

The discussion on communication perused to conversations on what would have been more effective, or how the consumers wished to be educated about climate-smart packaging, both expressed by employees and consumers. One employee suggested relating the campaigns to the debate of society. During the year 2023, the debate on the price of electricity has been prominent. By comparing a glass bottle to a one-kilowatt hour of electricity, the consumers’ have a relevant reference system to make the understanding of its climate impact clearer.

> "It would be a smart campaign to catch today's debate of society. For example, comparing one glass bottle to a one-kilowatt hour of electricity" **Employee 2**

In addition, the employee suggested adding carbon dioxide to the receipts, something that had previously been discussed within Systembolaget. A reference to an old, successful Systembolaget campaign about an interactive game in the cashier with flashcards was brought up, as a reflection on what could be developed in the future. The point is to make the educational efforts more interactive and inclusive, to make consumers think more about their choice.

> "Carbon dioxide information on the receipts was a brilliant idea. Otherwise, make the information more interactive, as the playing cards we had before about showing legitimation, but name it e.g., "The climate game" **Employee 2**

On the other hand, the consumers had different suggestions on communication that they would think were more effective. Relating to label information, one consumer thought to have the information close and in relation to the product.

> "I believe in keeping it simple and having information close to the product because that's where you stand and think about the purchase" **Consumer 3**

Another consumer brought up the need for them to be a bigger size or in different colors than just green, to make them stand out more and reduce the risk to walk past them.

> "I like the labels but would have preferred them to be maybe bigger or a different color so they are more visible because sometimes I think they can disappear when you have to make a choice, you might miss them" **Consumer 4**

Developed knowledge about climate-smart packaging is the key forward, according to one consumer. Furthermore, the consumer argued for the perceived guilt that can occur when purchasing something "environmentally bad", and that the guilt comes from knowing more about the products' sustainability characteristics.

> "I think consumers need to feel more guilty when they don't buy a sustainable alternative, and that guilt builds up with increased knowledge. Personally, I don't know where in the wine process the climate emissions occur or why, the consumer needs to know more about that. They need to know what the consequences are of buying "conventional" packaging" **Consumer 8**

How to increase knowledge and the incentives to purchase climate-smart packaging, then? According to one consumer, the fact that the taste does not get affected by the packaging material needs to be highlighted more. From the consumers' viewpoint, having an "authority" to explain this can have a contradictory effect. Instead, Systembolaget should focus more on using public figures with wine knowledge as "outer voices" to provide praise about climate-smart packaging.

> "I wouldn't like to be informed about climate-smart wine packaging by being pointed to by an authority. I would like it to be a well-known wine character who can vouch for no difference in taste, maybe one of the great wine connoisseurs, someone who has the knowledge and are accepted by the Swedish people" **Consumer 7**

The consumer provided a personal example of a situation in which climate-smart packaging was purchased, and why that happened.

> "I recently purchased a Tetra Pak of Beaujolais Nouveau, a youthful French wine that has quickly become a favorite of mine. It's simple and elegant packaging - well-suited for a young wine, making it approachable, no one would be afraid of it. That variant is also offered in glass packaging. My attention was drawn to this specific Tetra Pak by a recommendation in Dagens Nyheter from a well-known, respected, and widely recognized public figure, whose recommendation served as a trustworthy indicator" **Consumer 7**

The consumer's driving force to purchase climate-smart packaging was by reading a wine recommendation written by a trustworthy public figure with knowledge of wine who advised it. In the recommendation, a picture of the Tetra Pak with the text *"Don't miss the opportunity, this is really good. Don't be afraid of the Tetra Pak",* was provided. The consumer then trusted the choice and bought the climate-smart package. Another consumer also suggested that the communication should be in collaboration with other stakeholders to anchor the message better.

> "They could collaborate with and establish ambassadors or stakeholders through associations (e.g., the Nature Conservation Association). In this way, they can anchor their message more clearly. The message should be that climate-smart packaging is better for the climate, but that it is more practical should be at the core" **Consumer 10**

The advantage that it is practical, e.g., that it is easier to recycle, easier to carry home, and that it is cheaper – factors that can gain the individual, should be highlighted more, according to the same consumer. The climate aspect should be an additional benefit, but not the message's main core.

5.6 Circumstances during Purchase

In the purchasing phase, certain circumstances or contextual factors were discussed that could influence the purchasing decision.

5.6.1 Location in Store

The first circumstantial factor concerns location in the store environment. How the products are located within the Systembolaget stores seemed to fill a vital role in consumers' purchases, both from the employee and consumer perspectives. This can also be related to the relatively low seeking of information beforehand. In other words, consumers tend to enter the store and go to their favorite wine section, divided by country of origin, or to the shelf of Temporary Assortment *(in Swedish, Tillfälligt sortiment)* without a plan of their purchase.

> "I don't have an exact plan of what I will purchase, I just go to the store. In similarity to [consumer 2] who usually goes to the American shelf, I usually go to the Italian one. There, it is always products that I recognize and know are good" **Consumer 3**

There seemed to be a habitual act in visiting already known shelves, with security in knowing that the choice is familiar and will have a good taste. Thus, "taste", being highly subjective, the consumers have different shelf preferences. The similarity is, however, that shelves provide a sense of safety.

Additionally, the importance of the shelves and product placements were discussed in relation to climate-smart packaging. According to a store employee, a clear advantage exists to re-organize the store to put climate-smart packaging on a separate shelf, making it easier for consumers to find them.

> "To make it easier for consumers to find sustainable wine options, including climate-smart packaging, there should be designated sections for these products in the stores. Ideally, separate shelves for climate-smart packaging, natural wines, and sustainable wines would allow consumers to easily navigate and locate these products without any confusion" **Employee 1**

From this viewpoint, not having separated shelves can create difficulties for consumers to locate climate-smart products and may discourage them from making sustainable choices. However, the employee was also flagged for the difficulties in making this work in practice, due to the regulations Systembolaget has to follow. Correspondingly, this solution was discussed as relevant from a consumer's perspective.

> "The absolute best in terms of climate-smart packaging would be that they were placed on a separate shelf. It limits the search process; you know exactly where they are. But I understand, it will be difficult logistically. But it would be nice of Systembolaget to solve it that way, they can expand it gradually" **Consumer 7**

> "Change the stores. Have the sustainable packaging in a separate department, maybe invest in having extra employees there at the beginning so people can ask" **Consumer 10**

One consumer highlighted the logistical difficulties with a potential re-organization of the store, but that it is something that can take form over time. Another consumer discussed the point of having employees at the potential climate-smart shelves to inform and answer questions about the benefits of alternative packaging. However, a counter mention regards this is the risk of separating climate-smart from the glass alternative, in terms of forgetting that they exist when searching in the ordinary sections with glass bottles.

> "If you have them next to nicer bottles, it is an indication that the quality and taste are the same. If you put them somewhere else, consumers might think "What is this new thing?" and purchase a familiar choice instead. Put them next to the glass bottles, but make them stand out more, and show that they are a better option" **Consumer 4**

Due to the familiarity and the subjective preference for shelves and glass bottles, consumers can pay attention to the climate-smart alternative if they are placed alongside a glass.

Additionally, it can serve as a quality indicator, where the trustworthiness of glass can have a spillover effect on the alternative.

5.6.2 Contextual Factors

Contextual factors encompass topics concerning the situation the purchase is being made. For example, geographical contexts, where the consumers are residents, how far they have to recycle stations or demographical factors such as age. As exemplified by an employee, the stores' geographical location can determine consumers' willingness to purchase sustainably. The store where the employee works have a high rating in the interest in climate-smart packaging in Systembolaget's consumer surveys conducted twice a year, which is derived from the reflection of the general knowledge towards sustainability in that geographical area of Stockholm (City South).

> "I think our consumers' involvement in these questions is a self-reinforcing effect because people in this area are already more aware of sustainability from the start" **Employee 2**

In addition, demographical variables such as age and gender can have an influence on what argumentation or information to use. For example, both employees saw elderly women being the main purchases of climate-smart packaging. Not necessarily because of sustainability, but because they are easier to carry.

> "If you want to get past the problem of people not having an interest in sustainability, you can say that weight is an important factor, a lighter bottle would be a good thing to get people to buy climate smart without them knowing about it" **Employee 2**

The easier weight is a factor that will benefit the individual and can therefore be a driving force. One consumer who purchases climate-smart packaging regularly, mentions the weight as a contributor to the choice.

> "I buy climate-smart packaging primarily because it is easier to carry home and because it is easier to recycle" **Consumer 10**

In addition, it is easier to recycle, something that another consumer brought up as a topic. Due to the consumers' residential status, recycle stations are far away, making the PANT system with PET bottles a driving force to buy them since a PANT station is located in a nearby food store.

> "I prefer glass bottles, but I happen to buy PET bottles often because I'm lazy because it is easier to recycle due to PANT" **Consumer 3**

This highlights that self-beneficial situational factors that increase convenience serve as a motivation to purchase alternative packaging. However, the monetary profit provided by the PANT system for cans and PET did not motivate any of the participants, since the monetary size wasn't large enough. On the other hand, if the price of climate-smart packaging were lower

than a glass bottle, it would motivate some consumers to buy it, especially if the wine and brand remained identical and assurance of the wines' unchanged quality.

> "I could buy it if it is a cheaper price" **Consumer 8**

> "If I had better assurance in that the quality remained the same, it was cheaper and the bottle had a better design than the ones now available in the store, I would buy it" **Consumer 9**

> "If they have less climate impact than the glass bottle and are a little cheaper, then I could imagine buying it" **Consumer 5**

> "The only reason I'd change packaging options is if it's the same wine with the same label, it's cheaper, and I'm not going to serve it to my guests" **Consumer 2**

However, some restraining factors are still present, regarding the barrier to serving it to guests or putting it on the table in social gatherings.

6. Analysis

This chapter aims to explain the results from the empirical findings from the perspective of the presented theories in Chapter 2.

6.1 Summary of the Results

The results obtained from this study were structured according to a thematic analysis. The result chapter began by presenting the *green gap*, or *attitude-behavior gap,* that existed among most consumers in this study, see *Table 7*. Four themes were discovered and created based on the interviews with the store employees and the focus group discussions with the consumers. The themes are *Level of Knowledge; Design and Function; Communication;* and *Circumstances during Purchase.* The theme *Level of Knowledge* covered the gap in knowledge on the wine industry in general, and climate-smart wine packaging in particular. In addition, many consumers experienced a fear of a decline in the wine quality in climate-smart packaging, pointing to a knowledge gap about the packaging material's impact on taste. The theme *Design and Function* covered the importance of design and consumers' attitudes toward different packaging material alternatives. The theme of *Communication* brought up topics related to different communication channels from Systembolaget that aim to increase consumers' knowledge about climate-smart wine packaging. In addition, suggested or desired communication conveyed by the consumers was presented. Finally, the theme *Circumstances during Purchase* brings up circumstances or contextual factors that could have an influence on the purchasing decision, including location in store, demographical, and geographical factors.

In the following chapters, the results are analyzed and discussed based on the theoretical framework presented in Chapter 2. It starts with a broader context of the results, to present the framework in which companies work with sustainable solutions (SBM), by which consumers are affected. The chapter then puts the results through the consumption process, framed by the *four C's*. Lastly, the results from the focus group interviews are put through the *Alphabet Theory*, serving as the study's conceptual framework, to discuss factors relating to the purchase choices of climate-smart packaging. Thus, the *Alphabet Theory* can provide the answer to factors relating to the *green gap*, and why intended purchase behavior does not always translate to actual practice.

6.2 Pre-conditions for Shelf-space

As previously mentioned in Chapter 2, consumers do not operate in isolation, they are actors within a company's microenvironment, which in turn are placed in a broader macro environment (Belz & Peattie 2012). Putting this into perspective, what is presented on the shelves to the consumers at Systembolaget is partly derived from actors in the macro environment (*Ibid.*). Within the microenvironment, companies are regulated by political actors and governmental strategies, with the objective to maximize economic benefits and obtain social profits, while mitigating and controlling potential negative impacts on society, including social sustainability. This can be accomplished through various approaches, such as implementing bans on certain products through regulatory means, imposing financial regulations such as taxation, or promoting self-management through labeling or marketing (*Ibid.*). Systembolaget is state-owned and obtained a monopoly on alcoholic beverages in Sweden. In turn, governed by EU legal rules or monopolies, not allowing them to conduct marketing to promote products. In addition, it also lays the foundation for their process of deciding what is presented on the shelves (Systembolaget 2022). Consumers being market actors in the microenvironment, mirrors the companies' sustainability

Retailers, like Systembolaget's stores, have a role as intermediaries between the company and consumers, enabling communication and information sharing with the consumers. Thus, the retailer possesses purchaser power as a gatekeeper, deciding what to put on the shelf (Belz & Peattie 2012). Systembolaget's supply system (see *4.5.1* in *Chapter 4*) is dependent on consumer demand, and if there is a high demand for climate-smart packaging, then the producers will be more likely to produce wine in more sustainable options. One interviewee highlighted the limited assortment of wine in climate-smart packaging, and how that can be a barrier to trying out wine in climate-smart packaging because the consumers might not find something that is to their liking, or the available collection are from niche brands and not familiar brands for consumers. As stated by Herbes *et al.* (2018) how consumers view alternative packaging will guide manufacturers into producing or not producing wine in climate-smart packaging, and therefore becomes a continuous loop of supply and demand between consumers, producers, and retailers.

Further, consumer valuation differed between geographical markets, and different consumer segments reacted differently to different CSR claims. This implies that food companies need to adjust their CSR communication to the social context and market in which the company operates (*Ibid*.).

6.3 Archetypes applied in Systembolaget

Referring to Chapter 2, consumers' perception of a company's sustainability work and corporate social responsibility, is shown to have a better effect on growth than the actual sustainability efforts made (Cowan & Guzman 2020). However, to avoid greenwashing and ensure that what is spoken actually mirrors the work that is done (Mark-Herbert *et al.* 2007), it

is important that companies have an established sustainability agenda within the business model. Bocken *et al.* (2014) suggested sustainable business model archetypes, presented in Chapter 2 (*Figure 3*), served as a theoretical framework due to its ability to explain the company's *value proposition*, *value creation and delivery*, and *value capture*. Certain model archetypes were identified as relevant to the study's aim of investigating the conditions for altering packaging material for a food product within a company. When applying this study's empirical findings through the archetypes, it reveals what is being made today at Systembolaget, but it also reveals opportunities for continued work to strengthen sustainability within business models. The following paragraph will discuss the relevant archetypes in categorized by *value proposition*; *value creation and delivery*; and *value capture*, visualized in *Figure 20*.

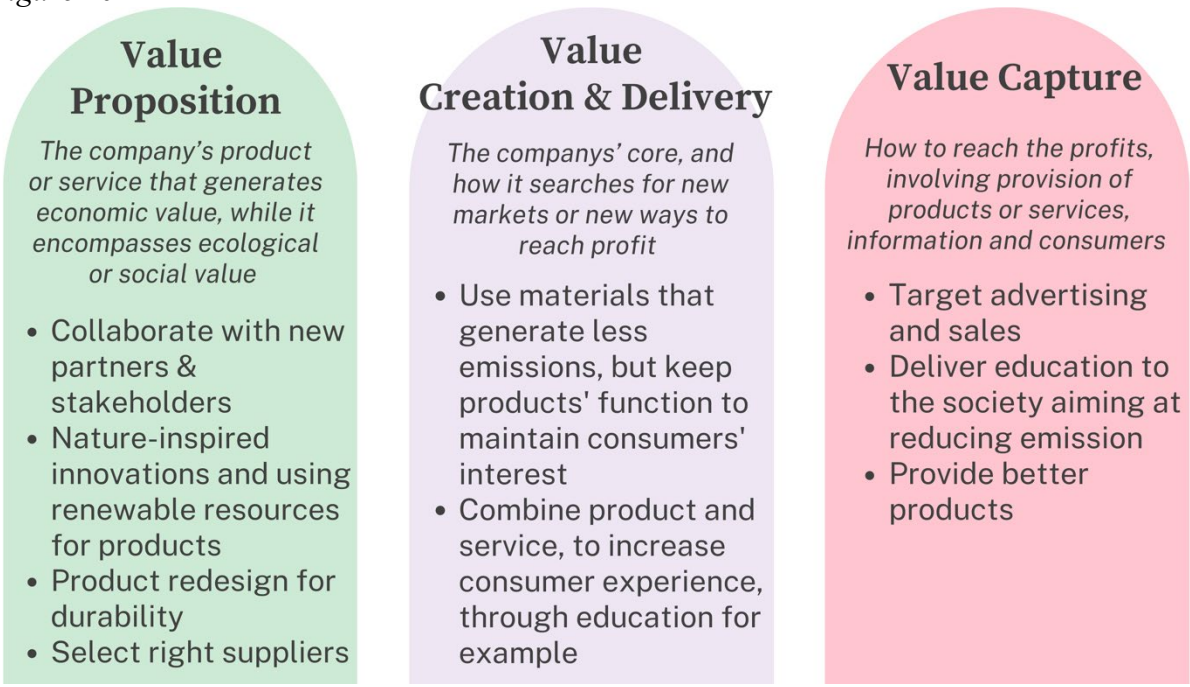

Figure 20. The results applied to Bocken et al.'s (2014) framework of sustainable business models. The relevant archetypes derived from the results are divided according to their value proposition; value creation & delivery; and value capture.

Value proposition stands for the company's product or service that generates economic value, while it encompasses ecological or social value too. *Develop scale-up solutions* (see Chapter 2, *Figure 3*), this is exemplified by collaborating with new, maybe unusual partners to utilize the right channels *(Ibid.).* Based on the empirical evidence presented in this study shows that a change in communication, the advertising, around climate-smart packaging may be necessary. Specifically, the empirics suggest that collaborating with other Swedish stakeholders to anchor the message, using well-known Swedish public figures with expertise in wine, and employing visualized information that makes it easy for consumers to compare CO_2e levels could be effective approaches. The archetype *Substitute with renewables and natural processes* (see Chapter 2, *Figure* 3) suggests addressing non-renewable resources, and stimulate nature-inspired product innovation and design. In addition, the archetype *Encourage sufficiency* (see Chapter 2, *Figure* 3) suggests product redesign for durability and change in the way the

products are promoted (*Ibid*.). Further, the empirical findings highlight the point to develop new, innovative designs with nature-imitating materials. Deriving an example from the results, plastic was not associated with a sustainable material in comparison with other materials such as paper or cardboard, which can be interpreted as 'nature-imitating'. Employees also suggested developing new exclusive packaging in cardboard (or aseptic carton). Regarding product design with durability, the BiB-bottle (see Chapter 5, *Figure 17*) was most preached by the consumers in the focus group discussion. If the product design in the BiB-bottle could prolong the shelf-life or durability, in similarity to a regular Bag-in-Box, it fulfills a great function for the consumer. In addition, Systembolaget has the power to decide what to include in the wine assortment. As gatekeepers, they have the potential to select new products that prioritize durability, for example, the BiB-bottle or other similar packaging innovations. However, the process due to the monopoly is more complicated than that, referring to the alcohol laws (Systembolaget 2022).

Value creation and delivery concerns the businesses' core, and how it searches for new markets or new ways to reach profit (Bocken *et al.* 2014). Drawing from the archetypes, *Maximize material and energy efficiency* (see Chapter 2, *Figure* 3), reflects a situation where using resources in products that generate less emissions, but that the product delivers the same function as products that generate more emissions (Bocken *et al.* 2014). This can be drawn to Systembolaget's applied work towards switching to climate-smart packaging alternatives, instead of glass, and still meet the same function for the consumer. In addition, the archetypes *Deliver functionality rather than ownership* and *Encourage sufficiency* (see Chapter 2, *Figure* 3) brings up the point of offering a combination of products and services, with the product still in the center, but with an additional consumer experience with service included. Education about reduced consumption towards consumers is an example. In the long run, it has the potential to shift consumption patterns and can create incentives for producers to design and develop other types of products (*Ibid*.). This can reflect a hybrid business model that Systembolaget delivers, by educating consumers about the environmental benefits of climate-smart packaging in the employees' meeting with them in store. However, there are challenges in convincing the consumers that the function of the climate-smart alternatives is the same as in the glass, even though the environmental benefits are communicated. In addition, the climate-smart packaging meets the ecological value, but as stated by one of the employees, it is a trade-off with social sustainability, from the aspect that the Bag-in-Box (the most climate-smart packaging seen to material and volume), makes the alcohol consumption per unit rise with approximately 30%.

Finally, *value capture* concerns how to reach profits, involving the provision of products or services, information, and consumers (Bocken *et al.* 2014). The archetype *Encourage sufficiency* (see Chapter 2, *Figure* 3) points to target advertising and sales. Looking at the obtained results, consumers and employees pointed out how the climate-smart packaging alternatives were located and distributed in Systembolaget's store, aiming at the eventual necessity to change the way the packages are presented to the consumers. The archetypes *Repurpose the business for society/environment, Substitute with renewables and natural*

processes, Maximize material and energy efficiency and *Encourage sufficiency* (see Chapter 2, *Figure* 3) discusses the meaning of delivering education to the consumers and the society, to ensure that the business provides a broader meaning for the society to reduce emissions (*Ibid*.), a work that is integrated into Systembolaget educational efforts towards the consumers and by their communication channels. Additionally, *Encourage sufficiency* discusses increased consumer loyalty with the provision of better products (see Chapter 2, *Figure* 3), implying that the inclusion of products aligned with consumers' acceptance, can increase loyalty and increase the purchase.

6.4 Consumers of Systemblaget

To illustrate the consumer's purchasing journey in relation to the company, a joint figure (see *Figure 5* in Chapter 2) between *the consumption process* and the *four C's*, based on Belz and Peattie (2012) was made to illustrate the dialectic relationship in how the consumer may navigate the process of buying a product and how the business may respond to their actions. Additionally, insights about consumers' viewpoint throughout the process of consumption, can act as a catalyst for sustainable innovation (*Ibid*.). By applying the results, it can provide a chance for Systembolaget to improve its climate-smart packaging products and offered services by gaining insight into their consumers' attitudes and preferences. In this section, the aspects of *communication*, *convenience*, and *consumer cost* from the *four C's* are discussed, to express meaningful and suitable consumer solutions.

Several factors can determine consumers' purchase of a sustainable product, for example, the product's nature and how it is differentiated in design and performance. The profile on sustainability issues is also a factor since some sustainability issues generate stronger feelings than others. The company's credibility and how well the product is communicated are additional factors. Lastly, consumers' individual price sensitivity and interest/knowledge in sustainability can be influenced (Belz & Peattie 2012).

Consumer cost is an extension of the concept of price and involves psychological barriers and risks a consumer can experience when purchasing a new product with sustainability characteristics (Belz & Peattie 2012). The results indicate that many consumers are experiencing barriers, especially in terms of fear of potential disappointment about wine in climate-smart packaging, and fear of decreasing performance. In addition, the results also indicated that barriers are of social nature, with a fear of presenting the climate-smart wine packaging toward the consumer's social circle, serving it to guests, or putting the packaging on the table. The products' nature, and how it is differentiated in design and performance, for example, are one factor that can influence consumers' willingness to purchase. Results from the empirical background state that consumers put a lot of emphasis on external attributes such as packaging (Orlowski *et al.* 2022). Consumers experience certain barriers to alternative packaging in which both *convenience* and *communication* act as a tool to overcome those obstacles (Belz & Peattie 2012). First, the climate-smart packaging needs to be convenient or meet the consumer's needs at that time and place in which glass is not suitable. There have to

be some types of benefits either it has to be easy to carry, recycle, is cheaper, or has a long shelf-life (e.g., BiB-bottles). Although, the product design can also meet convenience in the use and post-use phases.

There are certain ways that companies can increase the convenience for consumers, by for example practicing their purchase power by deciding what is put on the shelves, and choice-edit the bad products away. As exemplified, this act is not completely possible for Systembolaget, especially since some more wines need to be stored in a glass bottle. However, they can choose to relocate in-store and collect the climate-smart products on one shelf to make the choices easier for the consumers in-store. Additionality, the likelihood to purchase a climate-smart alternative could also increase by choosing a packaging material and a product design that have the ability to increase the consumers' convenience in comparison to glass. For example, one consumer stated that the critical point of purchasing an alternative packaging would be prolonged shelf-life and durability, in similarity to a Bag-in-Box.

Moreover, changing or increasing *communication* efforts about sustainability issues can be a potential way to overcome barriers during the whole purchase process (Belz & Peattie 2012). Rose *et al.* (2007) showed that consumers that seek others' approval in their purchasing behavior are not motivated by messages that stimulate feelings such as guilt or fear. To motivate these consumers, it was more effective to frame the problem personalized, focusing on e.g., increased convenience, to make it more relevant for the individual. This has the potential to shift the association of the changed consumption pattern to a stronger perception of self (*Ibid.).* Many of the consumers stated fear of serving climate-smart packaging to others, indicating a fear of not getting their approval. However, this could be reduced with increased convenience through the product through design, or with more personalized communication messages that can strengthen the perception of self. Examples derived from the results can indicate that more effective marketing could be related to providing more information about the advantages of climate-smart packaging related to individual benefits, such that it is practical, easier to recycle, and easier to carry home.

Furthermore, the education of employees to convey sustainability messages to consumers is exemplified as a communication strategy (Belz & Peattie 2012). In the interviews with the employees, this subject was discussed in the light of opportunities and challenges. At the store where the employees work, they have themselves built a communication system, in which they compare consumers' wine packaging purchases with a car ride or meat hamburgers expressed in carbon dioxide equivalents. For example, if the consumer purchases climate-smart wine packaging, the employees encourage the purchase by stating the amount of CO_2e they have saved, by comparing the purchase to kilometers of car driving or the number of hamburgers. This leaves the consumer with immediate positive feedback about the purchase, at the same time as it is educational with messages that are relatable to other acts, such as driving. According to the employees from the interviews, the opportunities arise from the positive consumer feedback that they experience from this method. Many consumers in their store now know about the climate aspects of alternative packaging, making it more personalized. Importantly, the notion is that the factors of *communication, consumer cost*, and *convenience*

influence each other. The consumers' purchase process is not linear. For example, if the communication of a product is good, but the cost or barriers are too high for a price-sensitive consumer, it will not be convenient for that customer to buy that particular product.

6.5 Alphabet Theory

Zepeda and Deal's (2009) *Alphabet Theory* was used as a conceptual framework to categorize the different factors to better understand the influencing variables when purchasing wine and in this case, climate-smart wine packaging. In this section, the results in relation to the factors from *Alphabet Theory* are discussed, illustrated in *Figure 21.* Through this, it also gave an explanation to the *green gap*, or *attitude-behavior gap*, in the sense of showing that intention to purchase does not necessarily lead to a purchase (Zepeda & Deal 2009) (see *Table 7* in Chapter 5). In the latter section, *Figure 21* aims to illustrate a suggestion for how the *Alphabet Theory* can be developed, based on this study's findings.

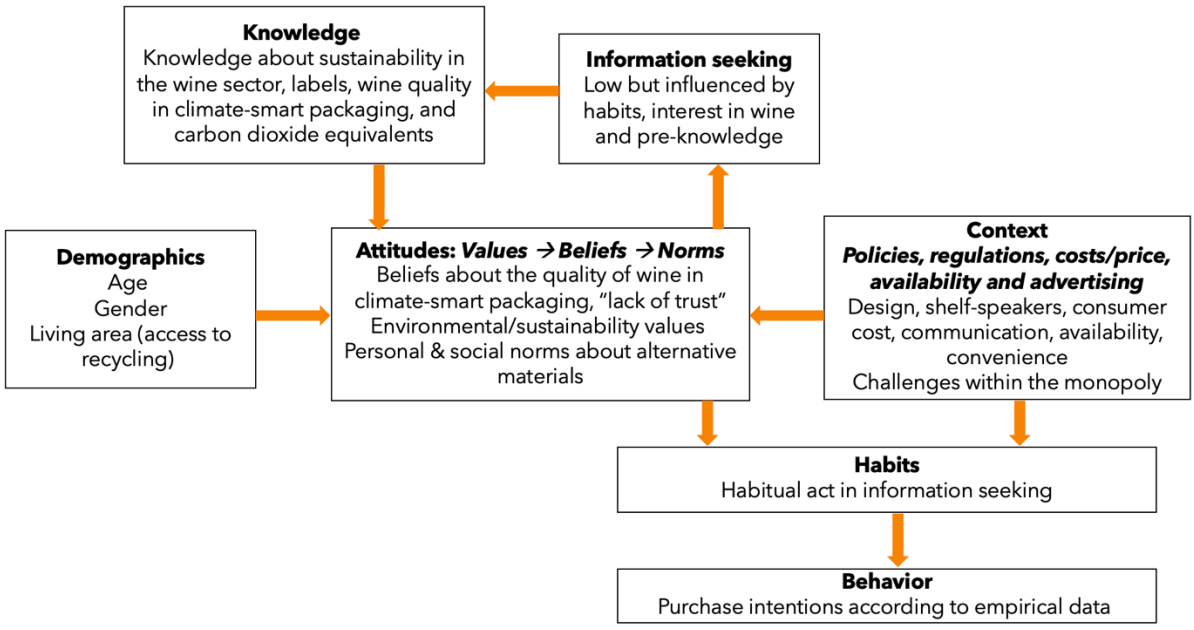

Figure 21. Overview of influencing factors affecting consumers' purchasing behaviors based on the Alphabet Theory (Zepeda & Deal 2009).

Figure 21 illustrates the contributing factors for consumers purchasing behaviors, as seen in the empirical results collected in this study from the focus group interviews and semi-structured interviews, which showed different factors in each category; *Demographics, Information seeking; Knowledge; Attitudes; Context; Habits;* and *Behaviors,* and will be discussed further in detail, see 6.5.1 – 6.5.6.

6.5.1 Demographics

Deriving from the results, multiple factors such as age, gender, and living areas whether in urban or rural areas, can affect how consumers make the decision to purchase a climate-smart wine package. When it comes to age, one of the employees implied that elderly women purchased more climate-smart packaging due to its lighter weight than glass bottles, but that age per se was not an indicator for purchasing more or less climate-smart packaging, but that the weight was more practical, convenient, and easier to recycle.

Demographical variables can indirectly influence behavior through attitudes. The study's empirical collection had a majority of women in the focus groups, and according to Schäufele and Hamm (2017), women are more likely to have behavioral intentions for sustainability aspects. Another indicator is peoples living area, and in the specific context, the focus was shifted more to the accessibility for recycling glass, plastic, and aluminum. Some respondents have access to recycling stations near their homes, but others did not. One respondent purchased beverages in PET bottles to be able to recycle them through the PANT system, instead of buying glass bottles and having nowhere to recycle them. Demographical variables in this study, however, were limited as it is more difficult to find a correlation between demographics and behavioral intentions in a qualitative study. According to Zepeda and Deal (2009), difficulties exist in drawing conclusions about specific demographic variables affecting consumers' behaviors in sustainable food purchases, with which this study agrees.

6.5.2 Information seeking and Knowledge

The extent to which the consumer seek information before their purchase was relatively low. For example, deriving from the results, consumers often act on habits in store, visit their favorite shelf, and seek their preferable shelf speaker, but do not seek information about climate-smart packaging beforehand. It also showed that the shelf- speakers in store (see Chapter 5, *Figure 18*) can act as a helpful tool to make climate-smart choices, especially when the consumers did not know what to purchase. However, the extent of information seeking was proved to be affected by interest in wine and purchase habits, factors that can be derived from *Knowledge*.

Zepeda and Deal (2009) highlighted that a higher knowledge may lead to a purchase intention. However, consumer knowledge about sustainability labels, the perception of carbon dioxide equivalents, and the quality of wine in climate-smart packaging in the study's empirical findings was something that the respondents did not have much knowledge of. The usual sustainability label that was known by all respondents was the 'organic' label, but the consumers had little knowledge about the other sustainability labels presented at Systembolaget. Some respondents as well as an employee suggested that implying that something is sustainable is not enough information for consumers and that more information is needed. For example, presenting more tangible numbers or a comparison to other types of foodstuffs, how many kilometers driving a car is equivalent to in CO_2e emission for each beverage packaging for wine which is presented in the graph (see Chapter 5, *Figure 19*).

Seeking information is a way of gaining knowledge, and it is according to the *Alphabet Theory* how consumers can make reasonable choices, however, in this case, consumers do not look for information about the sustainability aspects of wine as it is not commonly known that the production of wine glass bottles have higher CO_2e emissions than other beverage packaging.

6.5.3 Attitudes

Attitudes are the foundation upon which norms are built. These norms create habits and influence purchasing behavior, making attitudes important (Zepeda & Deal 2009). The empirical findings showed a belief that the quality of wine will decrease in climate-smart packaging, or that the material could be bad for the health. This correlates to what was found by Zepeda and Deal (2009), that "lack of trust" can be a factor why consumers' do not purchase sustainably. Personal and social norms are part of consumers' purchase habits, personal norms are e.g., having a habit to purchase wine in glass bottles, as it is seen as a social norm overall. The consumers in the focus groups expressed how they think and believe that the glass bottle is more appropriate to serve wine to guests, further explaining the norm of the glass.

6.5.4 Context

There are multiple external conditions making contextual factors that can affect consumers' purchase decisions, for example, policies, regulations, costs/price, advertising, and availability (Guagnano *et al.* 1995). Some of them were apparent in the interviews such as design, shelf-speakers, advertising (or *communication* relating to the *four C's*), costs/price (both in terms of consumer costs relating to the *four C's*, and in terms of the prices of the product), and availability (or *convenience*, relating to the *four C's*). The design proved to be influential, and the packaging alternatives that had an association with more societally accepted products were more favored than, for example, plastic bottles in the focus group, which also correlates to the norm. However, if the packaging corresponded to *convenience* for a specific contextual situation, for example, being lighter, easier to recycle, or having longer durability, the climate-smart alternative could be a favorable choice. The color of the labels also influenced consumers and some expressed how the sustainability labels presented at Systembolaget had similar colors and shapes which made it hard for them to distinguish the differences between the labels.

Regarding other factors, such as availability, some consumers expressed their concern about a limited assortment of wine in aseptic cartons which makes the decision-making harder because there is not a wide variety to choose from, and therefore the choice to make a climate-smart choice is limited. One employee suggested that marketing campaigns to fit the latest societal problems, e.g., the increased prices for electricity can be a way to get consumers' attention and change their attitudes and behavior. Another topic related to availability regards location in store, in which a climate-smart shelf could increase the availability. Further, consumers need to be informed about environmental issues within the wine industry and therefore, by creating information content through their communication channels Systembolaget can make climate-smart packaging part of the norm. Some respondents mentioned how they would try climate-

smart packaging if the design would be improved and if there was a guarantee that the quality of wine is the same as the wine in glass bottles, also relating to norms. Since contextual factors include policies or regulations, this could also be a discussion about the attitudes towards Systembolaget's monopoly, and the sender of the communication message, articulated as a potential problem by some consumers.

6.5.5 Habit

Habits are affected by the formation of attitudes as well as contextual variables (Zepeda & Deal 2009). It appears that consumers have developed a habitual act related to their information-seeking process. First, consumers often visit familiar shelves during their purchase, which gives them a sense of security in knowing that they will find products that are both familiar and enjoyable in terms of taste. It is worth noting that since taste is a highly subjective matter, consumers may have different preferences when it comes to which shelves, they prefer to visit. Nevertheless, what remains consistent is the fact that the shelves provide a reassuring sense of safety.

6.5.6 Behavior

All of the above-mentioned describe different aspects of consumers purchasing behavior, which leads to the last part of the *Alphabet Theory; Behavior*. Most consumers expressed their pro-environmental attitudes and wanting to make better decisions; however, the above-mentioned factors indicate a fear of bad quality wine, that it looks cheap, and that they still prefer wine in glass bottles. Shifting consumer behavior to purchase wine in climate-smart packaging according to the collected empirical data in the study, has to become a shift in the social norm to make people want to change their behaviors. A contextual factor that also could lead to a behavioral change is if the focus was more shifted toward the design of the packaging, consumers are affected by the shape of the bottle, color, and labels, and one example that made this statement apparently is when the consumers were shown an innovative product, see *Figure 17* in Chapter 5, a cardboard packaging with aluminum bag, shaped as a wine bottle, received very good feedback, in comparison to the other climate-smart packaging, and was an innovative product that consumers would consider purchasing.

6.5.7 Summary and Suggestion for Improvement

Based on the results from this study, a suggestion for improvements to *Alphabet Theory* is proposed, visualized as the blue arrows in *Figure 22.*

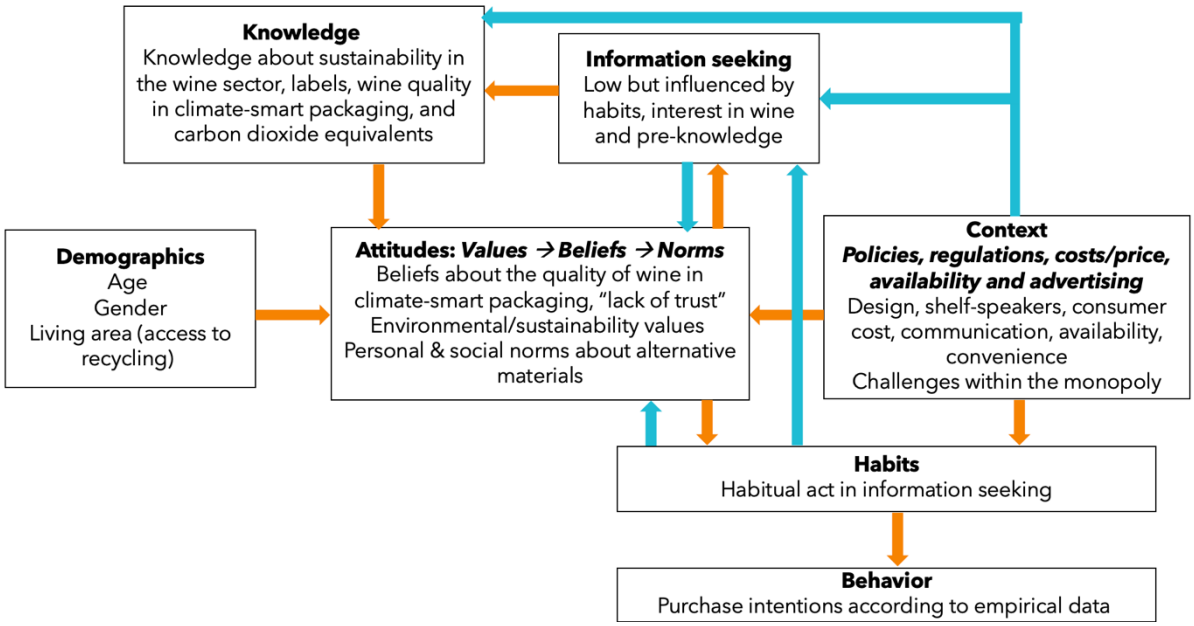

Figure 22. Suggestions for improvement of the Alphabet Theory. The blue arrows are examples of suggestions provided by the authors, derived from the results. Based on Zepeda and Deal (2009), with minor modifications by the authors.

Zepeda and Deal (2009) found that lack of trust, lack of knowledge, and lack of information seeking were one of the factors in why consumers did not want to purchase sustainably, deriving the personal belief system, which applies to climate-smart packaging choices for wine as well. In the *Alphabet Theory*, *Information seeking* affects *Knowledge*. However, derived from the results, consumers do not seek information about climate-smart wine packaging on their own, implicating a need for additional education, communication and nudging efforts, to increase and strengthen the knowledge. With increased knowledge attempts, the understanding such as educational incentives can increase and have a reinforcing effect. "Buzz-marketing" implies that consumers are carriers of words and have the power to be co-creator of norms (Belz & Peattie 2012), which can symbolize the reinforcing effect. Thus, *Contextual* factors, such as communication, availability, could be more connected to *Information Seeking* and *Knowledge*. Instead, consumers are driven by habits when they visit their stores, for example, visiting their favorite shelf, or searching for their preferable shelf-speakers, which can be seen as a part of their information seeking process. Thus, in this study, habits are not viewed simply as a prerequisite of behavior, but also as a prerequisite for the information seeking that creates the norm. In addition, changed habits also creates changed norms with time. Therefore, we propose a more dialectical and cyclical model where factors influence each other. Consumer behavior is complex and extends beyond the act of purchasing, making it a multi-faceted and ongoing process.

7. Discussion

This chapter aims to address the research questions stated in chapter one, based on the theoretical framework and the empirical data.

Wine is a highly differentiated food product that holds a unique position from a consumer perspective and has an inherent association with social settings (Lockshin & Corsi 2012; Ferrara & De Feo 2018; Fabbrizzi *et al.* 2021). Traditionally, wine has been associated with glass bottles and is considered a premium product, valued for its tradition and quality, making the glass bottle a deeply rooted packaging norm in the wine industry and for consumers (Ferrara *et al.* 2020; Soares *et al*. 2022). However, recent research has shown high levels of CO_2e emissions caused by single-use glass bottles, shedding light on the prevalence of introducing alternative packaging options for wine (Ferrara *et al*. 2020; Otto *et al.* 2021; Ruggeri *et al.* 2022). Earlier studies suggest that consumers find it difficult to switch to more climate-smart packaging materials when purchasing wine (Ferrara & De Feo 2020; Ferrara *et al.* 2020), nevertheless, while efforts are underway to develop and promote alternative packaging materials for wine (Nesselhauf *et al.* 2017), more needs to be known about consumer preferences and acceptance of these new packaging options (Ruggeri *et al.* 2022).

By choosing Systembolaget as a case, this study has aimed to investigate consumers' perspectives and the factors influencing their decisions to purchase climate-smart wine packaging, providing insights from the Swedish market. Additionally, the findings aim to provide Systembolaget with tools to develop its strategy for encouraging climate-smart packaging alternatives to consumers and producers. The following chapter aims to answer the research questions, by integrating and discussing the empirical findings of previous research, presented in Chapter 4.

7.1 What factors can influence consumers' decisions to purchase wine in climate-smart packaging?

As discussed in Chapter 6, the experienced risks associated with purchasing new and sustainable products can create psychological barriers for consumers. A potential risk that consumers' may feel when switching to a sustainable product is the fear of low-quality wine, or not meeting their expectations, and becomes an additional consumer cost (Belz & Peattie 2012); the purchasing experience of wine differentiates from other types of foodstuffs and becomes a more sensitive experience for consumers. Thus, it can be difficult to break norm-

driven patterns, such as switching from glass bottles to climate-smart alternatives. The results showed that there exists sensitivity about what others may think when presenting a climate-smart alternative in a social setting or putting it on the table. One of the factors derived from the results that can influence consumers' decision was centered around the design, and to the extent the innovation in the product could fulfill a level of convenience and meet consumers' needs.

With glass bottles being a deeply rooted norm (Ferrara *et al*. 2020; Soares *et al.* 2022), the results indicated that working on designing climate-smart packaging by the existing norm e.g., designing it with the shape of a wine glass bottle, could increase the incentives to purchase it, than for example, presenting it in a rectangular Tetra Pak, that was associated with a juice packaging. Wine in aluminum cans was associated with beer or cider. Thus, the consumers' feelings and attitudes toward the product had a lot to do with their association with other food products. In regard, the most favored product in the focus group discussions was the BiB-bottle – the packaging of a combination of plastic and cardboard. From the consumer's viewpoint, it was associated with the ordinary Bag-in-Box. Interestingly, even though a Bag-in-Box is not made of glass, or has the shape of a bottle, the consumers had a positive association with it. Bag-in-Box, being the most climate-smart alternative seen to packaging per volume, is an established packaging in Systembolaget's assortment today. However, this was not always the case. When it was introduced on the Swedish market, it faced skepticism from consumers and Systembolaget. Concerns were expressed about if the wines' quality would be affected by the packaging, leading to health risks. Over time, the BiB became a standard and favored option on the shelves of Systembolaget (Systembolaget n.d.a). This historical event acts as an example of a product first being rejected by consumers, but slowly growing into an accepted product, highlighting the potential for innovative products to become the norm. Therefore the innovative BiB-bottle is the only product that has two existing norms in one; designed in the shape of a glass bottle but has the function and the same material as a BiB. This results in a product that feels norm-safe and socially accepted, making it table-friendly.

In addition, the results indicated that the circumstances in which the purchase is made, in combination with the added convenience the climate-smart packaging can offer were influential. For example, climate-smart packaging was favored when consumers needed wine to cook with, or if they needed something that is easy to carry with less weight compared to glass, on a picnic or traveling. Demographical factors such as gender, age, living area (urban or rural), and whether they have access to recycling stations could play a role in the willingness to purchase climate smart.

In addition, the product's packaging material had an influence on consumers. Previous research shows that there exists a discrepancy between LCA research findings on packaging's environmental impact, and how it is interpreted by consumers. Consumers often use emotions and personal feelings to assess a packaging's environmental impact, rather than relying on research-based knowledge, which can result in purchases less sustainable than intended due to lack of knowledge (Boesen *et al.* 2019; Otto *et al.* 2021). For example, consumers have a

perception that glass has a more positive environmental impact than it actually does, while plastic is perceived to have a more negative impact than what evidence reveals. On the other hand, consumers' views on paper and metal/aluminum seem to align with scientific evidence regarding their environmental impact (Otto *et al.* 2021). The results derived from the discussions in the focus group reveal a similar pattern. The 'bad narrative about plastic' was identified by the employees, as well as the consumers, in which PET packaging was associated with environmental impact and health risks. These findings strengthen the argument for developing climate-smart packaging that is in line with existing associations and norms, such as using paper, cardboard and aluminum. This can also be applied to the *attention-behavior gap*, the intention consumers have, and why it is not always translated into practice, which can simply be due to of lack of knowledge, as exemplified above.

Further, a theme discovered, being a highly influential factor in the consumers' decision-making, related to their level of knowledge about 1) the packaging materials' influence on the wines' quality; and 2) general sustainability issues within the wine industry. Consumers tend to associate intrinsic wine attributes with external packaging cues; hence a lot of emotional involvement is added to the packaging material (Orlowski *et al.* 2022). First, the results derived from the focus groups and the interviews showed that many consumers were not aware of the environmental challenges and impacts in the wine industry in general. Comparisons were made to bananas, coffee, and meat, which the consumers had learned to purchase with consideration to the environment. Second, the consumers did not choose the climate-smart alternative due to fear of the declining quality of the wine, and that the taste and the content would get affected by, for example, PET or cardboard. The negative connotation of plastic material mentioned earlier is an additional example of this. This presumption lacks evidence and according to one interviewed employee, the characteristics of an aseptic carton not having a transparent design, make it an exceptional option to store wine so that the wine will not get declined by light. However, wine in an aseptic carton is not suitable for storing wine, something that the majority of consumers do not practice. Further, employees are not separated from these beliefs since they are a product of norms, too. As the campaign for climate-smart packaging started one year ago, employees may have difficulties in transcending their selling habits too. As mentioned by one employee, they need to be convinced about the benefits of climate-smart packaging options, in order to confidently be able to sell it to consumers, an educational effort needed headquarters must increase their efforts.

Thus, these educational efforts, related to increasing knowledge of wine in relation to sustainability and packaging, need to be provided by Systembolaget's headquarters.

Bergquist *et al.* (2023) have discovered that the effectiveness of marketing campaigns aimed at altering climate-smart behaviors varies depending on the type of mitigation intervention employed. According to their recent study, strategies that include *social comparison* and *financial incentives* were found to be the most successful in influencing people to modify their behavior for a more climate-conscious outcome. Conversely, mitigation interventions that relied on *feedback* and *education* had the smallest effects in altering climate-smart behaviors.

The desire to fit into societal norms affects consumers' behaviors. Thus, informing consumers that other people are practicing the behavior desired, can have an influential impact on consumers' decision marking. As stated by Bergquist *et al.* (2019), this effect is greater when it is communicated implicitly rather than explicitly, where explicit includes a clear sender that communicates the norm and implicit is communicated in a way that the sender is not easily identified. Relating to this study's result, one of the suggested marketing methods is that the climate-smart packaging should be communicated through a known, public figure with knowledge of wine. Using 'an outer voice' instead of having Systembolaget acting as the sender, could have the effect of the message being delivered by someone that is trustworthy, rather than an "*authority*" with "*monopoly of the packaging, too"*; something that was expressed by the consumers. Thus, there is a risk that consumers can feel dictated to act in a certain way or feel pressured to purchase climate-smart, which could have contradictory effects in which the consumers' free will are reduced. This can be discussed in relation to what is brought up by Hastings and Angus (2011) and Kennedy and Parsons (2014), regarding the complex relationship consumers can have with marketing campaigns connected to the government, in where the line between good governing or social fabrication are highly subjective (Kennedy & Parsons 2014). However, marketing campaigns involving outer voices can be difficult due to the monopoly bounded laws, making advertisement limited (Systembolaget 2022). Since governmental marketing of alcohol aims to moderate consumption to favor public health, pointing to a social responsibility mission (Kennedy & Parsons 2014), Systembolaget needs to balance its' sustainability-related goals towards its law-bounded missions. As stated by one of the consumers, the employees are trusted in general, and can therefore also be a "trusted voice" for consumers.

Financial incentives, or the monetary rewards for behaving sustainably, were in this study partly discussed in relation to the PANT on PET and cans. A cheaper price on the product could also be a financial factor. The results in relation to financial incentives were two folded. First, the consumers were not motivated by the monetary reward derived from the PANT. In similarity to the findings by Khanna *et al.* (2021), the size of the monetary reward affected the results. Further, van den Broek *et al.* (2017) found that the effectiveness of financial incentives depends on if the financial motive corresponds to the consumers' values. Personal norms (the individual's sense of moral duty towards engaging in environmentally friendly actions) also have an important role and are linked to the likeliness to encourage financial incentives (*Ibid.*). Second, a cheaper price on the climate-smart packaging product could be more attractive, but this was dependent on demographical, individual factors such as occupation or interest in wine. As previously mentioned, wine is seen as a premium product for many consumers, making the price less important in comparison to other food products. However, this depends on who the consumer is and their interest and knowledge in wine, relating to the *Alphabet Theory*.

In the results of this study, a lot of the discussions were centered around the education of consumers, and the education of employees, and how they both are related to the creation of knowledge. According to Bergquist *et al.* (2023), education and feedback incentives were least

effective to promote pro-environmental behavior. However, they can be effective under specific conditions. Feedback incentives have shown their effectiveness in situations where frequent, direct, immediate feedback is expressed, especially when the barriers to acting environmentally are low, but the advantages are high (*Ibid*.). In the situation of purchasing climate-smart packaging for wine, the barriers are high, as shown by the results from this study, in accordance with findings by Ferrara *et al.* (2020). However, with increased incentives suggested by this study, such as better design, the barriers to acting pro-environmentally may be lower. Nevertheless, frequent, direct, and immediate feedback has shown its effectiveness, something also suggested by one of the employees. By encouraging the consumers when they have made a climate-smart purchase, the employees experienced positive feedback from the consumers, in which they feel like they did a great choice. Following the implication that consumers may be driven by individual benefits, this can also be a "high advantage", making feedback incentives more effective (Bergquist *et al.* 2023). When motivation for pro-environmental action is low and barriers are high, such as in climate-smart wine purchases, combining education with other incentives, such as social comparison, has been found to be particularly effective (Khanna *et al.* 2017; Bergquist *et al.* 2023). This points out a preferable method to continue the communication towards educating consumers, in combination with social comparison approaches. Since there is an inherent challenge in convincing the consumers that the function of climate-smart packaging is the same as in glass even if environmental benefits are communicated, can also point out the potential benefits of proposing more social norms in the communication.

Deriving from the results, a need for more education of the consumers was expressed. Knorr and Augustin (2021) put emphasis on the value of strengthening the information about food values and educating employees to increase consumers' level of knowledge. As expressed by the employees, there was an expectation from the headquarters that they would inform consumers about climate-smart packaging when it was introduced at Systembolaget. However, the employees feel like they did not get the educational support they needed. From the consumers' perspective, they did not experience that the employees spoke with them about sustainability in relation to wine purchases, but they did not search for this information either. In addition, there exists an inherent challenge in their need to practice brand neutrality, at the same time as promoting climate-smart alternatives, which proved to be a difficult task for the employees, which they feel a lack of guidelines. The employees can even experience that a lot of responsibility is on their shoulders. As a response, their own initiative and interest in sustainability have made them develop a reference system that compares the CO_2e emissions of packaging, with the CO_2e emissions of a car ride or eating meat, something that has had a positive effect among consumers at their store. In findings by Wynes *et al.* (2020), incentives such as 'carbon numeracy' were shown to be ineffective, since consumers have difficulties making trade-offs about climate impacts due to insufficient knowledge but can increase with better educational attempts (*Ibid.*). Further, the consumers experienced some difficulties in understanding the shelf-speakers in the store (*Organic, Climate-smart choice, Sustainable Choice*), as discussed in Chapter 6, that may influence their purchase decision. On the other hand, Thøgersen (2021) points out the simple, yet powerful message of making climate-smart

behavior the easy behavior. Implementing educational elements, such as labels or carbon numeracy, has the ability to simplify consumers' decision-making process. The method of visualizing a comparison of wine packaging and other activities expressed in CO_2e may therefore be a suggested method, shedding on the promising effect of combining incentives suggested above to strengthen the likelihood of opting for climate-smart choices (*Ibid*.).

The factors derived from this study can be discussed based on the factors presented in the *Alphabet Theory*. First, *Information seeking* determines *Knowledge* in the *Alphabet Theory* model, but according to the results presented in this study, consumers do not seek information on their own, but they need to be educated, nudged, and informed. Preferably, by social norms, created from marketing efforts aiming at a combination of social comparison and educational incentives, or educational effects in-store by nudging and from employees. With increased knowledge attempts, the understanding such as educational incentives can increase and have a reinforcing effect, putting emphasis on the development of the *Alphabet Theory*.

7.2 What improvements can be identified in a company to increase incentives for consumers to choose more climate-smart packaging?

The results indicated that product placement in the Systembolaget stores could be an important factor in consumers' purchasing decisions. There seemed to be a habitual act of visiting already known shelves in the stores, which could also be due to relatively low information seeking beforehand. The suggestion, both discussed by the employees and consumers, indicated the potential benefits of re-organizing the stores and putting the climate-smart alternatives on a separate shelf in order to facilitate consumers' search process. This initiative can be referred to as nudging, which has been proven as most successful in controlled environments, when not disturbed by other campaigns, suggested by Mont *et al.* (2014). Systembolaget's monopoly creates a regulated environment in the store, free from external market influences that could potentially be disruptive for customers. This allows Systembolaget to operate independently and encourage desired behaviors within a controlled setting, while also providing a cost-effective channel for the government to pursue broader societal objectives, such as reducing alcohol consumption and thus promoting social sustainability reflected by Systembolaget's nudging techniques of the alcohol-free assortment (*Ibid*.). As Systembolaget's work with climate-smart alternatives improves and grows in its range (Systembolaget 2022), nudging tools can be a way forward to make decisions easier for consumers. Nonetheless, it is worth mentioning that the effectiveness of nudging is likely to be enhanced when they are used in combination with other policy instruments, rather than being relied upon in isolation (Mont *et al.* 2014), which is in line with what is brought up by Bergquist *et al.* (2023). Further, tools for nudging food consumption can for example include simplification of key information and increase accessibility through labeling or displays, using social norms to portray the behavior of other individuals, and altering the psychical environment to increase convenience and encourage favorable purchase choice (Mont *et al.* 2014), all of which the findings in this study

agrees. Thus, nudging can be seen as an incentive that can make the climate-smart choice the easy choice (Thøgersen 2021).

Understanding consumers' interpretations can serve as guidelines for what companies should present on the shelves in-store. However, there exist challenges from Systembolaget's perspective regarding the product's recyclability. For example, due to the material composition of PET bottles, they do not become new pet bottles after recycling in their current state. From a perspective of sustainable business models, better recycling possibilities could strengthen Systembolaget's work towards circularity, perhaps working towards closed material loops.

The wine industry's environmental challenges have prompted producers to adopt more environmentally friendly practices. By implementing innovative methods, such as climate-smart packaging, producers can develop new marketing strategies and gain a competitive advantage in the wine industry (Flores 2018). In findings by Ferrara *et al.* (2020) and Nesselhauf *et al.* (2017), a specific group of consumers were most likely to purchase climate-smart packaging alternatives; the less-traditionalist and low-involvement consumers had lower purchase barriers and higher likeliness to purchase wine in alternative packaging. The results from this study point to similar conclusions. The participants with a higher interest in wine had a lower willingness to purchase wine in climate-smart packaging, making this consumer segment the least likely to 'move the hand'. Thus, this information can act as a catalyst for producers who aims to differentiate themselves in an industry in need of prompting sustainable changes for its' survival (Nesselhauf *et al.* 2017; Flores 2018; Ferrera *et al.* 2020).

On a final note, it is impossible to be profitable in an unsustainable system. By adopting through implementing a sustainable business model and sustainable practices now, the future for companies might look brighter. Producers can gain a competitive advantage by transiting to a more sustainable business model and strategy. Consumers' demands are a crucial factor in this. But who has more influence? Norm changes within a strongly norm-based industry are complex, but not impossible. As with any behavior, it is a co-creation between the individual and her societal environment, which adapts and shapes with time.

8. Conclusions & Future Research

The final chapter reflects the aim of the project as stated in Chapter 1, highlights the limitations of the study, and makes suggestions for future research.

The aim of the study was to explain the conditions for altering packaging materials for a food product. The empirical finding of the study revealed multiple barriers for consumers to purchase climate-smart packaging for wine, however, opportunities for change were also found, which will be explained further in detail. Using the *Alphabet Theory* as a conceptual framework, the results of this work suggest that consumers are affected by different factors, whether it is *habitual* (e.g., purchasing behaviors); *demographics* (e.g., residential area); *knowledge* (e.g., their understanding of the environmental impact and concept of carbon dioxide equivalents (CO_2e); *contextual* (e.g., cost, design, communication, convenience); or *information-seeking* (e.g., how consumers look at sustainability labels while visiting the store). The study's findings suggest that consumers do not seek information on their own, but they need to be educated, nudged, and informed. Preferably, by social norms, created from marketing efforts aiming at a combination of social comparison and educational incentives, or educational effects in-store by nudging and from employees. With increased knowledge attempts, the understanding such as educational incentives can increase and have a reinforcing effect, putting emphasis on the development of the *Alphabet Theory.*

Consumers put a lot of emphasis on external cues and design, therefore innovative packaging design, shaping the climate-smart bottle to resemble the glass bottle in terms of material and shape to correspond to existing norms is a suggestion to increase the incentives to purchase it.

The gathered results indicated that when the motivation for pro-environmental action is low and barriers are high, such as in climate-smart wine purchases, a combination of education; innovative design; communication; and nudging incentives are needed to increase knowledge and change social and personal norms. As previously mentioned, the *green gap* shows a discrepancy between people's attitudes toward sustainability and their actual purchasing behavior, and the empirical findings in the study indicated that consumers have limited knowledge about wine beverage climate impact and therefore do not seek specific information about climate-smart wine packaging in-store. They are, however, more familiar with other sustainability labels such as 'organic'. In conclusion, consumers need to be more informed and educated about packaging's climate impact to be more aware of the issues that lie behind it.

Encouraging more consumers to purchase climate-smart packages is part of Systembolaget's sustainability goals, however, communication campaigns, sustainability labels, and nudging are all part of their communication where they need to tread lightly because of national laws, EU laws, and the fact that Systembolaget has a brand neutrality policy, which creates internal challenges on their communication strategies. Therefore, educational incentives such as giving employees more tools to communicate with their customers and focusing on creating campaigns to increase the understanding of carbon numeracy on wine packaging's environmental impact are suggested.

8.1 Limitations

This study's choice of methods and research design carries out limitations, which this chapter aims to shed light on. The study's limitations were limited to a set of deadlines, and a period of a few months, equivalent to 30 credits, from the Swedish University of Agricultural Science. With focus groups and semi-structured interviews being the main sources for data collection within the single case study, it implies that the results cannot be generalized (Wibeck 2000; Yin 2009) or can reveal causal processes. Yet, case studies serve as a great format to tell a story by offering a glimpse of reality within a specific time, space, and place, and highlighting complexity and social dynamics (David & Sutton 2016). The empirical findings of this qualitative case study do not necessarily mirror reality, as we cannot generalize Swedish consumers' perception of climate-smart packaging. In addition, this study carries demographical limitations. Higher participation from women with fewer male representatives provided an uneven gender representation among the participants, which according to e.g., the *Alphabet Theory* can be a factor influencing sustainable food purchase behavior. Systembolaget's provision of statistics on consumer segments, which the recruitment of participants was based on, provided a fruitful basis for understanding different consumer segment preferences and behavior. However, with limited participants, the consumer segments were not representative. Nonetheless, the focus groups and semi-structured interviews provided a glimpse of the reality of how consumers perceive climate-smart packaging and what consumers purchasing behaviors can look like. Systembolaget will be provided with both challenges and opportunities to improve consumers purchasing behavior. To continue to build on this research subject, the authors would like to propose research for the future.

8.2 Future Research

The study of consumer behavior and the examination of sustainable packaging alternatives for wine is a relatively new field of research. The ongoing emergence of innovative packaging options within the wine industry (Nesselhauf *et al.* 2017) holds significant promise for this research field's future growth and development. Future studies might continue investigating demographical and contextual variables by conducting quantitative research on consumers, aiming to answer Systembolaget's consumer segments and how to reduce the *green gap*. A

quantitative survey could contain more specific demographical and contextual questions to find out consumers' perceptions of climate-smart packaging. A proposed suggestion is to provide alternatives for different types of beverage packaging, with different designs, prices, and materials. More statistical data on consumer segments' willingness to purchase climate-smart packaging could frame a comprehensive understanding of consumers, creating a window of opportunities for marketers to create appealing and suitable communication efforts.

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Popular science summary

Environmental concerns in the wine industry are getting more attention worldwide, making it important to shift to more sustainable practices. One of the most significant impacts includes CO_2e emissions from glass bottles as wine packaging. In the wine industry, more climate-smart packaging alternatives are emerging as a response, but a challenge remains to encourage consumers to make the shift, as the glass bottle holds meaningful value.

Wine is a highly differentiated food product in the market. Throughout history, wine has been associated with glass bottles and is considered a premium product, valued for its tradition and quality, making the glass bottle a deeply rooted norm, both in the industry and for consumers. With more light being shed on the glass bottles' environmental impact, companies within the wine industry have a key role in making it easier for consumers to choose sustainable alternatives. However, consumers have difficulties in shifting to more climate-smart alternatives, due to the strong associations to the glass bottle. But what factors can increase the incentives to purchase sustainably when the barriers are high? This master's thesis is on commission by Systembolaget – the Swedish state-owned company with a monopoly on the retail trade of alcoholic beverages. By choosing Systembolaget as a case, this study has provided insights from the Swedish market. Additionally, the findings can provide Systembolaget with tools to develop its strategy for encouraging climate-smart packaging alternatives to consumers.

Three focus group discussions with consumers of Systembolaget and two interviews with store employees of Systembolaget were made to facilitate a deeper understanding of consumers' perception of climate-smart wine packaging. The themes derived from the results showed that the barriers toward purchasing climate-smart packaging were high, even if they had an interest in sustainability, pointing at a green gap. The level of knowledge about wine in climate-smart packaging is low, creating fears of declining quality and function. However, innovative product design that corresponds to the 'glass bottle norm' in terms of shape and material was most favorable of the climate-smart packaging options, showing the importance of norms. To increase incentives to purchase climate-smart packaging, the consumers need to be educated through for example, communication campaigns aiming at social comparison to change norms, and through store employees' expertise. Nudging incentives in the Systembolaget stores could be a way to simplify consumers' decision process, making the right choice the easy one. However, challenges arise in applying sustainability-related goals in a state-owned company ruled by laws. For example, inherent conflict goals appear in following brand neutrality while prompting climate-smart options, calling for more educational tools and support from headquarters.

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Appendix 1 – Focus Group Interviews

The interview guide for the focus group is designed as an interactive process, following the 4 phases of the consumption process.

Intro (X min)

Warm welcome to the focus group. We tell them about the interactive layout of the group discussion, what is expected of them and how we are going to gather their answers.

Phase 1: Before entering the store, pre-purchase (X min)

1a. What is your previous knowledge and interest of sustainability? Do you care about the environment or buying climate-smart products in general?

1b. Do you feel like you have enough knowledge about wine in relation to packaging materials and CO_2e?

1c. You are about to purchase a bottle of wine at Systembolaget. How would you describe your information-seeking process? Do you have a plan on what to buy before entering the store? How do you usually search for information about your purchase (online, app or not seeking at all? Go by habit, or just choose when entering the store?

Phase 2: Behavior in store and the initiation to the purchase – Interactive part with MentiMeter (X min)

2a. How do you usually behave when entering a store? Are you driven by habits? What are they derived from? What do you see?

2b. *Interactive part: Communication in store, labels, shelf talkers:*

Show pictures of communication in the store (posters)

Show pictures of shelf talkers with labels (hållbart val, klimatsmart förpackningsval, ekologiskt)

What are the feelings from seeing this? Are they informative? What are your association with them? Do your previous knowledge or information seeking correlates with what you see? Do you feel informed? Does it help you to purchase climate-smarter wine packaging? Do you care?

2c. *Interactive part: Packaging design alternatives:*

how pictures of different packaging alternatives – international alternatives included

During the point of purchase – what caught your eye? Would you buy this? Why not? If yes – what are the causes for it? And on what occasions could you buy it?

2d. Think of yourself when having a glass and an alternative packaging before you. What would make you choose the alternative packaging?

Phase 3: After the consumer decision and the evaluation and attitudes after the purchase (X min)

3a. You have made the purchase decision. What would make you change your decision? What would make the choice of a more sustainable packaging alternative more likely? Why/or why didn't you purchase it? *(E.g., change in the way the company communicates, change the availability in-store/online, more knowledge-increasing communication about the actual CO_2e emissions related to your choice?).*

Phase 4: Post-use behaviour (X min)

4a. What are your attitudes toward the packaging after use? Do you recycle it, or reuse it?

Outro (X min)

Open questions, thoughts, and evaluation, how was this interactive experience for you?

Appendix 2 – Semi-structured interviews with store employees

The questions follow the different phases in the consumption process, deriving from the questions in the focus groups. This part will only deal with Phase 2 (Behavior in the store) and Phase 3 (After decision), as the store employee only works within those frameworks.

Intro (5 min)

General information about informed consent and allowance of recording. Answers are treated confidentially, anonymity can never be guaranteed, but personal information will never be disseminated.

1. What is your position at Systembolaget?

2. How long have you worked at Systembolaget?

Phase 2: Behavior in store and purchase (15-20 min)

3. Describe how you, as an employee at Systembolaget, work with the sale of climate-smart packaging choices for wine? What does a typical customer meeting look like?

4. Based on your own experience and perception, do you feel that customers are interested in buying wine with sustainable properties, e.g. organic, climate-smart or sustainable choice?

5. Of the customers who feel interested in sustainability - do they buy products with a sustainability character in the wine segment? How does it manifest itself?

6. Which type of consumer would you describe as most or least interested in climate-smart packaging for wine? What are their arguments and rationale?

7. In Systembolaget's stores there are certain elements for the purpose of communicating about climate-smart packaging choices and sustainability-related issues. There are, for example, posters and brochures. There are also labels on shelves, e.g. Sustainable choice and climate-smart packaging.] How do you perceive the consumer's level of knowledge regarding this sustainability communication and the sustainability labels, 'Sustainable choice' and 'Climate-smart packaging?

Phase 3: After the consumer decision / The evaluation and attitudes after the purchase (7-10 min)

8. In your customer meeting, what challenges do you experience in selling KSF? What do you think could increase the purchasing power for climate-smart packaging?

9. In your role as a salesperson - do you feel that you have the support in your work that you need to work for Systembolaget's sustainability work? Is there something you would like to improve?

Outro (5 min)

10. Do you have any questions, thoughts, or comments you would like to add?

Transcription information.

Appendix 3 – Vilket kundsegment tillhör du?

Avsnitt 2 av 3

Vad tycker du

Nedan presenterar vi ett antal påståenden om alkoholdryck. Hur ställer du dig till dem?

Välj ett alternativ i den linjära skalan från 1 - 10, där 1 = Instämmer inte alls, 10 = Instämmer helt

I vilken utsträckning instämmer du i följande påstående…

1. Jag dricker gärna vin, men det spelar ingen större roll vilket vin det är*

	1	2	3	4	5	6	7	8	9	10	
Instämmer inte alls	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Instämmer helt

I vilken utsträckning instämmer du i följande påstående…

2. Jag följer de senaste trenderna kring vin*

	1	2	3	4	5	6	7	8	9	10	
Instämmer inte alls	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Instämmer helt

I vilken utsträckning instämmer du i följande påstående…

3. Jag köper ofta vin, öl, eller sprit för att ha på lager eller lite extra hemma*

	1	2	3	4	5	6	7	8	9	10	
Instämmer inte alls	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Instämmer helt

I vilken utsträckning instämmer du i följande påstående…

4. Jag tror att vin kan vara bra för hälsan, för att hålla sig frisk*

	1	2	3	4	5	6	7	8	9	10	
Instämmer inte alls	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Instämmer helt

I vilken utsträckning instämmer du i följande påstående…

5. Jag tycker det dricks för mycket alkohol i Sverige idag*

	1	2	3	4	5	6	7	8	9	10	
Instämmer inte alls	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Instämmer helt

I vilken utsträckning instämmer du i följande påstående…

6. Jag tycker det är för mycket snobberi kring vin*

	1	2	3	4	5	6	7	8	9	10	
Instämmer inte alls	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Instämmer helt

I vilken utsträckning instämmer du i följande påstående…

7. Jag tycker det är spännande att testa nya dryckessorter (vin, öl, cider/alkoläsk eller sprit) *

	1	2	3	4	5	6	7	8	9	10	
Instämmer inte alls	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Instämmer helt

I vilken utsträckning instämmer du i följande påstående…

8. Jag tycker om att ta ett glas vin eller öl till matlagningen, det hör till*

	1	2	3	4	5	6	7	8	9	10	
Instämmer inte alls	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Instämmer helt

I vilken utsträckning instämmer du i följande påstående…

9. Jag väljer efter flaskdesign och etikett när jag köper nya produkter (vin, öl, cider/alkoläsk eller sprit) *

	1	2	3	4	5	6	7	8	9	10	
Instämmer inte alls	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Instämmer helt

I vilken utsträckning instämmer du i följande påstående…

10. Jag är mycket intresserad av vin, det är en av mina största intressen*

	1	2	3	4	5	6	7	8	9	10	
Instämmer inte alls	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Instämmer helt

I vilken utsträckning instämmer du i följande påstående…

11. Jag är mycket intresserad av öl, det är en av mina största intressen*

	1	2	3	4	5	6	7	8	9	10	
Instämmer inte alls	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Instämmer helt

I vilken utsträckning instämmer du i följande påstående…

12. Köper jag vin, öl eller sprit till helgen är det oftast slut på måndagen*

	1	2	3	4	5	6	7	8	9	10	
Instämmer inte alls	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Instämmer helt

I vilken utsträckning instämmer du i följande påstående…

13. Om jag hittar en produkt (dryck) som jag tycker om (pris, smak etc.) blir det gärna så att jag fortsätter köpa den*

1	2	3	4	5	6	7	8	9	10

Instämmer inte alls	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Instämmer helt

14. Jag är intresserad av hållbarhet, och vill gärna köpa klimatsmarta förpackningar* när jag handlar*

*Klimatsmarta förpackningar refererar till papp, burk, PET, påse och returglas

☐ag är väldigt intresserad av hållbarhet och köper ofta klimatsmarta förpackningar
☐Jag är lite intresserad av hållbarhet och köper ibland klimatsmarta förpackningar
☐Jag är inte alls intresserad av hållbarhet och köper inte klimatsmarta förpackningar
☐Annat…

Avsnitt 3 av 3

Nu är enkäten snart klar!

Vi kommer påbörja processen att bilda fokusgrupper för intervju och vill gärna att du är med! Fokusgrupper är en grupp om 4–6 personer, där vi öppet diskuterar det givna ämnet under ungefär 2 timmar.
Datum: Någon gång under mars månad.
Plats: I person i Stockholm eller Uppsala, alternativt digitalt.
Exakt datum och plats bestäms när rekryteringen är klar.

Godkänner du att bli kontaktad för att medverka i en fokusgruppsintervju? *
☐Ja, jag vill medverka I en fokusgruppsintervju
☐Kanske, kontakta mig gärna för att berätta mer!
☐Nej, jag vill inte medverka i en fokusgruppsintervju
Om *ja* eller *kanske* hur önskar du bli kontaktad? Skriv in din *mail* eller ditt *telefonnummer*

_____
_____

Jag definierar mig som
☐Kvinna
☐Man
☐Annat

Vilken åldersgrupp ingår du i?
☐Under 30 år
☐30 – 39 år
☐40 – 49 år
☐50 – 59 år
☐Över 60 år
☐Vill inte ange

Vilken är din huvudsakliga sysselsättning?

☐Heltidsarbetande
☐Deltidsarbetande
☐Egenföretagare
☐Studerande
☐Arbetslös eller Arbetssökande
☐Föräldraledig
☐Hemmaman eller Hemmafru
☐Pensionär eller sjukskriven
☐Vill inte ange

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