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Sustainable Food and Social Mechanisms

How social mechanisms influence adoption of sustainable food in a Norwegian student context.

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This thesis is written as a part of our Master of Science in Economics and Business Administration at Norwegian School of Economics. It is moreover within the specialisation of Marketing and Brand Management (MBM), and Energy, Natural Resources, and the Environment (ENE). Today, sustainable consumption, and moving consumers towards this, is highly relevant and this topic has been greatly educational and interesting.

The dissertation has not come to be without some key people, to whom we would like to express our sincerest thanks.

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Executive Summary

The purpose of this dissertation is to discover how social mechanisms influence adoption of sustainable food. The background for this is the identified growing market trends in relation to sustainable products and food. In addition, we conduct a literature review which further confirms the need to study social mechanisms in the context of sustainable food. Specifically, we study influences of injunctive norm, descriptive norm, social identity, cognitive social identity, emotional social identity, social desirability, attitude, and perceived behavioural control on adoption of sustainable food. These variables are selected based on frameworks presented by White et al. (SHIFT; 2019a) and Ajzen (TPB; 1991). The results reveal that descriptive norm, social identity, cognitive social identity, attitude, and perceived behavioural control influence adoption of sustainable food. Moreover, the study provides theoretical and managerial implications in the context of sustainable food. In terms of theoretical contributions, the thesis yields support to descriptive norm and injunctive norm, a need for expansion of the normative component in TPB, identification with social groups, and social mechanisms being important for adoption of sustainable food. In terms of managerial implications, the dissertation lends support to the marketing mix, and thereby product, price, place, and promotion. Lastly, we make suggestions for future research related to design choice, the research model and choice of variables, common method bias, the assumptions of linear regression, and the measure of intention.

1. Introduction

1.1 Background and purpose

The background for this dissertation is the overarching wish to study the phenomenon of sustainable food and specifically how social mechanisms influence its adoption. Sustainable food has gained traction in recent years (Statista Research Department, 2023), a notion which is further supported after conducting our literature review (Appendix 1). According to Hasan et al. (2023), there has been an increase in green consumption behaviour in the past two decades due to climate change, changing consumer preferences, environmental concern, and animal welfare. This indicates that consumers are becoming increasingly motivated to purchase sustainable food and green food. Introspective Marketing Research (2023) projects that the global sustainable food market is expected to grow from 997.29 bn USD in 2022 to 1700.76 bn USD by 2030. Moreover, in terms of environmentally oriented consumer behaviour, purchasing green food products is the most accepted and widespread behaviour (Ham et al., 2015b).

Even though sustainable food is gaining traction, the attitude towards such products is still mixed (Statista Research Department, 2023). In a 2019 survey it is found that while about two thirds of Gen Z (ages 11-26; Beresford Research, 2023) in the US are likely to buy sustainable food, only a little under one third of Baby Boomers (ages 59-77; Beresford Research, 2023) claim the same (Statista Research Department, 2023). Furthermore, a 2022 survey conducted by World Wildlife Fund for Nature (WWF; 2022), reveals that the rise in cost of food acts as a barrier to purchase sustainable food. At the same time, Euromonitor International (2023) find that, per 2022, less than 20% of consumers wish to spend more on household products with sustainable attributes. Furthermore, Euromonitor claim that the main barrier for sustainable products is cost. Lack of availability is another barrier, as found in our literature review (Appendix 1; see e.g., Adhitiya & Astuti, 2019; Lazaroiu et al., 2019; Thøgersen & Zhou, 2012). This is further supported by EAT-GlobeScan (2021). In their 2021 report, they find that the two biggest obstacles for purchasing healthy and sustainable food are affordability and availability. Out of 30 000 consumers across 31 markets in the world, 36% find availability to be a significant barrier to purchase. Reynolds et al. (2022) also find lack of availability to be a significant barrier to purchase of sustainable food in the United Kingdom. In sum, consumption of sustainable food remains low, and some of the prevalent barriers for adoption are price and lack of availability.

The literature review, however, reveals (Appendix 1) additional factors which influence adoption of sustainable food. Amongst other things, the reviewed articles study factors, which influence adoption of sustainable food, such as (perceived) value (Adhitiya & Astuti, 2019; Alam et al., 2020; Cao et al., 2021; Sandu et al., 2022; Vermeir & Verbeke, 2006), knowledge and awareness of sustainable food (Carzedda et al., 2021; Rahim et al., 2013; de Sio et al., 2022; Murti & Ekawati, 2022; Pasco, 2023; Premadasa & Fernando, 2022; Wang & Wang, 2016, Yogananda & Nair, 2019) and health consciousness (Carzedda et al., 2019; Murti & Ekawati, 2022; Premadasa & Fernando, 2019; Qi et al., 2020; Qi & Ploeger, 2021; Rustagi & Agarwal, 2021; Thøgersen & Zhou, 2012; Yogandanda & Nair, 2019). In addition to this, the two most prevalent theories are the Theory of reasoned action (hereafter called TRA; Ajzen & Fishbein, 1980) and the Theory of planned behaviour (hereafter called TPB; Ajzen, 1991). Subsequently, attitude, subjective norm, and perceived behavioural control (hereafter called PBC) are studied.

The literature review (Appendix 1) also reveals that social mechanisms affect the adoption of sustainable food. Specifically, 30 out of the 42 reviewed articles find that social mechanisms significantly influence the adoption of sustainable food (e.g.: Huseyin & Gül, 2022; Kim et al., 2016; Qi & Ploeger, 2019; Qi et al., 2020; Rahim et al., 2011; Rahim et al., 2013; Vermeir & Verbeke, 2008). This indicates that social mechanisms are important to explain adoption of sustainable food. Even though TRA and TPB include subjective norm, they do not study social mechanisms deeper than this. White et al. (2019a), on the other hand, present social norms, social identities, and social desirability as important factors when moving consumers towards sustainable behaviours.

Based on what is presented above, we discern a need for further studies on social mechanisms and how they influence adoption of sustainable food. This is also in line with White et al. (2019a) and Flores and Jansson (2021) who request further research into social mechanisms and sustainable behaviour. Armitage and Conner (2001) also request expansion of the subjective norm in TPB. *Hence, the purpose of this thesis is to discover how social mechanisms influence adoption of sustainable food.* As TRA and TPB are well-established models in terms of explaining adoption, we choose to include, and control for, the mechanisms included in TPB. We choose TPB as it is an extension of TRA.

1.2 Research questions

The basis for research question one (RQ1) is the framework of social mechanisms related to sustainable behaviour which White et al. (2019a) present. The framework consists of the following social mechanisms: (1) social norms, (2) social identities, and (3) social desirability. We choose to focus on social mechanisms as the literature review (Appendix 1) highlights their importance in addition to the fact that humans often are influenced by expectations, behaviours, and presence of others (White et al., 2019a). The literature furthermore agrees that humans can be categorised as social beings (Morgan, 2015), as illustrated by Flynn's (2008) description of humans as necessarily and distinctly social. Flynn further states that our relationships and interactions with others influence our experiences and our emotions.

According to Abrahamse and Steg (2013), social factors, in the context of causing sustainable consumer behaviour change, are some of the most influential mechanisms. As mentioned, the literature review (Appendix 1) supports the claim that social mechanisms influence adoption of sustainable food. One such example is Ham et al. (2015a) who find that subjective norms are statistically significant predictors of green food purchase intention. Another example is Vermeir and Verbeke (2008) who find that perceived social influences, together with attitudes, perceived consumer effectiveness and perceived availability, have a significant and positive influence on behavioural intention for sustainable dairy. However, much of the literature (cf. Appendix 1) has a one-sided focus on social norms, and not social mechanism as whole. Therefore, we find it appropriate to explore the other social mechanisms to bring forth a more nuanced view of social mechanisms.

After reviewing the literature (Appendix 1) and the social mechanisms presented by White et al. (2019a), a need for further study is apparent. We therefore propose the following research question:

RQ1: What are the influences of social mechanisms (White et al., 2019a) on adoption of sustainable food?

The concept we utilise for our second research question is TPB (Ajzen, 1991). Ajzen (2019) claims that over two thousand articles have utilised TPB across various behavioural domains. Followingly, and as mentioned, the model is empirically validated, and highly relevant for our study. The model presents attitude, subjective norm, and PBC as predictors of variance in actual behaviour (Ajzen, 1991). According to Kan and Fabrigar (2017) it is the attitude towards a behaviour, subjective norm and PBC which turn into the development of intention.

TPB is frequently and successfully applied to studies of sustainable food choices. One such example is Vassallo et al. (2016) who find that, amongst other things, attitude, PBC, and subjective norm influence the intention to buy sustainably produced food. In our literature review (Appendix 1) we also find support for TPB and its influence on intention. One first example is Shen et al. (2022), who find that attitude, subjective norm, and PBC significantly influence both purchase intention and behaviour positively. Another example is Sandu et al. (2022) who find that attitude, social norms and PBC significantly and positively influence intention to buy green food, together with perceived value. Thus, through TPB, one can understand how to impact adoption. In our dissertation social mechanisms are the main focus, but even so TPB is an influential and important model, and we therefore wish to control for TPB. In addition to this, we wish to see how the social mechanisms work together with TPB. Based on this, we present the following second research question:

RQ2: What are the influences of the TPB antecedents (Ajzen, 1991) on adoption of sustainable food?

1.3 Theoretical contributions

This thesis firstly complements existing research on adoption of sustainable food in the context of social mechanisms. Previous research, as we see in the literature review (Appendix 1), primarily focuses on subjective norm as the construct is presented in TPB. Meanwhile, this study provides a nuanced presentation and examination of several social mechanisms. Furthermore, this study presents the effects of social mechanisms and how they explain adoption. Thus, the understanding of social mechanisms and how they affect adoption of sustainable food will improve.

Secondly, this study contributes to valuable insight about the student segment and how they can be influenced by social mechanisms to adopt sustainable food. The literature review (Appendix 1) shows that only seven out of the total of 43 articles examine students or the relevant age group. Gen Z (born between 1996 and 2010; McKinsey & Company, 2023) is the largest generation in the world (Boffey, 2023) and followingly a valuable target group. As we see in the literature review (Appendix 1), "young people are the best people for understanding green purchase intention completely since they will be the decision-makers of the future and have an influence on their friends' and families' purchasing decisions." (Ali et al., 2023, p. 169). Moreover, within Gen Z (and Millennials), 53% claim sustainability as important for purchase decisions (Reda, 2021). Studies also find that Gen Z demand sustainable retail, and that the vast

majority prefers to buy sustainable brands (Petro, 2021). This highlights the importance of understanding this generation and what influences their adoption of products.

Thirdly, this study contributes to a broader understanding of cultural differences in respect to social mechanisms. This is based on the literature review (Appendix 1) in which we find a surplus of articles which study countries in Asia. Specifically, 26 articles (60%) study Asian countries. Thus, we widen the scope of examined countries. Moreover, none of the articles in the review study Nordic countries. Followingly, focusing on Norway in this dissertation deepens the understanding of the social mechanisms in a different cultural context than previous studies.

Lastly, we utilise an academically sound and renowned theoretical model in TPB as a control for the social mechanisms in our research model.

1.4 Managerial contributions

The current research (cf. Appendix 1) shows that social norms are important for adoption of sustainable food. This study, however, studies social mechanisms on a deeper level and investigates how they affect adoption of sustainable food. Therefore, this dissertation firstly contributes to a deeper understanding of social mechanisms and the psychological process of consumers (Zheng et al., 2023). Thus, stakeholders and managers can gain better understanding of customer needs. This is valuable for those who wish to offer efficient and targeted advertising of sustainable food. Moreover, managers may use these findings as a premise to adjust their production, promotion, and delivery of services to stimulate adoption of their products. In other words, this can help ease the development of efficient marketing strategies.

Secondly, this dissertation contributes, as mentioned, to insight into the student target group and can thus be seen as a new view on current and prospective customers. As we see in the literature review (Appendix 1), students are not widely studied, but even so a highly valuable target group (Lapowsky, 2014). Young adults furthermore represent a fair share of disposable income (Page, 2022) and are emerging as *the* sustainability generation. In other words, understanding social mechanisms in the context of young adults is important to effectively engage the demographic in sustainable food choices.

The dissertation thirdly contributes to a better understanding of cultural differences, as discussed above. In the context of the Norwegian market, this will help managers adjust how they are currently working. It can moreover contribute to more efficient communication, as well

as improved customer relations. This yet again provides new perspectives on ways to influence prospective and current customers.

1.5 Main results

The main result of the study is that social mechanisms are important in the context of adoption of sustainable food. Specifically, the dissertation finds full support for descriptive norm having a positive influence on intention to purchase sustainable food. Furthermore, we find partial support for injunctive norm, social identities, cognitive social identity, and attitude having positive influence on intention to purchase sustainable food. Lastly, we find some support for PBC having positive influence on intention to purchase sustainable food.

1.6 Outline

Section 2 outlines the nomological network of sustainable food and presents market trends and history of the concept. Meanwhile, section 3 introduces theory and the hypotheses for the dissertation. Moving on, section 4 presents the methodology, while section 5 presents the results from the analyses. Finally, section 6 details the discussion and conclusion of the thesis.

2. Sustainable food: Nomological network and market trends

Sustainability is defined by the United Nations Brundtland Commission as something which "meets the needs of the present without compromising the ability of future generations to meet their own needs" (United Nations, 1987, p. 16). The Oxford Learner's Dictionaries (n.d.) further defines sustainability as "the use of natural products and energy in a way that does not harm the environment" and something which can be carried out for a long time. Based on these general definitions we wish to gain a better understanding of sustainability in relation to food and consumption. Moreover, we wish to define sustainable, green, and organic product.

2.1 Sustainable food

2.1.1 Sustainable product and food

According to Belz and Peattie (2009, p. 154) sustainable products are "offerings that satisfy customer needs and significantly improve the social and environmental performance along the whole life cycle in comparison to conventional or competing offers". Another definition states that sustainable products should take sustainable development principles into account, which is aimed at achieving environmental, social, and economic goals in society (Guido, 2009).

Sustainable food, on the other hand, is defined as food that should meet requirements within safety, politics, and environment (for example, nutritious, and healthy diets for everyone), viable livelihood for retailers, processors and farmers, animal welfare, environmental protection, safeguarding biodiversity, saving energy, and minimising waste (Gorgitano & Sodano, 2014). In short, sustainable food "generally refers to food that is produced using methods that protect the environment and the welfare of the people producing them." (Statista Research Department, 2023).

2.1.2 Sustainable consumption

In 1994, the Oslo Symposium discussed sustainable consumption as a concept and defined it as using products and services to meet consumer demand while enhancing their quality of life, as well as reducing negative side-effects of consumption. These side-effects include usage of finite resources, hazardous substances, and waste (Kristia et al., 2023; Gorgitano & Sodano, 2014; Consumption, 2008). According to the United Nations Environment Programme (UNEP, n.d.) sustainable consumption (and production) is defined as using services and related products

which fulfil basic needs and improve life quality while also minimising usage of natural resources, toxic materials and emissions of waste and pollutants during the product's life cycle. This to safeguard the needs of future generations (UNEP, n.d.).

2.2 Green food

2.2.1 Green product and food

According to Adhitiya and Astuti (2019, p. 194) the Commission of European Communities defines a green product as a product which "uses less resources, has a lower impact and risk on the environment, and prevents waste piles at the conception stage". Moreover, they state that "a product can be considered "green" if it has a higher environmental performance than the traditional one at parity functions. This performance is not limited to the production phase but is extended to the overall product life cycle" (Adhitiya & Astuti, 2019, p. 194).

According to Durif et al. (2010) it is possible to define "green product" in three ways: through academic, industrial and consumer perspectives. The first, academic, definition states that a green product has a design or attributes which utilise recycling resources and improves the environmental impact or reduces toxic damage to the environment during the entirety of its life cycle (Durif et al., 2010). The second, industrial, definition states that a green product must respect the "three Rs" (reduce, reuse, recycle), must be certified by an official institution, cannot test on animals, and must be biodegradable (Durif et al., 2010). Lastly, the third, consumer, perspective yields the definition of a green (household) product needing to be "(1) non-toxic for nature, (2) good for health, (3) socially responsible, and (4) good for the planet." (Durif et al., 2010, p. 31).

When it comes to green food, de Sio et al (2022, p. 2) pose the following definition: "food that is protective and respectful of biodiversity and ecosystems, culturally acceptable, accessible, economically and nutritionally valuable, and made by optimizing natural and human resources". It is moreover defined as a product which causes less damage to the environment throughout its life cycle, both in product characteristics and production methods, compared to products of the same category (de Sio et al, 2022). Another definition states that green foods are safe to consume, of fine quality and nutritional value, concerned with animal welfare and produced under the principle of sustainable development (Khan et al., 2015; Ham et al., 2015a).

2.2.2 Green consumption

When it comes to green consumption, Elliott (2013) defines it as an emerging strategy which individuals can utilise to reduce both personal and household impacts (for example, waste management and energy use). Elliott (2013) further states that sustainable and green consumption often are used synonymously in both the press and literature. Another researcher argues that green consumption overlaps with other concepts, hereunder responsible, sustainable, and ethical consumption, and further argues that this leads to an unclear and inconsistent definition of green consumption within the literature (Peattie, 2010). Gilg et al. (2005, p. 481) further add to this discussion by arguing that green consumption "has come to mean all things to all people" and that there is an "ever-expanding liturgy of activities and products, which can be used as proxies for green consumption" (Gilg et al., p. 481). Thus, they argue that the environmental dimension of green consumption relates more to sustainability in general.

2.3 Organic food

2.3.1 Organic product and food

According to the Food and Agriculture Organisation of the United Nations (FAO) a certified green organic product is a product which is certified organic by an official body, and which follows specific standards in relation to production, storage, processing, handling, and marketing (FAO, n.d.).

Moving on to organic food, these are products which are "produced according to the principles of organic farming, which seeks to work compatibly with natural cycles and processes in soil, plants and animals. Neither chemical fertilizers and pesticides nor genetically modified organisms (GMOs) are allowed in organic farming" (Belz & Peattie, 2009, p. 154). A similar definition is found by Duram (2019) who states that organic food is food, both fresh and processed, which is produced according to organic farming methods, without synthetic chemicals (for example, man-made pesticides and fertilizers), and moreover which does not contain GMOs. Organic food is furthermore "healthier, fresher, and more environmentally friendly [compared to traditional food], and it better supports the local economy" (Cao et al., 2021, p. 3540).

2.3.2 Organic consumption

Organic consumption is very closely tied to organic *food* consumption, as organic food is the largest market within organic products such as personal care and cosmetics (Statista Research

Department, 2022). We therefore choose to define organic consumption with the help from organic food consumption. According to a study based on Danish consumers, from the period between 1999 and 2002, organic food consumption is associated with more favourable socio-demographics and dietary habits, as well as a generally healthier lifestyle (Andersen et al., 2022). Schifferstein and Ophuis (1998) define organic consumption as something which is part of the way of life. They further state that organic consumption derives from an ideology, which is connected to a value system which affects consumption behaviour, attitudes, and personality measures.

2.4 Similarities and differences in the nomological network

Below (Table 1), we summarise definitions of sustainable food, green food, and organic food, to enable comparisons and better understand the differences and similarities between the three.

Sustainable food	Green food	Organic food
*Meets "safety, political and environmental requirements, such as safe, healthy, and nutritious diets for everyone (Gorgitano & Sodano, 2014, p. 210). *"Viable livelihood for farmers, processors, and retailers" (Gorgitano & Sodano, 2014, p. 210). *Animal welfare (Gorgitano & Sodano, 2014). *Environmental protection (Gorgitano & Sodano, 2014). *Safeguarding biodiversity (Gorgitano & Sodano, 2014). *Energy saving (Gorgitano & Sodano, 2014). *Waste-minimising (Gorgitano & Sodano, 2014). *Improving quality of life (Consumption, 2008) *Reduce use of natural resources, waste- and pollutants-emissions, toxic materials, during the life cycle (Consumption, 2008) *Should not threaten the needs of future generations (Consumption, 2008; UNEP, n.d.)	*"Protective and respectful of biodiversity and ecosystems" (de Sio et al., 2022, p.2) *Culturally acceptable (de Sio et al., 2022) *Accessible (de Sio et al., 2022) *"Economically and nutritionally valuable" (de Sio et al., 2022, p. 2) *"Made by optimizing natural and human resources" (de Sio et al., 2022, p. 2) *"Safe to use" (Ham et al., 2015a, p. 738) *"Have fine quality" (Ham et al., 2015a, p. 738) *"Produced using methods which show concern for animal welfare" (Ham et al., 2015a, p. 738) *"Grown and produced in line with the principles of sustainable development" (Ham et al., 2015a, p. 739)	*"Healthier, fresher, and more environmentally friendly compared to traditional food" (Cao et al., 2021, p. 3540) *"Produced, stored, processed, handled, and marketed in accordance with precise technical specifications (standards)" (FAO, n.d.) *"Certified as "organic" by a certification body." (FAO, n.d.). *"Better supports the local community" (Cao et al., 2021, p. 3540) *"Considered an important form of sustainable consumption" (Cao et al., 2021, p. 3540) *"A more sustainable alternative to conventional food" (Thøgersen & Zhou, 2012, p., 314) *"Fresh or processed food produced by organic farming methods" (Duram, 2019) *"Grown without the use of synthetic chemicals" (Duram, 2019) *Without GMOs (Duram, 2019) *Animal welfare (Regjeringen, 2015).

Table 1: Comparison of sustainable food, green food, and organic food.

In reviewing similarities and differences between these concepts, one first thing to point out is that all three seek to safeguard the environment, ecosystems, and biodiversity (de Sio et al., 2022; Gorgitano & Sodano, 2014; Cao et al., 2021). Moreover, whereas organic food has strict

standards regarding GMOs, pesticides, and chemicals (Duram, 2019), sustainable food should only seek to minimise toxic materials, waste emissions and the use of natural resources (Consumption, 2008). Meanwhile green food only needs to be in line with the principles of sustainable development (Ham et al., 2015b). Furthermore, organic food should be produced, handled, and marketed in line with strict technical standards (FAO, n.d.). It is furthermore an industry with clear systems in terms of producing, processing, distributing, and retailing (Duram, 2019). Moreover, organic food needs to be certified by an official certification body (FAO, n.d.) such as "USDA Organic" in the US, "Debio" in Norway or the "EU organic logo" for EU countries (USDA, n.d.; Debio, n.d; European Commission, n.d.).

Based on this and the literature review (Appendix 1), we argue that organic food is to be categorised as a sub-category of sustainable food. Firstly, because it is often what is used when studying sustainable food (Cao et al., 2021; Kristia et al., 2023) and is even used to define sustainable food (e.g., Cerri et al., 2019b; Kristia et al., 2023). According to Kristia et al. (2023) sustainable food encompasses organic food, plant-based diets, reduction of meat consumption and purchase of locally grown and seasonal food. Secondly, organic food has a narrower and more precise definition than that of sustainable food and green food, as the comparison above shows. Lastly, other authors argue that green food and organic food should not be used interchangeably, even though sustainable food and green food is (de Sio et al., 2019). This is because organic food describes a different concept than sustainable food and green food (de Sio et al., 2022).

While sustainable food, green food, and organic food share similarities in terms of environmentally friendly farming practices, sustainable food and green food encompass a broader set of principles. Sustainable food and green food consider social and economic aspects of the food systems, as well as a wider range of environmental concerns. However, organic food does not necessarily address the social or economic aspects of food production. In addition to this, as mentioned, organic food is a subset of sustainable food, meaning all organic food is sustainable food, but not all sustainable food is organic.

Based on this comparison of concepts, we reach the conclusion that sustainable food and green food cover the same concept whereas organic food is something separate. Subsequently sustainable food and green food is what we focus on in the literature review (Appendix 1), and they are the concepts we use in the remainder of the dissertation. Even so, we will henceforth use sustainable food to encompass both sustainable food and green food.

2.5 Market trends for sustainable food

When looking at the market trends for sustainable food, it becomes apparent that "food" and "product" are used synonymously. Therefore, when presenting the evolution and trends in the following section, we follow the same approach. Moreover, the market trends are structured in a chronological order.

2.5.1 Historical evolution of sustainable food

The world is currently facing substantial challenges such as climate change, overpopulation, and depletion of resources (Varah et al., 2021), which pose a great threat to the environment. According to Berrebi et al. (2023), the increase in attention regarding climate change impacts and related environmentally deteriorating events has led to a rise in the interest of consumers in green products. Furthermore, according to Jackson (2006 in Vittersø & Tangeland, 2015) food accounts for one of the three consumption areas which most significantly affect the environment. As the global population continues to grow, the global demand for food followingly increases (Elferink & Schierhorn, 2016). However, factors such as climate change make it difficult to meet the global food demand (Elferink & Schierhorn, 2016). Phenomena such as climate change pose both environmental and social challenges (Gaudig et al., 2021), highlighting the need to shift the course of today towards a more sustainable one.

Due to the difficulty of finding one common definition of sustainable food and green food, as we document in section 2.4, it is challenging to unravel the evolution of sustainable food and green food consumption in detail. In the following section we therefore present the evolution of sustainability as a concept and furthermore, the evolution of and trends for organic food consumption. We choose to include the evolution of and trends for organic food consumption, as this topic is covered to a greater extent in the existing literature than sustainable food and green food consumption. Moreover, we argue that the evolution of and trends for organic food is likely to be transferable to the case of sustainable food and green food consumption since we argue for it being a sub-category of sustainable food.

2.5.2 Market trends for sustainable food globally

Sustainable development, as a concept, has received increased attention in recent years. This is due to quality of life, and amongst other things the quality of the natural environment, gaining greater public interest (Carzedda et al., 2021). Furthermore, although much of today's concern about sustainability can be said to be related to environmental challenges taking place in our time, the overconsumption of resources is criticised as early as BC (Jackson, 2014 in Quoquab & Mohammad, 2020). It is, however, only in the 18th century that overconsumption is criticised in a more modern way (Quoquab & Mohammad, 2020). Furthermore, during the 20th century, the work of the United Nations, contributed to an increase in attention regarding consumption, both through its initial *Scientific Conference on the Conservation and Use of Resources*, in 1949, and the *United Nations Conference on the Human Environment* in 1972 (Jackson, 2014 in Quoquab & Mohammad, 2020). During the 1960s and 1970s, legislation with environmental focus increased, and the policy-making approach called "cleaner production" was introduced in the 1980s to increase eco-efficiency and reduce waste (Beaton & Perera, 2012).

Moreover, in 1987 the World Commission on Environment and Development launched its report on sustainable development, making explicit the role of consumption for sustainable development. This was further emphasized in the United Nations Conference on Environment and Development of 1992 (Quoquab & Mohammad, 2020), where sustainable consumption made its way to the political agenda of intergovernmental organisations (IGOs; Gorgitano & Sodano, 2014). Sustainable consumption was later formally presented at the Oslo Symposium in 1994 (Liu et al., 2017). The Johannesburg Plan of Implementation (JPOI) of 2002 further considered sustainable consumption, as well as production, to be a necessity for sustainable development (UNEP, 2012). In 2012, the General Assembly declared that modern societies' consumption is essential for achieving sustainable development (Quoquab & Mohammad, 2020). The interest for sustainable food consumption further increased significantly in 2015 after the adoption of UN Sustainable Development Goals (SDGs; Kristia et al., 2023).

In terms of the link between food and sustainability, Ritchie (2021) establishes that our current food systems account for approximately 25% to 30% of global greenhouse gas emissions, making clear how food, sustainability, and the environment are intertwined. Sustainable development is also said to have a greater significance in the food industry due to its impact on dietary life of the modern society and on the environment considering its intricate supply chains (Kim et al., 2016). Sustainable development has become a high priority for the food industry as

an increasing number of consumers have become more conscious as to buying sustainable and environmentally friendly products (Vermeir & Verbeke, 2008).

According to Vittersø and Tangeland (2015), in the food sector, organic food is often considered as a key element for transitioning towards a more sustainable food system, in terms of both production and consumption. After 1920 the organic movement was formed as a response to the industrialization of agriculture (Šrůtek & Urban, 2008), and a growing scepticism towards the impacts of synthetic fertilizers (Pessis, 2023). Fertilizer shortages during World War II further increased the attention towards organic farming techniques (Pessis, 2023). Moreover, as pesticides also received environmental concern during the 1960s, organic farming received greater attention, and in 1972 the International Federation of Organic Agriculture Movements (IFOAM) was created (Pessis, 2023).

Regarding quantifying sustainable consumption, the market value for ethically labelled packaged foods, is projected to grow from 793.3 bn USD in 2015 to 872.7 bn USD by 2020 globally (Statista Research Department, 2023). Furthermore, sales of organic food on a global basis increased from around 18 bn USD in 2000 to approximately 132.74 bn USD in 2021 (Shahbandeh, 2023). A joint study by McKinsey and NielsenIQ finds that, for the US, "products making ESG-related claims averaged 28 percent cumulative growth over the past five-year period, versus 20 percent for products that made no such claims" (Bar Am et al., 2023, p. 3). Moreover, NYU Stern Center for Sustainable Business finds that products marketed as sustainable had sales growth 2.7 times as fast as those of conventional products between 2015 and 2021 (Berrebi et al., 2023). Furthermore, Berrebi et al. (2023) establishes that products marketed as sustainable increased their market share in 2022 by 3.3% from 2015. A study by Harvard Business Review finds that even though 65% claim to wish to buy purpose-driven brands that advocate sustainability, only about 26% do (White et al, 2019b).

It is worth mentioning the evolution of organic food consumption during the COVID-19 pandemic. According to Harvey (2021) many reported an increase in consciousness in terms of environmental issues. Furthermore, due to the pandemic and its lockdowns there has been a reassessment in society of health and the influence humans have on the environment (Harvey, 2021). According to the Soil Association's annual report on the organic market, the organic market rose by 12.6% from 2019 (Harvey, 2021). For those who maintained their income throughout the pandemic, and who were working remotely, and therefore having more meals at home, these had the opportunity to indulge in somewhat more expensive, organic food (Harvey, 2021). It followingly becomes evident that those who did not maintain their income during the

pandemic might have had to reduce their spending on products such as organic food and turn to more low-cost alternatives.

According to Adhitiya and Astuti (2019, p. 193), "green products have gained increasing attention in recent years due to the friendliness of their environment in the manufacturing process, emissions used are low, can be recycled, etc". Moreover, "the development of environmentally friendly production and consumption has become a global trend." (Adhitiya & Astuti, 2019, p. 193). Due to the growing importance of sustainable consumption, consumption of food is being recognised as an important issue of sustainability. This is because of its influence on "personal and public health, natural resources, social cohesion and the economy." (Cao et al., 2021, p. 3540). As we mention in the introduction, the global sustainable food market is expected to grow from 997.29 bn USD in 2022 to 1700.76 bn USD by 2030 (Introspective Marketing Research, 2023).

2.5.3 Market trends for sustainable food in Norway

In a national dietary report (N=8852) from 2020, Folkehelseinstituttet (Norwegian Institute of Public Health; FHI), find that 62% have changed their diets in the last three years to have a more sustainable and environmentally friendly diet (Abel & Totland, 2021). Amongst other things, vegetarian food, a reduction in meat consumption and more locally sourced food are some of the implemented measures. Interestingly, the share of people making changes is significantly greater for the younger consumers, and 18 percent of women between the age of 18 and 24 report they have made changes to a large or very large degree (Abel & Totland, 2021).

In addition to this, there is an increase every year since 2000 in consumption of ecological groceries. Notwithstanding missing numbers from 2019, the numbers from 2020 show a 10-20 percent increase of ecological groceries sales in the three retail chains in Norway (Norges Bondelag, n.d.).

When it comes to organic farming, Vittersø and Tangeland (2015) report that organic farming in Norway received production subsidies for the first time in 1990. This was established because of the focus within agricultural policy on environmental initiatives at the time. Later, in 1995, an action plan for organic farming was introduced. This was considered a sign that the government had begun to realise the importance of further development of organic agriculture and its market conditions. Amongst other things, this plan ensured that organic production, which had not been branded as organic food up until that point, was labelled as organic. These

political measures were undertaken to stimulate “production, distribution and consumption of organic food in Norway” (Vittersø & Tangeland, 2015, p. 97).

2.6 Main takeaways

In this chapter, we firstly find that sustainable food and green food is something separate from organic food. We also find that sustainable food and green food are often used interchangeably in the literature. Followingly, it makes sense to study both sustainable food and green food in our dissertation. More importantly, we find that there is little data when it comes to the evolution of sustainable food. Therefore, it is important to gather data, and further understand the development of sustainable food. We also find that consumers are becoming increasingly interested in green products due to the current challenges we are facing globally. The United Nations Sustainable Development Group stresses the importance of transitioning to food systems which balance food production with climate change, “sustainable agriculture and healthy, affordable, diets for all.” (UNSDG, 2023). Moreover, as we see in the introduction (Chapter 1), about two thirds of Gen Z are more likely to buy sustainable food, but less than one third of Baby Boomers claim the same (Statista Research Department, 2023). In other words, we see a trend with the younger consumers, and it is followingly important to understand what drives adoption for this target group, which again highlights the importance of this study.

3. Theory and hypotheses

3.1 Adoption – what is it?

The Cambridge Dictionary (n.d.) defines adoption as "accepting or starting to use something new". Adoption is moreover defined by Hassinger (1959) as a process consisting of five steps: (1) awareness, (2) interest, (3) evaluation, (4) trial and (5) adoption. Subsequently, adoption can be understood as a process in which a consumer starts by learning about a product. The consumer then develops interest in the product and seeks more information. Thereafter, the consumer evaluates and soon tries the product, before finally adopting and thus accepting the product which leads to continued use. The process can also be ended at any of the stages.

Adoption is often captured through the intention of use. In the instance of TPB, the model includes both intention and behaviour, and intention is defined as an indicator of a consumer's disposition to perform a behaviour (Fishbein & Ajzen, 2015). It is moreover considered as the immediate antecedent of behaviour (Ajzen, 2019). Meanwhile, behaviour is the observable action in a situation, with respect to a target (Ajzen, 2019). What TPB does not capture, however, is the intention-behaviour gap. The discrepancy between intention and behaviour, is the gap between those who fail to act, even though they intend to do so (Sniehotta et al., 2005). As Ajzen (2019) states, since intention does not necessarily predict actual behaviour, it is not possible to use the measure of intention as a proxy for the measure of behaviour.

In our literature review (Appendix 1), many of the studies only utilise intention as the dependent variable, but there are also examples of articles which claim to measure behaviour when they are measuring intention (for example, Murti & Ekawati, 2022). Vermeir and Verbeke (2006) argue that even though they do not utilise a measure for actual behaviour, behavioural intention and actual behaviour are strongly, but not perfectly, correlated. So, even though some of the articles claim to measure purchase or consumption, this is not necessarily true, as is revealed when looking at the utilised measures.

3.2 Social mechanisms and Theory of planned behaviour

Social mechanisms can be defined as "constellations which describe how the action of one actor influences the action of another actor by influencing desires, beliefs, or opportunities." (Maurer, 2016, p. 34). As White et al. (2019a) present, people are often influenced by the presence, behaviour, and expectations of others. Social influence is, as mentioned, among the most influential mechanisms in terms of causing sustainable consumer behaviour change (White et al., 2019a).

Furthermore, social influence denotes how consumers' opinions, feelings, thoughts, attitudes and/or behaviours are influenced by others (Dahl, 2013; Liang et al., 2017). People are preoccupied with what others think of them, and social reputation is often influential on behaviour (Goldsmith & Goldsmith, 2011). In other words, the potential disapproval of others will influence what one does. Moreover, "people observe others' behaviour and imitate them" (Goldsmith & Goldsmith, 2011, p. 119). In addition to this, though, people may directly give instructions to other people concerning how to behave and what to believe. This can happen through for example, teaching in group settings, or in individual settings such as within family and friend groups. When consumers internalise what they observe and are taught, it becomes a foundation for their feelings, thoughts, and actions in the future (Goldsmith & Goldsmith, 2011).

Social influence is well-documented in consumer behaviour research and is found to be a critical factor in terms of significantly changing the behaviour of individuals (Bhukya & Paul, 2023). Theories such as the social influence theory (Kelman, 1958) help explain how consumers are influenced by their external social environment. Moreover, the theory proposes that the behaviour of other consumers plays a pivotal role in changing of attitudes (Bhukya & Paul, 2023). A second theory, the social norms theory (Perkins & Berkowitz, 1986), states that individual's attitudes and behaviours are significantly influenced by how they perceive their social group(s) to act (Trivedi & Beck, 2018, p. 14). Social norms theory is often used to understand and prevent "interventions of consumers' anti-consumption behavior" (Bhukya & Paul, p. 8) in research such as ethical consumption, food consumption, sustainable consumption, and environmental consumption (Bhukya & Paul, 2023). Social comparison theory, on the other hand, posits that consumers make comparisons with others, either worse or better than themselves, and this influences their choice (Festinger, 1954, in Bhukya & Paul,

2023). This theory is often used when explaining the effect of an individual's comparisons on behavioural decisions.

TPB builds upon the TRA model by Ajzen and Fishbein (Ajzen & Fishbein, 1980). Specifically, it is an extension of the model, since TRA has a limitation, in that it assumes incomplete volitional control in consumers. Therefore, the TPB has been created, and this model includes PBC. The antecedents of intention are attitude, subjective norm, and PBC (Ajzen, 1991). Intention is furthermore based on attitude and subjective norm, weighted by importance in relation to the behaviour (Ajzen, 2019). PBC in turn acts as a moderator on the effect of attitude and subjective norm on intention, but also has a direct effect of intention on behaviour. Intention is assumed to capture motivational factors, which then influences behaviour. In other words, they indicate "how hard people are willing to try […] in order to perform the behavior" (Ajzen, 1991, p. 181). Generally speaking, a strong intention makes it more likely that a behaviour will be performed (Ajzen, 1991).

As we discuss in section 3.3, subjective norm is covered by social norms in White et al. (2019a), and we therefore do not discuss subjective norm any further than what is presented above.

Attitude is defined as evaluative assessments of aspects regarding someone's experience, such as a behaviour, that is either negative or positive, and which is furthermore affected by factors that are situational, herein observations of behaviour which is one's own (Bem, 1967; Glasman & Albarracín, 2006; Montano & Kasprzyk, 2008 in Lindgren et al., 2021). The background factor of attitude is behavioural beliefs, which is defined as a person's subjective evaluation of whether a behaviour will yield a certain outcome or experience (Ajzen, 2019). These behavioural beliefs produce the favourable or unfavourable attitudes towards a behaviour. Moreover, this background factor helps direct an individual's consideration of positive and negative outcomes (Kan & Fabrigar, 2017). Furthermore Ajzen (1991) states that one forms beliefs concerning an object through linking it to certain attributes. In terms of attitudes regarding a behaviour, every belief associates the behaviour to certain consequences, or a certain attribute (Ajzen, 1991). These attributes are already evaluated either negatively or positively, and in so one automatically obtains an attitude towards the behaviour (Ajzen, 1991).

Attitude is well-documented through various theories. One first is the Elaboration Likelihood Model of persuasion (ELM, Petty & Cacioppo, 1986). This model argues that attitudes which are changed or formed through central processing are stronger predictors of behaviour than that of attitudes which are changed or formed through peripheral processing (Petty et al., 1991). A

second model which describes how attitude influences behaviour, is the MODE model of attitude-behaviour relations. Developed by Fazio in 1990, the model explains how attitude influences behaviour and judgements, and moreover how motivation and opportunity acts as key determinants of behaviour (Fazio & Olsen, 2014; Haddock & Maio, 2007).

According to Abrahamse (2019) those who have a favourable attitude towards a behaviour, accompanied by a greater acceptance of the behaviour among important others, as well as high levels of PBC, are more likely to develop strong intentions to execute the behaviour in question.

We expect PBC to influence adoption as it denotes consumer's sense of their own ability to execute a certain behaviour. Moreover, the background factor of PBC, control beliefs, shows which factors may enable or prevent a behaviour, and thereby produce a behavioural control (Ajzen, 2019; Kan & Fabrigar, 2017). As Ajzen (1991, p. 181-182) states, "behavioral intention can find expression in behavior only if the behavior in question is under volitional control i.e., if the person can decide at will to perform or not perform the behavior". Even though many behaviours meet this requirement, it is also conditional on non-motivational factors such as "availability of requisite opportunities and resources" (Ajzen, 1991, p. 182). These resources are, for example, skills, money, and time. It is these factors which represent actual control over a behaviour. There is, however, a difference between actual control and perceived control. It is, according to Ajzen (1991), the consumer's perception of control which is important in influencing intention and behaviour. PBC, moreover, varies across actions and situations.

Several theories discuss similar concepts to PBC. Firstly Rotter (1954; 1966) and his concept of perceived locus of control, denotes people's "cross-situational beliefs about what determines whether or not they get reinforced in life" (Cal State Fullerton, n.d.). Secondly, Atkinson (1964) and his theory of achievement motivation, discusses consumers' likelihood to engage in success, as well as their likelihood to avoid failure. It is moreover the expectation of success which is the crucial factor in determining the behaviour (Ajzen, 1991). Lastly, Bandura (1982, p. 122) and his concept of perceived self-efficacy is "concerned with judgments of how well one can execute courses of action required to deal with prospective situations".

Perceived self-efficacy is where most of the knowledge on the role of PBC comes from (Ajzen, 1991). According to Ajzen (1991) there are two rationales, at the least, which can be used to support PBC (together with intention) being used to predict behaviour. The first is that a person who believes in their ability to succeed is more likely to persist than one who doubts, given that

their intention of a behaviour is equal (Ajzen, 1991). The second rationale is that PBC often is used as a proxy when measuring actual control (Ajzen, 1991).

From the abovementioned studies, it follows that humans are social beings, and significantly influenced by those around us, attitude, and PBC when it comes to behaviour. In fact, "much of our behaviour is predicated on the attitudes and behaviours of others" (Goldsmith & Goldsmith, 2011, p. 119). Based on this, we believe we can use social mechanisms, attitude and PBC to explain adoption of sustainable food. Ajzen (1991) does, however, find that personal considerations tend to overshadow the influence of social pressure. However, as we see in the literature review (Appendix 1), 30 out of 42 articles find social mechanisms to be relevant. We also believe social mechanisms to be less researched than TPB in the context of adoption of sustainable food. We thereby see the importance of studying social mechanisms, which in turn can contribute to strengthening the understanding of social mechanisms.

3.3 Conceptual research model

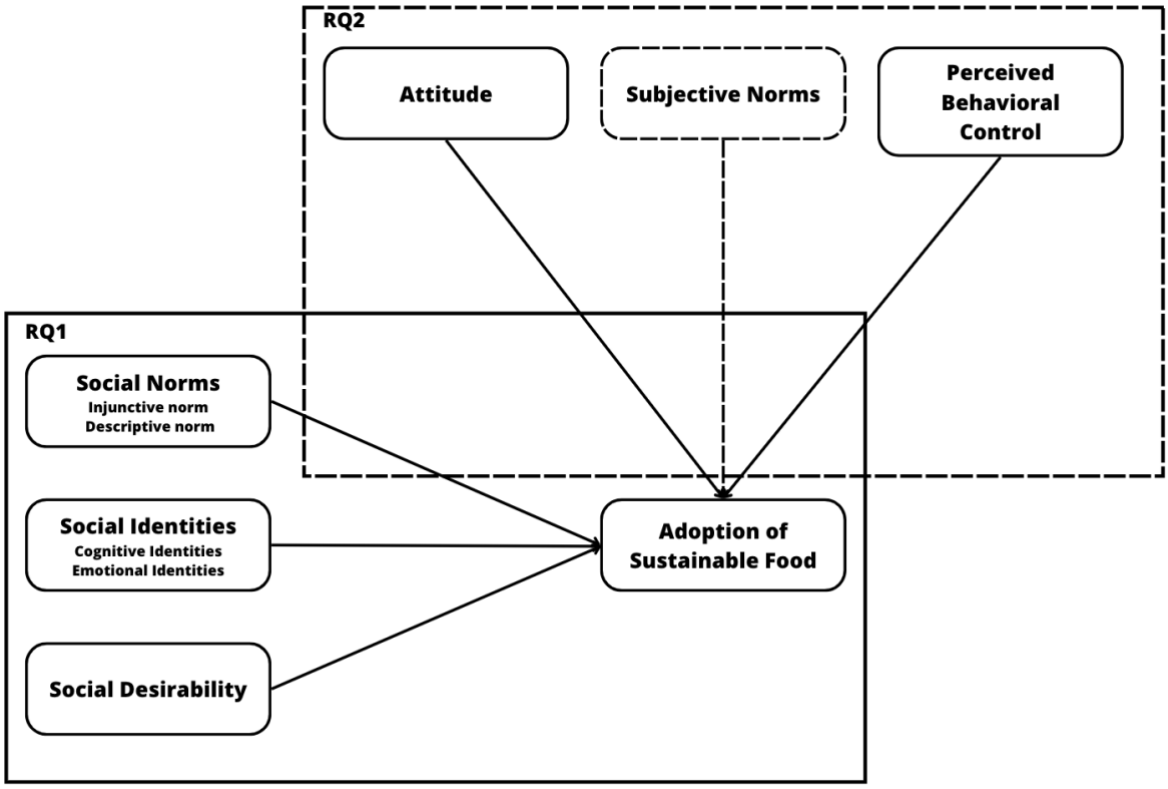

Figure 1: Conceptual research model

Based on the research variables which White et al. (2019a) and Ajzen (1991) use, we create a visual representation of the research model. As the model illustrates (Figure 1), we wish to study the impact of White et al.'s (2019a) social influence factors: social norms, social identities, and social desirability, on adoption of sustainable food. In addition, we wish to study the factors of TPB (Ajzen, 1991): attitude, subjective norm, and PBC, on adoption of sustainable food.

We note, however, that social norms in White et al. (2019a) and subjective norm in Ajzen (1991) are used interchangeably in the literature. Moreover, injunctive norm, which together with descriptive norm in White et al. (2019a) constitutes social norm, measures the same concept that subjective norm in TPB does. Therefore, we choose to measure Ajzen's subjective norm as part of White et al.'s (2019a) social norm, and in other words combine the two concepts in our conceptual research model (Figure 1). We do this to avoid measuring the same variable twice. Therefore, subjective norm in TPB is drawn with a dotted line, to illustrate it being part of TPB but not measured as part of TPB in our dissertation.

3.4 Research model

3.4.1 Research question 1

Social norms

Social norms denote peoples' beliefs regarding what is approved of and socially appropriate in a specific context. Moreover, it is something which can have important influence on the behaviour of sustainable consumers (Cialdini et al., 2006; Peattie, 2010). Social norms are moreover "found to influence a range of behaviours in a myriad of domains, including recycling (Schultz, 1999), littering (Kallgren et al., 2000) and tax evasion (Kahan, 1997)" (Cialdini & Goldstein, 2004). According to White et al. (2019a), social norms can be separated into descriptive norm and injunctive norm. We subsequently choose to separate between injunctive norm and descriptive norm in our model to better capture the nuances of social mechanisms.

Injunctive norm describes what other people approve or disapprove of in terms of behaviour (Cialdini & Goldstein, 2004; Lee, 2011; Jachimowicz et al. 2018; Reno et al., 1993; Schultz et al., 2007). According to Lee (2011, p. 208), injunctive norm is a "narrow definition of subjective norm" and is studied in many articles. Lee (2011, p. 215) finds injunctive norm to be a significant predictor of "leisure-time physical activity intention". Another example is Bhanot (2021) who finds that injunctive norm positively influences water conservation behaviour. In terms of injunctive norm and its influence on intention to buy sustainable food,

our literature review (Appendix 1) does not have any articles which mention injunctive norm except for Thøgersen and Zhou (2012). In this article, injunctive norm is measured as an independent variable, and it is found that the social factors influence adoption of organic food. There are, however, examples of articles which do not find injunctive norm to be significant. One example is Salmivaara et al. (2021) who find that injunctive norm is not significantly associated with actual or intended food choice. Even so, we hypothesise that our study will reveal a positive relation between injunctive norm and intention. Thus, our first hypothesis is:

Hypothesis 1a **(H1a)**: Injunctive norm has a positive influence on intention to purchase sustainable food.

Descriptive norm denotes what other people commonly do or are doing (Cialdini et al., 1990; Cialdini & Goldstein, 2004; Reno et al., 1993). Lee (2011, p. 208) describes descriptive norm as an "individual's perception about what significant others do". According to Reinholdsson et al. (2023), research finds that, in general, descriptive norm is more effective than injunctive norm when one is nudging food alternatives. In terms of articles which study descriptive norm, Rivis and Sheeran (2003 in Lee 2011), in a meta-analysis, find that descriptive norm has a significant effect on intention across several behavioural domains. However, this effect is found to be moderated by types of behaviour and age, such as health risk versus promoting behaviour. They also find that "the association between descriptive norm and behavioral intention was stronger in younger samples and health-risk behaviors (as compared to health-promoting behaviors)" (Lee, 2011, p. 210). In terms of descriptive norm and its influence on adoption of sustainable food, our literature review (Appendix 1) contains two articles which study descriptive norm. The first one being Ham et al. (2015a) and the second being Thøgersen and Zhou (2012), who both find that descriptive norm has a positive and significant influence on the intention to buy green and organic food, respectively. Based on this, our second hypothesis is:

Hypothesis 1b **(H1b)**: Descriptive norm has a positive influence on intention to purchase sustainable food.

Social identities

Social identities, the second construct which White et al. (2019a) present, is defined as the sense of identity which comes from group memberships (Tajfel & Turner, 1986). One study (Mannetti et al., 2004) finds that viewing oneself as similar to the "typical recycler" predicts recycling intentions, and to a better degree than attitudes, subjective norm and PBC. In simpler terms,

social identification has been summarised by Bartels and Onwezen (2014, p. 83), and has been found to:

> "be a strong predictor of positive attitudes, spending behaviours and willingness to propagate a positive group image in organizational contexts (Bergami and Bargozzi, 2000; Feather and Rauter, 2004), marketing contexts (Bhattacharya and Sen, 2003; Ahearne et al., 2005; Homburg et al., 2009), and more recently, in the context of sustainability (Bartels and Reinders, 2010; Bartels and Hoogendam, 2011)"

When it comes to social identity and its effect on adoption, one study shows that social identity positively influences prosocial common-pool behaviour (Sotnik et al., 2023). Moreover, Kural and Özbek (2023) find that social identity, among other factors, has a significant effect on sport consumption for football teams (Kural & Özbek, 2023). There seems to be little literature which looks at social identity and food adoption. Even so, one example is Bartels and Reinders (2010, p. 347) who study "social identification, social representations, and consumer innovativeness in an organic food context". In this article, the authors find that social identification is "an indirect determinant of citizenship behaviours" (Bergami & Bagozzi, 2000, p. 555). In our literature review (Appendix 1), there is only one article which finds social identity to be relevant (Zheng et al., 2023), but it is also the only article which includes social identity as a variable. Based on these previous studies, we hypothesise:

Hypothesis 2a **(H2a)**: Social identities have a positive influence on intention to purchase sustainable food.

According to Ellemers et al. (1999), social identity consists of three components, namely cognitive, emotional, and evaluative identity. Cognitive social identity refers to self-categorisation in terms of "a cognitive awareness of one's membership in a social group" (Ellemers et al., 1999, p. 372). Moreover, emotional social identity encompasses affective commitment which is related to feeling emotionally involved in a social group (Ellemers et al., 1999). Meanwhile, evaluative identity describes group self-esteem in terms of a value connotation, either positive or negative, linked to the social group membership (Ellemers et al., 1999). However, earlier on Tajfel (1972 in Johnson et al., 2012) defined social identity as consisting of "an individual's knowledge of group membership and the emotional significance the individual attaches to that membership", referring to cognitive social identity and emotional social identity. When reviewing the literature on social identity, we find emotional social identity and evaluative social identity to be similar in terms of items that are frequently used to measure these two dimensions. As a result of this, we choose to solely examine cognitive social

identity and emotional social identity as dimensions of social identity, which is in line with Tajfel's definition from 1972.

Zheng et al. (2023) point out that cognitive social identity can affect consumers' product evaluation in terms of consumers being motivated to make identity cues through seeking self-definition and strategic choice of products. Furthermore, according to Zheng et al. (2023) consumers are likely to change their behaviours to be in line with the values and habits of a group if the consumers carry an emotional attachment to this specific group.

In addition to the studies that we mention above, there are some examples of articles which consider cognitive social identity and emotional social identity as separate terms. One first example is Chang et al. (2010), who find that both cognitive social identity and emotional social identity impact social influence, albeit in varying degrees depending on what product is being consumed. Another study, Nedra et al. (2019), finds that social identity (here separated into cognitive and affective/emotional) positively influences the ease of use on intention to use hedonic networks. Based on this, we hypothesise:

Hypothesis 2b **(H2b)**: Cognitive identities have a positive influence on intention to purchase sustainable food.

Hypothesis 2c **(H2c)**: Emotional identities have a positive influence on intention to purchase sustainable food.

Social desirability

Social desirability describes how consumers are prone to select those sustainable options which make a positive impression on other consumers (Green & Peloza, 2014). In a study by Griskevicius et al. (2010), they find that consumers, when shopping in public and when green products are more expensive than conventional products, are more willing to buy green products to communicate social status. Green and Peloza (2014) also find that consumers in public contexts, in which they could be observed and evaluated by others, are more likely to act in a socially desirable way. One example which is widely used in the literature, is social desirability in the context of answering survey questions (Krumpal, 2013; Cerri et al., 2019a). According to Krumpal (2013) social desirability is often divided into two sub-dimensions: a stable personality characteristic and an item characteristic. The first (1) view of social desirability is (1) "a constant need for social approval and impression management, to cause socially desirable misreporting" (Krumpal, 2013, p. 2028, who refers to Crowne & Marlowe, 1960, 1964 and

DeMaio, 1984). The second (2) view is "considering various activities or attitudes to be more or less socially undesirable and thus relates to perceived desirability of a behaviour to particular items" (Krumpal, 2013, p. 2028).

When looking at the literature, one can find examples of social desirability being measured in different contexts. One first example, is Borello et al. (2020) who find that social desirability has a positive significant effect on recycling. Another example is found in Barros et al. (2003), who find that social desirability significantly and positively influences vegetable consumption. Chéron et al. (2022) study how social desirability and consumer alienation may influence the relationship between sustainable purchase choices and happiness, and among other things, find that the need for social approval positively impacts sustainable consumption. Lastly, we also find an example in the context of organic food, namely Hwang (2016), who finds that social desirability positively and significantly influences organic food purchase intention. When looking at our literature review (Appendix 1) there is only one article which mentions social desirability, namely Cerri et al. (2019b). This article does, however, only mention social desirability as a concept and does not measure it, as it is a literature review itself. Based on the aforementioned studies, we propose the following hypothesis:

Hypothesis 3 **(H3)**: Social desirability has a positive influence on intention to purchase sustainable food.

3.4.2 Research question 2

Attitude

Ajzen (1991) defines attitude as to what degree a person has a favourable evaluation or not of a certain behaviour. TPB is, as mentioned, a model which is empirically tested and has been used in over two thousand articles to predict and explain behaviour in various behavioural domains (Ajzen, 2020). Subsequently, it is not hard to find articles which support the claim that attitude significantly and positively influences intention. Han et al. (2010), for example, find that attitude significantly influences green hotel choices. Attitude is also found to be significant in for example public health (Caputo, 2020) and political science (La Barbera & Ajzen, 2020). In the first instance, attitude is found to help predict intention to consume alcohol in adolescents in Italy, and in the latter, attitude is found to influence the intention to vote in an Italian context.

In terms of attitude and its influence on adoption of sustainable food, our literature review (Appendix 1) has several examples of articles which find that attitude has a significant and positive influence on intention and/or behaviour (e.g., Qi & Ploeger, 2019; Van et al., 2018;

Vermeir & Verbeke, 2008). In both Qi and Ploeger (2019) and Van et al. (2018), attitude positively influences purchase intention, while in Vermeir and Verbeke (2008), attitude positively influences behavioural intention in the context of sustainable dairy. Based on these previous articles, we propose the following hypothesis:

Hypothesis 4 **(H4)**: Attitude has a positive influence on intention to purchase sustainable food.

As we mention in section 3.3, we measure subjective norm from TPB through social norms in White et al.'s (2019a) framework of social mechanisms. Therefore, we do not cover subjective norm again here.

Perceived Behavioural Control

Lastly, the third antecedent of intention, PBC, is defined as "perceived ease or difficulty of performing the behavior and it is assumed to reflect past experience as well as anticipated impediments and obstacles." (Ajzen, 1991, p. 188). In simple terms, PBC is the consumers' perception of their own ability to perform a behaviour (Ajzen, 2019).

In the literature, PBC is found to predict intention well. One example of this, is Ho et al. (2022) who find that PBC significantly predicts the willingness of scientists to carry out public engagement. Another example finds that PBC affects the purchase intention of local food (Shin & Hancer, 2016). Lee (2009) finds PBC to significantly and positively influence intention to use internet banking. When looking at our own literature review (Appendix 1), we see that Vermeir and Verbeke (2008) find PBC, together with attitude and subjective norm, to predict purchase intention of sustainable products independently. This is also true for Ham et al. (2015a), who find that all variables of TPB positively and significantly influence the intention to purchase green food. Another example is found in Qi and Ploeger (2019) who find that PBC, once again together with attitude and subjective norm, significantly and positively influence the purchase intention of sustainable food. Based on this, we propose the following hypothesis:

Hypothesis 5 **(H5)**: Perceived behavioural control has a positive influence on intention to purchase sustainable food.

4. Methodology

In the following section, we present our pre-test, the subsequent data screening, and data collection before moving to the measures and factor analysis. After this, we look at descriptive statistics, common method bias and assumptions for multiple linear regression.

To collect data, we use a survey which is often used in descriptive research. In addition, a survey is both easy to understand and explain (Saunders et al., 2016). In line with this, the survey enables easy gathering of quantitative data, and the data which is collected is useful when making inferences about relationships between our variables (Saunders et al., 2016). In addition to this, as we see in the literature review (Appendix 1), the majority of the studies use surveys. Followingly, utilising a survey enables us to compare our results with previous research more easily.

In the following analysis, we have four models which relate to the research questions. Model 1 and Model 2 measure social mechanisms in isolation, based on White et al. (2019a), and subsequently relate to RQ1 and how social mechanisms can influence adoption of sustainable food. We choose to create two models related to this research question to measure both the one-dimensional construct of social identity (Zheng et al., 2023) and social identity when it is separated into cognitive social identity and emotional social identity (cf. Tajfel, 1972). Moving on to Model 3 and Model 4, these models include the TPB and followingly relate to RQ2 and how TPB and social mechanisms influence adoption of sustainable food. Model 3 is an extension of Model 1 as it includes attitude and PBC. Model 4 is similarly an extension of Model 2.

4.1 Pre-test

To ensure that our survey is fit for the intended target group, and it collects the intended data, we conduct a pre-test. The respondents complete the survey in an online schema through Qualtrics, and can use mobile phones, tablets, and computers. The survey contains 14 pages of text entries and/or questions (Appendix 2) in addition to two end-of-survey messages (if-condition dependent on consent to participate in survey). Furthermore, the survey has designated sections for measuring intention, attitude, PBC, injunctive norm, descriptive norm, social identity (cognitive social identity and emotional social identity), social desirability, age, and gender. Moreover, despite arguing in section 3.4.1 that the similarity between emotional social identity and evaluative social identity justifies examination of solely cognitive social

identity and emotional social identity, we include a section measuring evaluative social identity in the pre-test. We do so to investigate whether emotional social identity and evaluative social identity load on different factors in the factor analysis, and thereby can be computed into two separate constructs. Then, we can examine whether both constructs are significant in the regression analysis. In other words, we do this to check whether emotional social identity and evaluative social identity are similar constructs, as we argue in section 3.4.1. If we find them to be similar, this gives further ground for solely examining cognitive social identity and emotional social identity. The pre-test is distributed on the 18th of October between 13:00 and 13:40 with the help of Messenger, mail, and text-messages. Respondents have two days to complete the pre-test, until the end of the 20th of October.

The participants in the pre-test are 11 in total. Moreover, four (36%) of the participants are in the "25 or older" age group, and seven (64%) are in the "22-25" age group. Eight (73%) of the participants are female, and three (27%) of the participants are male. The respondents are selected based on being outside of NHH but are also acquaintances of the authors. Respondents are asked to look out for spelling mistakes, whether everything is understandable, approximately how much time they spend (Table 2), and whether the format of the survey is functional and comprehensible. Any other feedback is also welcomed.

Respondents	Age	Gender	Time spent (mins.)
Respondent 1	22-25	Female	3
Respondent 2	22-25	Female	6
Respondent 3	25 or older	Female	8
Respondent 4	25 or older	Male	5
Respondent 5	25 or older	Female	8
Respondent 6	25 or older	Male	8
Respondent 7	22-25	Male	8
Respondent 8	22-25	Female	25
Respondent 9	22-25	Female	15
Respondent 10	22-25	Female	20
Respondent 11	22-25	Female	10

Table 2: Descriptive statistics of sample in pre-test

After we receive feedback from the respondents, we discuss the suggestions. The results of the pre-test firstly reveal that the language utilised in the survey can be perceived as difficult to understand, especially for those who do not have English as their first language. Even so, this issue is not severe, and we moreover choose to prioritise the original wording of the items. This is to be consistent with the measures they are adapted or adopted from. In addition to this,

through the pre-test it is revealed that the word "integral" is perceived as difficult to understand. "Integral" is part of evaluative social identity, which, as we describe in section 3.4.1, includes measures similar to those of emotional social identity. We therefore decide to remove evaluative social identity from the survey, and therefore do not investigate factor loadings and significance levels for this latent variable. This moreover contributes to simplify and reduce confusion related to the measurement items we use in our questionnaire. Some of the respondents in the pre-test also suggest that the formulation of some of the items can be improved. Even so, we yet again choose not to alter the items to keep them close to the original items.

Secondly the pre-test reveals an issue where labels explaining the scales are not visible for mobile phone users. Due to this, we include "1 = Strongly disagree, 7 = Strongly agree" in each of the questions in the survey, to ensure that even those using mobile format can understand the scales. In other words, we change the layout of the survey to accommodate mobile phone users. Thirdly, we receive feedback saying that some of the questions are perceived as similar to each other. Due to this, we choose to include the sentence "Methodological requirements make some questions appear similar, but please answer all the questions to the best of your abilities" in the section of the survey which introduces sustainable food (page 2 in the survey).

The final version of the survey includes 33 items measuring injunctive norm, descriptive norm, social identity (cognitive social identity and emotional social identity), social desirability, attitude, PBC, intention, age, and gender. After making the discussed adjustments, we are ready to initiate distribution to the final sample.

4.2 Ethical considerations

To avoid issues with validity and trustworthiness of the collected data (Cacciattolo, 2015), we make some ethical considerations. We firstly ensure that participation in the survey is voluntary, and that one can exit the survey at any given time. Participants moreover must actively consent to participate in the survey. We also choose to anonymise all responses and do not collect IP addresses, location data or contact info. In addition to this, the participants are not observed during the survey. We moreover do not ask for any sensitive information, and when asking about age we utilise broad categories. Lastly, in the final distribution, we hand out chocolates in exchange for participation. To ensure that participation is still voluntary, we make explicit the choice to take the survey, and several people decline to participate. In addition, as we see in section 4.3 below, there are no significant biases among the distribution methods.

4.3 Sampling and data collection procedure

The survey is distributed in three rounds[1], with different methods. On the 23rd of October, at 15:05 the first round of surveys is distributed. This is done through e-mail, which NHH provides access to. There are a total of 2946 e-mail addresses belonging to Norwegian students, wherein two belong to the authors, and three fail to deliver. Within the first 24 hours, the survey has 110 completed responses and 48 incomplete responses. On the morning of the 26th of October around 09:15, a reminder-email is sent to encourage completion of the survey. Before this reminder is sent, we have 131 completed responses and 46 incomplete responses. Meanwhile, the reminder-email leads to 188 completed responses and 54 incomplete responses. Based on a preliminary consideration of careless answers and incomplete responses, we conduct a third distribution at 14:15 on the 30th of October, to achieve a sufficient number of valid responses for the analysis. This is done through field-gathering with a QR-code, which students can scan and thereby access the survey. In addition to this, we hand out chocolates in exchange for participation. Before closing the survey, we have 247 responses. The survey is shut down on the 31st of October, 09:15, approximately a week after its publication. We use Statistical Package for Social Sciences (SPSS) version 29.0.0.0 for the data screening and all data analyses.

Table 3 below shows the frequency of respondents for each distribution, before and after screening of the data (left and right, respectively). The screening is conducted in section 4.3.1 below.

Before screening	Frequency	Percentage
Distribution 1	159	64.4
Distribution 2	58	23.5
Distribution 3	30	12.1
Total	247	100

After screening	Frequency	Percentage
Distribution 1	141	76.2
Distribution 2	18	9.7
Distribution 3	26	14.1
Total	185	100

Table 3: Frequency of respondents in each distribution. Before screening (left), After screening (right)

[1] Comparing means through One-way ANOVA reveals no significant differences between the three distribution rounds, except for one variable. Descriptive norm is significantly different (p=0.013) across the three methods. This has not created any significant biases.

4.3.1 Data screening

In the data screening process, we remove responses based on five criteria. The first criterion is that the respondent must consent to participate in the survey. Completing the whole survey is the second criterion. The third criterion is that one must answer correctly on the control question ("On this statement you are supposed to answer Strongly Agree (7)."). Moving on to the fourth criterion, one must spend more than two minutes on the survey. Lastly, the fifth criterion is that careless respondents, consistently choosing the same number (in this case 12 times in a row), are removed. Based on these criteria, we remove a total of 62 responses. One due to lack of consent, 45 due to incomplete responses and 14 due to answering the control question incorrectly. One response is removed based survey time below two minutes, and one is removed due to careless responses. This leaves a total of 185 valid responses and is therefore within the proposed ratio of five observations per variable, and above minimum sample size of 50 observations (Hair et al., 2010).

4.3.2 Sample description

Among the 185 respondents, 50.3% are male, 48.1% are female and 1.6% "prefer not to say". In other words, the number of female and male respondents is near equal. This does, however, indicate an overrepresentation of the female group at NHH, since the number of female students at NHH is 42% according to NHH's last annual report (NHH, 2022). In other words, this sample is not representative of the NHH population. Even so, it is in line with previous research, which finds females to be more eager participants and to have a higher response frequency than males (de Sio et al., 2022; Ham et al., 2015a; Latip et al., 2023; Qi & Ploeger, 2019). Within the different age groups, 27% are aged from "18-21", 55.1% from "22-25" and 17.8% are "25 or older". Herein, the age group "18-21" represents the number of students at bachelor's level well, seeing as there are roughly 1500 bachelor's students at NHH out of the total of approximately 3900 students (NHH, 2022). The sample description is below in Table 4, and a complete summary of the SPSS output is in Appendix 3.

Age	Frequency	Percentage
18-21	50	27.0
22-25	102	55.1
25 or older	33	17.8
Total	185	100

Gender	Frequency	Percentage
Male	93	50.3
Female	89	48.1
Prefer not to say	3	1.6
Total	185	100

Table 4: Sample description of final sample. Age and gender.

4.4 Measures

The measures in this survey are all on a seven-point Likert scale and seven-point semantic differential scale. The Likert scale ranges from 1 = Strongly disagree, to 7 = Strongly agree, and typically utilises a statement to which respondents rate their level of agreement (Albert & Tullis, 2010). Meanwhile, the semantic differential-scale utilises bipolar adjectives (Albert & Tullis, 2010) such as bad/good and foolish/wise as we use to measure attitude.

Moving on to the specific measures, to measure injunctive norm we adapt items from Nysveen et al. (2005) to be in line with sustainable food. As for descriptive norm, these items are adapted from Lee (2011), yet again substituting words to be in line with sustainable food. We also adapt items from Balaji et al. (2019) to measure social identity on a general level (Balaji et al., 2019). Here, Balaji et al. (2019) study adoption of green hotels, and we subsequently keep the measures as is except for the exchange of "green hotel" with "sustainable food". Zheng et al. (2023) is moreover utilised to measure cognitive social identity and emotional social identity, and these items are adapted to study "sustainable consumer group". Social desirability is adopted from Chéron et al. (2022) as well as Thompson and Phua (2005). Meanwhile the items for attitude, PBC and intention are all adapted from Nysveen et al. (2005), yet again conforming the measures to fit with sustainable food. All items are summarised in Appendix 4.

The measured items in the factor analysis only act as an indication for each latent variable. They are measured or represented by one or more of the indicator variables (Hair et al., 2010). In the factor analysis, we can discover where the latent variables are and compute variables for further analysis (Webster, n.d.).

In the factor analysis (Appendix 5) we use the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity. KMO indicates how much of the variance in our variables may be due to other underlying factors (IBM, 2023a). Meanwhile, the Bartlett's test tells us whether our variables are appropriate for factor analysis (Hair et al., 2010). Regarding critical values, high values for KMO, close to 1.0, are an indication that factor analysis can be useful for our data. Meanwhile, if the value is below 0.5, a factor analysis will likely not be of much use (IBM, 2023a). For the Bartlett's test, a statistically significant test of sphericity (sig. <.05; Hair et al., 2010) is an indication that there are sufficient correlations between the variables, and that we can proceed with the analysis (Hair et al., 2010). As for our four models, we firstly see that the KMO values are all above 0.8 and thus are appropriate for factor analysis. Secondly, we see that all the models have a significance level of <.001

(Appendix 5), and we therefore conclude that there is adequate correlation between the variables to proceed with factor analysis.

In the analysis, we also utilise the Maximum Likelihood Method, which yields estimates of parameters that are more likely to produce the observed correlation matrix, on the condition that the sample is from a multivariate normal distribution (IBM, 2023b). We also rotate the solution based on Direct Oblimin, a form of oblique rotation (IBM, 2023c), to control for correlation between the independent variables. Lastly, for readability of the output, we supress small coefficients (absolute values below 0.30) in the pattern matrix.

4.4.1 Factor analysis of Intention

We choose to run a factor analysis of intention (Appendix 5.1), which in this instance yields a communalities table (Table 5) since there only is one measure. According to IBM (2023d), initial communalities are "estimates of the variance in each variable accounted for by all components and factors". When assessing communalities, values below 0.5 are considered to not have sufficient explanation (Hair et al., 2010). In our case, the communalities are above this level and thus satisfactory. The initial Eigenvalue and explained variance are satisfactory (Appendix 5.1). Meanwhile, the KMO and Bartlett's test, yields 0.5 (KMO) and a <.001 significance level (Appendix 5.1). In sum, the factor for intention is satisfactory.

I intend to buy SF in the next six months.	.694
In the next six months I intend to buy SF frequently.	.694

Table 5: Communalities of intention.

4.4.2 Model 1

Based on our preconceived notions from the literature review (cf. Appendix 1) we conduct factor analysis to confirm a pre-existing structure. We include all items for *injunctive norm, descriptive norm*, *social desirability,* and *social identity*. The extraction is executed based on Eigenvalues greater than 1, to only extract significant factors (Hair et al., 2010). It is moreover to explore whether the output of the analysis yields four factors under this condition, as predicted by the theory.

The total variance explained (TVE) table (Appendix 5.2: Iteration 1) does, however, not have more than two factors with Eigenvalues greater than 1. In addition to this, the pattern matrix reveals (Appendix 5.2: Iteration 1) an overall unclear output. For example, we see that both injunctive norm and descriptive norm have loadings in both factor one and two. In addition, there are issues with discriminant validity, since the differences between the loadings of item

two (.518-.443) and item three (.498-.689) are smaller than the critical value of 0.2. Lastly, social desirability does not have visible factor loadings since we supress values below 0.3. We subsequently choose to run the analysis again, and this time we use an a priori criterion (Hair et al., 2010) based on Model 1. Even though this conflicts with the empirical Eigenvalue condition, we have theoretical support for these factors being relevant (cf. Literature review; Appendix 1). Furthermore, the Eigenvalues (.931 and .797) lie close to the critical value, and this further supports an a priori criterion. Thus, we have four factors.

Running the analysis again produces a TVE table (Appendix 5.2: Iteration 2) where two out of four factors have Eigenvalues above 1, but like above, the values are sufficiently close to 1 and therefore acceptable. The pattern matrix (Appendix 5.2: Iteration 2) shows some issues with injunctive norm and descriptive norm in terms of discriminant validity. The loadings for item one in injunctive norm (.465-.370) and item one in descriptive norm (.399-.398) lie closer than 0.2. Due to this we decide to remove item one from both injunctive norm and descriptive norm. As for social desirability, item three has a loading below 0.5, which is below the minimum value for convergent validity (Hair et al., 2010), and we therefore decide to remove this item, too. Lastly, for social identity, all the loadings are above 0.5 and we therefore leave them as they are.

Based on this discussion, we create the final iteration for Model 1 (Table 6; Appendix 5.2: Iteration 3). Looking at the pattern matrix, both injunctive norm and descriptive norm have convergent validities above the cut-off of 0.5 and are satisfactory. Social desirability, however, has a new issue with convergent validity. After removing item three due to low convergent validity, the issue has moved to item one. Even so, we argue that .493 is sufficiently close to the cut-off of 0.5 and we therefore keep it in the analysis. Lastly, social identity has loadings which are all satisfactory. In sum, the construct validity of the measurement model is acceptable.

To assess reliability, we use Cronbach's alpha and construct reliability (hereafter called CR). Cronbach's alpha (Appendix 6) denotes whether there is a high degree of reliability, and we use the most used lower limit of Cronbach's alpha which is 0.7. In this model, all factors except social desirability have values above 0.7. Even so, social desirability (.617) is quite close to 0.7, and we therefore conclude that Cronbach's alpha is within acceptable limits. Moving on to CR, which is calculated based on the factor loadings of the items, all values above 0.7 are acceptable (Hair et al., 2010). We followingly see that CR is within acceptable limits for all factors since social desirability (0.63) is yet again sufficiently close to the cut-off. Lastly, we look at average

variance extracted (hereafter called AVE) to assess convergent validity, and hereunder values above 0.5 indicate adequate convergence (Hair et al., 2010). We see that all factors except social desirability (0.37) are above the value of 0.5. In sum, the reliability of Model 1 is satisfactory, and the AVE of all factors except social desirability is adequate.

		Factor						
Dimension	Items	1	2	3	4	α	CR	AVE
Injunctive	*It is expected that people like me buy SF.	.598				.855	0.79	0.66
	*People I look up to expect me to buy SF.	.985						
Descriptive	*Most of the people I know buy SF.		.621			.802	0.74	0.60
	*People important to me buy SF.		.899					
Social desirability	*I am always willing to admit when I make a mistake.				.493	.617	0.63	0.37
	*I never resent being asked to return a favour.				.549			
	*I always try to practice what I preach.				.746			
Social identity	*I strongly identify with SF.			.725		.902	0.86	0.61
	*I feel good to be a customer of SF.			.733				
	*I like to tell that I am a buyer of SF.			.912				
	*Sustainable food fits well with how others perceive me.			.733				
Eigenvalue		5.073	1.737	.851	.734			
Cumulative variance explained		46.121	61.910	69.645	76.314			

Table 6: Factor analysis. Dimension, items, factor loadings, Cronbach's alpha, CRs and AVEs. Model 1.

Regarding discriminant validity, this is achieved when the square root of AVE is higher than that of each construct and the correlation between them (Fornell and Larcker, 1981). Based on this, we calculate the square root of AVE and compute the correlation between the constructs (Table 7). Subsequently, we conclude that there is no breach of Fornell and Larcker's criteria for discriminant validity.

	1	2	3	4	5	Mean
1 Intention	-					4.57
2 Injunctive	0.554	*0.812*				3.27
3 Descriptive	0.562	0.572	*0.775*			3.18
4 Social desirability	0.141	0.005	0.179	*0.608*		5.43
5 Social identity	0.732	0.694	0.602	0.088	*0.781*	3.89

Table 7: Correlations, square roots of AVE (diagonal) and means, Model 1. Calculated with Pearson and two-tailed test of significance.

4.4.3 Model 2

In the second model, we include all items for *injunctive norm*, for *descriptive norm*, *social desirability*, *cognitive social identity*, and *emotional social identity*. We thus substitute social identity with the four items for cognitive social identity and the three items for emotional social

identity. The objective of this substitution is to investigate whether an inclusion of more measures leads to an increase in variance explained in the regression. Moreover, it is an attempt to bring forth a nuanced understanding of social identity compared to the one obtained through the one-dimensional construct used in Model 1. In the first iteration of Model 2, we choose not to exclude any of the items which are removed in Model 1.

In iteration one of Model 2 (Appendix 5.3: Iteration 1), we investigate whether extraction based on Eigenvalues above 1 yields the expected number of factors in accordance with the literature. Based on the literature, we expect to find five factors. Even so, the TVE table (Appendix 5.3: Iteration 1) only shows four factors with Eigenvalues greater than 1. Therefore, we again conclude to use an a priori criterion and extract five factors based on theory.

In the second iteration of Model 2 (Appendix 5.3: Iteration 2), we use all items for the five factors. The pattern matrix (Appendix 5.3: Iteration 2) reveals issues with discriminant validity. Item one for both injunctive norm (-.384 and -.351) and descriptive norm (-.418 and -.380) has loadings where the difference is less than 0.2. Meanwhile, social desirability has an issue with item three having convergent validity below 0.5. Based on this, we conclude to remove item one from both injunctive norm and descriptive norm and item three from social desirability. Cognitive social identity and emotional social identity, however, have satisfactory loadings, and we choose not to alter them.

This leads to the third and last iteration of the model (Appendix 5.3: Iteration 3) with five factors. In the pattern matrix (Table 8; Appendix 5.3: Iteration 3), convergent validity for injunctive norm and descriptive norm is above the cut-off value and acceptable. Social desirability now has an issue with item one. Even so we argue, like in Model 1, that the factor loading of .483 is sufficiently close to 0.5, and we therefore choose to include it. As for cognitive social identity and emotional social identity, all factor loadings are above 0.5, and subsequently satisfactory (Hair et al., 2010). Yet again, the construct validity is deemed acceptable.

Regarding Cronbach's alpha (Appendix 6), all factors except social desirability are acceptable. Even so, as in Model 1, the value of .617 is not far below the limit of 0.7 and we therefore consider it a marginal breach. Moving on to CR, all factors except social desirability are over 0.7, and thus acceptable. Even so, 0.63 is close to 0.7, as in Model 1. Lastly, all factors for AVE, except social desirability (0.36), are acceptable. In sum, reliability is acceptable, and the convergent validity is adequate for all factors except social desirability.

Dimension	Items	Factor					α	CR	AVE
		1	2	3	4	5			
Injunctive	*It is expected that people like me buy SF.	.651					.855	0.85	0.74
	*People I look up to expect me to buy SF.	1.029							
Descriptive	*Most of the people I know buy SF.		-.998				.802	0.76	0.63
	*People important to me buy SF.		-.521						
Social desirability	*I am always willing to admit when I make a mistake.					.483	.617	0.63	0.36
	*I never resent being asked to return a favour.					.654			
	*I always try to practice what I preach.					.651			
Cognitive	*My personal identity overlaps with that of the sustainable consumer group in terms of perception.			.766			.919	0.89	0.66
	*My self-image overlaps with the identity of the sustainable consumer group.			.915					
	*My values overlap with those of the sustainable consumer group.			.922					
	*My lifestyle overlaps with the sustainable consumer group.			.617					
Emotional	*Others' praise of the sustainable consumer group is like a compliment to my ego.				-.835		.867	0.81	0.60
	*I am very attached to the sustainable consumer group.				-.878				
	*I am valued by the sustainable consumer group.				-.565				
Eigenvalue		6.214	1.788	1.340	.887	.688			
Cumulative variance explained		44.383	57.153	66.725	73.060	77.977			

Table 8: Factor analysis. Dimension, items, factor loadings, Cronbach's alpha, CRs and AVEs. Model 2.

Like we do with Model 1, we utilise Fornell and Larcker's (1981) criteria for discriminant validity (Table 9). Yet again, there are no issues with this criterion, seeing as all correlations are below the square root of AVE.

	1	2	3	4	5	6	Mean
1 Intention	-						4.57
2 Injunctive	0.554	*0.860*					3.27
3 Descriptive	0.562	0.572	*0.794*				3.18
4 Social desirability	0.141	0.005	0.179	*0.600*			5.43
5 Cognitive	0.656	0.571	0.466	0.124	*0.812*		3.70
6 Emotional	0.485	0.543	0.408	0.033	0.687	*0.775*	2.75

Table 9: Correlations, square roots of AVE (diagonal) and means, Model 2. Calculated with Pearson and two-tailed test of significance.

4.4.4 Model 3

When computing Model 3, we extend Model 1 by including measures for attitude and PBC. Thus, we are using item two and three for *injunctive norm* and *descriptive norm*, items one, two and four for *social desirability*, and all four items for *social identity*. For *attitude* and *PBC* we include all items. We do this factor analysis using Eigenvalue of 1 as a requirement (Appendix 5.4: iteration 1), but like the two previous factor analyses, we do not get the expected number of factors.

Therefore, we force six factors and run the analysis again (Appendix 5.4: Iteration 2). Now, all the Eigenvalues are above or close to 1, and thereby acceptable. The pattern matrix (Table 10; Appendix 5.4: Iteration 2) reveals loadings where all items, except item one for social desirability, are above 0.5. As we discuss under Model 1, item one for social desirability (.496) is sufficiently close to the cut-off, and we therefore choose to leave it as is. In sum, the construct validity is acceptable.

Moving on to reliability and Cronbach's alpha (Appendix 6) and CR, we firstly see that all values are acceptable except for social desirability (.617). However, as before, social desirability is close to the cut-off. The values for CR are acceptable, with social desirability (0.62) being sufficiently close to 0.7. Lastly, in terms of AVE, all factors except social desirability are adequate. Social identity (0.46) is just below the limit of 0.5 and we therefore conclude that it is acceptable. Social desirability, however, is below the limit. In sum the reliability is acceptable, and the convergent validity is adequate except for social desirability.

		Factor								
Dimension	Items	1	2	3	4	5	6	α	CR	AVE
Injunctive	*It is expected that people like me buy SF.	.581						.855	0.76	0.63
	*People I look up to expect me to buy SF.	.959								
Descriptive	*Most of the people I know buy SF.				-.761			.802	0.73	0.57
	*People important to me buy SF.				-.751					
Social desirability	*I am always willing to admit when I make a mistake.						.496	.617	0.62	0.36
	*I never resent being asked to return a favour.						.646			
	*I always try to practice what I preach.						.644			
Social identity	*I strongly identify with SF.					-.618		.902	0.77	0.46
	*I feel good to be a customer of SF.					-.572				
	*I like to tell that I am a buyer of SF.					-.787				
	*Sustainable food fits well with how others perceive me.					-.725				
Attitude	*I think SF is bad/good		.799					.855	0.85	0.59
	*I think SF is foolish/wise		.655							
	*I think SF is unfavourable/ favourable		.644							
	*I think SF is negative/positive		.943							
PBC	*I feel free to buy SF.			.638				.745	0.75	0.51
	*Buying SF is entirely within my control.			.809						
	*I have the necessary means and resources to buy SF.			.674						
Eigenvalue		6.343	2.347	1.891	1.340	.842	.729			
Cumulative Variance explained		35.239	48.278	58.783	66.229	70.906	74.955			

Table 10: Factor analysis. Dimension, items, factor loadings, Cronbach's alpha, CRs and AVEs. Model 3.

Similar to Model 1 and Model 2, we check whether the factor correlations are below the AVE roots (Table 11). In this instance, though, we find that the correlation between social identity and intention (0.732) is higher than the AVE root for social identity. Followingly, we have an indication of a marginal breach of the Fornell and Larcker's criteria. Even so, we choose to measure the construct of social identity like in previous research (Balaji et al., 2019), where the validity of the construct has been demonstrated in a similar context. In addition to this, this is the only model where there is an issue with discriminant validity. Subsequently, we keep the measure as is.

	1	2	3	4	5	6	7	Mean
1 Intention	-							4.57
2 Injunctive	0.554	*0.794*						3.27
3 Descriptive	0.562	0.572	*0.755*					3.18
4 Social desirability	0.141	0.005	0.179	*0.600*				5.43
5 Social identity	0.732	0.694	0.602	0.088	*0.678*			3.89
6 Attitude	0.521	0.340	0.356	0.200	0.563	*0.768*		6.08
7 PBC	0.184	0.144	0.177	0.081	0.167	-0.051	*0.714*	4.39

Table 11: Correlations, square roots of AVE (diagonal) and means, Model 3. Calculated with Pearson and two-tailed test of significance.

4.4.5 Model 4

Model 4 is an extension of Model 2 as it includes attitude and PBC. In this model, we use item two and three for *injunctive norm* and item two and three for *descriptive norm*, items one, two and four for *social desirability*, all four items for *cognitive social identity*, and all three items for *emotional social identity*. Moreover, we include four items for *attitude*, and three items for *PBC*. We firstly conduct the factor analysis with an Eigenvalue of 1 but this only yields five factors (Appendix 5.5: Iteration 1), out of the seven predicted by the theoretical model. Therefore, we utilise an a priori criterion with seven factors.

Now (Appendix 5.5: Iteration 2), the Eigenvalues are all close to or above the critical value of 1, and therefore acceptable. The pattern matrix (Table 12; Appendix 5.5) reveals the same issue with item one for social desirability as in the previous analyses. It is, even so, accepted like before. Based on this, all items are above the 0.5 cut-off and thus satisfactory. In sum, the construct validity is acceptable.

Regarding Cronbach's alpha, social desirability (.617) is not above the cut-off of 0.7, but even so quite close. All other loadings are acceptable. In terms of CR, social desirability (0.62) is again below the limit but even so acceptable since it is sufficiently close to 0.7. The other factors are also acceptable. Lastly, regarding AVE and construct validity, all factors except social desirability (0.36) are above the 0.5 cut-off. In sum the reliability is acceptable, and so is construct validity except for social desirability.

		Factor									
Dimension	Items	1	2	3	4	5	6	7	α	CR	AVE
Injunctive	*It is expected that people like me buy SF.	.642							.855	0.83	0.72
	*People I look up to expect me to buy SF.	1.009									
Descriptive	*Most of the people I know buy SF.		.965						.802	0.75	0.62
	*People important to me buy SF.		.549								
Social desirability	*I am always willing to admit when I make a mistake.							.466	.617	0.62	0.36
	*I never resent being asked to return a favour.							.720			
	*I always try to practice what I preach.							.591			
Cognitive	*My personal identity overlaps with that of the sustainable consumer group in terms of perception.			.688					.919	0.81	0.52
	*My self-image overlaps with the identity of the sustainable consumer group.			.788							
	*My values overlap with those of the sustainable consumer group.			.812							
	*My lifestyle overlaps with the sustainable consumer group.			.572							
Emotional	*Others' praise of the sustainable consumer group is like a compliment to my ego.						.837		.867	0.78	0.55
	*I am very attached to the sustainable consumer group.						.813				
	*I am valued by the sustainable consumer group.						.526				
Attitude	*I think SF is bad/good				.836				.855	0.85	0.58
	*I think SF is foolish/wise				.654						
	*I think SF is unfavourable/favourable				.647						
	*I think SF is negative/positive				.891						
PBC	*I feel free to buy SF.					.668			.745	0.75	0.51
	*Buying SF is entirely within my control.					.755					
	*I have the necessary means and resources to buy SF.					.709					
Eigenvalue		7.411	2.350	2.034	1.346	1.283	.919	.742			
Cumulative variance explained		35.289	46.477	56.164	62.574	68.684	73.058	76.594			

Table 12: Factor analysis. Dimension, items, factor loadings, Cronbach's alpha, CRs and AVEs. Model 4.

Lastly, we look at whether the correlations are below the square root of AVE (Table 13), which they are in this case. Based on this, we conclude that discriminant validity is not present in this model.

	1	2	3	4	5	6	7	8	Mean
1 Intention	-								4.57
2 Injunctive	0.554	*0.849*							3.27
3 Descriptive	0.562	0.572	*0.787*						3.18
4 Social desirability	0.141	0.005	0.179	*0.600*					5.43
5 Cognitive	0.656	0.571	0.466	0.124	*0.721*				3.70
6 Emotional	0.485	0.543	0.408	0.033	0.687	*0.742*			2.75
7 Attitude	0.521	0.340	0.356	0.200	0.549	0.409	*0.762*		6.08
8 PBC	0.184	0.144	0.177	0.081	0.085	0.072	-0.051	*0.714*	4.39

Table 13: Correlations, square roots of AVE (diagonal) and means, Model 4. Calculated with Pearson and two-tailed test of significance.

4.4.6 Computing variables

Based on the factor analysis, we compute variables for injunctive norm, descriptive norm, social desirability, social identity, cognitive social identity, emotional social identity, attitude, PBC, and intention. We also only create one variable for each latent variable, so that if one of the variables is included in several models, it is measured the same way. For injunctive norm and descriptive norm, we remove item one as discussed in the previous models. For social desirability, we remove the third item before computing the variable. For social identity, we keep all the items, due to satisfactory loadings above 0.5. We also compute cognitive social identity and emotional social identity with four and three items respectively. Regarding attitude, PBC and intention, all items are included. With this, we have composed the necessary factors for conducting linear regression of Model 1, 2, 3 and 4.

4.5 Descriptives

Table 14 below displays descriptive statistics (Appendix 7) for the computed variables. We notice that attitude and social desirability have high means compared to the other variables. This could be connected to skewness, which we discuss in section 4.7.1. The mean values for PBC and intention are both slightly above the scale average of four, while injunctive norm, descriptive norm, social identity, and cognitive social identity are all slightly below. Meanwhile, emotional social identity has the lowest mean, but is still close to the scale average.

	N	Minimum	Maximum	Mean	Std. Deviation
Injunctive	185	1.00	7.00	3.2703	1.56644
Descriptive	185	1.00	6.50	3.1838	1.22419
Social desirability	185	2.67	7.00	5.4288	0.85685
Social identity	185	1.00	7.00	3.8932	1.51210
Cognitive	185	1.00	7.00	3.7000	1.49814
Emotional	185	1.00	7.00	2.7514	1.36667
Attitude	185	2.00	7.00	6.0824	0.95356
PBC	185	1.67	7.00	4.3928	1.28375
Intention	185	1.00	7.00	4.5676	1.65159
Valid N (listwise)	185				

Table 14: Descriptives of the computed variables.

4.6 Common method bias

When conducting a survey, one must be aware of the effects of common method bias. Common method bias can have detrimental impact on validity and reliability of a study's results (Kock et al., 2021), as well as the "covariation between latent constructs" (MacKenzie & Podsakoff, 2012, p. 543). When the relationship between the independent variable(s) and the dependent variable is influenced by common method variance, one is facing common method bias (Jakobsen & Jensen, 2015; Richardson et al., 2009 in Kock et al., 2021). Furthermore, common method bias may result in Type I or Type II errors (Kock et al., 2021). Due to the potential detrimental effects, it is crucial to ascertain potential origins of common method bias.

According to MacKenzie and Podsakoff (2012) it is possible to control for common method bias both before and after data gathering, through respectively procedural and statistical controls. Responses are more likely to be influenced by method bias when respondents answer stylistically, due to satisficing instead of optimising during a survey (MacKenzie & Podsakoff, 2012). Respondents might skip the parts of a survey that require cognitive effort, such as reading text provided. In the case of surveys containing close-ended questions, often involving a rating scale, respondents may even answer by randomly selecting a number on the scale (MacKenzie & Podsakoff, 2012).

4.6.1 Procedural control

Firstly, we attempt to ensure that lack of ability to comprehend the questions in the survey is reduced. We do this through pre-testing where we distribute the pre-test to people from various age groups, professions, and studies, as we describe in section 4.1, to ensure that our final sample understands the questions.

Common method bias can also be provoked because of factors that reduce respondents' motivation to answer accurately (MacKenzie & Podsakoff, 2012). For example, low need to self-disclose may lead to respondents answering questions carelessly and randomly (MacKenzie & Podsakoff, 2012). To remedy this tendency and enhance respondents' motivation to expend cognitive effort in answering the questions, throughout the survey we make explicit with various statements that the respondents' answers are important to us. Both in the beginning, middle and toward the end of the survey, we include statements such as "we would highly appreciate your response", "All responses are valuable to us", "we highly appreciate you taking the time to answer all the questions", and "Thank you for completing the survey. It is crucial for our thesis".

Furthermore, according to Mackenzie and Podsakoff (2012) impulsiveness can reduce attention paid to both instructions and questions, which can result in poor comprehension, and furthermore lead to carelessness. To remedy this tendency, we implement the following statement succeeding a clarification of sustainable food: "When you answer the questions in this survey, please keep this definition in mind, and please take the time to read each question carefully".

Respondents' motivation to exert cognitive effort may furthermore be diminished by lengthy scales as respondents may become fatigued towards the end of the survey (MacKenzie & Podsakoff, 2012). This can potentially lead to invalid responses in terms of being stylistic or nondifferentiated (MacKenzie & Podsakoff, 2012). We attempt to remedy this tendency by being selective when choosing items to include in the survey in general, as well as notably reducing the number of items covering social desirability. Moreover, we include statements such as "You have now completed 50% of the survey.", and "You are approaching the end of the survey.", in the middle and towards the end of the survey, in addition to including a progress bar. Furthermore, according to Revilla and Ochoa (2017), and Wigmore (2022), the ideal length of a survey seems to be approximately 10 minutes. Through pre-testing we see that it takes respondents on average 8 minutes to complete the survey, indicating that it is not a lengthy survey.

Moreover, respondents may be inclined to cover their genuine opinions by modifying their answers if they have doubts relating to the use of the data retrieved from the survey (Baumgartner and Steenkamp 2001; Schmitt 1994 in MacKenzie & Podsakoff, 2012). To mitigate such suspicions, we make explicit initially why we request the information gathered from the survey, and how the information will be used. In addition, we assure the respondents

that the information will be handled confidentially, as is in line with the recommendations of MacKenzie and Podsakoff (2012).

Bias may also occur due to the presence of factors that ease the task of satisficing, such as the "availability of answers to previous questions" (MacKenzie & Podsakoff, 2012, p. 553). When respondents have access to previous questions, they can easily go back and forth between questions which to a great extent enables them to align later answers with those they have previously given (MacKenzie & Podsakoff, 2012). To remedy this, we prevent respondents from going back to previous questions, and in so previous answers, thereby reducing the physical availability of previous questions.

MacKenzie and Podsakoff (2012, p. 545; 547; 550) list several other factors that may lead to common method bias, such as "low personal relevance of the issue", "lack of experience thinking about the topic", and "low feeling of altruism". We do not consider these factors as we do not have any basis for making assumptions on their personal relevance. However, as we describe in the section below, according to the Harman's single factor test we do not face common method bias issues.

4.6.2 Statistical control

Repetitiveness is another factor which may reduce respondents' motivation to expend cognitive effort when a message is repeated excessively (Petty & Cacioppo, 1986 in MacKenzie & Podsakoff, 2012). In such case, respondents might be inclined to satisfy through providing stylistic or nondifferentiated answers (MacKenzie & Podsakoff, 2012). Certain elements of our survey might be perceived as repetitive by some. Firstly, each new page of the survey provides rather similar instructions. Secondly, the questions themselves might be perceived as alike due to the items in the questions being relatively similar. However, the instructions and questions are kept as they are due to methodological purposes, and nondifferentiated responses are controlled for, in line with our fifth criterion as we describe in section 4.3.1.

We employ the Harman's single factor test to identify common method bias. According to Podsakoff et al. (2003 in Kock et al., 2021, p. 4) the test examines "whether a single factor explains the majority of the variance in measurement items". We argue that in line with the Harman's single factor test, common method bias should not constitute a problem. This is due to the first factor of each of our four models accounting for less than 50% of the initial Eigenvalues, as they respectively account for 46,12%, 44,38%, 35,24%, and 35,29%. In sum,

all four models pass the criterion of the Harman's single factor test to identify common method bias.

4.7 Assumptions for multiple linear regression

There are four main assumptions for multiple linear regression: (1) normality, (2) homoskedasticity, (3) linearity, and (4) multicollinearity.

4.7.1 Normality

Normality denotes whether the sample data distribution is similar to a normal distribution (Hair et al., 2010). If the assumption does not hold, it means all statistical tests are invalid. Even so, the importance of nonnormality depends on two factors: the sample size and the shape distribution, hereunder kurtosis and skewness (Hair et al., 2010).

Kurtosis indicates the flatness or "peaked-ness" compared to a normal distribution (Hair et al., 2010). The most used critical value for kurtosis is ±1.96 (Hair et al., 2010). In this instance, we have negative kurtosis for injunctive norm, descriptive norm, social identity, cognitive social identity, PBC, and intention. Meanwhile, social desirability, emotional social identity, and attitude have positive kurtosis. Moreover, all values are within the cut-off value and therefore point in the direction of normality (Table 15).

Skewness denotes the symmetry of a distribution in comparison to a normal distribution. Furthermore, if a skewness value falls outside the range of ±1, this indicates a substantially skewed distribution (Hair et al., 2010). In the table below (Table 15), we see that injunctive norm, descriptive norm, social identity, cognitive social identity, and emotional social identity are positively skewed, while social desirability, attitude, PBC and intention are negatively skewed. Attitude is the only variable outside the desired range. This can be connected to section 4.5, where the mean of attitude is the highest.

Sample size determines whether skewness and kurtosis are to detrimental effect. In general, a large sample reduces the potentially harmful effects of nonnormality. Based on our sample being 185, and thus close to 200 where the deviation from nonnormality may be negligible (Hair et al., 2010), an instance of nonnormality would not be as harmful. In our case, however, both skewness and kurtosis are acceptable, except for attitude's skewness. Subsequently, this discussion of normality points in the direction of being fulfilled.

	Skewness	Kurtosis
Injunctive	0.441	-0.560
Descriptive	0.061	-0.381
Social desirability	-0.798	0.838
Social identity	0.239	-0.736
Cognitive	0.037	-0.693
Emotional	0.879	0.433
Attitude	-1.210	1.750
PBC	-0.061	-0.811
Intention	-0.172	-0.898

Table 15: Normality (skewness, and kurtosis).

4.7.2 Homoscedasticity

Another assumption of multiple linear regression is homoscedasticity and in other words constant variance of the error term (Hair et al., 2010). It moreover "refers to the assumption that dependent variable(s) exhibit equal levels of variance across the range of predictor variable(s)" (Hair et al., 2010, p. 74). To check whether this condition is satisfied, we plot the residuals against the predicted variables of y (Appendix 8; Keller, 2018), and we see that the plots point in the direction heteroscedasticity. This could be due to the skewed distribution of attitude, and slightly skewed distribution of social desirability. We choose not to perform any corrective measures against heteroscedasticity, but keep in mind that this can "cause the predictions to be better at some levels of the independent variable than at others" (Hair et al., 2010, p. 75).

4.7.3 Linearity

An important assumption of linear regression is that there is a linear relationship between the dependent variables and the independent variable. In other words, a representation of the "degree to which the change in the dependent variable is associated with the independent variable" (Hair et al., 2010, p. 183). We check for linearity through a scatterplot of the residuals (Hair et al., 2010). Should the scatterplot reveal consistent curvilinear patterns it means that corrective measures should be taken to increase the validity of the coefficients and the predictive accuracy of the model (Hair et al., 2010). We followingly create scatterplots (Appendix 9) for the independent variables and find no consistent curvilinear patterns, thereby pointing in the direction of linearity.

4.7.4 Multicollinearity

A fourth assumption for linear regression is no multicollinearity. In other words, we assume there is no correlation between several independent variables. To test this assumption, we utilise the variance inflation factor (VIF) and collinearity tolerance. VIF is an "indicator of the effect

that the other independent variables have on the standard error of a regression coefficient" (Hair et al., 2010, p. 161). Moreover, high values of VIF indicate a high degree of multicollinearity (Hair et al., 2010). Meanwhile, the collinearity tolerance is a common measure for multicollinearity and as this value grows smaller, the measured variable is increasingly predicted by the other independent variables (Hair et al., 2010). If VIF is equal to one and the tolerance level equals 1.0, this indicates no instance of multicollinearity (Hair et al., 2010), but if the tolerance level is 0.25 this indicates a high level of multicollinearity. Based on this, the tolerance should ideally be high (Hair et al., 2010). Regarding VIF, Hair et al. (2010) utilise 10 as a threshold. They also argue that VIF values between 3 and 5 should be assessed to ensure there is no multicollinearity. We present and discuss VIF and tolerance values in section 5.

5. Results

When conducting multiple linear regression (Appendix 10), we utilise the previously computed variables as independent variables (section 4.4.6) except for intention which is used as the dependent variable. We include collinearity diagnostics as part of the regression. The summarised findings for all four regression models are found in Table 28, where we also discuss the main takeaways from the regression analysis.

5.1 Model 1

Model 1 (Appendix 10.1) includes injunctive norm, descriptive norm, social desirability, social identity, and intention.

Model fit. To review the model fit, we utilise the F statistic and significance from the ANOVA print (Table 16). A high F statistic, in general, indicates an overall significant regression model. We moreover evaluate the fit of the model in the context of the significance level. The F statistic in Model 1 (57.87) is satisfactory, and the significance level (<.001) is within the most used level of significance of .05 (Hair et al., 2010). The ANOVA analysis followingly yields satisfactory results and shows that the model has an overall good fit.

	F	Sig.
Regression	57.877	<.001

Table 16: ANOVA Model 1. F and Significance level.

Assumptions test. As we mention in section 4.6.4, we evaluate whether the assumption of no multicollinearity is fulfilled. All the tolerance values (Table 17) are within the previously discussed critical limits. The same is true for VIF, where all values are below three. We followingly conclude that there are no significant instances of multicollinearity in Model 1.

	Standardised coefficients beta	Sig.	Collinearity tolerance	Statistics VIF
(Constant)		.323		
Injunctive	.047	.516	.474	2.111
Descriptive	.167	.011	.571	1.752
Social desirability	.059	.245	.952	1.051
Social identity	.594	<.001	.455	2.198

Table 17: Model 1. Standardised coefficients beta, sig., collinearity tolerance and statistics VIF.

Variance explained. The model has an adjusted R square, which controls for the number of variables included in the model (Hair et al., 2010), equal to 0.553 (Table 18), and the model followingly explains 55.3% of the variability in the dependent variable. If we have a higher

value of the adjusted R square this generally indicates that a larger proportion of the variability in the dependent variable is explained by the regression model. The adjusted R square shows us that Model 1 is a satisfactory model, and that it explains a lot of the variance.

R	R square	Adjusted R square	Std. Error of the Estimate
.750	.563	.553	1.10439

Table 18: Model summary Model 1. R, R square, Adjusted R square and Std. Error of Estimate.

Effects of predictors. Out of the four beta coefficients from this model (Table 17), only descriptive norm and social identity are significant.

5.2 Model 2

Moving on to Model 2 (Appendix 10.2), we exclude social identity, and instead include cognitive social identity and emotional social identity.

Model fit. Regarding the overall model fit, the F statistic (Table 29) is not very high, but the significance level is lower than .05 and thus, the model has an acceptable fit.

	F	Sig.
Regression	39.903	<.001

Table 19: ANOVA Model 2. F and Significance level.

Assumptions test. Regarding collinearity tolerance (Table 20), none of the variables are below 0.25, and as for VIF all values are below three. We therefore conclude no severe instances of multicollinearity in this model.

	Standardised coefficients beta	Sig.	Collinearity tolerance	Statistics VIF
(Constant)		.212		
Injunctive	.156	.030	.518	1.930
Descriptive	.263	<.001	.619	1.614
Social desirability	.038	.476	.939	1.065
Cognitive	.454	<.001	.454	2.204
Emotional	-.020	.785	.492	2.034

Table 20: Model 2. Standardised coefficients beta, sig., collinearity tolerance and statistics VIF

Variance explained. The adjusted R square (Table 21) is .514 and within reasonable limits, explaining 51.4% of the variability.

R	R square	Adjusted R square	Std. Error of the Estimate
.726	.527	.514	1.15151

Table 21:Regression model summary Model 2. R, R square, Adjusted R square and Std. Error of Estimate.

Effects of predictors. This regression (Table 20) shows that injunctive norm, descriptive norm, and cognitive social identity are significant.

5.3 Model 3

Model 3 (Appendix 10.3) is an extension of Model 1 and includes attitude and PBC to explore whether this increases the explained variance.

Model fit. The F statistic (Table 22) is not very high but paired with the significance level of <.001 it has an acceptable model fit.

	F	Sig.
Regression	41.391	<.001

Table 22: ANOVA Model 3. F and Significance level.

Assumptions test. In this model, the collinearity tolerance (Table 23) is above 0.25 for all variables, and all VIF values are below three. Thus, there are no significant breaches of the assumption of no multicollinearity.

	Standardised coefficients beta	Sig.	Collinearity tolerance	Statistics VIF
(Constant)		.230		
Injunctive	.059	.404	.471	2.123
Descriptive	.156	.016	.567	1.765
Social desirability	.031	.544	.917	1.091
Social identity	.488	<.001	.358	2.794
Attitude	.168	.006	.633	1.581
PBC	.073	.150	.924	1.082

Table 23: Model 3. Standardised coefficients beta, sig., collinearity tolerance and statistics VIF

Variance explained. The adjusted R square is .568 (Table 24), indicating that the model explains a relatively good amount (56.8%) of the variability.

R	R square	Adjusted R square	Std. Error of the Estimate
.763	.583	.568	1.08500

Table 24: Regression model summary Model 3. R, R square, Adjusted R square and Std. Error of Estimate.

Effects of predictors. Regarding the standardised coefficients of beta (Table 23), descriptive norm, social identity and attitude are statistically significant.

5.4 Model 4

Model 4 (Appendix 10.4) is an extension of Model 2 and includes attitude and PBC.

Model fit. Firstly, the F statistic (Table 25) is low, at 32.281, but paired with the significance level (<.001) Model 4 illustrates an acceptable fit.

	F	Sig.
Regression	32.281	<.001

Table 25: ANOVA Model 4. F and Significance level.

Assumptions test. Looking firstly at the collinearity tolerance (Table 26), we see that cognitive social identity has the lowest value, but it is still not close to 0.25. When looking at VIF all values are below the threshold of three, and thus do not need further examination. We subsequently conclude that there are no significant instances of multicollinearity.

	Standardised coefficients beta	Sig.	Collinearity tolerance	Statistics VIF
(Constant)		.136		
Injunctive	.148	.034	.516	1.939
Descriptive	.227	<.001	.604	1.656
Social desirability	.006	.904	.913	1.095
Cognitive	.363	<.001	.398	2.511
Emotional	-.030	.675	.490	2.039
Attitude	.206	.001	.655	1.527
PBC	.104	.044	.940	1.064

Table 26: Model 4. Standardised coefficients beta, sig., collinearity tolerance and statistics VIF

Variance explained. The adjusted R square (Table 27) is .543 in this model, and thereby explains 54.3% of the variability in the model.

R	R square	Adjusted R square	Std. Error of the Estimate
.749	.561	.543	1.11603

Table 27: Regression model summary Model 4. R, R square, Adjusted R square and Std. Error of Estimate.

Effects of predictors. Moving on to the standardised coefficients of beta (Table 26), injunctive norm, descriptive norm, cognitive social identity, attitude and PBC are all significant.

5.5 Main takeaways from the regression

Based on the four regression models, we wish to highlight some key takeaways.

Model fit. Firstly, in terms of model fit, all the models are significant, and the F-values lie between 32.281 and 57.877.

Assumptions test. All models have satisfactory values, and we do not detect any significant breaches of the assumption of no multicollinearity.

Variance explained. The values lie between .514 and .568. In other words, the models are quite similar in terms of explained variance.

Effects of predictors. In Model 1, descriptive norm and social identity are statistically significant. In Model 2, injunctive norm, descriptive norm, and cognitive social identity are statistically significant. Moving on to Model 3, descriptive norm, social identity, and attitude are statistically significant. Lastly, in Model 4, injunctive norm, descriptive norm, cognitive social identity, attitude, and PBC are statistically significant.

In sum, the F statistic is highest in Model 1 and Model 3, which also are the models with the highest adjusted R square. This points in the direction of utilising the "simpler" models, the models which do not include cognitive social identity and emotional social identity, with higher explained variance and better model fit (Hair et al., 2010).

As illustrated in the summary table (Table 28), social mechanisms explain a lot. The models which look solely at social mechanisms explain over 50% of the variance. When we include the measures from TPB, the coefficient of determination only increases marginally. In other words, the social mechanisms are strong even when we control for the traditional model. This can in turn be used to argue that social mechanisms are important in the context of adoption of sustainable food, as we see in the literature review (Appendix 1) and chapter 3.

	Model 1	Model 2	Model 3	Model 4
Injunctive	.047	.156*	.059	.148*
Descriptive	.167*	.263**	.156*	.227**
Social desirability	.059	.038	.031	.006
Social Identity	.594**		.488**	
Cognitive		.454**		.363**
Emotional		-.020		-.030
Attitude			.168*	.206*
PBC			.073	.104*
R^2 adjusted	.553	.514	.568	.543
F	57.877**	39.903**	41.391**	32.281**

*Table 28: Summary of all four models. Standardised coefficients beta, significance, R square adjusted and F statistic. * = <.05, ** = <.001*

6. Discussion

6.1 Summary of results

In terms of the hypotheses we present, all four models fully support H1b, as we present in Table 29 below. We therefore conclude that descriptive norm has a positive influence on intention to purchase sustainable food. Hypothesis H1a, H2a, H2b, and H4 are partially supported by the models, while H5 has some support. There is no support for hypothesis H2c nor H3. In sum, we see that social mechanisms, emotional social identity and social desirability notwithstanding, are influential when it comes to adoption of sustainable food.

Hypothesis		Support
H1a	Injunctive norm has a positive influence on intention to purchase sustainable food.	M2, M4
H1b	Descriptive norm has a positive influence on intention to purchase sustainable food.	M1, M2, M3, M4
H2a	Social identities have a positive influence on intention to purchase sustainable food.	M1, M3
H2b	Cognitive identities have a positive influence on intention to purchase sustainable food.	M2, M3
H2c	Emotional identities have a positive influence on intention to purchase sustainable food.	No support
H3	Social desirability has a positive influence on intention to purchase sustainable food.	No support
H4	Attitude has a positive influence on intention to purchase sustainable food.	M3, M4
H5	Perceived behavioural control has a positive influence on intention to purchase sustainable food.	M4

Table 29: Hypotheses and corresponding model(s) which yield(s) support.

6.2 Limitations and implications

6.2.1 Theoretical implications

This dissertation provides several theoretical implications within the field of adoption of sustainable food. Firstly, the dissertation finds that both injunctive norm and descriptive norm play an important role in shaping intention towards sustainable food adoption. This supports and extends the TPB model. Descriptive norm is statistically significant in more models than injunctive norm and thereby yields support to previous research which finds descriptive norm to be more effective than injunctive norm when choosing food alternatives. This also gives support to the authors who request an expansion of the normative component in TPB (cf. Armitage & Conner, 2001). In other words, subjective norm in TPB, usually measured with items similar to injunctive norm, may need to be expanded to also include descriptive norm.

In line with this, the dissertation secondly contributes to previous research which finds the normative component in TPB to be the weakest link (cf. Armitage & Conner, 2001). Previous studies of TPB in the context of sustainable food find that social norms, and thereby injunctive norm, are not necessarily significant. Our study lends support to this.

Thirdly, the thesis shows that identification with social groups is important in the context of adoption of sustainable food through support of social identity. This contributes to the field of social identity and influence on food adoption, something which we identify as a gap in the research (Chapter 3.4; Appendix 1). Furthermore, the dissertation provides support to Zheng et al. (2023) and their claims of cognitive social identity affecting consumers' product evaluation and strategic choice of products.

In sum, the dissertation gives support to White et al. (2019a) and their argumentation of social mechanisms, albeit not social desirability or emotional social identity, being important in shifting consumers to be more sustainable. It moreover furthers the notion that social mechanisms are important in the context of adoption of sustainable food.

6.2.2 Managerial implications

Regarding managerial implications, and how to stimulate adoption of sustainable food, this study provides valuable insight to managers and businesses in Norway on an important target group of potential consumers of sustainable food. The implications from this dissertation may be used to shape promotion and advertisement of one's products. Specifically, we make suggestions related to how managers can use the marketing mix in the context of social mechanisms and sustainable food.

Product. To create a distinguishable product, marketers should aim to highlight their product being sustainable, and therefore highlight, for example, potential health attributes, environmental benefits, the product being local, and safeguarding animal welfare and biodiversity (Gorgitano & Sodano, 2014).

Price. The price of sustainable food products is often higher than that of conventional food products. This is due to the price of sustainable products internalising both social and environmental costs. Managers can use this higher price to emphasise the value and quality of sustainable food products (Sheth et al., 2011).

Place. One first distribution channel to utilise is traditional retail stores. In-store, one can leverage the importance of descriptive norm, as consumers can observe others' behaviours,

thereby increasing the likelihood of being influenced to purchase sustainable products. One can also attempt to create sections in the store designated to sustainable products, to make them visible and thereby easier to choose. Lastly, managers can consider selling their products through a second channel such as "Bondens marked" (Bondens marked, n.d.) to increase the number of distribution channels, and thus reach more customers.

Promotion. A way to employ effective marketing communications is through educating consumers on the costs internalised in the price of the products (Sheth et al., 2011) through for example promotions and commercials. Furthermore, using labels such as the Norwegian "Klodemerket" (TORO, n.d.) informs consumers that the product in question has a low climate footprint, and thereby is sustainable. In so, one facilitates the process of choosing sustainable food products for consumers.

6.3 Future research

The study provides insight regarding adoption of sustainable food. Even so, the study is not without limits, and we therefore provide some suggestions for future research. We identity considerations related to design choice, research model and choice of variables, common method bias, assumptions of linear regression, and lastly the measure of intention.

One first thing to consider, is the use of covariance design. Using this design means we uncover variance between the dependent variable and the independent variable. If we were to make assumptions about correlations or conduct empirical tests, we need to conduct an experiment. This is followingly something which can be done in future research.

The second thing to consider, is that our explained variance of about 55% (Model1) and 56% (Model 3) also implies approximately 45% and 44% unexplained variance. It is, however, desirable to have higher explained variance, and this therefore points in the direction of needing to include additional variables in the model. Variables (as we discuss in the introduction) such as cost (WWF, 2022; Euromonitor International, 2023), availability (Adhitiya & Astuti, 2019; Lazaroiu et al., 2019; Thøgersen & Zhou, 2012; EAT-GlobeScan, 2021; Reynolds et al., 2022), perceived value (Adhitiya & Astuti, 2019; Alam et al., 2020; Cao et al., 2021; Sandu et al., 2022; Vermeir & Verbeke, 2006), knowledge and awareness of sustainable food (Carzedda et al., 2021; Rahim et al., 2013; de Sio et al., 2022; Murti & Ekawati, 2022; Pasco, 2023; Premadasa & Fernando, 2022; Wang & Wang, 2016, Yogananda & Nair, 2019) and health consciousness (Carzedda et al., 2019; Murti & Ekawati, 2022; Premadasa & Fernando, 2019; Qi et al., 2020; Qi & Ploeger, 2021; Rustagi & Agarwal, 2021; Thøgersen & Zhou, 2012;

Yogandanda & Nair, 2019) could be interesting to include in future models. In addition to this, we believe including variables such as past purchase behaviour (Ukenna & Ayodele, 2019; Yamoah & Acquaye, 2019), willingness to pay more (Leong & Mariadass, 2019), and green claim trust (de Sio et al, 2022), as we find in the literature review (Appendix 1), could be valuable in a future model.

In line with this argument, one can also consider exchanging TPB with a different model, as it does not add a lot to the existing model. In the literature review, models such as consumption value theory (Adhitiya & Astuti, 2019; Cao et al., 2021), self-determination theory (Chwialkowska, 2018), social support theories (Hasan et al., 2023), goal framing theories (Khan et al., 2022) and individual green consideration model (Latip et al., 2023) are discussed and could followingly be interesting to evaluate further.

Another thing to consider is social desirability and how to measure it. Even though social desirability is not significant in any of our models, we speculate that this is related to how we measure the construct. We measure social desirability so that it captures consumers acting in a socially desirable way to fit in with the sustainable food group. Meanwhile, it is most commonly used to measure whether people are answering surveys in a way that presents them as a more socially acceptable version of themselves (see for example Bir et al., 2018; Cerri et al., 2019a; Smith et al., 2017). In other words, what is usually measured is the social desirability bias (Grimm, 2010; Cerri et al, 2019b). Therefore, in future research, it would be beneficial to re-evaluate social desirability both in terms of how to measure it, and whether it is beneficial in this model.

We also wish to highlight the issue with emotional social identity, and that we believe it to stem from the utilised measures. We argue that social identity is closer to cognitive social identity than emotional social identity in terms of items. Inspecting the utilised measures and their respective items, we see that the items for cognitive social identity, as opposed to emotional social identity, are more similar to the general measure of social identity. For example, item one for social identity is “I strongly identify with sustainable food” while item one for cognitive social identity is “My personal identity overlaps with that of the sustainable consumer group in terms of perception”. Meanwhile, the measures in emotional social identity more so cover one’s ego and feelings. We argue that this is not as well captured by the general measure. Based on this, it could be wise to ensure social identity captures both its dimensions more evenly in the future. One could also consider employing the three-dimensional view of social identity as

suggested by Ellemers et al. (1999) and therefore study cognitive social identity, emotional social identity, and evaluative social identity.

In line with the argument above, it is also interesting to research whether other emotional factors than emotional social identity influence adoption of sustainable food. For example, in the literature review (Appendix 1), emotional value (Adhitiya & Astuti, 2019; Cao et al, 2021), green advertising scepticism (de Sio et al., 2022), emotional support (Hasan et al., 2023) and enjoyable shopping experience (Qi et al., 2020) are some mentioned factors which can be interesting to study in future research. In addition to this, emotions (see for example Bukchin & Kerret, 2018; Aertsens et al., 2009), and for example positive emotions towards sustainable food, can be beneficial to study.

We also wish to highlight some considerations in terms of common method bias. In addition to the implemented measures, it could be valuable to include "personal relevance", "experience around the topic", "feelings of altruism", "perceived value" and/or "knowledge and awareness of sustainable food" in future research. Should one choose to include for example perceived value or knowledge and awareness of sustainable food, it can help to further reduce the possibility of common method bias. There are, of course, other suggested remedies, many of which could be useful in future research, such as "low need for cognition", "forced participation" and "grouping related items together" (MacKenzie & Podsakoff, 2012).

Another consideration for future research relates to the assumptions of multiple linear regression, and the fact that we have indications of heteroscedasticity in our data set. In the future, it is beneficial to implement measures to counteract this, such as the procedure of weighted least squares or variance-stabilising transformations (Hair et al., 2010). We believe that the heteroskedasticity in our model may be due to the skewness of attitude, which therefore implies that remedying normality for attitude could correct this. This is followingly desirable in future research.

Lastly, we wish to bring forth the fact that in this dissertation, we only measure intention. Intention is not necessarily a predictor of actual behaviour, and it is therefore not possible to use intention as a proxy for behaviour (Ajzen, 2019). In other words, we are not able to conclude anything regarding actual behaviour. Subsequently, it is desirable to measure actual behaviour in future research.

6.4 Conclusions

Through analysis of the data retrieved from our survey and based on the models we use for our study we conclude that descriptive norm has a positive influence on intention to purchase sustainable food (H1b). Furthermore, our models suggest partial support for injunctive norm, social identities, cognitive social identities, and attitude to have a positive influence on intention to purchase sustainable food (respectfully H1a, H2a, H2b, and H4). Our study suggests weak support for PBC having a positive influence on intention to purchase sustainable food (H5). Lastly, we find no support for emotional social identities and social desirability having a positive influence on intention to purchase sustainable food (respectively H2c and H3).

As for theoretical implications we see a need for an enhanced approach to social norms, as presented in TPB, which emphasises descriptive norm to a greater extent as it is statistically significant across all models in our dissertation. The dissertation also contributes to the field of social identity and cognitive social identity and their influence on adoption in the context of sustainable food. In other words, the dissertation highlights the importance of social mechanisms in the context of sustainable food. Regarding managerial implications, these insights can be utilised to improve the effectiveness of initiatives with the aim of promoting adoption of sustainable food.

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Appendix

Appendix 1: Literature review

In the initial stage, we conduct a literature review to get an overview of the research area and to discover relevant articles. The search is conducted between the time period of the 23rd of August until the 28th of August 2023. We refine the search to only include articles which consider the effect of social mechanisms on adoption of sustainable food and green food. This is often measured as attitude to purchase/consume or intention to purchase/consume sustainable/green food.

In the search we use nine search terms on sustainable food and green food. They are (1) Sustainable food adoption (n=62) / Green food adoption (n=19), (2) Sustainable food social norm (n=0) / Green food social norm (n=0), (3) Sustainable food social identity/-ies (n=0) / Green food social identity/-ies (n=2), (4) Sustainable food social desirability (n=1) / Green food social desirability (n=0), (5) Sustainable food interpersonal influence (n=0) / Green food interpersonal influence (n=0), (6) Sustainable food social identification (n=0) / Green food social identification (n=0), (7) Sustainable food theory of planned behavior/-our (n=12) / Green food theory of planned behavior/-our (n=6), (8) Sustainable food attitude (n=26) / Green food attitude (n=21), (9) Sustainable food intention (n=37) / Green food intention (n=61).

To conduct this search, we utilise Google Scholar. Here, we do an (1) “advanced search”, “with all of the words”, (2) “in the title of the article”. We further choose to (3) exclude citations, (4) patents and (5) non-English articles. Articles can be from (6) “any time”, are (7) sorted by relevance and of (8) “all types”. If an article is (9) from 2020 or older, and not cited, it is excluded. Some articles are (10) not available online and are followingly excluded. We also conduct a subjective evaluation of whether articles look at (11) consumer perspectives, and only keep the ones who do. Furthermore, (12) books and chapters from books and (13) reports, master and PhD theses are excluded, whereas (14) conference articles are included. As mentioned, only those articles which consider social mechanisms on adoption of sustainable food and green are included, and this is a subjective evaluation by us. Some articles appear several times in the search output, and followingly duplicates of articles are removed.

Before applying these conditions to our search, we have a total of 247 articles. After applying the condition of only English articles, we remove 4 articles. There are also 39 articles in total which are from 2020 or older and not cited, which we remove. A total of 32 articles are

unavailable online and are followingly excluded. There are also 49 articles which do not have a consumer perspective, and they are removed. A total of 5 articles are books or book chapters, and are followingly excluded, and 16 articles are either master's, PhD's, or undergraduate's dissertations. Due to our subjective evaluation of whether articles look at social mechanisms, we find a total of 32 articles which do not. There are also some articles which do not look at adoption of food, and they summarise to 19. Lastly, a total of 9 articles are listed twice, and are thus removed. After all the conditions are applied, we are left with 42 articles.

In the review there is a total of 34 quantitative studies and 6 qualitative studies, meanwhile 2 are of mixed methods. The prominent theory is TRA/TPB (and extended TPB) (Fisher & Ajzen; Ajzen, 1991), and a total of 26 studies utilise these theories. In addition to this, we notice that a lot of the studies examine consumers in Asia, in fact, in total 26 articles are centred around countries in Asia, such as Indonesia, Malaysia, China and Vietnam. We furthermore notice that not a lot of the studies look at consumers who are students (in isolation). In total, 7 articles look at millennials, people between the ages of 18-25, 19-22, (college) students and young adults. Out of the 42 articles, a total of 30 find that social mechanisms have a significant influence on adoption of sustainable food and green food.

The findings from the literature review are presented in the table below. There are seven columns: reference, method, main theory, independent variables, dependent variables, mediators/moderators, and main result.

Appendix 1.1: Literature review table

Reference	Method	Main theory	Independent variables	Dependent variables	Mediators /moderators	Main result
Adhitiya & Astuti (2019).	Quantitative: Survey, n=200, Indonesian people who knew about green products.	Theory of consumption values & value-attitude-behaviour model.	Functional value (price and quality), social, emotional, conditional, epistemic, environmental value, and green consumer behaviour.	Green consumer behaviour (general/organic food).	Mediator: Attitude toward green products.	Social value only significant influence on green consumer behaviour. Attitude toward green product statistically significant influence on epistemic, environmental, and emotional value.
Alam et al. (2020).	Quantitative: Survey, n=220, Malaysian adults.	Extended Theory of planned behaviour (TPB).	Perceived value, attitude, social norm, perceived availability, perceived effectiveness.	Intention & Behaviour (general).	Mediator: Intention.	All independent variables except perceived availability have a statistically significant influence on intention. Perceived availability, perceived effectiveness, and intention significantly impact behaviour.
Ali et al. (2023).	Quantitative: Survey, n=256, Pakistani millennials.	Theory of planned behaviour (TPB).	Attitude Towards Green Products (AGP), Subjective Norms (SN), Perceived Behavioural Control (PBC).	Green Purchase Behaviour (GPB) & Green Purchase Intention (GPI) (general/organic food).	Mediator: Green Purchase Intention (GPI).	All variables positively affect GPI directly. GPI mediates the link between AGP and GPB and SN and GPB. AGP and PBC significantly affect GPI.

Cao et al. (2021).	Quantitative: Survey, n=344, Chinese consumers of organic foods.	Consumption value theory (TCV) and Anxiety.	Functional value-quality (FV-Q), Functional value-price (FV-P), Emotional value (EMV), Social value (SV), conditional value (CV), Epistemic Value (EPV), Anxiety (A).	Purchase Behaviour (PB) (organic food/general).	Moderator: Sustainable consumption attitude (SCA). Mediators: Consumption values (FV-Q, FV-P, EMV, SV, CV, EPV & A).	The study finds that FV-P, EMV, SV & EPV significantly, positively influence PB. A has a significant, positive influence on FV-Q, FV-P, EMV, SV, CV & EPV, and a significant, negative influence on PB. FV-P, EMV, SV & EPV mediates the relationship between A & PB. Lastly, SCA has a positive, moderating effect on PV-P and PB.
Carzedda et al. (2021).	Quantitative: Survey, n=600 Italian consumers.	Theory of Planned Behaviour (TPB).	Food safety concerns, health consciousness, organic product knowledge, subjective norm, green consciousness & perceived product quality.	Purchase intention (organic food/general).	N/A.	Food safety concerns, green consciousness, perceived quality, health consciousness, subjective norm, and organic product knowledge influence consumer behaviour.
Cerri et al. (2019).	Qualitative: literature review, n=388 peer reviewed studies.	No specific theory. Main concepts: Social desirability bias.	N/A.	N/A.	N/A.	The researchers request more research on the subject of social desirability bias.
Chwialkowska (2018).	Qualitative: Interview, n=71, families.	Self-determination theory.	External motive, introjected motive, identified motive and integrated motive.	Adoption of a vegan diet (vegan diet).	Mediator: Family-influence.	Results show that self-endorsed consumption is the key to internalising sustainability values.

de Sio et al. (2022).	Quantitative: Survey, n=410, Italian consumers.	No specific theory. Main concepts: Green advertising scepticism, green claim trust.	Green advertising scepticism (GAS) perceived environmental knowledge (PEK).	Intention to buy green products (INT) (general).	Mediator: Trust in green claims (TR).	The indirect effect of GAS on INT through the mediator, TR, was statistically significant, thereby indicating full mediation. The indirect effect of PEK on INT through TR was statistically significant, and the direct effect was also significant giving partial mediation between PEK and INT.
Ham et al. (2015a).	Quantitative: Survey, n=411, household primary shoppers in a Southeast Europe region.	Theory of planned behaviour (TPB).	Perceived behavioural control, subjective norms (social and descriptive norms) & personal attitude.	Intention to purchase green food (general).	N/A.	The study finds a statistically significant correlation between the intention to purchase and the independent variables.
Ham et al. (2015b).	Quantitative: Survey, n=411, household primary shoppers in Eastern Croatia.	Theory of planned behaviour (TPB).	Attitude (A), Subjective norms (SN), Perceived behavioural control (PBC) & Perceived self-identity (PSI).	Green food purchasing Intention (general).	N/A.	Attitude, subjective norms, perceived behavioural control and perceived self-identity are found to significantly influence intention positively.
Hasan et al. (2023).	Mixed research approach. Quantitative: Survey, n=386, above 18 years old in Bangladesh. Qualitative: Interview.	Social Support theory (SST).	SST (emotional support (EST) & informational support (IST)) & Contemporary Variables (sustainability perceptions (SP), religious values (RV), trust (TRT) & technology competency (TC)).	Loyalty (organic food delivery applications).	Mediator: Behavioural intention to Use (BIU).	All variables except technical competency were found to influence BIU significantly and positively, which in turn influences loyalty.

Huseyin & Gül (2022).	Quantitative: Survey, n=270, pre-service science teachers in Turkey.	Theory of planned behaviour (TPB).	Attitude, subjective norm & perceived behavioural control.	Behaviour (fast-food).	Mediator: Intention.	Attitude and PBC has a positive significant direct and indirect influence on Behaviour. Subjective norm only has a significant indirect effect on behaviour.
Khan et al. (2022).	Quantitative: Survey, n=488 Pakistani consumers.	Goal-framing theory (GFT).	Gain motivations, hedonic motivations, normative motivations.	Purchase intention (organic food/general).	Moderators: Knowledge (on gain motivations) & Perceived price (on normative motivations). Mediators: Gain motivations (on normative-intentions) & hedonic motivations (on gain-intentions and normative-intentions).	The results show that purchase intention is significantly affected by gain and hedonic motivations, while normative has an indirect role. Knowledge and perceived price significantly moderate the motivational factors.
Kim et al. (2016).	Quantitative: Survey, n=548 South Korean consumers of the age 20 to 59 years.	Extended Theory of planned behaviour (TPB).	Perceived Quality (PQ), Behavioural Beliefs (BB_iOE_i), Normative Beliefs (NB_iMC_i), Control Beliefs (CB_iPC_i), Attitude (AT), Subjective Norm (SN), Perceived Behavioural Control (PBC), and personal moral norm (PN).	Patronage intention (IN) (general).	Mediator: Perceived behavioural control (between SN and IN) & Attitude (between PQ and IN).	BB_iOE_i statistically significantly influence AT toward IN. NB_iMC_i statistically significantly influence SN toward IN. AT statistically significantly influences IN. SN statistically significantly influences IN. PBC statistically significantly influences IN. PN statistically significantly influences IN. PQ statistically significantly influences IN through AT.

Koch et al. (2021).	Qualitative: Review/conceptual paper.	No specific theory. Main concepts: Public exposure therapy, disgust.	N/A.	N/A.	N/A.	The review proposes public exposure therapy as an approach to increase acceptance of sustainable food alternatives (e.g., insects or lab-meat).
Latip et al. (2023).	Quantitative: Survey, n=268 Malaysian consumers above 18 years.	Theory of planned behaviour (TPB) and Individual green consideration model (IGC) (underlying model).	Personal Attitude (PA), Perceived Social Pressure (PSP), Perceived Autonomy (PAU) & Receptivity to Green Communication (RGC).	Organic Food Purchase Intention (OFPI). (general).	Moderator: Receptivity to Green Communication (RGC).	The study finds that PA, PAU and RGC have a significant influence on OFPI.
Lazaroiu et al. (2019).	Qualitative: Mini review.	No specific theory. Main concepts: Trust management.	N/A.	N/A.	N/A.	The review states trust and perceptions of nutritional benefits of organic food as influential. factors.
Leong & Mariadass (2019).	Quantitative: Survey, n=306 Malaysian consumers between 18 to 25 years old.	No specific theory. Main concepts: Green advertisement, Trust, Willingness to pay.	Willingness to pay more (WTPM), Green Advertisement (GA) & Trust.	Purchase Intention (PINT) (of green food).	Mediator: Green Food Product Attribute (GFPA).	The study finds that GFPA significantly partially mediates between GA and PINT. GFPA significantly fully mediates the relationship between trust and PINT. GFPA significantly partially mediates the relationship between WTPM and PINT.
Murti & Ekawati (2022).	Quantitative: Survey, n=340, Indonesian millennials.	No specific theory. Main concepts: Environmental knowledge and awareness, health awareness & social awareness.	Environmental knowledge, Environmental awareness, Health awareness & Social Awareness.	Purchase intention & Sustainability consumption.	N/A.	The study finds that all factors except environmental concern have a significant positive effect on purchase intention.

Nguyen et al. (2021).	Quantitative, Survey, n=402, Vietnamese consumers.	Extended Theory of planned behaviour (TPB).	Environmental concern, subjective norms, Attitude, Perceived monetary barriers & Guilt.	Purchase intention (of organic meat).	Mediators: Attitude toward purchasing organic food & Perceived monetary barriers.	Environmental concern is significantly positively related to attitudes toward organic meat purchase. Environmental concern is significantly negatively related to perceived monetary barrier's associated with organic meat purchase. Subjective norms are significantly positively related to attitudes toward organic meat purchase. Attitudes toward organic meat purchase are significantly positively related to purchase intention. Perceived monetary barriers are significantly negatively related to purchase intention. Guilt about consuming conventional met is significantly positively related to purchase intention.
Pasco (2023).	Quantitative: Survey, n=1182, Gen Z Philippines consumers.	Extended Theory of planned behaviour (TPB).	Awareness about green foods, attitude towards green food consumption, subjective norm & perceived behavioural control.	Generation Z Behavioural intention to consume green food (general).	N/A.	The paper finds attitude, subjective norm, perceived behavioural control and level of awareness to significantly influence the green food consumption.
Premadasa & Fernando (2022).	Mixed research approach. Quantitative; Survey, n=384 consumers above 15 years in Sri Lanka. Qualitative: Interview, n=9.	No specific theory. Main concepts: environmental concern, health consciousness & premium price.	Consumer awareness on organic food (environmental concern & health consciousness).	Green purchase intention (general).	Mediator: Premium Price.	The results reveal that both environmental concern and health consciousness have a positive significant influence on green purchase intention, and that there is partial (significant) mediation from premium price.

Qi & Ploeger (2019).	Quantitative: Survey, n=300 Chinese consumers.	Extended Theory of planned behaviour (TPB).	Attitude, Perceived behavioural control, subjective norms, face consciousness, group conformity, confidence & personal characteristics.	Purchase intention (general).	N/A.	The results show that attitude, perceived behavioural control and subjective norms significantly influence the purchase intention.
Qi et al. (2020).	Qualitative: Interview, n=28, Chinese consumers.	No specific theory. Main concepts: COVID-19, Intention-Behaviour Gap.	Direct effect: Health consciousness, Perceived attributes, Environmental consciousness, Social influence, Family composition, Enjoyable shopping experience. Indirect effect: Positive impact of COVID-19.	Green food purchase intention & green food purchase behaviour (general).	Moderators: Negative impact of COVID-19 (indirect effect), High Price, unavailability issues, limited knowledge & mistrust issues (direct effect). Mediator: Green food purchase intention.	The results show that health consciousness, perceived attributes, environmental consciousness, social influence, family structure, and enjoyable shopping experiences are predictors of green food purchase intention.
Qi & Ploeger (2021).	Quantitative: Survey, n=360 Chinese consumers above 20 years.	Extended Theory of planned behaviour (TPB).	Attitude, Subjective Norm, Perceived Behavioural Control, Moral attitude, Health consciousness & Impact of COVID-19 (IOC).	Purchase intention (general).	Mediator: Health consciousness.	The study finds that attitude, perceived behavioural control, moral attitude, health consciousness and IOC significantly positively influence green food purchase intention. IOC is significantly related to health consciousness.

Rahim et al. (2011a).	Quantitative: Survey, n=600 Malaysian consumers above 18 years.	Theory of reasoned action (TRA).	Product significance (PS), Purchase benefit (PB) & Purchase attributes (PA), Product Characteristics (PC), Individual importance (II).	Intention to purchase green food (general).	N/A.	The results show that PS, PA, PC and II positively significantly influence purchase intention of green food.
Rahim et al. (2011b).	Quantitative: Survey, n=600 Malaysian consumers.	Theory of Reasoned Action (TRA).	Attitude (salient referents & motivation to comply) & Normative factors (subjective norms, social and personal norms).	Intention to purchase green food product (general).	N/A.	The results show that both attitude and normative factors have significant influence on intention to purchase green food products.
Rahim et al. (2013).	Quantitative: Survey, n=1763 Malaysian consumers above 18 years.	Modified Theory of Reasoned Action (TRA).	Knowledge, Attitude (Salient beliefs & Evaluation of the outcome) Subjective Norms (Salient referents & Motivation to comply).	Intention to purchase green food products (general).	N/A.	Knowledge, attitude, and subjective norms (with corresponding dimensions) have a positive significant influence on intention to purchase green food products.
Rustagi & Agarwal (2021).	N/A.	Theory of Planned Behaviour (TPB).	Environmental Attitudes, Attitudes towards green food products, subjective norms, perceived behaviour control, perceived value & long-term health orientation.	Green food purchase intention.	N/A.	This article is a suggestion for a future research project. The authors write: “There is substantial evidence that all green marketing variables influence customers’ purchases of green products in a favorable way.” (Rustagi & Agarwal, 2021, p. 353).

Rustagi & Prakash (2022).	Qualitative: Literature review.	Theory of Reasoned Action (TRA) & Theory of Planned Behaviour (TPB).	N/A.	N/A.	N/A.	The study finds literature which highlights individual factors, product attributes and marketing and social influence, as important for adoption of sustainable food.
Sandu et al. (2022).	Quantitative: Survey, n=165 Romanian consumers.	(Integration of) Theory of Planned Behaviour (TPB).	Perceived value, Attitude, Social norms, Perceived behavioural control (PBC divided into: Perceived effectiveness & Perceived availability), Intention.	Behaviour to buy (general).	Mediator: Intention.	Perceived value, attitude, social norms, and PBC significantly positively influence intention to buy green food. PBC and intention significantly positively influence behaviour.
Shen et al. (2022).	Quantitative: Meta-analysis, n=50.	Theory of Planned behaviour (TPB).	Attitude (ATT), Subjective Norm (SN), Perceived Behavioural Control (PBC).	Purchase Intention (PI) & Purchase behaviour (PB).	Moderators: National economic development & national culture.	The study shows that ATT, SN and PBC significantly positively influence PI and PB. ATT and SN positively significantly influences PBC. ATT positively significantly influences SN. PI positively significantly influences PB.
Teng et al. (2012).	Quantitative: Survey, n=1355 Malaysian consumers.	Theory of Planned Behaviour (TPB).	Attitude, Subjective Norm, Perceived Behavioural Control.	Intention towards the green food consumption (general).	N/A.	Attitude, Subjective Norms and Perceived Behavioural Control significantly influence the intention of green food purchase positively.

Thøgersen & Zhou (2012).	Quantitative: Survey, n=529	Innovation adoption model, expectancy-value attitude theory and Bem's self-perception theory.	Attitude, Injunctive Norm, Descriptive Norm, and Perceived Behavioural Control.	Intention to buy (organic food/general).	N/A.	Education level, income and priority given to universalism values influence adoption of organic food. Consumer's perceptions and inferences about their healthiness, taste, and environmental friendliness influence attitudes. Buying experience of organic food influences attitude towards buying organic food. Social factors influence adoption of organic food.
Ukenna & Ayodele (2019).	Quantitative: Survey, n=437 Nigerian consumers.	Extended theory of planned behaviour (TPB).	Attitude, Subjective Norm, Perceived Behavioural Control & Past Behaviour.	Patronage intention (street food).	Mediators: Attitude, Subjective norm, Perceived behavioural control.	PB significantly positively influence attitude, SN, and PBC. SN and PBC have significant positive influence on attitude. SN, PBC and attitude significantly positively influence PI. PI and PBC significantly positively influence AP.
Van et al. (2018).	Quantitative: Survey, n=197 Vietnamese students	Theory of Planned Behaviour (TPB) & Technology Acceptance Model (TAM).	Perceived usefulness (PU), perceived ease to buy (PE), attitudes (AT), subjective norm (SN) & perceived behavioural control (PBC).	Green food purchase intention (PI) (general).	Mediator: Attitudes towards green food purchase.	PU and PE significantly positively impact AT. SN, PU and AT significantly positively influence PI.
Vermeir & Verbeke (2008).	Quantitative, Survey, n= 456 young adults in Belgium.	Theory of Planned Behaviour (TPB).	Attitude, Perceived consumer effectiveness, Perceived availability & Social norms.	Behavioural intention (sustainable dairy).	Moderators: Confidence & Human values.	Attitudes, perceived social influences, perceived consumer effectiveness and perceived availability have a significant and positive influence on behavioural intention.

Vermeir & Verbeke (2006).	Quantitative, Survey, n=456 Belgium consumers of the age between 19 and 22.	The consumer behaviour model by Jager (2000).	Involvement, values, social norms, (un)certainty, availability & perceived consumer effectiveness (PCE).	Attitudes and behavioural intentions towards sustainable food products (dairy products).	N/A.	Involvement, PCE, certainty, social norms and perceived availability significantly influence attitude towards sustainable food products, which further influences intention to buy.
Wang & Wang (2016).	Quantitative: Survey, n=793 college students in Taiwan.	Extended Theory of Planned Behaviour (TPB).	Awareness of dining environments and related problems (Aw), awareness of contextual factors (Ac) Perceived knowledge (PK), Beliefs regarding GFBs (Be), Moral responsibility pertaining to GFBs (Mo), Self-identity to GFB (SI), Social Subjective norm of GFBs (SN), commitment to GFBs (Co), civic behaviour pertaining to GFBs (CiGFBs) & individual consumer behaviour pertaining to GFBs (InGFBs).	Commitment to GFBs (general).	Mediators: Social Subjective norm, commitment to GFBs, moral responsibilities pertaining to GFBs, self-identity & PBC.	SI, PBC, and Mo have a direct significant influence on InGFB. The authors further propose that SN and Co have indirect significant effect on InGFB.
Yamoah & Acquaye (2019).	Quantitative: Dataset, n=1.8 million customers in the UK.	Campbell's Paradigm theory.	Past Purchase, Premium Pricing, Product Availability and Product Variety.	Sustainable food purchase (output variable: retail sales value) (organic apples).	N/A.	Price, past purchase, and product availability have a significant impact on supermarket retail sales value.

Yogananda & Nair (2019).	Quantitative, Survey, n=284, Malaysian consumers.	Extended Theory of Planned Behaviour (TPB).	Environmental attitude (EA), Subjective Norm (SN), Perceived Behavioural Control (PBC), Environmental Knowledge (EK), Health Consciousness (HC) and Environmental Concern (EC).	Intent to purchase (ITP) (general).	N/A.	EC, PBC, HC and SN significantly influence ITP.
Zheng et al. (2023).	Quantitative: Survey, n=497 Chinese consumers above 20 years.	Social Identity Theory & Psychological Distance Theory.	Cognitive identity, emotional identity, evaluative identity, psychological distance & green perceived value.	Purchase intention (general).	Mediators: Psychological distance and green perceived value.	Social identity, psychological distance and green perceived value significantly influences purchase intention positively.
Zhu et al. (2013).	Quantitative: Survey, n=457 Chinese consumers.	Theory of Planned Behaviour (TPB).	Subject/social norm (External influencing factors).	Green food consumption intention and green food consumption behaviour (general).	Moderator: Context factors. Mediator: Internal influencing factors.	Internal factors partly mediate the relationship between external influencing factors and green food consumption intention. Context factors significantly moderate the relationship between green food consumption intention and green food consumption behaviours.

Appendix 1.2: Literature review references

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Appendix 2: Survey design

Page 1:

Dear fellow students.

This survey is part of our master thesis at NHH. The topic of our thesis is sustainable food. Regardless of whether you consume sustainable food, we would highly appreciate your response. All responses are valuable to us. The survey will take approximately 8 minutes.

The survey is anonymous, and all information will be handled confidentially. Please also note that participation in the survey is voluntary and that you are free to withdraw from the survey at any time. You must, however, complete the entire survey in order for your responses to be included in the data analyses.

This survey is only for students at NHH. Please do not distribute this survey to people outside NHH.

If you have any questions or comments, please feel free to send us an email at helene.hunter@student.nhh.no or nina.winsnes@student.nhh.no

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I consent to take part in this survey and accept that data from it will be used for research purposes.

Yes

No

Page 2:

In this questionnaire we will be asking questions about sustainable food. We wish to provide you with a clarification of the concept of sustainable food before answering the questions.

Sustainable food can be defined in many ways, but we have chosen to define it as food which meets safety, political and environmental standards. In other words, it is produced, distributed and consumed in such a way that it protects the environment and the welfare of people producing the food. Sustainable food should also meet the needs of future generations. Examples of sustainable food include grass fed beef and lamb, oats, locally grown vegetables, mussels, seaweed, mushrooms & beans.

When you answer the questions in this survey, please keep this definition in mind, and please take the time to read each question carefully. Methodological requirements make some questions appear similar, but please answer all the questions to the best of your abilities.

Page 3:

Please use the scales below to indicate what best describes your opinion in regard to the statements. Feel free to use the whole scale.
1 = Strongly disagree, 7 = Strongly agree.

	Strongly disagree						Strongly agree
	1	2	3	4	5	6	7
I intend to buy sustainable food in the next six months.	○	○	○	○	○	○	○
In the next six months I intend to buy sustainable food frequently.	○	○	○	○	○	○	○

Page 4:

Please use the scales below to indicate your opinion. Feel free to use the whole scale.
1 = Bad, 7 = Good.

	Bad						Good
	1	2	3	4	5	6	7
I think sustainable food is...	○	○	○	○	○	○	○

Please use the scales below to indicate your opinion. Feel free to use the whole scale.
1 = Foolish, 7 = Wise.

	Foolish						Wise
	1	2	3	4	5	6	7
I think sustainable food is...	○	○	○	○	○	○	○

Page 5:

Please use the scales below to indicate your opinion. Feel free to use the whole scale.
1 = Unfavourable, 7 = Favourable.

	Unfavourable						Favourable
	1	2	3	4	5	6	7
I think sustainable food is...	○	○	○	○	○	○	○

Please use the scales below to indicate your opinion. Feel free to use the whole scale.
1 = Negative, 7 = Positive.

	Negative						Positive
	1	2	3	4	5	6	7
I think sustainable food is...	○	○	○	○	○	○	○

Page 6:

Please use the scales below to indicate what best describes your opinion in regard to the statements. Feel free to use the whole scale.
1 = Strongly disagree, 7 = Strongly agree

	Strongly disagree						Strongly agree
	1	2	3	4	5	6	7
I feel free to buy sustainable food.	○	○	○	○	○	○	○
Buying sustainable food is entirely within my control.	○	○	○	○	○	○	○
I have the necessary means and resources to buy sustainable food.	○	○	○	○	○	○	○

Page 7:

Please use the scales below to indicate what best describes your opinion in regard to the statements. Feel free to use the whole scale.
1 = Strongly disagree, 7 = Strongly agree.

	Strongly disagree						Strongly agree
	1	2	3	4	5	6	7
People important to me think I should buy sustainable food.	○	○	○	○	○	○	○
It is expected that people like me buy sustainable food.	○	○	○	○	○	○	○
People I look up to expect me to buy sustainable food.	○	○	○	○	○	○	○

Page 8:

You have now completed 50% of the survey.
As mentioned, this survey is part of our master thesis, and we highly appreciate you taking the time to answer all the questions.

Please use the scales below to indicate what best describes your opinion in regard to the statements. You are welcome to use the whole scale.
1 = Strongly disagree, 7 = Strongly agree.

	Strongly disagree						Strongly agree
	1	2	3	4	5	6	7
People I look up to buy sustainable food.	○	○	○	○	○	○	○
Most of the people I know buy sustainable food.	○	○	○	○	○	○	○
People important to me buy sustainable food.	○	○	○	○	○	○	○
On this statement you are supposed to answer Strongly Agree (7).	○	○	○	○	○	○	○

Page 9:

Please use the scales below to indicate what best describes your opinion in regard to the statements. Feel free to use the whole scale.
1 = Strongly disagree, 7 = Strongly agree.

	Strongly disagree						Strongly agree
	1	2	3	4	5	6	7
I strongly identify with sustainable food.	○	○	○	○	○	○	○
I feel good to be a customer of sustainable food.	○	○	○	○	○	○	○
I like to say that I am a buyer of sustainable food.	○	○	○	○	○	○	○
Sustainable food fits well with how others perceive me.	○	○	○	○	○	○	○

Page 10:

Please use the scales below to indicate what best describes your opinion in regard to the statements. You are welcome to use the whole scale.
1 = Strongly disagree, 7 = Strongly agree.

	Strongly disagree						Strongly agree
	1	2	3	4	5	6	7
My personal identity overlaps with that of the sustainable consumer group in terms of perception.	○	○	○	○	○	○	○
My self-image overlaps with the identity of the sustainable consumer group.	○	○	○	○	○	○	○
My values overlap with those of the sustainable consumer group.	○	○	○	○	○	○	○
My lifestyle overlaps with the sustainable consumer group.	○	○	○	○	○	○	○

Page 11:

Please use the scales below to indicate what best describes your opinion in regard to the statements. Feel free to use the whole scale.
1 = Strongly disagree, 7 = Strongly agree.

	Strongly disagree						Strongly agree
	1	2	3	4	5	6	7
Others' praise of the sustainable consumer group is like a compliment to my ego.	○	○	○	○	○	○	○
I am very attached to the sustainable consumer group.	○	○	○	○	○	○	○
I can integrate into the sustainable consumer group.	○	○	○	○	○	○	○

Page 12:

You are approaching the end of the survey.
Thank you for completing the survey. It is crucial for our thesis.

Page 13:

Please use the scales below to indicate what best describes your opinion in regard to the statements. Feel free to use the whole scale.
1 = Strongly disagree, 7 = Strongly agree.

	Strongly disagree						Strongly agree
	1	2	3	4	5	6	7
I am always willing to admit when I make a mistake.	○	○	○	○	○	○	○
I never resent being asked to return a favour.	○	○	○	○	○	○	○
I have never been annoyed when people expressed ideas very different from my own.	○	○	○	○	○	○	○
I always try to practice what I preach.	○	○	○	○	○	○	○

Page 14:

Please select your age.

18-21

22-25

25 or older

Please select your gender.

Male

Female

Other

Prefer not to say

End of survey message if completed survey:

Thank you for participating in this survey!

Your responses have been recorded.

If you have any questions or comments, please feel free to send us an email at helene.hunter@student.nhh.no or nina.winsnes@student.nhh.no

As mentioned in the introduction, this is a survey which is part of our master thesis work at NHH. Moreover, it studies sustainable food. The main purpose is to study how social mechanisms influence the adoption of sustainable food.

End of survey message if consent is not given:

Thank you for your interest in this survey, and your time and effort in checking it out.

If you wish to complete the survey at a later stage, it will be available for about a week.

If you have any questions, do not hesitate to contact us at helene.hunter@student.nhh.no or nina.winsnes@student.nhh.no

Appendix 3: Descriptive statistics of final sample

Frequencies

Statistics

		Please select your age.	Please select your gender.
N	Valid	185	185
	Missing	0	0

Frequency Table

Please select your age.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-21	50	27,0	27,0	27,0
	22-25	102	55,1	55,1	82,2
	25 or older	33	17,8	17,8	100,0
	Total	185	100,0	100,0	

Please select your gender.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	93	50,3	50,3	50,3
	Female	89	48,1	48,1	98,4
	Prefer not to say	3	1,6	1,6	100,0
	Total	185	100,0	100,0	

Appendix 4: Measures before and after adaption

Variable	Measure	Adapted	Reference
Social norm	7-point Likert Scale: • People important to me think I should use "service". • It is expected that people like me use "service".	7-point Likert scale Injunctive • People important to me think I should buy sustainable food. • It is expected that people like me buy sustainable food. • People I look up to expect me to buy sustainable food.	Nysveen et al. (2005).
	• People I look up to expect me to use "service".	Descriptive • People I look up to buy sustainable food. • Most of the people I know buy sustainable food. • People important to me buy sustainable food.	Lee (2011).
Social identity	7-point Likert scale: General • I strongly identify with green hotels. • I feel good to be a customer of green hotels. • I like to tell that I am a customer of green hotels. • Green hotels fit well to me.	7-point Likert scale: General • I strongly identify with sustainable food. • I feel good to be a customer of sustainable food. • I like to tell that I am a buyer of sustainable food. • Sustainable food fits well with how others perceive me.	Balaji et al. (2019).
	Cognitive • My personal identity overlaps with that of the green consumer group in terms of perception. • My self-image overlaps with the identity of the green consumer group. • My values overlap with those of the green consumer group. • My lifestyle overlaps with the green consumer group.	Cognitive • My personal identity overlaps with that of the sustainable consumer group in terms of perception. • My self-image overlaps with the identity of the sustainable consumer group. • My values overlap with those of the sustainable consumer group. • My lifestyle overlaps with the sustainable consumer group.	Zheng et al. (2023).
	Emotional • Others' praise of the green consumer group is like a compliment to my ego. • I am very attached to the green consumer group. • I am valued by the green consumer group.	Emotional • Others' praise of the sustainable consumer group is like a compliment to my ego. • I am very attached to the sustainable consumer group. • I am valued by the sustainable consumer group.	Zheng et al. (2023).

Social desirability	5-point scale • I'm always willing to admit when I make a mistake. • I always try to practice what I preach. • I never resent being asked to return a favour. • I am never annoyed when people express ideas very different from my own. • I never deliberately say something to hurt someone's feelings. • I like to gossip at times. (Reverse coded) • There are occasions when I take advantage of someone. (Reverse coded) • I sometimes try to get even rather than forgive and forget. (Reverse coded) • At times I insist on having things my own way. (Reverse coded) • There are occasions when I feel like smashing. (Reverse coded)	7-point Likert scale • I am always willing to admit when I make a mistake. • I never resent being asked to return a favour. • I have never been annoyed when people expressed ideas very different from my own. • I always try to practice what I preach.	Chéron, et al. (2022) and Thompson & Phua (2005).
Attitude	Four semantic differential-scales • Bad/good • Foolish/wise • Unfavorable/favorable • Negative/positive	Four semantic differential-scales • Bad/good • Foolish/wise • Unfavourable/favourable • Negative/positive	Nysveen et al. (2005)
PBC	7-point Likert scale • I feel free to use the kind of "service" I like to • Using "service" is entirely within my control. • I have the necessary means and resources to use "service"	7-point Likert scale • I feel free to buy sustainable food. • Buying sustainable food is entirely within my control. • I have the necessary means and resources to buy sustainable food	Nysveen et al. (2005)
Intention	7-point Likert Scale • I intend to use "service" the next 6 months. • The next 6 months I intend to use "service" frequently	7-point Likert scale: • I intend to buy sustainable food in the next 6 months. • In the next six months I intend to buy sustainable food frequently	Nysveen et al. (2005)

Appendix 5: Factor analysis

Appendix 5.1: Factor analysis of Intention

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,500
Bartlett's Test of Sphericity	Approx. Chi-Square	215,815
	df	1
	Sig.	<,001

Communalities

	Initial
Please use the scales below to indicate what best describes your opinion in regard to the statements. Feel free to use the whole scale. 1 = Strongly disagree, 7 = Strongly agree. - I intend to buy sustainable food in the next six months.	,694
Please use the scales below to indicate what best describes your opinion in regard to the statements. Feel free to use the whole scale. 1 = Strongly disagree, 7 = Strongly agree. - In the next six months I intend to buy sustainable food frequently.	,694

Extraction Method: Maximum Likelihood.

Total Variance Explained

	Initial Eigenvalues		
Factor	Total	% of Variance	Cumulative %
1	1,833	91,638	91,638
2	,167	8,362	100,000

Extraction Method: Maximum Likelihood.

Appendix 5.2: Model 1

Iteration 1:

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6,238	44,556	44,556	5,857	41,833	41,833	5,649
2	1,965	14,033	58,589	,786	5,617	47,450	1,615
3	,931	6,652	65,241				
4	,797	5,690	70,931				
5	,766	5,473	76,403				
6	,679	4,850	81,253				
7	,599	4,282	85,535				
8	,504	3,603	89,138				
9	,381	2,720	91,858				
10	,289	2,061	93,918				
11	,258	1,840	95,758				
12	,220	1,571	97,329				
13	,199	1,421	98,750				
14	,175	1,250	100,000				

Extraction Method: Maximum Likelihood.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Pattern Matrix[a]		
	Factor	
	1	2
People important to me think I should buy sustainable food.	,626	,322
It is expected that people like me buy sustainable food.	,690	
People I look up to expect me to buy sustainable food.	,782	
People I look up to buy sustainable food.	,668	,315
Most of the people I know buy sustainable food.	,518	,443
People important to me buy sustainable food.	,498	,689
I am always willing to admit when I make a mistake.		
I never resent being asked to return a favour.		
I have never been annoyed when people expressed ideas very different from my own.		
I always try to practice what I preach.		
I strongly identify with sustainable food.	,841	
I feel good to be a customer of sustainable food.	,774	
I like to say that I am a buyer of sustainable food.	,851	
Sustainable food fits well with how others perceive me.	,864	
Extraction Method: Maximum Likelihood. Rotation Method: Oblimin with Kaiser Normalization.		
a. Rotation converged in 8 iterations.		

Iteration 2:

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6,238	44,556	44,556	5,834	41,672	41,672	4,655
2	1,965	14,033	58,589	,805	5,749	47,422	3,990
3	,931	6,652	65,241	,717	5,121	52,543	4,973
4	,797	5,690	70,931	1,101	7,864	60,407	1,323
5	,766	5,473	76,403				
6	,679	4,850	81,253				
7	,599	4,282	85,535				
8	,504	3,603	89,138				
9	,381	2,720	91,858				
10	,289	2,061	93,918				
11	,258	1,840	95,758				
12	,220	1,571	97,329				
13	,199	1,421	98,750				
14	,175	1,250	100,000				

Extraction Method: Maximum Likelihood.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Pattern Matrix[a]				
	Factor			
	1	2	3	4
People important to me think I should buy sustainable food.	,465	,370		
It is expected that people like me buy sustainable food.	,666			
People I look up to expect me to buy sustainable food.	,952			
People I look up to buy sustainable food.	,399	,398		
Most of the people I know buy sustainable food.		,597		
People important to me buy sustainable food.		,933		
I am always willing to admit when I make a mistake.				,525
I never resent being asked to return a favour.				,582
I have never been annoyed when people expressed ideas very different from my own.				,443
I always try to practice what I preach.				,670
I strongly identify with sustainable food.			,700	
I feel good to be a customer of sustainable food.			,717	
I like to say that I am a buyer of sustainable food.			,905	
Sustainable food fits well with how others perceive me.			,716	
Extraction Method: Maximum Likelihood. Rotation Method: Oblimin with Kaiser Normalization.[a]				
a. Rotation converged in 7 iterations.				

Iteration 3:

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	5,073	46,121	46,121	3,614	32,853	32,853	3,520
2	1,737	15,789	61,910	1,699	15,448	48,301	3,015
3	,851	7,735	69,645	,785	7,134	55,435	4,288
4	,734	6,668	76,314	,963	8,758	64,194	1,218
5	,672	6,109	82,423				
6	,601	5,465	87,888				
7	,365	3,314	91,202				
8	,313	2,842	94,045				
9	,246	2,240	96,285				
10	,230	2,093	98,377				
11	,178	1,623	100,000				

Extraction Method: Maximum Likelihood.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Pattern Matrix[a]				
	Factor			
	1	2	3	4
It is expected that people like me buy sustainable food.	,598			
People I look up to expect me to buy sustainable food.	,985			
Most of the people I know buy sustainable food.		,621		
People important to me buy sustainable food.		,899		
I am always willing to admit when I make a mistake.				,493
I never resent being asked to return a favour.				,549
I always try to practice what I preach.				,746
I strongly identify with sustainable food.			,725	
I feel good to be a customer of sustainable food.			,733	
I like to say that I am a buyer of sustainable food.			,912	
Sustainable food fits well with how others perceive me.			,733	
Extraction Method: Maximum Likelihood. Rotation Method: Oblimin with Kaiser Normalization.[a]				
a. Rotation converged in 7 iterations.				

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,851
Bartlett's Test of Sphericity	Approx. Chi-Square	1070,951
	df	55
	Sig.	<,001

Appendix 5.3: Model 2

Iteration 1:

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	7,221	42,478	42,478	6,778	39,870	39,870	5,588
2	1,975	11,616	54,094	1,392	8,187	48,057	5,552
3	1,607	9,455	63,549	,810	4,764	52,821	3,347
4	1,002	5,895	69,444	1,199	7,053	59,874	1,297
5	,758	4,456	73,900				
6	,706	4,151	78,051				
7	,657	3,865	81,916				
8	,573	3,373	85,289				
9	,506	2,975	88,265				
10	,425	2,502	90,767				
11	,355	2,086	92,853				
12	,300	1,765	94,617				
13	,220	1,294	95,912				
14	,213	1,252	97,163				
15	,188	1,106	98,269				
16	,172	1,011	99,280				
17	,122	,720	100,000				

Extraction Method: Maximum Likelihood.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Iteration 2:

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6,762	42,265	42,265	6,477	40,479	40,479	5,216
2	1,973	12,331	54,596	1,311	8,196	48,675	4,234
3	1,552	9,697	64,293	,816	5,099	53,774	4,926
4	,986	6,163	70,456	,661	4,131	57,905	2,261
5	,742	4,636	75,092	1,013	6,329	64,234	1,340
6	,689	4,306	79,399				
7	,596	3,728	83,126				
8	,573	3,584	86,710				
9	,504	3,148	89,859				
10	,359	2,245	92,104				
11	,312	1,950	94,054				
12	,245	1,531	95,585				
13	,214	1,340	96,924				
14	,191	1,194	98,118				
15	,177	1,105	99,223				
16	,124	,777	100,000				

Extraction Method: Maximum Likelihood.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Pattern Matrix[a]					
	Factor				
	1	2	3	4	5
People important to me think I should buy sustainable food.		-,348	-,451		
It is expected that people like me buy sustainable food.			-,763		
People I look up to expect me to buy sustainable food.			-,970		
People I look up to buy sustainable food.		-,418	-,380		
Most of the people I know buy sustainable food.		-,695			
People important to me buy sustainable food.		-,994			
I am always willing to admit when I make a mistake.					,544
I never resent being asked to return a favour.					,579
I have never been annoyed when people expressed ideas very different from my own.					,469
I always try to practice what I preach.					,644
My personal identity overlaps with that of the sustainable consumer group in terms of perception.	,781				
My self-image overlaps with the identity of the sustainable consumer group.	,908				
My values overlap with those of the sustainable consumer group.	,908				
My lifestyle overlaps with the sustainable consumer group.	,658				
Others' praise of the sustainable consumer group is like a compliment to my ego.				-,748	
I am very attached to the sustainable consumer group.				-,648	
Extraction Method: Maximum Likelihood. Rotation Method: Oblimin with Kaiser Normalization.[a]					
a. Rotation converged in 8 iterations.					

Iteration 3:

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6,214	44,383	44,383	4,231	30,224	30,224	4,034
2	1,788	12,770	57,153	,883	6,305	36,529	2,623
3	1,340	9,572	66,725	2,640	18,859	55,388	5,011
4	,887	6,336	73,060	,775	5,533	60,921	4,276
5	,688	4,917	77,977	,955	6,820	67,741	1,280
6	,671	4,791	82,768				
7	,582	4,155	86,923				
8	,442	3,155	90,078				
9	,323	2,307	92,385				
10	,310	2,211	94,596				
11	,240	1,716	96,312				
12	,215	1,538	97,850				
13	,175	1,253	99,103				
14	,126	,897	100,000				

Extraction Method: Maximum Likelihood.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Pattern Matrix[a]					
	Factor				
	1	2	3	4	5
It is expected that people like me buy sustainable food.	,651				
People I look up to expect me to buy sustainable food.	1,029				
Most of the people I know buy sustainable food.		-,998			
People important to me buy sustainable food.		-,521			
I am always willing to admit when I make a mistake.					,483
I never resent being asked to return a favour.					,654
I always try to practice what I preach.					,651
My personal identity overlaps with that of the sustainable consumer group in terms of perception.			,766		
My self-image overlaps with the identity of the sustainable consumer group.			,915		
My values overlap with those of the sustainable consumer group.			,922		
My lifestyle overlaps with the sustainable consumer group.			,617		
Others' praise of the sustainable consumer group is like a compliment to my ego.				-,835	
I am very attached to the sustainable consumer group.				-,878	
I can integrate into the sustainable consumer group.				-,565	
Extraction Method: Maximum Likelihood. Rotation Method: Oblimin with Kaiser Normalization.[a]					
a. Rotation converged in 6 iterations.					

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,866
Bartlett's Test of Sphericity	Approx. Chi-Square	1540,658
	df	91
	Sig.	<,001

Appendix 5.4: Model 3

Iteration 1:

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6,343	35,239	35,239	5,990	33,275	33,275	5,154
2	2,347	13,039	48,278	1,824	10,133	43,408	3,659
3	1,891	10,505	58,783	1,030	5,720	49,128	1,755
4	1,340	7,447	66,229	1,021	5,670	54,798	1,046
5	,842	4,676	70,906				
6	,729	4,049	74,955				
7	,675	3,749	78,703				
8	,624	3,464	82,168				
9	,603	3,350	85,518				
10	,503	2,792	88,310				
11	,378	2,098	90,409				
12	,347	1,929	92,338				
13	,287	1,592	93,930				
14	,278	1,542	95,472				
15	,248	1,379	96,851				
16	,214	1,188	98,039				
17	,197	1,094	99,133				
18	,156	,867	100,000				

Extraction Method: Maximum Likelihood.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Iteration 2:

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6,343	35,239	35,239	4,044	22,466	22,466	3,705
2	2,347	13,039	48,278	3,084	17,133	39,598	4,036
3	1,891	10,505	58,783	1,663	9,240	48,839	1,788
4	1,340	7,447	66,229	1,004	5,579	54,417	3,358
5	,842	4,676	70,906	,786	4,369	58,786	4,861
6	,729	4,049	74,955	,730	4,056	62,842	1,410
7	,675	3,749	78,703				
8	,624	3,464	82,168				
9	,603	3,350	85,518				
10	,503	2,792	88,310				
11	,378	2,098	90,409				
12	,347	1,929	92,338				
13	,287	1,592	93,930				
14	,278	1,542	95,472				
15	,248	1,379	96,851				
16	,214	1,188	98,039				
17	,197	1,094	99,133				
18	,156	,867	100,000				

Extraction Method: Maximum Likelihood.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Pattern Matrix[a]						
	Factor					
	1	2	3	4	5	6
It is expected that people like me buy sustainable food.	,581					
People I look up to expect me to buy sustainable food.	,959					
Most of the people I know buy sustainable food.				-,761		
People important to me buy sustainable food.				-,751		
I am always willing to admit when I make a mistake.						,496
I never resent being asked to return a favour.						,646
I always try to practice what I preach.						,644
I strongly identify with sustainable food.					-,618	
I feel good to be a customer of sustainable food.					-,572	
I like to say that I am a buyer of sustainable food.					-,787	
Sustainable food fits well with how others perceive me.					-,725	
1 = Bad, 7 = Good. - I think sustainable food is...		,799				
1 = Foolish, 7 = Wise. - I think sustainable food is...		,655				
1 = Unfavourable, 7 = Favourable. - I think sustainable food is...		,644				
1 = Negative, 7 = Positive. - I think sustainable food is...		,943				
I feel free to buy sustainable food.			,638			
Buying sustainable food is entirely within my control.			,809			
I have the necessary means and resources to buy sustainable food.			,674			
Extraction Method: Maximum Likelihood. Rotation Method: Oblimin with Kaiser Normalization.[a]						
a. Rotation converged in 12 iterations.						

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,846
Bartlett's Test of Sphericity	Approx. Chi-Square	1753,715
	df	153
	Sig.	<,001

Appendix 5.5: Model 4

Iteration 1:

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	7,411	35,289	35,289	7,019	33,424	33,424	5,831
2	2,350	11,189	46,477	1,749	8,327	41,751	4,373
3	2,034	9,686	56,164	1,602	7,628	49,379	1,883
4	1,346	6,410	62,574	,693	3,301	52,680	2,384
5	1,283	6,110	68,684	1,014	4,830	57,510	4,409
6	,919	4,374	73,058				
7	,742	3,536	76,594				
8	,663	3,157	79,751				
9	,642	3,059	82,810				
10	,528	2,514	85,325				
11	,479	2,281	87,606				
12	,467	2,225	89,831				
13	,350	1,665	91,496				
14	,311	1,481	92,977				
15	,299	1,423	94,400				
16	,254	1,209	95,609				
17	,237	1,129	96,738				
18	,204	,971	97,709				
19	,199	,949	98,658				
20	,160	,761	99,419				
21	,122	,581	100,000				

Extraction Method: Maximum Likelihood.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Iteration 2:

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	7,411	35,289	35,289	4,413	21,012	21,012	4,332
2	2,350	11,189	46,477	2,023	9,631	30,644	2,914
3	2,034	9,686	56,164	2,779	13,233	43,877	5,279
4	1,346	6,410	62,574	1,596	7,600	51,477	4,334
5	1,283	6,110	68,684	1,348	6,417	57,894	1,761
6	,919	4,374	73,058	,779	3,707	61,601	4,380
7	,742	3,536	76,594	,897	4,272	65,873	1,480
8	,663	3,157	79,751				
9	,642	3,059	82,810				
10	,528	2,514	85,325				
11	,479	2,281	87,606				
12	,467	2,225	89,831				
13	,350	1,665	91,496				
14	,311	1,481	92,977				
15	,299	1,423	94,400				
16	,254	1,209	95,609				
17	,237	1,129	96,738				
18	,204	,971	97,709				
19	,199	,949	98,658				
20	,160	,761	99,419				
21	,122	,581	100,000				

Extraction Method: Maximum Likelihood.

a. When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

Pattern Matrix[a]							
	Factor						
	1	2	3	4	5	6	7
It is expected that people like me buy sustainable food.	,642						
People I look up to expect me to buy sustainable food.	1,009						
Most of the people I know buy sustainable food.		,965					
People important to me buy sustainable food.		,549					
I am always willing to admit when I make a mistake.							,466
I never resent being asked to return a favour.							,720
I always try to practice what I preach.							,591
1 = Bad, 7 = Good. - I think sustainable food is...				,836			
1 = Foolish, 7 = Wise. - I think sustainable food is...				,654			
1 = Unfavourable, 7 = Favourable. - I think sustainable food is...				,647			
1 = Negative, 7 = Positive. - I think sustainable food is...				,891			
I feel free to buy sustainable food.					,668		
Buying sustainable food is entirely within my control.					,755		
I have the necessary means and resources to buy sustainable food.					,709		
My personal identity overlaps with that of the sustainable consumer group in terms of perception.			,688				
My self-image overlaps with the identity of the sustainable consumer group.			,788				
My values overlap with those of the sustainable consumer group.			,812				
My lifestyle overlaps with the sustainable consumer group.			,572				
Others' praise of the sustainable consumer group is like a compliment to my ego.						,837	
I am very attached to the sustainable consumer group.						,813	
I can integrate into the sustainable consumer group.						,526	
Extraction Method: Maximum Likelihood. Rotation Method: Oblimin with Kaiser Normalization.[a]							
a. Rotation converged in 8 iterations.							

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,866
Bartlett's Test of Sphericity	Approx. Chi-Square	2225,901
	df	210
	Sig.	<,001

Appendix 6: Cronbach's alpha

Variable	Cronbach's alpha	N of items
Injunctive norm	.855	2
Descriptive norm	.802	2
Social desirability	.617	3
Social identity	.902	4
Cognitive identity	.919	4
Emotional identity	.867	3
Attitude	.855	4
PBC	.745	3

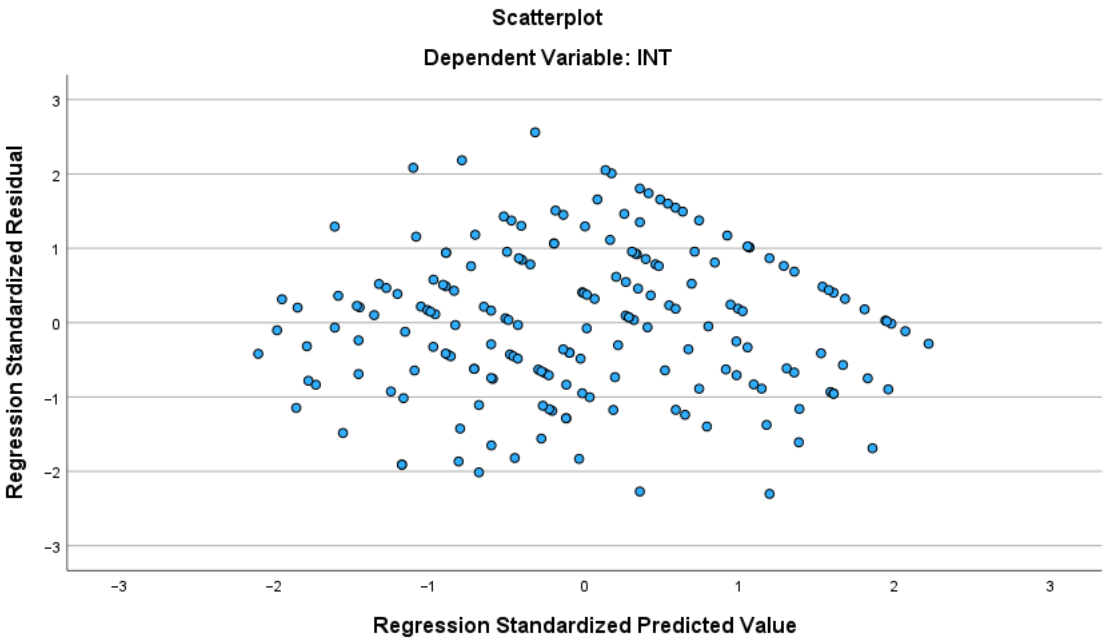
Appendix 7: Descriptives of computed variables

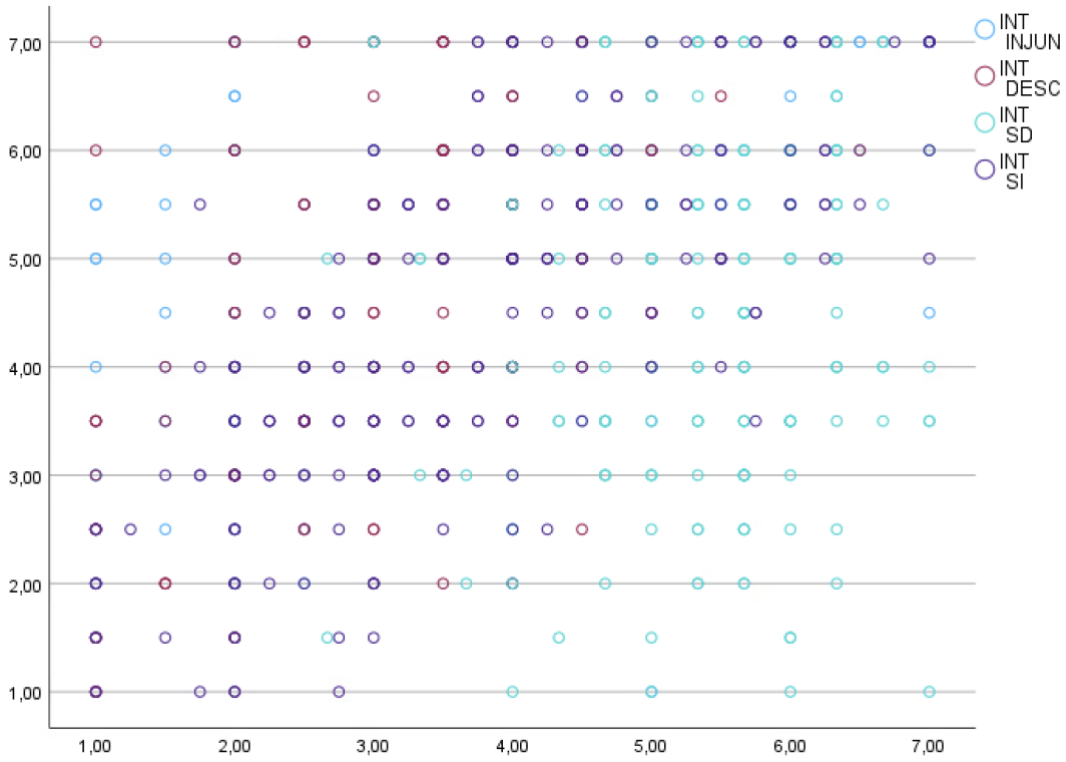
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
INJUN	185	1,00	7,00	3,2703	1,56644
DESC	185	1,00	6,50	3,1838	1,22419
SD	185	2,67	7,00	5,4288	,85685
SI	185	1,00	7,00	3,8932	1,51210
COG	185	1,00	7,00	3,7000	1,49814
EMO	185	1,00	7,00	2,7514	1,36667
ATT	185	2,00	7,00	6,0824	,95356
PBC	185	1,67	7,00	4,3928	1,28375
INT	185	1,00	7,00	4,5676	1,65159
Valid N (listwise)	185				

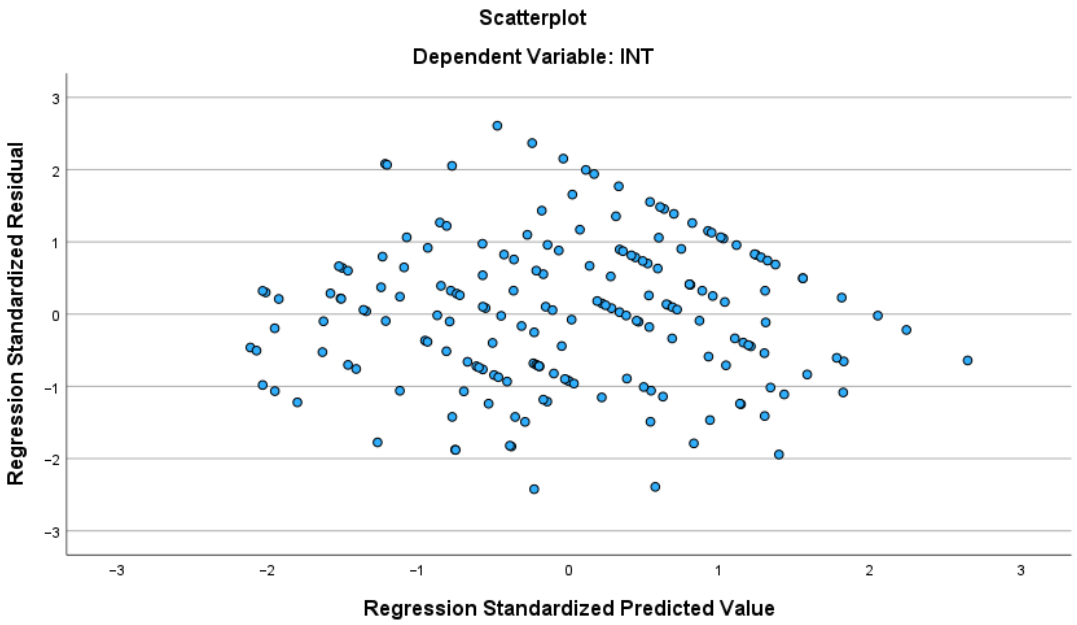
Appendix 8: Scatter plots of homoscedasticity

Model 1:



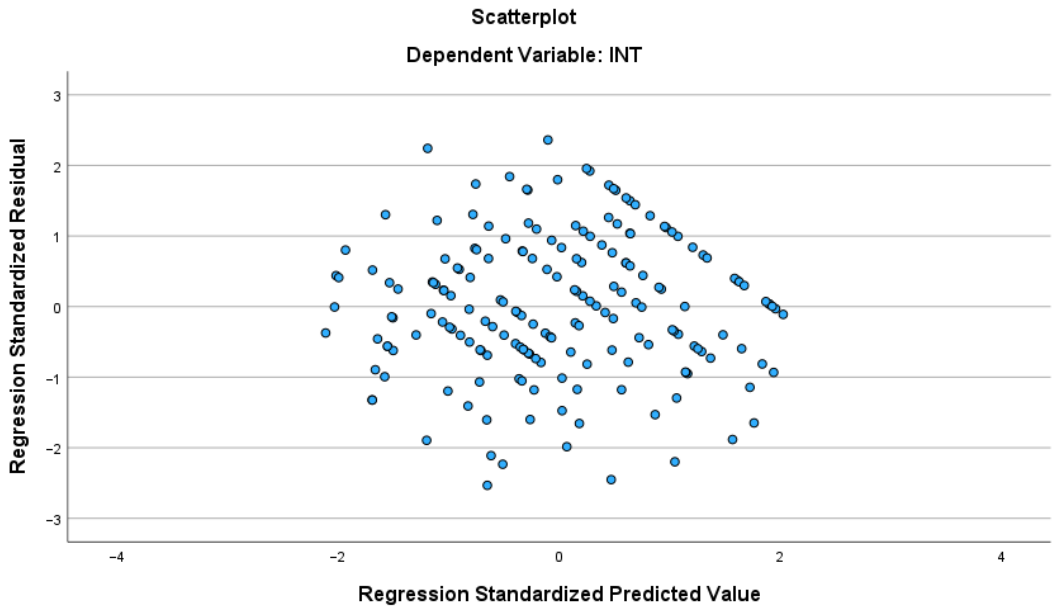


Model 2:


Scatterplot
Dependent Variable: INT
Regression Standardized Residual
Regression Standardized Predicted Value
3
2
1
0
-1
-2
-3

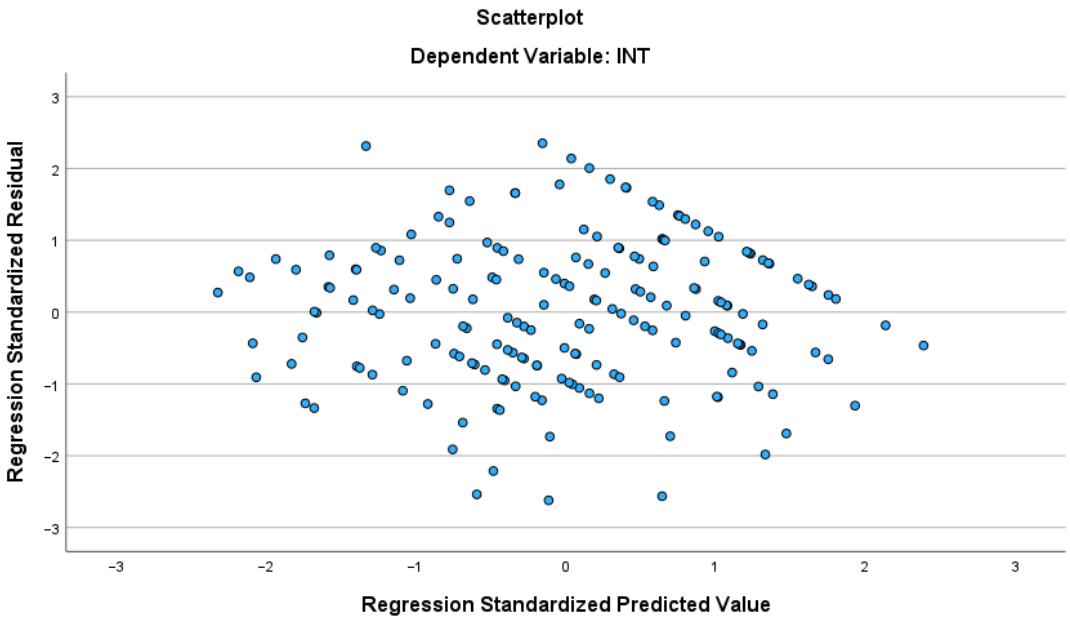

INT INJUN
INT DESC
INT SD
INT COG
INT EMO
7,00
6,00
5,00
4,00
3,00
2,00
1,00

Model 3:


Scatterplot
Dependent Variable: INT
Regression Standardized Residual
Regression Standardized Predicted Value
3
2
1
0
-1
-2
-3
-4
-2
0
2
4


INT INJUN
INT DESC
INT SD
INT SI
INT ATT
INT PBC
7,00
6,00
5,00
4,00
3,00
2,00
1,00
1,00
2,00
3,00
4,00
5,00
6,00
7,00

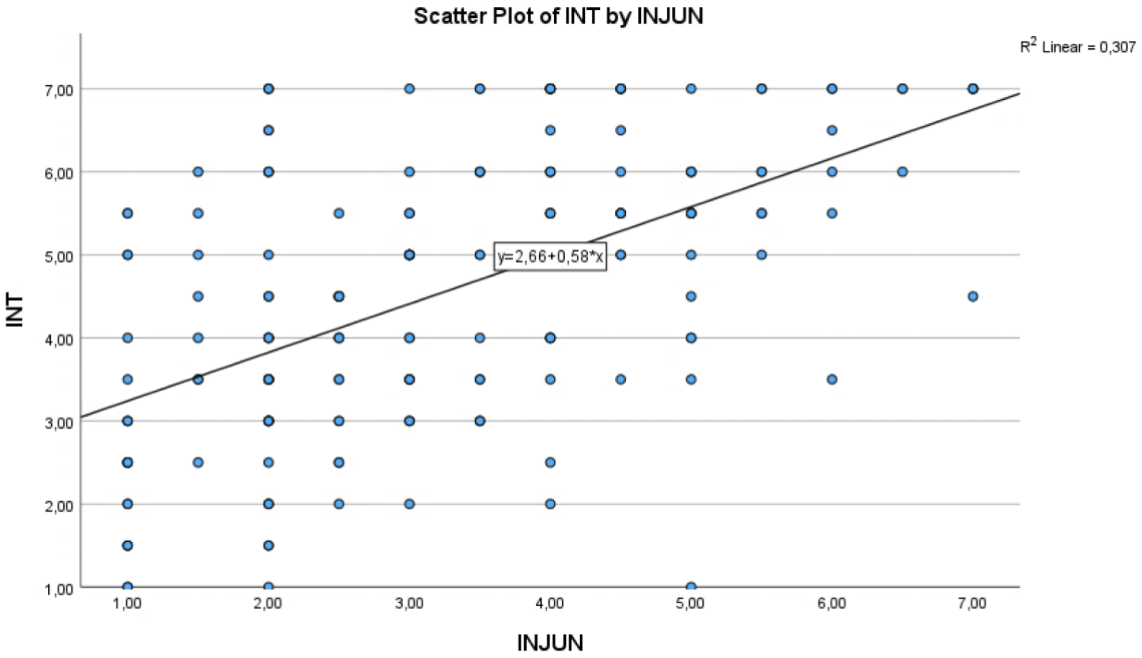
Model 4:


Scatterplot
Dependent Variable: INT
Regression Standardized Residual
Regression Standardized Predicted Value
3
2
1
0
-1
-2
-3

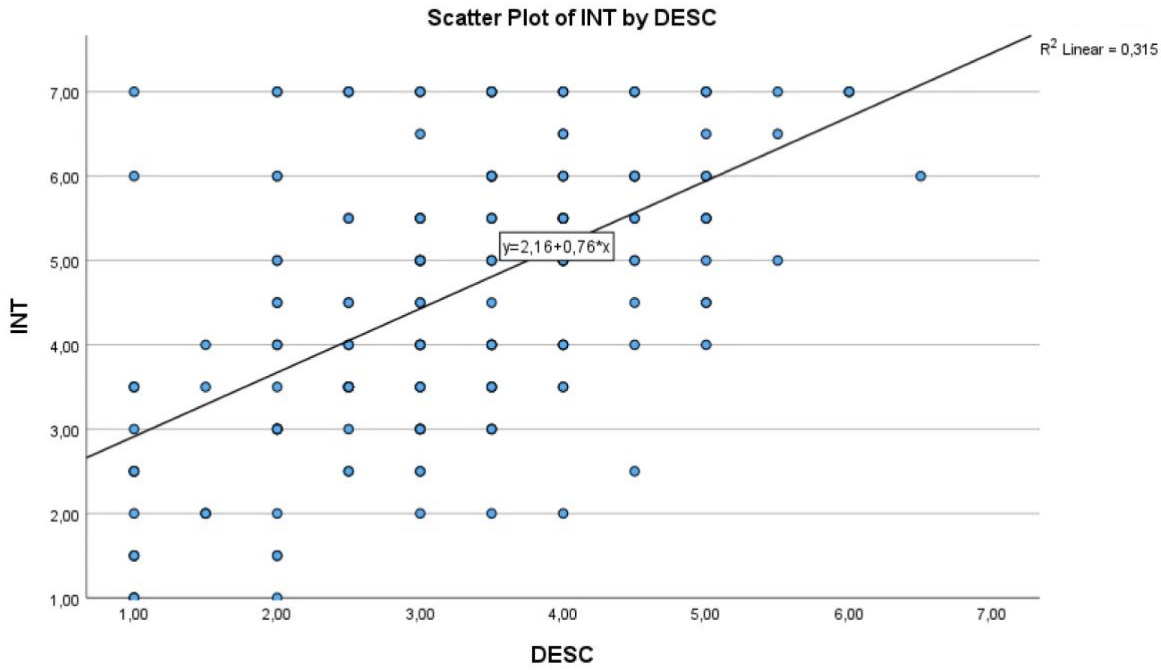

INT INJUN
INT DESC
INT SD
INT COG
INT EMO
INT ATT
INT PBC
7,00
6,00
5,00
4,00
3,00
2,00
1,00

Appendix 9: Scatter plots of linearity

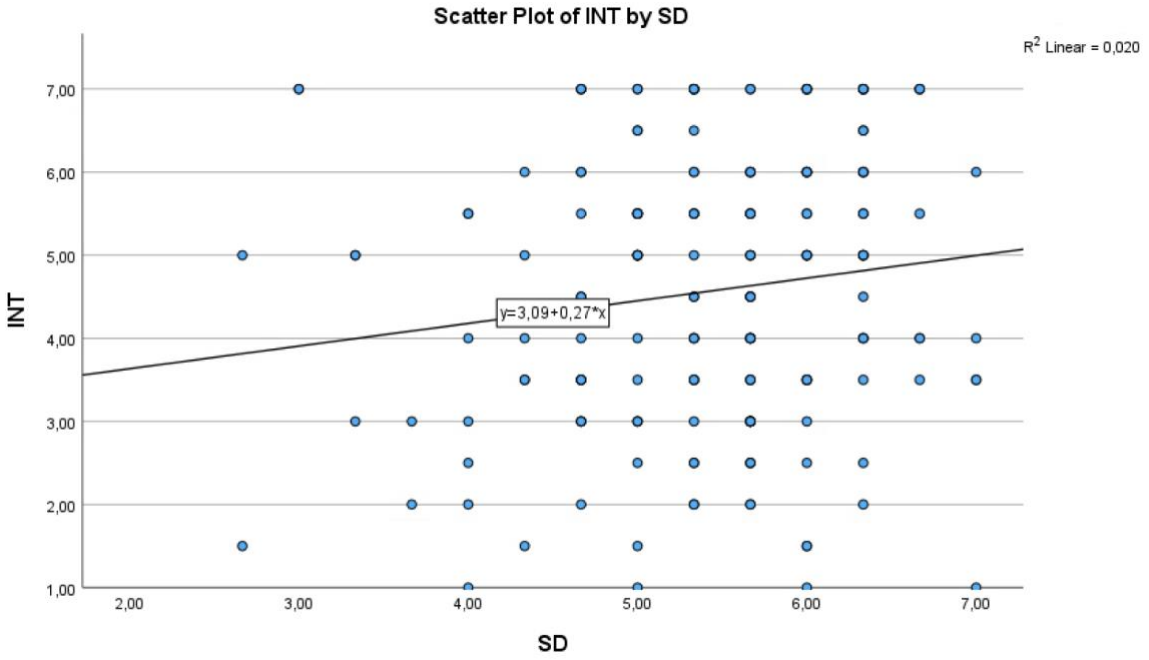
Injunctive norm:



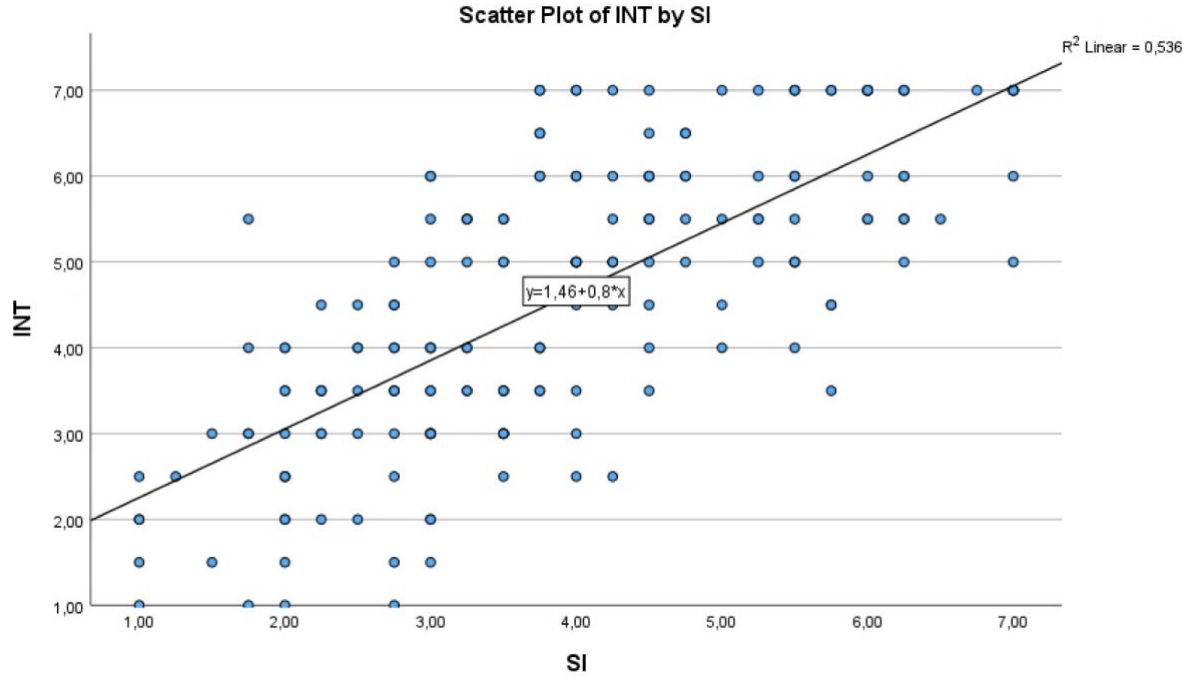
Descriptive norm:



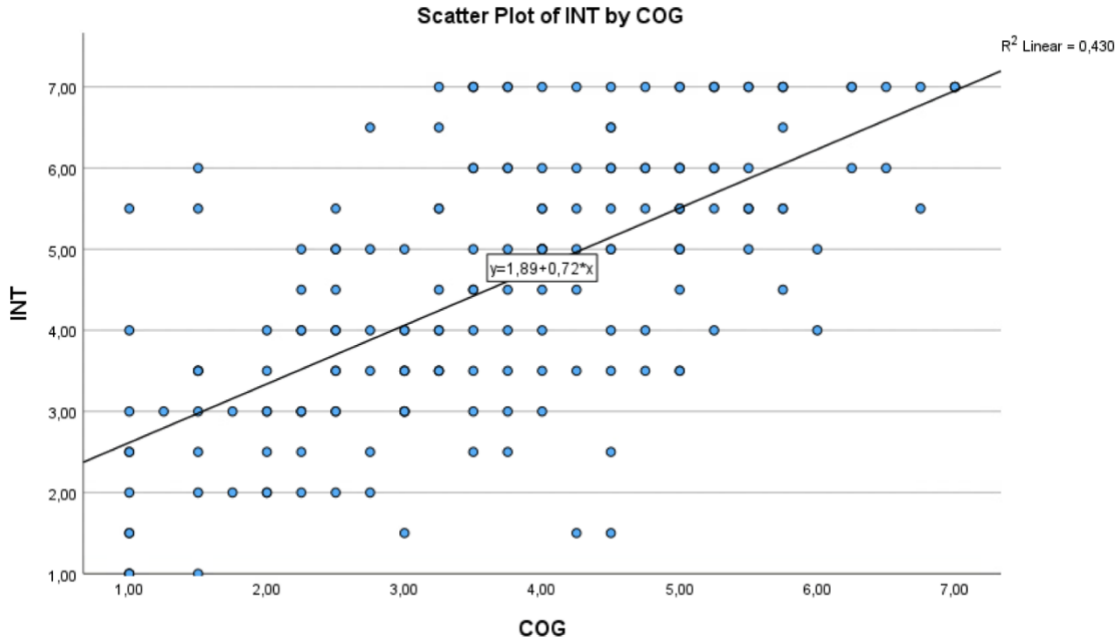
Social desirability:



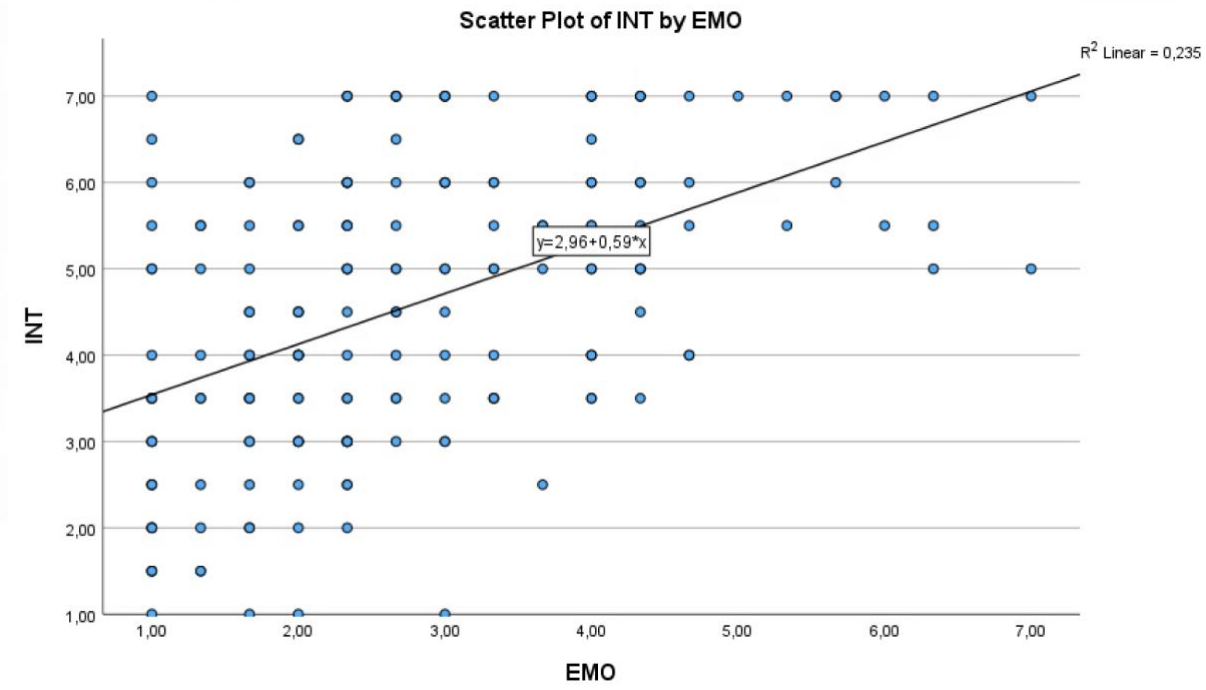
Social identity:



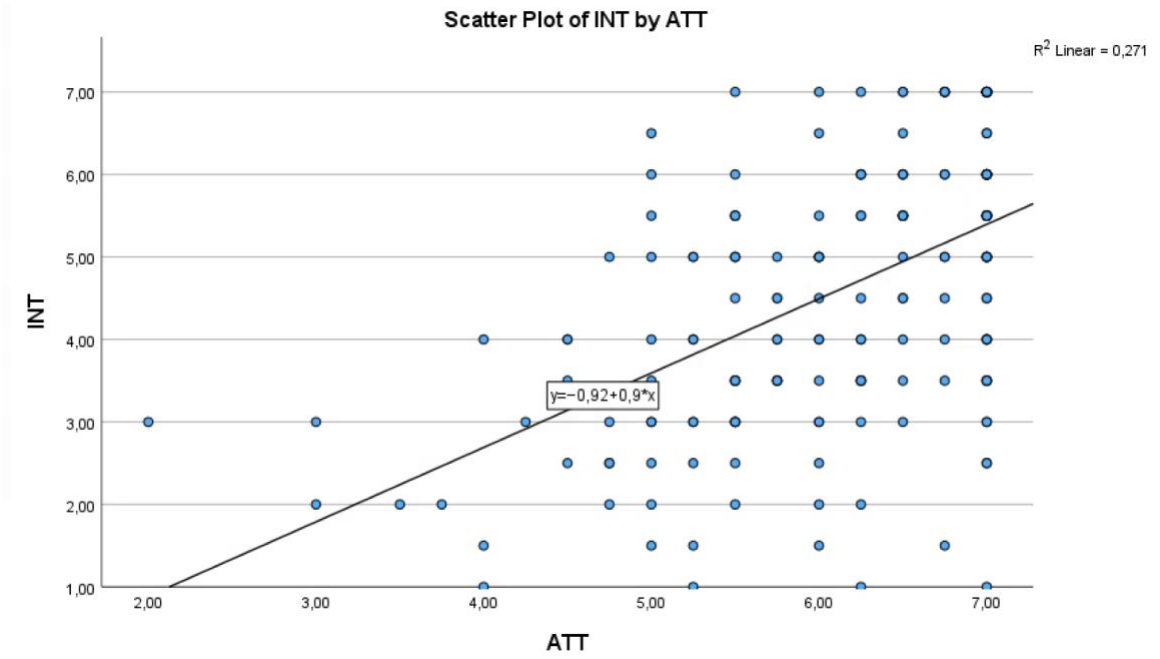
Cognitive social identity:



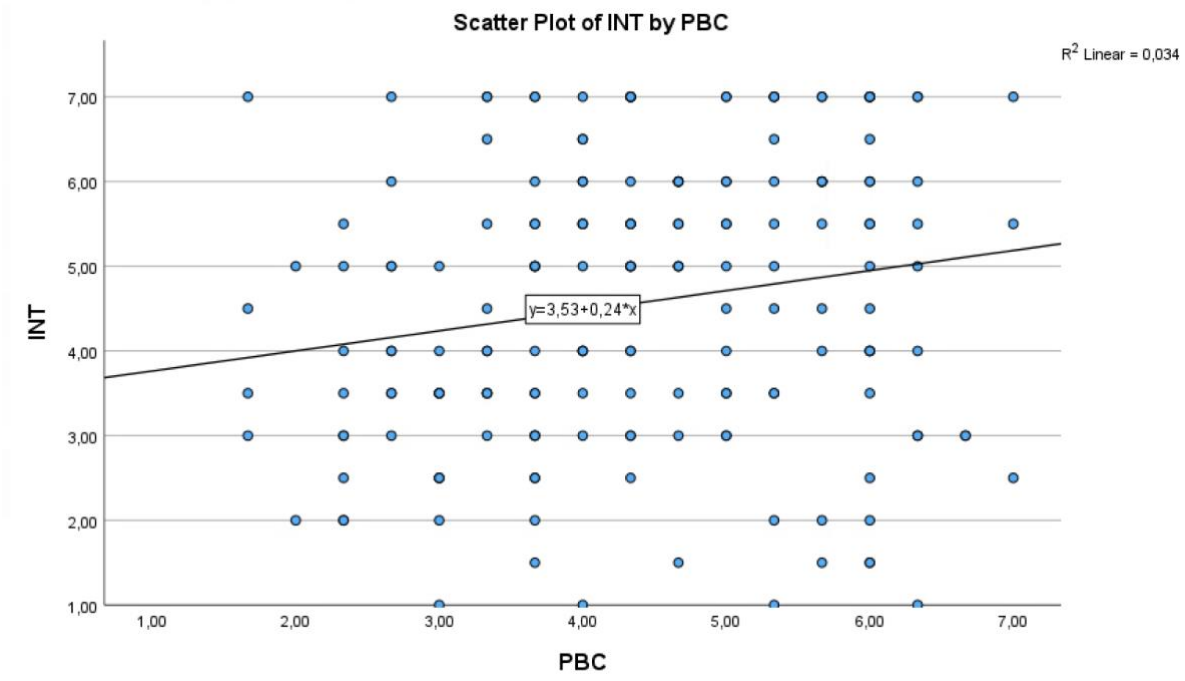
Emotional social identity:



Attitude:



PBC:



Appendix 10: Linear Regression

Appendix 10.1: Model 1

Correlations

		INTENT	INJUNCT	DESCRIPT	DESIR	SOCID
Pearson Correlation	INTENT	1,000	,554	,562	,141	,732
	INJUNCT	,554	1,000	,572	,005	,694
	DESCRIPT	,562	,572	1,000	,179	,602
	DESIR	,141	,005	,179	1,000	,088
	SOCID	,732	,694	,602	,088	1,000
Sig. (1-tailed)	INTENT	.	<,001	<,001	,027	<,001
	INJUNCT	,000	.	,000	,473	,000
	DESCRIPT	,000	,000	.	,007	,000
	DESIR	,027	,473	,007	.	,117
	SOCID	,000	,000	,000	,117	.
N	INTENT	185	185	185	185	185
	INJUNCT	185	185	185	185	185
	DESCRIPT	185	185	185	185	185
	DESIR	185	185	185	185	185
	SOCID	185	185	185	185	185

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,750[a]	,563	,553	1,10439

a. Predictors: (Constant), SI, SD, DESC, INJUN

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	282,363	4	70,591	57,877	<,001[b]
	Residual	219,542	180	1,220		
	Total	501,905	184			

a. Dependent Variable: INT

b. Predictors: (Constant), SI, SD, DESC, INJUN

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	,547	,553		,991	,323		
	INJUN	,049	,076	,047	,651	,516	,474	2,111
	DESC	,225	,088	,167	2,554	,011	,571	1,752
	SD	,114	,097	,059	1,168	,245	,952	1,051
	SI	,649	,080	,594	8,129	<,001	,455	2,198

a. Dependent Variable: INT

Appendix 10.2: Model 2

Correlations

		INTENT	INJUNCT	DESCRIPT	DESIR	COGNIT	EMOTION
Pearson Correlation	INTENT	1,000	,554	,562	,141	,656	,485
	INJUNCT	,554	1,000	,572	,005	,571	,543
	DESCRIPT	,562	,572	1,000	,179	,466	,408
	DESIR	,141	,005	,179	1,000	,124	,033
	COGNIT	,656	,571	,466	,124	1,000	,687
	EMOTION	,485	,543	,408	,033	,687	1,000
Sig. (1-tailed)	INTENT	.	<,001	<,001	,027	<,001	<,001
	INJUNCT	,000	.	,000	,473	,000	,000
	DESCRIPT	,000	,000	.	,007	,000	,000
	DESIR	,027	,473	,007	.	,046	,329
	COGNIT	,000	,000	,000	,046	.	,000
	EMOTION	,000	,000	,000	,329	,000	.
N	INTENT	185	185	185	185	185	185
	INJUNCT	185	185	185	185	185	185
	DESCRIPT	185	185	185	185	185	185
	DESIR	185	185	185	185	185	185
	COGNIT	185	185	185	185	185	185
	EMOTION	185	185	185	185	185	185

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,726[a]	,527	,514	1,15151

a. Predictors: (Constant), EMO, SD, DESC, INJUN, COG

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	264,555	5	52,911	39,903	<,001[b]
	Residual	237,350	179	1,326		
	Total	501,905	184			

a. Dependent Variable: INT

b. Predictors: (Constant), EMO, SD, DESC, INJUN, COG

Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	,722	,577		1,252	,212		
	INJUN	,164	,075	,156	2,182	,030	,518	1,930
	DESC	,354	,088	,263	4,020	<,001	,619	1,614
	SD	,073	,102	,038	,715	,476	,939	1,065
	COG	,500	,084	,454	5,946	<,001	,454	2,204
	EMO	-,024	,089	-,020	-,273	,785	,492	2,034

a. Dependent Variable: INT

Appendix 10.3: Model 3

Correlations

		INTENT	INJUNCT	DESCRIPT	DESIR	SOCID	ATTITUDE	PBC
Pearson Correlation	INTENT	1,000	,554	,562	,141	,732	,521	,184
	INJUNCT	,554	1,000	,572	,005	,694	,340	,144
	DESCRIPT	,562	,572	1,000	,179	,602	,356	,177
	DESIR	,141	,005	,179	1,000	,088	,200	,081
	SOCID	,732	,694	,602	,088	1,000	,563	,167
	ATTITUDE	,521	,340	,356	,200	,563	1,000	-,051
	PBC	,184	,144	,177	,081	,167	-,051	1,000
Sig. (1-tailed)	INTENT	.	<,001	<,001	,027	<,001	<,001	,006
	INJUNCT	,000	.	,000	,473	,000	,000	,025
	DESCRIPT	,000	,000	.	,007	,000	,000	,008
	DESIR	,027	,473	,007	.	,117	,003	,137
	SOCID	,000	,000	,000	,117	.	,000	,012
	ATTITUDE	,000	,000	,000	,003	,000	.	,245
	PBC	,006	,025	,008	,137	,012	,245	.
N	INTENT	185	185	185	185	185	185	185
	INJUNCT	185	185	185	185	185	185	185
	DESCRIPT	185	185	185	185	185	185	185
	DESIR	185	185	185	185	185	185	185
	SOCID	185	185	185	185	185	185	185
	ATTITUDE	185	185	185	185	185	185	185
	PBC	185	185	185	185	185	185	185

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,763[a]	,583	,568	1,08500

a. Predictors: (Constant), PBC, ATT, SD, INJUN, DESC, SI

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	292,360	6	48,727	41,391	<,001[b]
	Residual	209,545	178	1,177		
	Total	501,905	184			

a. Dependent Variable: INT

b. Predictors: (Constant), PBC, ATT, SD, INJUN, DESC, SI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-,884	,734		-1,205	,230		
	INJUN	,062	,074	,059	,837	,404	,471	2,123
	DESC	,210	,087	,156	2,423	,016	,567	1,765
	SD	,059	,098	,031	,607	,544	,917	1,091
	SI	,533	,088	,488	6,023	<,001	,358	2,794
	ATT	,291	,105	,168	2,762	,006	,633	1,581
	PBC	,094	,065	,073	1,447	,150	,924	1,082

a. Dependent Variable: INT

Appendix 10.4: Model 4

Correlations

		INTENT	INJUNCT	DESCRIPT	DESIR	COGNIT	EMOTION	ATTITUDE	PBC
Pearson Correlation	INTENT	1,000	,554	,562	,141	,656	,485	,521	,184
	INJUNCT	,554	1,000	,572	,005	,571	,543	,340	,144
	DESCRIPT	,562	,572	1,000	,179	,466	,408	,356	,177
	DESIR	,141	,005	,179	1,000	,124	,033	,200	,081
	COGNIT	,656	,571	,466	,124	1,000	,687	,549	,085
	EMOTION	,485	,543	,408	,033	,687	1,000	,409	,072
	ATTITUDE	,521	,340	,356	,200	,549	,409	1,000	-,051
	PBC	,184	,144	,177	,081	,085	,072	-,051	1,000
Sig. (1-tailed)	INTENT	.	<,001	<,001	,027	<,001	<,001	<,001	,006
	INJUNCT	,000	.	,000	,473	,000	,000	,000	,025
	DESCRIPT	,000	,000	.	,007	,000	,000	,000	,008
	DESIR	,027	,473	,007	.	,046	,329	,003	,137
	COGNIT	,000	,000	,000	,046	.	,000	,000	,124
	EMOTION	,000	,000	,000	,329	,000	.	,000	,165
	ATTITUDE	,000	,000	,000	,003	,000	,000	.	,245
	PBC	,006	,025	,008	,137	,124	,165	,245	.
N	INTENT	185	185	185	185	185	185	185	185
	INJUNCT	185	185	185	185	185	185	185	185
	DESCRIPT	185	185	185	185	185	185	185	185
	DESIR	185	185	185	185	185	185	185	185
	COGNIT	185	185	185	185	185	185	185	185
	EMOTION	185	185	185	185	185	185	185	185
	ATTITUDE	185	185	185	185	185	185	185	185
	PBC	185	185	185	185	185	185	185	185

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,749[a]	,561	,543	1,11603

a. Predictors: (Constant), PBC, ATT, SD, INJUN, EMO, DESC, COG

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	281,447	7	40,207	32,281	<,001[b]
	Residual	220,458	177	1,246		
	Total	501,905	184			

a. Dependent Variable: INT

b. Predictors: (Constant), PBC, ATT, SD, INJUN, EMO, DESC, COG

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1	(Constant)	-1,125	,751		-1,498	,136		
	INJUN	,156	,073	,148	2,139	,034	,516	1,939
	DESC	,306	,086	,227	3,537	<,001	,604	1,656
	SD	,012	,100	,006	,121	,904	,913	1,095
	COG	,401	,087	,363	4,604	<,001	,398	2,511
	EMO	-,036	,086	-,030	-,421	,675	,490	2,039
	ATT	,357	,107	,206	3,346	,001	,655	1,527
	PBC	,134	,066	,104	2,025	,044	,940	1,064

a. Dependent Variable: INT