



Attitudes towards organic food and local food in Norway:
A comparison of preferences

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Attitudes towards organic food and local food in Norway: A comparison of preferences

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Abstract

The main purpose of this study is to establish which attitudes that affect Norwegian consumers' preferences for organic food and for local food. Throughout an extensive review on previous literature we found that preferences for these two categories were most commonly influenced by environmental consciousness, animal welfare consciousness, health consciousness, and price consciousness. Recently, there has been an emerging tendency of investigating how the preferences for organic food and local food overlap. From these findings, we have developed a conceptual framework which has been applied in order to study these effects in the country context of Norway. In combination with studying consumer preferences, we find it appropriate to also consider important strategic approaches which can be utilized by stakeholders.

This study uses data from Norsk Monitor, a Norwegian national survey, and results are estimated by average marginal effects. All estimated results show the hypothesized effects. Compared to previous research, some of our results need to be viewed in light of the Norwegian agriculture. The most informative results regarding our strategic purpose is how a positive attitude towards one of the food categories increases the probability of preferring the other. This overlapping preference indicates that consumers may consider them to be complements. We can also see a strong indication of price consciousness being present among consumers who are more inclined to prefer local food than organic food. On the other hand, those who prefer organic food seems to justify the organic price premium and express a commitment to this preference. Our findings are valuable for the Norwegian agricultural system, and an important contribution to the literature on consumer preferences for organic food and local food.

Foreword

This master thesis marks the fulfilment of the requirements for the Master of Science in Business Administration at the University of Stavanger Business School. Completing this thesis has been a personally and academically enriching process, and we have gained a great amount of insight into our research area of organic food and local food. The research experience has also been demanding, especially during this time of COVID-19 which has led to unexpected challenges.

Fortunately, we have received good help and support along the way. Firstly, we would like to express our gratitude to our thesis advisor, Professor Yuko Onozaka, for sharing her immense knowledge. The ideas, support and constructive feedback she has offered have been very helpful and are highly appreciated. We would also like to extend our gratitude to Anne Brit Løland for providing us with guidance and help with the general research process. Lastly, we are grateful for the patience and consideration our family members have shown during the months we had to work from home, in this special time.

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Chapter 1: Introduction

During the past two decades there has been a growing amount of focus on organic food. In recent years, however, there has also been an increasing interest in local food. This can be seen in how there has been an expansion of literature that studies and compares consumer preferences for these two food categories (e.g. Ditlevsen, Denver, Christensen, & Lassen, 2020; Feldmann & Hamm, 2015; Hempel & Hamm, 2016a; Jensen et al., 2019; Scalvedi & Saba, 2018). Within this literature there is an ongoing debate on whether the food categories are substitutes or complements as they are associated with similar attributes. The most common attitudes that motivate consumers to purchase either of these food categories are environmental concerns and aspects related to health, although these attitudes originate from different beliefs by consumers of organic food and consumers of local food (Scalvedi & Saba, 2018). In the context of Norway, there is a lack of research on preferences for both organic food and local food on Norwegian consumers. Due to this identified research gap, we find it important to gain insight of which factors that affects, characterizes, and separates Norwegian consumers' preferences for these food categories. It is further interesting to research this in the Norwegian country context, as our findings may be a reflection of aspects of the Norwegian agriculture, compared to research from other countries. Thus, we have defined our main research question as:

Which attitudes affect consumer preferences for organic food and local food in the Norwegian context?

Expectantly, our methodical approach in this study will make it able to provide an answer to this research question, as our objective is to fill this research gap. Establishing which attitudes organic consumers and local consumers have in common and which attitudes that separate them is valuable information for stakeholders (Feldmann & Hamm, 2015). With the growing interest in local food, the uncertainty of what classifies a food product as local has become a strategic implication. We have chosen to use the same definition as Ditlevsen et al. (2020), who have studied Danish consumers' preferences for organic food and local food. They have used a definition of local food as produced in Denmark. Therefore, local food is defined as produced in Norway in this thesis. Our aim is to reveal other strategic implications, and to provide suggestions for relevant approaches which we believe are the most effective for increasing the

demand for organic food and local food among Norwegian consumers. We have therefore formulated the following sub research question:

How can these attitudes be used for strategic purposes by stakeholders?

Insight into what characterizes Norwegian consumers' food preferences is vital for the development of the Norwegian agricultural system. Findings from this thesis will therefore be of great interest for several stakeholders. We can provide such valuable information, and further contribute to existing research as our estimated results concluded which attitudes that affect consumer preferences for organic food and local food. Thus, we are able to provide an answer to our main research question. We gain additional insight on organic and local food preferences by finding characterizing demographics of each attitude. This information is beneficial as we are able to specify some strategic suggestions, and thus answer our sub research question.

The thesis continues as follows: Chapter 2 provides a thorough literature review of findings and concepts from previous research on organic food and local food, as well as additional implications that are relevant for the strategic purpose. In Chapter 3 we present our conceptual framework and our development of hypotheses. Chapter 4 gives an overview of our methodical approach, where we also describe our choice of data and models for analysis. The estimated results are presented in Chapter 5. These results are further discussed in Chapter 6. Chapter 7 incorporates the above in a conclusion of the thesis.

Chapter 2: Literature review

This chapter presents a thorough review of interesting information and findings from previous research on preferences for organic food and local food. The revealed findings we consider to be the most relevant for our purpose will be used to narrow down our research area.

2.1. Preferences for organic food

According to the International Federation of Organic Agriculture Movements, organic farming entails four principals; “health”, “ecology”, “fairness” and “care”. These principles represent the foundation which enabled the development of organic farming, as well as its contribution to sustainability (IFOAM – Organics International, 2017). Further, organic agriculture is defined as:

... a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic Agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved. (IFOAM – Organics International, 2017).

Among the literature on consumers’ preferences for organic food, the most frequently mentioned influencing factors for choosing to purchase organic food products are environmental and animal welfare concerns, health aspects, and price.

2.1.1 Environmental consciousness

The vast majority of previous research on organic food preferences present environmental concern as one of the biggest influencers of organic food consumption (Davies, Titterington, & Cochrane, 1995; Denver, Jensen, Olsen, & Christensen, 2019; Ditlevsen, Sandøe, & Lassen, 2019; Janssen, 2018; Kushwah, Dhir, & Sagar, 2019; Kvakkestad, Berglann, Refsgaard, & Flaten, 2018; Magnusson, Arvola, Hursti, Åberg, & Sjöden, 2003; Makatouni, 2002; Massey, O’Cass, & Otahal, 2018; McEachern & Willock, 2004; O’Mahony & Lobo, 2017; Scalvedi & Saba, 2018; Smith & Paladino, 2010; Tsakiridou, Boutsouki, Zotos, & Mattas, 2008). In fact, a study from Greece found that 74.1 per cent of the respondents view consumption of organic food as a way of protecting the environment (Tsakiridou et al., 2008). Moreover, almost 55 per cent of the respondents in the Norwegian study by Kvakkestad et al. (2018) emphasized that

organic production is more environmentally friendly than conventional production. On the other hand, Norwegian agriculture is generally considered environmentally friendly by both organic and conventional consumers in Norway (Storstad & Bjørkhaug, 2003).

The absence of substances such as chemicals and pesticides in the production process of organic food is related to environmental aspects. According to the study conducted by Makatouni (2002), the effects of pesticides were especially concerning when looking at values related to the environment. Makatouni (2002) further relates this to parents buying organic food for environmental reasons, in order to let their children grow up on a “healthy” planet. This implies that the absence of chemicals and pesticides in organic food strengthens consumers’ belief that it is more environmentally friendly, as it is less harmful to the ecosystem (Kushwah et al., 2019; Makatouni, 2002; O’Mahony & Lobo, 2017; Sazvar, Rahmani, & Govindan, 2018). Consumers therefore purchase organic food with the perception that their purchasing behaviour is sustainable and beneficial to the environment (Kushwah et al., 2019; O’Mahony & Lobo, 2017).

On the other hand, whether or not organic food is more environmentally friendly than conventional food is unclear (Clark & Tilman, 2017; Tal, 2018) and is still being debated in the literature. However, there is a general assumption among consumers of organic food being more friendly to the environment and consumers purchase it because of the perceived environmental benefits (Gustavsen & Hegnes, 2020). In fact, several studies have concluded that environmental concern does influence consumer preferences towards organic food (Davies et al., 1995; Ditlevsen et al., 2019; Janssen, 2018; Kushwah, 2019; Kvakkestad et al., 2018; Magnusson et al., 2003; Makatouni, 2002; Scalvedi & Saba, 2018; Tsakiridou et al., 2008). Moreover, Yadav and Pathak (2016) found that, for young consumers, environmental concern was the most significant influencer of their purchase intentions. Conversely, the findings of Hwang (2016) show that environmental concerns did not improve purchase intentions for neither younger nor older consumers.

2.1.2 Animal welfare consciousness

Organic food products are considered to be ethical products (Hasanzade, Osburg, & Toporowski, 2018). Ethical aspects of organic food consumption are widely covered in earlier research, particularly on consumers’ concern for animal welfare (Bryla, 2016; Hjelmar, 2011;

O'Mahony & Lobo, 2017; Padel & Foster, 2005; Torjusen et al., 2001; Zander et al., 2013). A reoccurring theme in the literature is the concept of ethical consumption. Ethical consumption is referred to when consumers are actively focusing on and taking into consideration the ethical aspects, such as animal welfare, of their purchasing and consumer behaviour (Carrigan, Szmigin, & Wright, 2004; Kushwah et al., 2019; Langen, 2011; Uusitalo & Oksanen, 2004). Ethical consumers are consciously making consumption decisions that are acknowledging ethical values, environmental standards, and societal norms (Carrigan et al., 2004; Coelho, 2015; Kushwah et al., 2019; Ladhari & Tchetgna, 2017). This type of consumption has been increasing over the last few decades (Hasanzade et al., 2018; Kushwah et al., 2019; Langen, 2011). Results from previous research show that ethical dimensions do influence consumer behaviour when it comes to purchasing organic food (Ditlevsen et al., 2020; Hjelmar, 2011; O'Mahony & Lobo, 2017).

Concern for the welfare of animals that are involved in food production is among the top motivations for purchasing organic food, along with aspects related to environmental issues and health concerns (Denver et al., 2019; Ditlevsen et al., 2019; Hempel & Hamm, 2016a; Hjelmar, 2011; Makatouni, 2002; Massey et al., 2018; McEachern & Willock, 2004; Scalvedi & Saba, 2018; Storstad & Bjørkhaug, 2003; Tsakiridou et al., 2008; Wier & Calverley, 2002). By purchasing a certified organic product, consumers know that animal welfare issues are being focused on in the production process (Langen, 2011; Torjusen, Lieblein, Wandel, & Francis, 2001). As for agricultural policy goals, a Norwegian study by Kvakkestad et al. (2018) shows that animal welfare was the most important one. However, animal welfare concern was a less important consumption driver than health concerns and environmental friendliness. A similar result was obtained by Torjusen et al. (2001), whom also conducted their research on Norwegian consumers. This may be explained by the fact that the Norwegian agriculture generally has quite strict regulations for animal welfare and thus small differences between animal welfare in organic and conventional food production, according to The Norwegian Scientific Committee for Food Safety (2014). This can further imply that most Norwegian consumers, in general, are satisfied with Norwegian agriculture and its requirements for animal welfare (Gustavsen & Hegnes, 2020; Kvakkestad et al., 2018; Storstad & Bjørkhaug, 2003). Even so, Kvakkestad et al. (2018) found that 49 per cent of their respondents believe that organic production is more animal friendly than conventional production.

2.1.3 Health consciousness

The environmental aspect of organic food not containing chemicals and pesticides can also be related to health concerns, according to Ditlevsen et al. (2019), Ditlevsen et al. (2020), Hwang (2016), Janssen (2018), Kushwah et al. (2019), Makatouni (2002), O'Mahony and Lobo (2017), and Storstad and Bjørkhaug (2003). Almost 80 per cent of the respondents in the research by Tsakiridou et al. (2008) perceive organic food to be of better quality than conventional foods as they are free from chemicals and pesticides. Ditlevsen et al. (2020) also found that, among organic consumers, organic food is believed to be healthier, safer and pure because they do not contain these substances. Therefore, there is little trust in the conventional production process and a higher degree of trust in the production of organic products (Ditlevsen et al., 2020). Furthermore, the findings from Ditlevsen et al. (2019) show that organically produced foods are seen as pure, while conventional foods are perceived as "unclean". Both Janssen (2018) and O'Mahony and Lobo (2017) express that the consumption of organic food has increased due to this "purity" that comes from the lack of these substances that are found in conventional food products. This attribute contributes to parents preferring to purchase organic food, as they consider it better for their children's health (Davies et al., 1995; Makatouni, 2002; O'Mahony & Lobo, 2017; Tregear, Dent, & McGregor, 1994).

The aforementioned health concerns, caused by substances such as chemicals and pesticides, are associated with food safety concerns. From previous research, we see that these food safety concerns related to conventional foods positively impacts consumption of organic food (Ditlevsen et al., 2020; Hwang, 2016; Kvakkestad et al., 2018; Sazvar et al., 2018). Results from Hwang (2016) confirm that food safety concerns impact both younger and older consumers' intention to buy organic foods, and that these concerns are related to issues regarding such substances. Similarly, Kvakkestad et al. (2018) found that food safety concerns were among the most important reasons for purchasing organic food by Norwegian consumers who often, as well as those who rarely, bought organic food. From the research conducted by Tsakiridou et al. (2008) the results are clear; 94.5 per cent of their respondents were concerned about food safety. Further, the findings from Ditlevsen et al. (2019) show that organic foods are seen as safe and uncontaminated, compared to the perceived health risks with conventional foods. Kvakkestad et al. (2018) also found that 46.9 per cent of their respondents agree that organic food is safer than conventional food. According to Falguera, Aliguer, and Falguera, (2012), Hempel and Hamm (2016a), Massey et al. (2018), and Padel and Foster (2005), the increased food safety concern among consumers can, to some degree, be explained by the food

scandals and food safety scares that have occurred in the last years. Though, this may not be as present in Norway since domestically produced food is considered safe by Norwegian consumers (Storstad & Bjørkhaug, 2003). This mistrust in conventional food production has led to consumers wanting to be more aware of, and involved in, how their food is produced, as consumers have become more critical (Falguera et al., 2012).

Despite these health and food safety concerns that are increasing the demand for organic food, there are no proven direct health benefits from consumption of organic food compared to conventional food (Mie et al., 2017; Dillner, 2016; Gustavsen & Hegnes, 2020; The Norwegian Scientific Committee for Food Safety, 2014). However, there is a strong perception of organic food being better for you (Bjørkhaug & Blekesaune, 2013; Bryła, 2016; Denver et al., 2019; Ditlevsen et al., 2020; Gustavsen & Hegnes, 2020; Hwang, 2016; Janssen, 2018; Massey et al., 2018; McEachern & Willock, 2004; O'Mahony & Lobo, 2017; Sazvar et al., 2018; Tregear et al., 1994; Tsakiridou et al., 2008). Tsakiridou et al. (2008) found that 87.6 per cent of their respondents believe that organic foods are healthier than conventional foods. Bryła (2016) also obtained a similar result; over 80 per cent claim that organic food is healthier, and 56 per cent of Gustavsen and Hegnes' (2020) respondents share the same beliefs. Further, findings from Kvakkestad et al. (2018) show that the most important reason for buying organic is because it is healthy.

2.2 Preferences for local food

Within the literature on local food, the lack of a clear definition of what is classified as local food is a commonly voiced concern (Adams & Salois, 2010; Aprile, Caputo, & Nayga, 2016; Bjørkhaug & Blekesaune, 2013; Conner, Colasanti, Ross, & Smalley, 2010; Denver et al., 2019; Feldmann & Hamm, 2015; Haugum & Grande, 2017; Hempel & Hamm, 2016b; Jensen et al., 2019; Skallerud & Wien, 2019; Zepeda & Leviten-Reid, 2004). Since there is not a universal understanding of what local food is, the classification can vary from domestically produced, to produced within a certain geographical proximity. Despite this, local food is in high demand and valued by many consumers. The preference for local food is found to be influenced by attitudes related to environmental and animal welfare concerns, health aspects, and price in previous research.

2.2.1 Environmental consciousness

In parallel to previous literature on organic food preferences, it is a recurring theme in the literature on local food preferences that consumers are influenced by perceived environmental benefits (Aprile et al., 2016; Feldmann & Hamm, 2015; Hempel & Hamm, 2016b; Scalvedi & Saba, 2018). Due to the globalization of food supply chains, and thus an increased distance between the production site and the end consumer, consumers have started to demand a higher degree of transparency within the food production industry (Denver et al., 2019; Feldmann & Hamm, 2015; Hempel & Hamm, 2016a; La Trobe & Acott, 2000). There is an increasing demand for knowledge and insight into food production processes among consumers, both on how and where food products are produced. This is linked to consumers being more aware of how food production impacts the environment, and therefore have become interested in the more sustainable food alternatives (Feldmann & Hamm, 2015; Zepeda & Deal, 2009).

An environmental impact consumers have become aware of is the transportation distance of many of the common foods they eat (Denver et al., 2019; Ditlevsen et al., 2020; Jensen et al., 2019). In order to reduce food transportation and its carbon footprint, as well as being able to support local farmers, many consumers have become interested in purchasing local food (Aprile et al., 2016; Conner et al., 2010; Denver et al., 2019; Ditlevsen et al., 2020). Consumers regard local food production as environmentally friendly (Aprile et al., 2016; Hempel & Hamm, 2016b). For example, Aprile et al. (2016) found that, among their respondents, 61.5 per cent agree and 18.8 per cent strongly agree that local food is more environmentally friendly than conventional food. In contrast, conventional corporation made food is perceived as hurtful to the environment, and in turn hurtful to the consumers themselves (Zepeda & Deal, 2009), while local food production is associated with small-scale production. This is a valued quality by consumers (Adams & Salois, 2010; Denver et al., 2019; Ditlevsen et al., 2020; Jensen et al., 2019). The reason behind the small-scale preference is uncertain, but researchers assign it to transparency and a trust relationship (Adams & Salois, 2010; Denver et al., 2019). This consumer-producer relationship is a key feature for consumers to choose local food (Aprile et al., 2016; Jensen et al., 2019; Skallerud & Wien, 2019; Zepeda & Leviten-Reid, 2004). Feldmann and Hamm (2015) describes this relationship as being built on knowledge and awareness of how farmers produce, and their values. Connected to this is the concept of embeddedness, which also motivates local food consumption. This includes the non-economic values affecting local food purchasing habits, focusing on keeping farms in the community, protecting local food culture, and maintaining a relationship with farmers and producers

(Connor et al., 2010; Skallerud & Wien, 2019). That is, the positive environmental effects of local foods are not limited to reduced travel distances and carbon emission. Consumers also believe that purchasing local food has a positive effect on the local economy, and on the local farmers' economy (Adams & Salois, 2010; Aprile et al., 2016; Ditlevsen et al., 2020; Feldmann & Hamm, 2015).

Feldmann and Hamm (2015) has reviewed 73 articles regarding local food. From this, they found that environmental impact and sustainable consumption were not mentioned often as distinguishing features of local food. However, environmental friendliness was among the most frequently mentioned reasons for buying local food (Feldmann & Hamm, 2015). This is contradicted by Ditlevsen et al. (2020), who found that even though their respondents emphasized it, environmental and climate concerns were not within the main reasons as to why consumers choose to purchase local food. Further, in the research by Brown, Dury, and Holdsworth (2009) and Zepeda and Deal (2009), it was found that local food, for most consumers, were immediately associated with lower environmental impact.

2.2.2 Animal welfare consciousness

The concept of ethical consumption also applies to preferences for local food (Carrigan et al., 2004; Ditlevsen et al., 2020; Hempel & Hamm, 2016b). That is, ethical acceptability motivates local food purchases (Ditlevsen et al., 2020). Ethical acceptability involves environmental issues, social concern and overall consequences for the society, such as supporting local jobs, working conditions and animal welfare (Ditlevsen et al., 2020).

According to Hempel and Hamm (2016b), animal welfare is one of the overlapping associations, and determinants for purchasing local food and organic food. Animal welfare was also by Ditlevsen et al. (2020), Feldmann and Hamm (2015), Jensen et al. (2019), and Zepeda and Deal (2009) found to be an important association with local food. In two Danish studies, the association between animal welfare and local food seems to be quite strong. Firstly, localness can be seen as an attribute in itself, by representing for example high animal welfare (Jensen et al., 2019). Secondly, it is claimed that all food production in Denmark is animal friendly (Ditlevsen et al., 2020). The findings from Zepeda and Deal (2009) show that almost 30 per cent of both heavy organic buyers and light organic buyers saw the treatment of animals as a reason to purchase local food, and this belief motivated them.

2.2.3 Health consciousness

In addition to the external factors, such as environmental and animal welfare aspects, that affect local food purchases, there are also attributes of the food itself that motivate consumers. Such an attribute is food quality, which includes taste, freshness, appearance and healthiness (Adams & Salois, 2010; Brown et al., 2009; Jensen et al., 2019; Skallerud & Wien, 2019). Freshness was one of the three main positive associations with local food, along with short transportation distances and support for local farmers in a study on Danish consumers (Denver et al., 2019). Freshness and taste, as well as fewer or no artificial additives, pesticides and drug residues was emphasized by a focus group in another Danish study (Ditlevsen et al., 2020).

Through their review, Feldmann and Hamm (2015) found that consumers place greater trust in local food than in imported food, perceiving it as safer and easier to trace back to the individual producer. They further found that attitudes related to product quality, consumers personal health and food safety was among the most frequently mentioned attitudes. This expected superior quality was linked to freshness, healthiness, and wholesomeness (Feldmann & Hamm, 2015). Additionally, consumers believe that purchasing local food is directly beneficial for their personal health (Zepeda & Leviten-Reid, 2004) and health-related concerns (Skallerud & Wien, 2019). In the research conducted by Adams and Salois (2010), the health value and the absence of pesticides were highly rated characteristics of local food products. Aprile et al. (2016) and Skallerud and Wien (2019) further validate this. Aprile et al. (2016) found that 58.9 per cent agree and 25 per cent strongly agree that local food is healthier, and healthiness is still one of the most important drivers of purchasing behaviour (Skallerud & Wien, 2019).

Consumers often view local food as fresher, healthier and safer than imported products (Feldmann & Hamm, 2015). This is because local food is perceived as having a higher quality in the production process and a higher food safety than globalized food products (Aprile et al., 2016; Feldmann & Hamm, 2015; Jensen et al., 2019; Winter, 2003). According to Aprile et al. (2016), Feldmann and Hamm (2015), and Zepeda and Deal (2009), food safety is a common attribute that is linked to local food. Findings from Aprile et al. (2016) show that consumers attributed 50.5 per cent of their motivations for purchasing local food to safety. This is a reaction to the modern, industrialized system that is present in the rest of the food industry today (Adams & Salois, 2010).

2.3. Differences and overlapping traits

The development of organic farming was initially viewed as a response to the dimensions of conventional farming that were concerning (Adams & Salois, 2010; Ditlevsen et al., 2020; Jensen et al., 2019). These dimensions were economically, environmentally and socially challenging, such as animal welfare concerns, biodiversity loss (Adams & Salois, 2010), and inauthenticity (Ditlevsen et al., 2020). Organic food production, with its small farms, small-scale production, focus on sustainability, community support and animal welfare, was supposed to be a better solution of food production practices, compared to conventional farming (Adams & Salois, 2010; Ditlevsen et al., 2020; Jensen et al., 2019). However, the organic food sector has increasingly been industrialized and globalized over the last years (Adams & Salois, 2010; Ditlevsen et al., 2020; Feldmann & Hamm, 2015; Jensen et al., 2019; Scalvedi & Saba, 2018). This has led to the term “organic lite”, which describes the corporate co-optation of the organic sector. The term recognizes that a substantial portion of the sector only satisfies the minimum standards of organic food production, and not the social and ethical dimensions that initially were associated with organic food (Adams & Salois, 2010; Feldmann & Hamm, 2015; Jensen et al., 2019). This implies that the organic food sector is increasingly being diagnosed with the same issues as the ones found in the conventional food sector; the same issues that were driving the development of the organic market in the first place (Ditlevsen et al., 2020). Adams and Salois (2010), whom conducted a study on the US market, links this structural development of the organic food market to the development of the federal organic standards, as the standards influenced the production to be least-cost, large-scale and input-oriented.

The growing “organic lite” sector has made consumers question the authenticity and transparency of the organic food market. These qualities are important for alternative consumers, and in recent times have seemed to be more present in the local food market. Research suggests that lack of these qualities and other desirable features, such as small-scale production and short supply chains, which used to be present in the organic food market has led to an increased demand of local food (Adams & Salois, 2010; Ditlevsen et al., 2020; Jensen et al., 2019; Scalvedi & Saba, 2018). This can be seen as a response to the arrival of “organic lite”. Further, this justifies the statement from Jensen et al. (2019); “*local has become the new organic*”. From the research conducted by Adams and Salois (2010) this is supported further, as their analysis implies a shift in demand from organic food to local food that is coincident

with the development of “organic lite”. Though, when considering studies on the Norwegian market, this switch in demand from organic food to local food may not be as distinctive. This is because there has not been a huge increase in demand for organic food in Norway (Bjørkhaug & Blekesaune, 2003; Gustavsen & Hegnes, 2020; Storstad & Bjørkhaug, 2003), Norwegian agriculture mostly consists of small family farms (Kvakkestad et al., 2018; Storstad & Bjørkhaug, 2003), and there is not much of a difference between conventional food and organic food (Bjørkhaug & Blekesaune, 2003; Gustavsen & Hegnes, 2020).

The statement “*local has become the new organic*” can be understood as local food substituting organic food. This is discussed in the literature, as it is unclear whether these two food categories are substitutes or complements for each other. Earlier research establishes that there is some overlap, as well as separating differences, between consumers of organic food and consumers of local food (Ditlevsen et al., 2020; Feldmann & Hamm, 2015; Hempel & Hamm, 2016a; Jensen et al., 2019; Scalvedi & Saba, 2018). A portion of the decreased demand in the organic sector, due to the structural development, seems to be linked to consumers feeling a lack of transparency (Denver et al., 2019; Feldmann & Hamm, 2015), which entails a lack of trust. The participating organic consumers in the research by Ditlevsen et al. (2020) from Denmark showed a high degree of trust in organic production, and as expected they had less trust in conventional production, whether it was produced locally or not. Conversely, their participating consumers of local, conventional food expressed a low degree of trust in organic food production and distrust in foreign food production (Ditlevsen et al., 2020). From the research by Jensen et al. (2019), also conducted in Denmark, participants expressed a high degree of trust in Danish food products and preferred that over imported food products. Norwegian consumers also place great trust in Norwegian agriculture and food production, compared to imported foods (Storstad & Bjørkhaug, 2003).

The results from Ditlevsen et al. (2020) further shows that the local consumers regard the organic attribute to be an irrelevant factor that is only making food products more expensive. As for the organic consumers, there is a lack of focus on the local attribute, but they still associate the attribute with several merits they value, such as purity, short supply chains, small-scale and environmentally friendly production (Ditlevsen et al., 2020). This in line with findings from Jensen et al. (2019), where their participating organic consumers viewed localness as a positive attribute when purchasing foods, but it was not important for them when compared to the organic attribute. According to Ditlevsen et al. (2020), the organic consumers

do see local food production as environmentally friendly, and values this. Nevertheless, this aspect goes unmentioned by the local consumers. They do not consider it to be a relevant aspect when making food purchase decisions (Ditlevsen et al., 2020). On the contrary, Scalvedi and Saba (2018) found that concern for environmental impact was a driver for both organic and local consumers.

Ditlevsen et al. (2020) revealed some food qualities that are drivers for both groups of consumers; taste, purity, diversity and ethical concerns. Environmental aspects are only included by organic consumers, who also are more prone to consider healthiness, animal friendliness, and knowledge of the production site as very important qualities. Authenticity is also found to be important for both groups when it comes to buying local food products. This indicates that both groups view their consumption choices as a way of considering ethical aspects of food production and thereby taking social responsibility. An important aspect was support of the local area, and organic consumers also included environmental concerns. They further conclude that demand for authentic food motivates both consumer groups, but the types of consumers who prefer organic food and local food are also different (Ditlevsen et al., 2020). Scalvedi and Saba (2018) adds evidence in the discussion on whether organic and local foods are substitutes or complements. There were overlapping traits, where both groups of consumers were driven by environmental concerns, healthiness, place of origin, and safety. Whereas safety was more specific for local food, possibly due to cultural values in the local community, and the sustainable aspects were more important for organic consumers (Scalvedi & Saba, 2018).

2.3.1 Price consciousness

During the process of food purchase decisions, consumers face a trade-off between perceived quality and perceived price (Hempel & Hamm, 2016b). Consequently, aspects of the food product have to be valued by the consumer. There are indications that consumers are willing to pay a premium price for a food product if information on aspects such as animal welfare, social impact, and environmental impact is disclosed (Hasanzade et al., 2018). On the other hand, it has been found that measures of willingness-to-pay might be overestimated, as consumers state a higher premium price when asked hypothetically than what they actually are willing to pay in real purchase situations (Feldmann & Hamm, 2015; Hempel & Hamm, 2016a). This is known as the attitude-behaviour gap, which describes that there is a gap between consumers' positive attitudes towards a food category and their real purchase intention of this

food category (Feldmann & Hamm, 2015; Janssen, 2018; Ladhari & Tchetgna, 2017; Massey et al., 2018; Padel & Foster, 2005).

In the literature, there is a common perception of organic food being more expensive (Janssen, 2018), with conventional consumers having a higher price sensitivity than committed organic consumers (Hempel & Hamm, 2016b). This price premium on organic food is often perceived as the main barrier for purchase (Janssen, 2018; Padel & Foster, 2005; Smith & Paladino, 2010). Consumers' knowledge regarding the different benefits and the true value of organic food products is insufficient. This explains why the higher price is not justified by most consumers (Bryła, 2016; Hjelm, 2011; Kushwah et al., 2019). In order to attract all types of consumers, and justify the price difference, organic food should have a better visual of the overall higher quality it has compared to the cheaper conventional alternative (Smith & Paladino, 2010; Torjusen et al., 2001). In other words, the purchasing barrier could be reduced if consumers were presented with more information, and thereby became more aware of the benefits linked to organic food and the factors that cause the price premium (Padel & Foster, 2005). However, the premium price is not the only barrier consumers face. The limited availability, with the inconvenience this entails, is also preventing consumers from buying organic food (Hjelm, 2011; Hwang, 2016; Makatouni, 2002; Tsakiridou et al., 2008). Increased availability, accompanied by clear, trustworthy labelling, could help food outlets compete in the organic food market. This would reduce the price and attract new customers (Massey et al., 2018; Tsakiridou et al., 2008). As there recently has been an increase in the level of knowledge on organic food, there has been introduced a number of private organic labels, at least into the US market, which has led to a reduced premium price and increased availability (Hwang, 2016; La Trobe & Acott, 2000). Nonetheless, several studies have reported that consumers are willing to pay a premium price for organic food (Gustavsen & Hegnes, 2020; Krystallis, Fotopoulos, & Zotos, 2006; Smith & Paladino, 2010), especially if the ethical benefits are presented clearly (Bryła, 2016; Kvakkestad et al., 2018; O'Mahony & Lobo, 2017). Tsakiridou et al. (2008) found that among Greek consumers, 40.8 per cent of their respondents were willing to pay the higher price for organic food. Additionally, Gustavsen and Hegnes (2020) found that 57 per cent of the Norwegian consumers in their research were willing to pay a higher price for organic fruits and vegetables, and 55 per cent were willing to pay more for organic labelled meat. There are different aspects that motivate consumers to purchase organic food, and their willingness to pay depends on labelling, animal welfare, health aspects and their view on pesticide contamination (Adams & Salois, 2010).

Local food has been established as an indicator for food quality, and it is debated how this has affected consumers' willingness to pay (Hempel & Hamm, 2016b). It is noteworthy that the willingness to pay for locally grown food is higher than, for instance, fair trade, organic, or low-fat food products (Aprile et al., 2016; James, Rickard, & Rossman, 2009). The reason for this might be that local food is commonly perceived as more natural, fresher and healthier than globalized products, and this justifies a premium price in the minds of the consumers (Aprile et al., 2016). In spite of that, local food is not expected or perceived to be more expensive than similar conventional and non-domestic foods (Hempel & Hamm, 2016b). This influences the choice of purchasing, as there are fewer trade-offs with local food compared to organic food. The Danish study by Ditlevsen et al. (2020) shows that committed local food consumers appreciate the fact that they know where the food is produced and the lower environmental impact it has, while the indifferent local food consumers consider low price to be important. However, the price sensitivity seems to be higher for plant products than animal products for all groups of consumers (Feldmann & Hamm, 2015). Kvakkestad et al. (2018) found that for Norwegian consumers, the most important attribute for milk was that it was produced in Norway, and they were willing to pay more for this type of milk, especially if the cows could graze outdoors when the season allowed it.

A variety of studies have suggested that there is a connection between consumers who prefer organic food and consumers who prefer local food (Hempel & Hamm, 2016b;2016a; Janssen, 2018; Padel & Foster, 2005). It is found that consumers with a low price consciousness are more inclined to be buyers of local food and organic food, which suggests that consumers of these foods are willing to pay a price premium for them (Feldmann & Hamm, 2015; Hempel & Hamm, 2016b; 2016a). Organic consumers have a higher willingness to pay for local food than consumers without preferences for any these two food categories, while this is not the case for local consumers' willingness to pay for organic food (Denver et al., 2019; Hempel & Hamm, 2016b). This may be because several attributes that are associated with organic food are also associated with local food, but organic food is considered to be unimportant and expensive by local consumers (Ditlevsen et al., 2020). Furthermore, consumers in general express a higher willingness to pay for local food than organic food (Adams & Salois, 2010; Denver et al., 2019; Hempel & Hamm, 2016b;2016a).

2.4 Additional implications

The attitudes discussed above can be used by different stakeholders to influence consumers' purchasing behaviour. Going forward, we will use the narrow definition of stakeholders which is presented by Freeman and Reed (1983). They defined a stakeholder as any identified group or individual that the organization or producer is dependent on for survival. Relevant approaches for stakeholders are the effects of governmental policies, simplifying differentiation, and gaining market insight.

2.4.1 Governmental policies

Policies and governmental goals play an important role when it comes to both organic food and local food. It is crucial that policymakers provide attention to the development of, and support the existing agriculture (Adams & Salois, 2010). They also need to recognize the values and preferences that are associated with both conventional and organic agriculture (Feldmann & Hamm, 2015). There is a variety of options that contribute to the development of the domestic agriculture industry, such as: providing financial support, allocation of sites, or providing specific sales outlets for local producers (Adams & Salois, 2010). A challenge faced by local food producers is the lack of understanding of their economic contribution to the local society, which represents a problem regarding policymaking of land development and investments (O'Mahony & Lobo, 2017). The optimal approach, and its required tools, for strengthening local producers' market shares is an ongoing discussion between the producers and policymakers (Aprile et al., 2016). Conversely, the organic food market in Norway has been aided with different policy instruments in order to encourage organic production and consumption. These policies vary from a direct approach, such as promoting and subsidizing the transition to organic, to a more indirect approach, such as promoting research and different services (Bjørkhaug & Blekesaune, 2017). In general, Norway has one of the broadest subsidizing systems in the world (Storstad & Bjørkhaug, 2003). This will help the Norwegian government reach the goal of 15 per cent organic production and consumption by 2020 (Ministry of Agriculture and Food, 2009). The latest numbers on actual organic production was 4.7 per cent in 2018, obtained from Statistics Norway's report published in 2020.

Organic food has benefited from its clear definition and labelling scheme (Adams & Salois, 2010; Denver et al., 2019). Labelling schemes usually has a system that varies from noting that a particular product contains organic ingredients to labelling a product as 100 per cent organic

(Adams & Salois, 2010). In Norway, everything labelled with the “Ø-label” is certified organic by the labelling organization Debio (Bjørkhaug & Blekesaune, 2017). Products with an organic label, e.g. the “Ø-label”, meets the minimum standards of rules and regulations (Adams & Salois, 2010; Bjørkhaug & Blekesaune, 2017; Langen, 2011; O’Mahony & Lobo, 2017; Padel & Foster, 2005; Wier & Calverley, 2002). An organic label on a food product is seen as a guarantee of the food product being purer, healthier, and overall better than those without (Jensen et al., 2019). Local food on the other hand is more abstract, as definitions vary among consumers, and no standardized labelling scheme exists (Adams & Salois, 2010; Feldmann & Hamm, 2015; Hempel & Hamm, 2016b). In order to provide local farmers and producers with the opportunity to differentiate themselves from others, the European Commission has been discussing the possibility of a common label scheme (Commission of the European Community, 2013, p.100). This will also make it easier for consumers. However, there are approaches towards such labelling schemes in Norway. The Norwegian government supports independent foundations such as Matmerk.no, who focuses on quality, diversity and added value within food production. The independent foundation promotes domestic Norwegian food through education, training, and quality (Skallerud & Wien, 2019). Their most common and well-known labelling scheme is “Nyt Norge”, a label which ensures that the product is produced and packaged in Norway (Merkeordningen Nyt Norge, n.d.). This label, and the possible addition of a more specified label that follows even stricter regulations, could lead to an increase in the consumption of local food.

2.4.2 Differentiation

There is a need to differentiate and distinguish between organic, local, and local-organic products, as consumers are uncertain of what separates these different food categories. A variety of research have suggested that consumers do not only value the different attributes of local food and organic food, they also value when such product information is revealed (Feldmann & Hamm, 2015; Hasanzade et al., 2018; Sirieix, Delanchy, Remaud, Zepeda, & Gurviez, 2013). Findings from Adams and Salois (2010) show that a majority of consumers believe that when purchasing organic food, they are also purchasing locally produced food and thereby support the local economy. By having clear labelling schemes, it is easier to differentiate between food categories and avoid such misunderstandings, and at the same time provide reliable certification as an indication of high quality (Krystallis et al., 2006; O’Mahony & Lobo, 2017).

On the one hand, many consumers find it difficult to identify whether a product is organic or not when labels or certifications are absent (Hjelmar, 2011; Krystalis et al., 2006; Massey et al., 2018; Wier & Calverley, 2002). On the other hand, organic labels suffer from scepticism and a lack of trust in many countries (Padel & Foster, 2005; Smith & Paladino, 2010; Zepeda & Deal, 2009). Still, many consumers value an organic label and may experience an emotional connection with it. Torjusen et al. (2001) found that among Norwegian consumers, purchasing organic labelled food products was in direct line with ethical and environmental concerns.

The fact that local food does not have a clear definition provides challenges when it comes to differentiating, labelling and the ability to fulfil consumers' expectations (Aprile et al., 2016; Feldmann & Hamm, 2015). There is a vast number of locality labels, differing from regionally produced, to within a country. The coexistence of independent labelling schemes, within the same market, has led to confusion among consumers on how to interpret the different labels for local food (Aprile et al., 2016). A product labelled with "Nyt Norge" ensures that it is produced in Norway, but for the consumer it could give the expectation of it being produced within a closer proximity. Using geographical indication labels that meets specialty criteria is often mentioned in the literature, according to the review by Feldmann and Hamm (2015). Thus, the local food market could benefit from a clear definition of local food to prevent further confusion among consumers (Adams & Salois, 2010).

2.4.3 Market

Organic food has made the move from niche to mainstream market. Which implies that they have become more professionalized and obtaining more market shares (Adams & Salois, 2010; O'Mahony & Lobo, 2017). While the organic food market has different characteristics now, compared to when it first was developed (Adams & Salois, 2010), there is still a high number of small, certified organic producers, indicating that the industry is still diverse (O'Mahony & Lobo, 2017). In many countries, farmers markets were promoted to create a consumer-producer relationship, increase awareness with regards to foods' origin, and support the local economy (Feldmann & Hamm, 2015; Skallerud & Wien, 2019). Several factors can influence where consumers chose to shop. These factors can be tied to the attribute of the food, such as quality (Adams & Salois, 2010; Guptill & Wilkins, 2002), or by gaining information and assurance directly from the farmer (Aprile et al., 2016).

Food marketing in Norway is either through mass marketing, mainly from the three large grocery chains, or through a direct contact between producers and consumers (Haugum & Grande, 2017). Small food producers could be regarded as viable marketing strategies in order to obtain more support for domestic, local, and organically produced food. This can be done by emphasizing the transparency that often is associated with such producers, and not solely the quality aspect (Denver et al., 2019). Feldmann and Hamm (2015) highlights the importance of revealing, and focusing on, these underlying food values and preferences that are held by consumers, in order to achieve the desired effect from marketing.

Chapter 3: Theory

We have developed a conceptual framework (Figure 1) based on which attitudes the past literature has presented as the most important influences on consumer preferences for organic food and local food. These attitudes are presented below, followed by findings from the literature we believe to be the most relevant for our research, and from this we define our hypothesized effects.

3.1 Conceptual framework

Figure 1 below depicts our conceptual framework. It shows the relationships between the attitudes and the preferences for organic food and local food, with the corresponding hypotheses, which will be presented subsequently. The conceptual framework also illustrates how our research takes place in the country context of Norway, emphasizing that aspects of the Norwegian food sector should be taken into consideration when reviewing our findings.

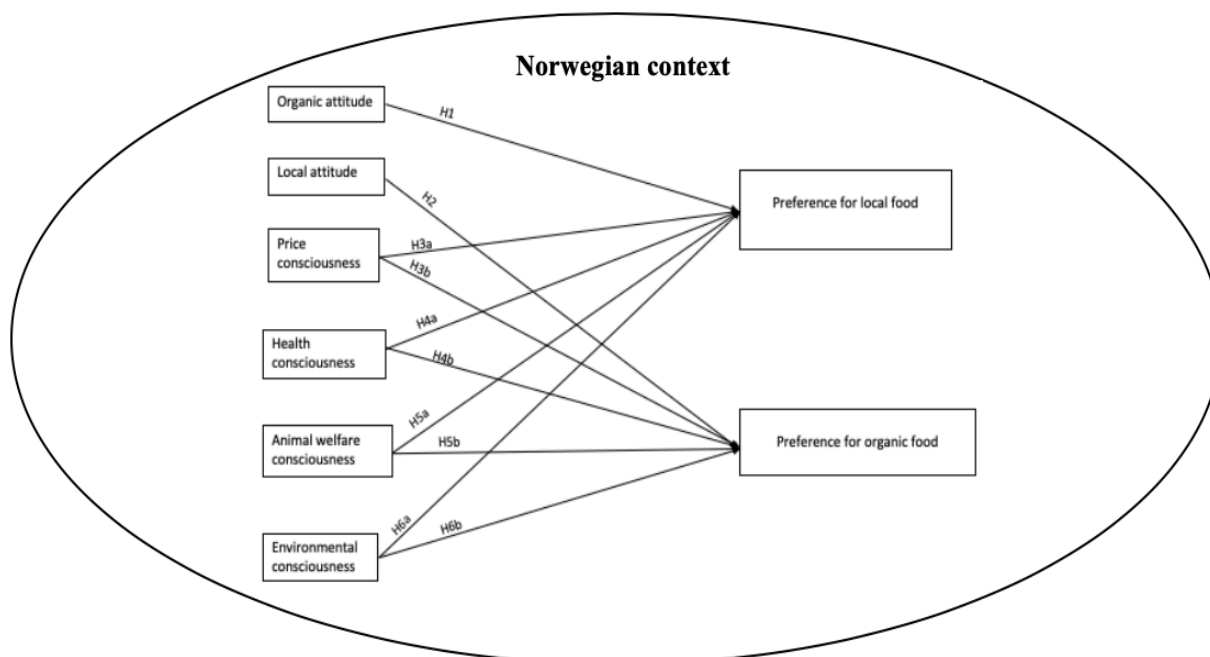


Figure 1: Conceptual framework

3.1.1 Overlapping preferences

In our literature review we propose that there has been a shift in demand from organic food to local food due to the industrialization of the organic food market (Adams & Salois, 2010). Simultaneously, there is an ongoing debate on whether these two food categories are

complements or substitutes. The organic food market in Norway has not experienced this structural development that can be seen in other countries. This is related to the few differences between organic food and conventional, domestically produced food (Bjørkhaug & Blekesaune, 2003; Gustavsen & Hegnes, 2020). From a Danish study by Ditlevsen et al. (2020) it is found that organic consumers do not trust conventional, local food production, and local consumers do not trust organic food production. Still, organic consumers appreciate the local attribute, while not emphasizing it. This is not the case for local consumers, as they regard the organic attribute as unimportant and unnecessarily expensive (Ditlevsen et al., 2020). Furthermore, Norwegian consumers in general place great trust in the domestic food production (Storstad & Bjørkhaug, 2003). The relationship between these two food categories is therefore difficult to predict. Nonetheless, we hypothesize:

H1: Preferences for organic food is positively affected by a positive attitude towards local food.

H2: Preferences for local food is positively affected by a positive attitude towards organic food.

3.1.2 Price consciousness

In the literature, organic food is considered to be expensive due to its price premium, while this does not seem to be the case for local food. However, several studies have confirmed that consumers are willing to pay the organic price premium (Gustavsen & Hegnes, 2020; Krystallis et al., 2006; Smith & Paladino, 2010). Further, findings from previous research shows that consumers are more likely to purchase organic food and local food if they have a low price consciousness (Feldmann & Hamm, 2015; Hempel & Hamm, 2016b; 2016a). It is difficult to hypothesize how price consciousness affects consumer preferences for local food and organic food in Norway, as Norwegian food prices generally are quite high compared to our neighbouring countries (Kvakkestad et al., 2018; Storstad & Bjørkhaug, 2003), and this may be reflected in our results. However, on the basis of the presented arguments, we hypothesize:

H3a: Price consciousness has a negative effect on consumer preferences for organic food.

H3b: Price consciousness has a negative effect on consumer preferences for local food.

3.1.3 Health consciousness

Health consciousness indicates that the consumer is aware of health aspects when making a food purchase decision. These aspects can be nutritional value, absence of undesirable

substances, and food safety. Undesirable substances include chemicals, pesticides and drug residues. Ditlevsen et al. (2020) found that organic consumers believe that organic food is healthier and safer because it is free from these substances. In the same study, this absence was also emphasized by local consumers. This may not be as distinctive in Norway because its northern location entails a short growing season with less need for pesticides (Kvakkestad et al., 2018). The literature on organic food denotes concern for food safety as an important driver of consumption of organic food. This is verified by Kvakkestad et al.'s (2018) study on Norwegian consumers, where almost half of their respondents agree that organic food is safer than conventional food, and this is one of the most important reasons for purchase. Regarding local food, Feldmann and Hamm (2015) has established that when compared to imported food products, local food is seen as safer. Further, purchasing local food is believed to be directly beneficial to consumers' personal health (Zepeda & Leviten-Reid, 2004). When it comes to Norwegian consumers, healthiness is one of the most important reasons for purchasing local food (Skallerud & Wien, 2019), and the most important for purchasing organic food (Kvakkestad et al., 2018). Therefore, we hypothesize:

H4a: Health consciousness has a positive effect on consumer preferences for organic food.

H4b: Health consciousness has a positive effect on consumer preferences for local food.

3.1.4 Animal welfare consciousness

To be animal welfare conscious implies that one is concerned for the welfare of the animals that are involved in food production, and that one considers this aspect when making food purchase decisions. As presented in our literature review, such concern is an important driver for purchasing organic food. Animal welfare concern is also a reason for purchasing local food, according to Zepeda and Deal (2009). In Denmark, the food production is perceived as animal friendly (Ditlevsen et al., 2020), and the local aspect represents high animal welfare (Jensen et al., 2019). The same can be said for Norwegian agriculture, as there are quite strict requirements for animal welfare, thus small differences between organic production and local domestic production (The Norwegian Scientific Committee for Food Safety, 2014). Therefore, it is probable that Norwegian consumers, in general, are satisfied with the animal welfare regulations in local domestic agriculture (Gustavsen & Hegnes, 2020; Kvakkestad et al., 2018; Storstad & Bjørkhaug, 2003). This implies that animal friendliness is a valued attribute by consumers of Norwegian food. Furthermore, Kvakkestad et al. (2018) and Torjusen et al. (2001)

found that animal welfare concern was an important driver for organic food purchase for Norwegian consumers. Based on the arguments above, we hypothesize the following:

H5a: Emphasizing animal welfare has a positive effect on consumer preferences for organic food.

H5b: Emphasizing animal welfare has a positive effect on consumer preferences for local food.

3.1.5 Environmental consciousness

There is a great amount of results from previous research that establishes a positive effect of environmental concern on consumer preferences for organic food. In the context of Norway, there is a perception that the agriculture, in general, is environmentally friendly (Storstad & Bjørkhaug, 2003). Despite this, Norwegian consumers believe that organic food production is more environmentally friendly than conventional food production (Kvakkestad et al., 2018), and this belief drives the consumers to purchase organic food (Gustavsen & Hegnes, 2020). As for local food, Ditlevsen et al. (2020) did not find that environmental concern is among the main reasons for purchasing local food in Denmark. Conversely, environmental friendliness was frequently mentioned as a reason for purchasing local food in the article review by Feldmann & Hamm (2015), and local food is considered to be better for the environment by most of Aprile et al.'s (2016) Italian respondents. Thus, we hypothesize the following:

H6a: Environmental consciousness has a positive effect on consumer preferences for organic food.

H6b: Environmental consciousness has a positive effect on consumer preferences for local food.

Chapter 4: Method

In the following section we will describe our methodical framework development, data selection process, sample characteristics, and finally our method of analysis.

4.1 Methodical approach

The initial intention of this thesis was to investigate Norwegian consumers' preferences for organic food. After a preliminary review of the literature, several key characteristics emerged as distinctive drivers of demand for organic food. We did not only see a pattern in which attitudes that affect consumers' preferences of organic food, we also discovered an ongoing discussion on the possible shift in demand from organic food to local food, also known as the arrival of "organic lite". Research on preferences for both food categories among consumers in Norway is not well represented in the literature. In order to fill this research gap, we found it interesting to broaden our research area by including preferences for local food.

After we established the area of our research, and conducted a more thorough review of the literature, the next phase in our research process was to determine which type of data that was the most appropriate for our purpose. Among previous research there is variation in the choice of methods. The majority have used a qualitative method, but there are also quite a few whom have used a quantitative or mixed methods approach. We have chosen to use a quantitative approach since we are using data from a national survey conducted in Norway, as this allows us to obtain data from a large sample.

With our choice of secondary data, the most common theoretical frameworks were naturally excluded as some of the necessary variables were not attainable. Nonetheless, in our research area it is not uncommon to develop a more tailored framework for the purpose of the research. As we wanted to investigate preferences for both organic food and for local food in a country context of Norway, none of the common frameworks fulfilled our expectations. Consequently, we deemed it beneficial to develop our own conceptual framework, which has been presented in Figure 1.

4.2 Type of data

We have used secondary data from a national survey, called Norsk Monitor, which is conducted by Ipsos Norway. Ipsos Norway is a part of the well-known, global corporation Ipsos. They

are an analytics firm, with many years of experience, who specialises in market surveys (Ipsos n.d.). By using data from Norsk Monitor we gain access to a large and diverse number of respondents, as opposed to if we had developed and conducted a survey of our own.

4.2.1 Norsk Monitor

Norsk Monitor captures the values, beliefs and norms of Norwegian consumers who are between the age of 15 and 91. The survey was first conducted in 1985 and has been conducted every other year since (Ipsos, n.d.). The survey consists of 3 000 different sub-questions, and the average number of respondents each period is approximately 3 800. As there are a lot of questions, the survey reminds the respondents to take breaks ever so often. The intention of this is to obtain a better reflection of the respondents' beliefs and limit the presence of hasty answers. To increase the response and completion rate of the survey, the respondents are offered an incentive in terms of an opportunity to win different prizes. Since 1985 there has been minor changes in the questions and sub-questions, in accordance with emerging trends and developments in the Norwegian society. This survey provides a unique insight into the Norwegian population over a long time period. Therefore, data from Norsk Monitor is used by a variety of different organizations, political parties and researchers.

4.2.2 Data selection

Given the magnitude of questions in Norsk Monitor, there were quite a few question options for the variables we wanted to include, based on previous research. A process of elimination was therefore necessary, where we were attentive to whether questions were non-ambiguous. Due to the survey being conducted in Norwegian, we deemed it necessary for the purpose of our research to translate our questions of choice to English. This required that we took some liberties in the translation process. However, we do not consider this as a weakness, because the questions and alternatives were formulated in a straightforward manner and were easy to translate. All questions from Norsk Monitor that have been used to develop our dataset are presented both in Norwegian, and the English translation, in Appendix.

Our conceptual framework (Figure 1) depicts our expected relationships between consumers' attitudes and preferences for organic and local food in the Norwegian context. The attitudes that are expected to affect preferences for both food categories, which we will use for our empirical estimation, are price consciousness, health consciousness, animal welfare

consciousness and environmental consciousness. These aforementioned attitudes are chosen as independent variables on the model for organic food preferences and on the model for local food preferences. Environmental consciousness, which we have labelled as “EnvCon” in our dataset, is collected from a question where the respondent is given a list of statements where they express the accuracy of these statements based on their own beliefs, on a scale from 1 to 4. The statement representing environmental consciousness is formulated as *“I am concerned with what I can personally do to protect the environment and natural resources”*. The remaining attitudes are acquired from a question where the respondent is presented with a long list of factors associated with grocery shopping and is asked to select which factors they consider important. From this list, we have selected the attribute *“Low price”* to represent price consciousness, which is labelled as “PriceCon”. Health consciousness, labelled “HealthCon”, is formulated as *“Is healthy”*. The attribute *“Animal welfare”* represents animal welfare consciousness and is labelled as “AnimWelCon”. From this list of important factors when grocery shopping, we have also selected our dependent variables. The dependent variable in our model for organic food preferences is labelled as “Org” and is formulated as *“Organically grown”* on the list of attributes. We have selected the attribute *“Produced in Norway”*, labelled “Loc”, to be our dependent variable on the model for local food preferences. The conceptual framework also illustrates that having a positive attitude towards one of the food categories is expected to affect the preference for the other food category. Hence, “Org” is included as an independent variable in the model for local food preferences, and “Loc” is included in the model for organic food preferences. It should be mentioned that our choice of variables has led us to only use data from 2017. This is because *“Animal welfare”* was not included in Norsk Monitor before this survey period. We consider this attitude to be an essential part of our conceptual framework and we therefore made the decision of limiting our data to the survey period of 2017, as a longer time period will not have a consequential effect on our research purpose.

In addition to our models on preferences, we have also selected some control variables which we will use for demographic statistics. Naturally, we have the variables “Gender” and “Age”, as well as a measure for level of education, labelled “Educ”. We have also included a variable for household income, labelled “HH_Inc”. This is because we believe that having a measure for household income instead of individual income will be more informative for our research since our models are linked to grocery shopping attitudes. It is also relevant to control for the number of children in a household when conducting research on consumers’ preferences and

attitudes, and we have therefore included the variable “Children”, which allows us to control for how many children under the age of 15 there are in the household. These demographic variables will be especially beneficial for our strategic purposes.

4.2.3 Data processing

The data from Norsk Monitor was originally available through the statistical software SPSS and was imported into Excel in order to perform the necessary adjustments of the dataset. These adjustments will be elaborated on in this section. The final dataset was then imported to Stata 16, which is the statistical software we have chosen for our estimations. As previously mentioned, we have only used data from 2017, and we initially had 3 778 unique respondents. With the purpose of minimizing a potential attitude-behaviour gap, we excluded respondents who stated that they were responsible for less than half of their household’s grocery shopping. Respondents who showed missing values in our dataset were, naturally, also excluded. After these adjustments we ended up with a data sample of 2 751 respondents.

The variables “PriceCon”, “HealthCon”, “AnimWelCon”, “Org”, and “Loc” are obtained from the same survey question. They take the value 1 if selected by the respondent as an important aspect to consider when grocery shopping, 0 otherwise. This defines them as binary variables. The variable “EnvCon” is obtained from a question where the answer options are on a scale from 1 to 4, where 1 is “*Highly accurate*” and 4 is “*Not accurate at all*”. For simplicity, since all other independent and dependent variables in our empirical estimation are binary, we considered it advantageous to also have “EnvCon” transformed to a binary variable. This will make the comparison of the estimated effects of the different attitudes more intuitive. We transformed “EnvCon” by keeping the option “*Highly accurate*” equal to 1, while the three remaining options were set equal to 0. The reason for not including the option “*Quite accurate*”, previously equal to 2, is because we did not consider this option to be sufficiently comparable to the other variables, given that they are specifically emphasized.

We have also executed some changes in our control variables. Firstly, the variable “Gender” was previously equal to 1 if the respondent is male and equal to 2 if the respondent is female. The value representing female was set equal to 0, as variables for gender usually are valued as either 0 or 1. Secondly, the Norsk Monitor dataset did not include a variable that measures the number of children in the household. We wanted to control for such a demographic, and this

was solved by creating a new variable from two existing survey questions. Specifically, we used a question for the total number of people in the household, which we subtracted by a question for how many people in the household that were over 15 years old. This resulted in a new variable; “Children”, which measures the number of children under 15 years old in the respondent’s household.

4.3 Descriptive statistics

The steps presented in the previous section led us to an end sample with the following characteristics that are presented in Table 1. For instance, our sample consists of 45 per cent males and 55 per cent females. This differs from the gender distribution in the Norwegian society where 50.4 per cent are male and 49.6 per cent are female (Statistics Norway, 2018). Due to the fact that we have accounted for the respondents’ grocery shopping practices in our elimination process of the data, this probably explains why we have a higher female to male ratio, as women typically are more responsible for the household’s grocery shopping. As for the age distribution, all ages between 15 and 91 are represented, where the average age of the respondents is 49.6 years. The age average can be an explanation for the low average of children under 15 years old in the household. These are some noteworthy demographic characteristics of our sample. Further, Table 1 presents summary statistics of all the demographic control variables, where we also have included summary statistics for the attitude variables.

	Mean	Std. Dev.	Min	Max
<i>Attitudes</i>				
Org	0.182	0.386	0	1
Loc	0.454	0.498	0	1
PriceCon	0.492	0.500	0	1
HealthCon	0.546	0.498	0	1
AnimWelCon	0.278	0.449	0	1
EnvCon	0.247	0.432	0	1
<i>Demographics</i>				
Age	49.605	17.099	15	91
Gender	0.451	0.498	0	1
Educ	3.856	0.932	1	5
HH_Inc	6.690	2.384	1	11
Children	0.394	0.796	0	4

Table 1: Summary statistics

It can also be useful to establish the connections between our dependent variables and independent variables, in order to get an overview of how all the variables are related to each other. For this purpose, we have performed a correlation analysis (Table 2). As anticipated, we see a relationship between all the independent variables and the dependent variables. It is noteworthy that organic preferences and local preferences are positively correlated. This is in line with our expectations, given results from previous research. We can also see that price consciousness is negatively correlated to all variables except for health consciousness.

	Org	Loc	PriceCon	HealthCon	AnimWelCon	EnvCon
Org	1.000					
Loc	0.223	1.000				
PriceCon	-0.115	-0.168	1.000			
HealthCon	0.106	0.105	0.022	1.000		
AnimWelCon	0.296	0.230	-0.113	0.137	1.000	
EnvCon	0.217	0.168	-0.077	0.128	0.225	1.000

Table 2: Correlation

4.4 Model

The fact that all of our attitude variables are valued 1 if selected by the respondent and 0 otherwise, makes a binary choice model the most appropriate for our estimations. There are two standard binary choice models; the logit model and the probit model. These two models overcome the limitations that are associated with the linear probability model (Wooldridge, 2016, p.525). However, there is a drawback with logit and probit models because the interpretation is more complex than with the linear probability model (Wooldridge, 2016, p.524). As there are few distinguishing differences between logit model and probit model, we chose the probit model because it tends to be preferred by economists for econometric estimations (Wooldridge, 2016, p. 527).

In order to test the hypotheses in our conceptual framework, we use the probit models. However, they have a limited ability of being interpreted, so they only give an indication of the attitudes' effects on preferences. Thus, to see how the consciousness and attitude variables affect preferences for organic and local food, we estimate the average marginal effects. The average marginal effects tell us how the probability of preferring organic food, or local food, increases

or decreases if a respondent emphasizes a specific attitude, holding everything else constant at an average.

For the purpose of our strategic implications, we want to gain further knowledge on which demographic characteristics we can find among those who typically have the different attitudes. Since the attitudes are unobservable, we conduct a comparing analysis of demographic characteristics. This comparison is achieved by estimating the group means of the demographic variables, where the sample is divided into groups determined by whether the individual attribute is emphasized or not. A t-test is then used to establish that the differences in the group means are statistically significant.

Chapter 5: Results & Analysis

In this part we will present our results from the statistical estimations. From this we will analyse our findings as a preparation for discussion and strategic implications recommendations in the following chapters.

5.1 Hypotheses testing

We have estimated two probit models; one on preferences for organic food, and one on preferences on local food. Table 3 shows the regression results from both models. The pseudo R^2 is low in both models, especially in the one on local preferences. Nevertheless, this should not be interpreted in the same manner as for the traditional R^2 . Hence, pseudo R^2 is not an appropriate measure of goodness-of-fit in binary choice models. However, we can see that the $\text{Prob} > \chi^2$ is 0.000 for both models, which indicates that the models are statistically significant. Thus, when also considering that all variables are statistically significant, we regard both models as highly applicable for our research. The hypotheses testing will follow once Table 3 is presented.

Variable	Preferences for organic food	Preferences for local food
	Coef.	Coef.
Org		0.489* (0.069)
Loc	0.454* (0.062)	
PriceCon	-0.191* (0.061)	-0.350* (0.050)
HealthCon	0.174* (0.062)	0.168* (0.051)
AnimWelCon	0.666* (0.063)	0.429* (0.059)
EnvCon	0.428* (0.065)	0.272* (0.060)
Pseudo R²	0.1389	0.0808
Prob > chi²	0.0000	0.0000

Note: Standard errors in parentheses. Asterisk marking represents statistical significance at 5% level.

Table 3: Estimated probit models

5.1.1 Organic food preferences

Hypothesis 1 states that emphasizing local food as a valued attribute positively affects preferences for organic food. This is supported by the data ($\hat{\beta} = 0.45, p = .000$). Hypothesis 3a states that price consciousness negatively affects preferences for organic food, this is also supported by the data ($\hat{\beta} = -0.19, p = .002$). Hypothesis 4a is also supported by the data ($\hat{\beta} = 0.17, p = .005$), which predicts a positive relationship between health consciousness and preferences for organic food. Emphasizing animal welfare is also estimated to have a positive effect on preferences for organic food, which entails that hypothesis 5a is supported by the data ($\hat{\beta} = 0.67, p = .000$). Hypothesis 6a is also supported by the data ($\hat{\beta} = 0.43, p = .000$), i.e. environmental consciousness has a positive effect on organic food preferences, which further strengthens the predictive power of the model. Thus, we consider the model to be highly suitable for our research.

5.1.2 Local food preferences

Regarding the model on preferences for local food, hypothesis 2 predicts a positive relationship between the preference for local food and a positive attitude towards organic food. This hypothesis is supported by the data ($\hat{\beta} = 0.49, p = .000$). Hypothesis 3b, stating that price consciousness negatively affects preferences for local food, is also supported by the data ($\hat{\beta} = -0.35, p = .000$). Health consciousness having a positive effect on preferences for local food, which is predicted in hypothesis 4a, is supported by the data ($\hat{\beta} = 0.17, p = .001$). Hypothesis 5b predicts a positive effect of animal welfare consciousness on preferences for local food and is supported by the data ($\hat{\beta} = 0.43, p = .000$). Conclusively, hypothesis 6b is also supported by the data ($\hat{\beta} = 0.27, p = .000$), indicating that environmental consciousness has a positive relationship with local food preferences. Based on these results, this model also provides great predictive power and is fitting for further estimation.

5.2 Average marginal effects

In the previous section we established that all hypotheses are supported, indicating that our conceptual framework is able to illustrate the relationships between the attitudes and preferences for organic food and local food. To further explore the magnitude of how these attitudes affect the food preferences, we have estimated the average marginal effects for both models. These results are presented in Table 4 and are discussed subsequently.

Variable	Preferences for organic food	Preferences for local food
	AME	AME
Org		0.183* (0.026)
Loc	0.106* (0.015)	
PriceCon	-0.043* (0.014)	-0.129* (0.018)
HealthCon	0.039* (0.014)	0.061* (0.018)
AnimWelCon	0.175* (0.018)	0.161* (0.022)
EnvCon	0.107* (0.018)	0.101* (0.022)

Note: Standard errors in parentheses. Asterisk marking represents statistically significance at 5% level.

Table 4: Estimated average marginal effects (AME)

5.2.1 Animal welfare consciousness

Animal welfare consciousness has been revealed to be the biggest determinant of preference for organic food, as well as for local food. These positive effects support both hypothesis 5a and hypothesis 5b. Our results show that being concerned for animal welfare increases the probability of preferring organic food by 17.5 per cent and the probability of preferring local food by 16.1 per cent. This is in line with previous research. For example, findings from the Danish study by Ditlevsen et al. (2020) shows that animal welfare is an important characteristic of food products for both organic consumers and for committed local food consumers, but more so for the organic consumers.

5.2.2 Environmental consciousness

Environmental consciousness also shows a positive effect, both for organic food (supporting hypothesis 6a) and for local food (supporting hypothesis 6b). The magnitude of the effect for both food categories are just over 10 per cent. Specifically, considering environmental friendliness to be important increases the probability of preferring organic food by 10.7 per cent and of preferring local food by 10.1 per cent. This is supported by findings from the study

by Scalvedi and Saba (2018) who found that environmental concern was a consumption driver for both types of consumers, and it was stronger for the organic consumers.

5.2.3 Health consciousness

Health consciousness is estimated to have a positive effect on preferences for both food categories, which supports hypothesis 4a and hypothesis 4b. Preference for organic food has an increased probability of 3.9 per cent if healthiness is emphasized. Regarding local food, being health conscious increases the probability of preference by 6.1 per cent. Both types of consumers being health conscious is in line with previous research. However, organic consumers tend to be more likely than local consumers to consider healthiness in their food purchase decisions, according to findings from Ditlevsen et al. (2020).

5.2.4 Price consciousness

Price consciousness resulted in having a negative effect on preferences for organic food, supporting hypothesis 3a, and on preferences for local food, supporting hypothesis 3b. Specifically, being price conscious reduced the probability of preferring organic food by 4.3 per cent, and of preferring local food by 12.9 per cent. These results are consistent with other findings in the literature. Particularly how organic consumers have been found to be less price sensitive (Hempel & Hamm, 2016b; Janssen, 2018; Zander et al., 2013) and local, conventional consumers express a higher price sensitivity (Ditlevsen et al., 2020; Jensen et al., 2019; Scalvedi & Saba, 2018).

5.2.5 Overlapping preferences

Finally, hypotheses 1 and 2 are also supported, which entails that emphasizing local food increases the probability of preferring organic food and that emphasizing organic food increases the probability of preferring local food. The numerical results show that these effects are 10.5 per cent and 18.3 per cent, respectively. This is supported by Feldmann and Hamm (2015) who remarks that consumers who prefer an alternative food category tends to also be more prone to value another alternative food category. Furthermore, our results are in line with findings from Hempel and Hamm (2016b). They demonstrate how organic consumers are more in favour of local foods, than local consumers favour organic foods.

5.3 Demographic analysis

The results from the comparing analysis of which demographics that characterizes the different attitudes are presented in Table 5. We have performed a t-test to test the statistical significance of the differences in the means, which is presented in Table 6. The estimated differences that were found to not be statistically significant will not be accounted for in our further analysis.

	PriceCon		HealthCon		AnimWelCon		EnvCon	
	0	1	0	1	0	1	0	1
Gender	0.426	0.477	0.516	0.397	0.481	0.373	0.478	0.371
Age	54.211	44.845	48.874	50.212	49.701	49.355	49.478	49.991
Educ	3.944	3.766	3.766	3.931	3.847	3.880	3.816	3.979
HH_Inc	7.167	6.198	6.565	6.794	6.736	6.572	6.718	6.604
Children	0.351	0.438	0.401	0.388	0.406	0.364	0.395	0.391

Table 5: Demographic analysis

	PriceCon	HealthCon	AnimWelCon	EnvCon
Gender	0.0063*	0.0000*	0.0000*	0.0000*
Age	0.0000*	0.0409*	0.6347	0.4968
Educ	0.0000*	0.0000*	0.4118	0.0001*
HH_Inc	0.0000*	0.0121*	0.1053	0.2790
Children	0.0041*	0.6705	0.2225	0.9140

Note: Asterisk marking represents statistically significance at 5% level.

Table 6: T-test

In our sample, being price conscious is characterized by a higher likelihood of being male, 10 years younger, having a lower education and household income, and having more children, compared to the average respondent who is not price conscious. Price consciousness is the only attitude where all demographic means are statistically different between the groups. For health consciousness, having the attitude increases the probability of having a higher education and household income, being female, and slightly older than if healthiness is not emphasized. An average respondent who is environmentally conscious, compared to those who are not, can be characterized by having a higher education, and a higher likelihood of being female. A higher likelihood of being female is also a demographic characteristic of the average respondent who

is animal welfare conscious. From this, it can be seen that the variable “Gender” is the only demographic variable that has a statistically significant difference between the group means for all attitudes.

Chapter 6: Discussion

During this study we have developed and applied a conceptual framework on preferences for organic food and local food. We have measured how these food preferences are affected by the most relevant influencing factors that have been revealed through our literature review. These attitudes are price consciousness, health consciousness, animal welfare consciousness, and environmental consciousness. Our results show that all the beforementioned attitudes are estimated to have an effect on preferences for both food categories. For the purpose of our research it is important to discuss our findings in the Norwegian context, and relevant strategic implications should also be deliberated on.

Governmental policies and goals are important for the development and growth of the organic food sector and the local food sector (Adams & Salois, 2010). For instance, both food sectors are offered subsidies for their production, where the magnitude of these subsidies depend on how much they produce (Ministry of Agriculture and Food, 2020). Additionally, the organic sector benefits from a policy that involves the promotion and subsidization of producers' transition from conventional to organic food production (Bjørkhaug & Blekesaune, 2017). The purpose of the governmental involvement is to reach the goal of obtaining 15 per cent organic production and consumption in Norway by 2020 (Ministry of Agriculture and Food, 2009). Given numbers from 2018 (Statistics Norway, 2020), there is reason to believe that this goal has not been reached. However, based on results from our study we are able to offer further recommendations that are beneficial for the organic food sector. Our findings and implications will also be useful for the local food sector in Norway.

First and foremost, our results show that a positive attitude towards local food positively affects the preference for organic food. An even stronger effect is revealed in regard to how a positive attitude towards organic food influences the preference for local food. These findings provide further evidence in the debate on whether these two food categories are substitutes or complements, as our results indicate that local food might be a complement for organic food. This overlapping preference indicates that there is market potential for food products that meet the requirements and are classified as both local and organic. Hence, introducing a label which displays that a food product is classified as local-organic may increase the demand for these foods. Creating a new label for this classification is an option, but there is also the possibility of combining already existing labels, such as the organic “Ø-label” and the label “Nyt Norge”.

In addition to the revealed overlapping preferences, we have also found that animal welfare consciousness, environmental consciousness, and health consciousness have quite similar effects on both food categories. As presented in Table 4, animal welfare consciousness was estimated to have the strongest influence on preferences for both organic food and for local food. This finding should be viewed in the country context of Norway, which makes it important to highlight that Norwegian agriculture generally has quite strict animal welfare requirements, according to Kvakkestad et al. (2018) and The Norwegian Scientific Committee for Food Safety (2014). Thus, there are few differences between organic production and Norwegian food production (The Norwegian Scientific Committee for Food Safety, 2014). These strict animal welfare requirements may imply that Norwegian consumers, in general, see animal welfare as a valued attribute, and therefore emphasize it as important. Aspects of the Norwegian agriculture should also be considered when discussing the small difference in how environmental consciousness affects organic and local food preferences. Although findings from the Norwegian study by Kvakkestad et al. (2018) show that more than half of their respondents emphasized that organic food production is more environmentally friendly than conventional food production, Storstad and Bjørkhaug (2003) states that Norwegian agriculture in general is regarded as environmentally friendly by both organic and conventional consumers. Further, Norwegian consumers place a great amount of trust in the domestic food production, compared to imported foods (Storstad & Bjørkhaug, 2003). Hence, our findings further strengthen the argument of there being few differences between organic food and local food in Norway.

As for the effect of health consciousness, the extent of the estimated effects might seem unexpected at first glance. By this we mean that we expected health consciousness to have a stronger effect on organic food preferences, than on local food preferences. This is attributed in how the literature on organic food focuses more on expected health benefits from consumption, compared to the literature on local food. Again, properties of the Norwegian agriculture might provide a further explanation of our results. Considering that the biggest reason for organic food being perceived as healthier than conventional food is the absence of substances such as pesticides it should be noted that this is less of an issue in Norway. This is because the country's northern location implies a shorter growing season and less need for pesticides (Kvakkestad et al., 2018). Since our local variable is defined as "Produced in Norway", this may explain why the effect of health consciousness is so strong on local food preferences. This factor can also explain how environmental consciousness has a similar effect

on both food categories. Further, health consciousness can also involve aspects of trust and food safety concerns, which provides further support for our results. This can also be explained by how Norwegian consumers place great trust in Norwegian agriculture and food production (Storstad & Bjørkhaug, 2003). As for food safety concerns, Storstad and Bjørkhaug (2003) state that food produced in Norway is considered safe, and we have few problems with food related diseases. Scalvedi and Saba (2018) found that food safety concerns were an overlapping trait for both organic and local consumers, but the trait was more specific for local food. Moreover, we need to emphasize that The Norwegian Scientific Committee for Food Safety (2014) has concluded that an organic diet does not have a clear positive effect on human health. Consequently, it is not too unexpected that consumers who prefer food produced in Norway are just as, or even more, health conscious than those who prefer organic food.

Among our results, price consciousness resulted in being the largest differentiator between preferences for organic food and local food. It is therefore worth noting that food in Norway is expensive compared to other countries (Kvakkestad et al., 2018; Storstad & Bjørkhaug, 2003), and that this may have affected our results in the sense that Norwegian consumers generally find low prices to be important when purchasing food. This explains why price consciousness has a stronger negative effect on preferences for local food, than on preferences for organic food. That is, our findings indicate that consumers who find organically grown to be a valued attribute are able to justify the organic price premium. In other words, consumers who prefer organic food seems to be committed to their preference. Findings from the effects of price consciousness further entails that food produced in Norway is satisfying for some consumers and that these consumers also tend to be quite price conscious. This is in line with the study by Hempel and Hamm (2016b), who found that conventional consumers are price conscious. Since our results show that consumers who prefer local food are more price conscious, a price differentiation between imported foods and domestically produced foods could act as a viable strategy in order to increase the demand for Norwegian foods and decrease the price barrier. Consumers who desire the additional attributes that are associated with organic food, appear to be committed to organic food by expressing a relatively low degree of price consciousness. Still, organic food preferences are also negatively affected by price consciousness. This makes it important for stakeholders to have insight into what characterizes Norwegian consumers who typically are price conscious. This insight can be retrieved from our demographic analysis which have been presented Table 5. Findings from this demographic analysis on price consciousness can be shortly summarized as this attitude being the only one where all mean

differences between the groups were statistically significant. The most interesting results were the difference in age, household income, and number of children between the groups, as these demographic means also were the highest and lowest compared to all other attitudes. These are noteworthy characteristics that stakeholders should be aware of.

Our results further indicate that the Norwegian organic sector is not showing symptoms of development towards what previous research have presented as “organic lite”. This is expected since there are minor differences between organic food production and Norwegian food production (Bjørkhaug & Blekesaune, 2003; Gustavsen & Hegnes, 2020). This is further supported by our results, given the small differences between our estimated effects. It is important to emphasize that when pursuing the goal for the Norwegian organic sector it is crucial to focus on and pay attention to the positive attributes, such as small-scale production, that are associated with organic food production. By this we mean that the growth cannot happen on the expense of these attributes, because it is not desired to have an industrialization of the organic sector. If this were to be the case, we could potentially move towards “organic lite”, and thus encounter the negative side effects of this development.

For the purpose of increasing demand for both organic food and local food we suggest using informative marketing campaigns. This is based on our own findings of attitudes’ effects on preferences, and how previous research has found that consumers value when desired attributes of food products are revealed (Feldmann & Hamm, 2015; Hasanzade et al., 2018; Sirieix et al., 2013). Thereby, our findings can be utilized by grocery chains and sales outlets, as we have established which specific attitudes that affect preferences for organic food and local food. As our results show quite similar effects of the attitudes for both food categories, we believe that our proposed strategies can be adopted to, and useful for, the future development of both the organic food sector and the local food sector.

6.1 Limitations of results

With the choice of secondary data, a common limitation is that one is restricted with regards to how questions are formulated and structured. That is, there is a trade-off between this limitation and a larger sample, which needs to be evaluated by the researchers. In our case, we deemed it beneficial to access data from a large sample that is collected by a reliable source. Hence, our results may have been affected due to how our questions of choice are constructed, and our

steps in the processing of our data. Specifically, the transformation of our variable for environmental consciousness from ordinal to binary. The question related to this variable initially had an answer scale from 1 to 4 of accuracy. For simplicity, we set all options, except for 1, equal to 0. Therefore, the options of “*Quite accurate*” and “*Slightly accurate*” are not positively accounted for, which may have caused the effect of environmental consciousness to appear weaker than it actually is. However, as previously mentioned, we do not consider these two levels of accuracy to be sufficiently comparable to respondents specifically emphasizing an attribute.

Chapter 7: Conclusion

The primary objective of this thesis was to investigate the effect of different attitudes on preferences for organic food and local food, and to determine relevant strategic implications based on these findings. Prior to selecting type of data and our methodical approach, we invested a great amount of time and effort into the review of previous literature on consumer preferences for organic and local food. This thorough review did not only provide a clear understanding of the most important influencing factors, but we were also able to gain knowledge on how these factors might be different in the country context of Norway. From this, we developed our own conceptual framework, representing our expectations of how the most relevant attitudes affect Norwegian consumers' preferences for organic food and local food. The results were estimated in the form of probit regression, average marginal effects, and a comparing analysis of demographic characteristics.

In regard to our main research question, all hypotheses are supported, and the results are significant. The effects of the attitudes on consumers' preferences have been estimated by using average marginal effects. Given results from these estimations, we can conclude that animal welfare consciousness, environmental consciousness, health consciousness, and price consciousness affect consumer preferences for both organic food and for local food. Additionally, we were able to provide further evidence in the debate on whether these two food categories are substitutes or complements, as a positive attitude towards one of the food categories positively affects preference for the other, which suggests that they are complements. The magnitudes, and similarities, of the effects indicate that our results are affected by the Norwegian context. Hence, our results further support that there are few differences between organic food and domestically produced food in Norway.

Regarding our sub research question, we note how policymakers should be aware of these overlapping preferences. Thus, the development of a mutual label is one of our strategic recommendations. We have also focused on the strong negative effect of price consciousness on preferences for local food, where we deem a price differentiation strategy to be a beneficial response. For the organic food sector in Norway, the most important strategy is simply to stay focused on, and to keep emphasizing the desired attributes that are associated with this food category. These suggestions, and our other presented findings should be utilized by

stakeholders, as we believe that this could improve the market position of both the organic food sector and the local food sector in Norway.

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Appendix

Selected questions from Norsk Monitor

Question number	Question	Answer options
V32	<p>What is your highest completed level of education?</p> <p>(Hva er din høyeste avsluttede utdanning?)</p>	<ol style="list-style-type: none"> 1. Primary school/Elementary school (Folkeskole/Framhaldsskolenivå) 2. Secondary school (Ungdomsskole/Realskolenivå) 3. High school (Videregående skole/ Gymnasnivå) 4. College/University, undergraduate (Høyskole/Universitet, lavere nivå) 5. College/University, graduate (Høyskole/Universitet, høyere nivå)
Q64	<p>How well does the statements below fit with your own beliefs and actions?</p> <p>(Hvor godt synes du utsagnene nedenfor stemmer overens med hva du selv mener eller gjør?)</p>	
Sub question 1	<p>I am concerned with what I can personally do to protect the environment and natural resources</p> <p>(Jeg er opptatt av hva jeg personlig kan gjøre for å verne om miljø og naturressurser.)</p>	<ol style="list-style-type: none"> 1. Highly accurate (Stemmer meget godt) 2. Quite accurate (Stemmer nokså godt) 3. Slightly accurate (Stemmer litt) 4. Not accurate at all (Stemmer ikke I det hele tatt)
Q220	<p>When you purchase groceries for yourself and your household, which of the following factors</p>	

	<p>do you find particularly important?</p> <p>(Når du kjøper mat til deg selv og din husholdning, hvilke faktorer nedenfor legger du spesielt stor vekt på?)</p>	
Sub question 1	<p>Low price (Lav pris)</p>	
Sub question 4	<p>Organically grown (Økologisk dyrket)</p>	
Sub question 5	<p>Produced in Norway (Produsert i Norge)</p>	
Sub question 17	<p>Is healthy (Er sunt)</p>	
Sub question 25	<p>Animal welfare (Dyrevelferd)</p>	
Q250	<p>In your household, how much of the grocery shopping are you responsible for?</p> <p>(I din husstand, hvor mye av innkjøpet av dagligvarer gjør du selv?)</p>	<ol style="list-style-type: none"> 1. Practically everything (Praktisk talt alt) 2. More than half (Mer enn halvparten) 3. Approximately half (Omtrent halvparten) 4. Less than half (Mindre enn halvparten) 5. Practically nothing (Praktisk talt ingenting)
Q272	<p>How many people live in your household?</p> <p>(Hvor mange personer bor det her i husstanden?)</p>	<ol style="list-style-type: none"> 1. One person (En person) 2. Two people (To personer) 3. Three people (Tre personer) 4. Four people

		<p>(Fire personer)</p> <p>5. Five people (Fem personer)</p> <p>6. Six people (Seks personer)</p> <p>7. More than six people (Flere enn seks personer)</p>
Q273	<p>And how many of these are 15 years old or older?</p> <p>(Og hvor mange av disse er 15 år eller eldre?)</p>	<p>1. One person (En person)</p> <p>2. Two people (To personer)</p> <p>3. Three people (Tre personer)</p> <p>4. Four people (Fire personer)</p> <p>5. Five people (Fem personer)</p> <p>6. Six people (Seks personer)</p> <p>7. More than six people (Flere enn seks personer)</p>
Q275	<p>What would you estimate your household's collective yearly gross income to be?</p> <p>(Hva vil du anslå husstandens samlede brutto inntekt til pr. år?)</p>	<p>1. Up to kr 100.000 (Inntil kr 100.000)</p> <p>2. 100. – 199.000</p> <p>3. 200. – 299.000</p> <p>4. 300. – 399.000</p> <p>5. 400. – 499.000</p> <p>6. 500. – 599.000</p> <p>7. 600. – 799.000</p> <p>8. 800. – 999.000</p> <p>9. 1 mill. – 1.5 mill</p> <p>10. 1.5 mill – 2 mill</p> <p>11. More than kr 2 mill (Mer enn kr 2 mill)</p>

	Gender (Kjønn)	1. Male (Mann) 2. Female (Kvinne)
	Age (Alder)	