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Who are the Organic Customers in Norway?

An analysis of what organic products the different customer groups buy and why

Anna Dulsrud Mageli and Aimée Madeleine Haugli

Supervisors: Frode Steen, Simen Aardal Ulsaker

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Abstract

The interest and consumption of organic products have grown in the last decade. As a result, grocery stores now have more variety and a wider assortment of organic products. This thesis has examined who has the willingness to pay for organic products in Norway and, the reasons why they are doing so. Data from Norgesgruppen and their Trumf-members has been used to conduct the analysis and track the customers' purchasing behavior. Additionally, a survey was conducted to get more insight into the intention behind the purchases of organic products.

The paper finds that the organic customer is usually a woman in the age group of 35 to 39. Significantly higher shares of organic product purchases were found in densely populated municipalities. The reasons why the customers purchase organic products vary, but environmental-friendliness, health and animal welfare are considered as the main reasons. This is an interesting finding as there is no previous research that proves that organic products are better for the farmland or healthier than conventional foods in Norway. Price is an important factor for why many do not purchase organic products, as they are considered as pricier than conventional products. In fact, the paper finds that organic products are considered as pricier than what they actually are.

When customers do purchase organic foods, they usually purchase baby food, tea, eggs and vegetables. Whether customers purchase most of these organic products intentionally or unintentionally is unknown.

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This thesis is written as a final part of the Master of Science in Economics and Business Administration at the Norwegian School of Economics (NHH), with majors in Business Analytics and Strategy and Management.

Our choice of writing for FOOD, a research collaboration between NHH and Norgesgruppen was motivated by our joint interest in consumer behavior. The process of writing this thesis has increased our knowledge about the grocery industry and given us a deeper understanding of the Norwegian market for organic products. The work has been inspiring and educative, but also challenging, especially due to unpredicted circumstances caused by the coronavirus disease, COVID-19.

For help and assistance throughout this study we would like to express our sincere gratitude to our supervisors, Professor Frode Steen and Assistant Professor Simen Aardal Ulsaker at the department of Economics. They provided us with critical insights, timely feedback and valuable guidance throughout the writing process.

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Anna Dulsrud Mageli

Aimée Madeleine Haugli

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1. Introduction

1.1 Background

The interest and consumption of organic products have risen in the past decade (Landbruksdirektoratet, 2020, p. 7; McFadden & Huffman, 2017). Consumers have different reasons for purchasing organic products, such as health, environmental concerns, and animal welfare (Hasselbach & Rosen, 2015). Organic food production is said to be better for the farmland, treat animals better, and are healthier as it is without pesticides. However, it is widely debated whether or not organic products actually are healthier and more environmentally friendly (Shennan et al., 2017; Lehtimäki, 2019; Desquilbet, Maigné & Monier-Dilhan, 2018). Growth in the industry, however, shows that consumers are reacting to the statements made about organic foods. The question of why some people buy organic products and others do not is not fully understood.

In the Nordic region, Denmark, and Sweden both have a significant consumption of organic foods (Landbruksdirektoratet, 2020, p. 7). Globally, Denmark is the country with the largest share of organic food sales. Sweden has the largest share of organic farmland in the Nordics, with 20 percent being organic (Landbruksdirektoratet, 2020, p. 62). Compared to Sweden and Denmark, Norway has a significantly smaller share of organic farmland, with only 4.2 percent being organic (Landbruksdirektoratet, 2020, p. 8). In 2019, sales of organic products increased in Norway. Organic products are more available than before. Despite a growing interest in organic products and higher sales, organic food consumption only stands for about two percent of food consumption in Norway (Landbruksdirektoratet, 2020, p. 44).

Back in 2005, the Norwegian government set a goal to make 15 percent of food production and consumption organic by 2015 (Landbruksdirektoratet, 2020, p. 44). This goal has later changed and Norway now has a national strategy for organic farming from 2018 to 2030 (Landbruks- og matdepartementet, 2018, p. 2). Currently, Norway is not able to produce enough organic products to keep up with demand, which leads to retailers importing organic products. Retailers of consumer goods have been trying to keep up with consumer interest in organic products. Many have produced their own private labels, such as Go Eco at Meny and Anglämark at Coop. Given the growing interest in organic products in Norway, an analysis of organic food consumers seems essential.

1.2 Research Question

The purpose of this master thesis is to research who purchases organic products in Norway. Furthermore, we wish to look at the motives for why they choose to purchase organic products instead of conventional products. This study will address the following research question:

Who are the organic customers in Norway?

By organic customer, we acknowledge the customer who seeks out and is willing to pay for organic products. To narrow the research question, we have chosen to look more in-depth on two different objectives:

1) *What are the characteristics of the customers that purchase organic products?*

The purpose of the first objective is to look at the characteristics of the customers that have purchased organic products. This includes looking at the customers' age, gender and place of residence. Furthermore, we will look at if the customers regularly purchase organic products or not. Consumer purchase decisions within this category will often be based on perceptions and experiences of organic products. Hence, we seek to analyze what their purchasing habits are like.

2) *How does the availability of organic products within the different product categories influence the customers' shopping habits?*

The purpose of the second objective is to see if the supply of organic products influences customers' shopping habits. We will look at the share of organic products offered in different product categories and see if they resemble the organic products that are purchased. Furthermore, we will look at how customers view the price of organic products. What the offerings of organic products are like may have an impact on organic product purchases. Therefore, this will be important to include in the analysis of the organic customer.

2. Background

In this chapter, we first give a brief introduction to organic food with an emphasis on the Norwegian marked. Moving on, we look at the demand and supply for organic products, as well as present the grocery chain where the data used in our analysis is gathered from. At last, we present a literature review. The aim of this is to form a foundation for our analysis in Chapter 3 and Chapter 4.

2.1 Organic Food

We now present the definition, standards, and regulations for organic products, as well as the Norwegian government's strategy for organic food production.

2.1.1 **The Definition of Organic Food**

Through the regulation of the Norwegian law (Økologiforskriften, 2017, § 2), an organic product is identified by containing a minimal amount of food additives, sustaining welfare for the animals and no usage of chemical-synthetic plant preservatives. More specifically, these following restrictions have to be followed:

Synthetic fertilizers and crop spray are prohibited: In organic agriculture, animal manure and compost should be used instead of synthetic fertilizers. Crop rotation should be practiced instead of crop spray.

Animals must receive roughage as fodder: The fodder should not contain antibiotics, synthetic coloring or regulators to increase appetite or growth.

The farm animals must be raised in the extensive livestock modality: Each specimen must have conditions similar to those they would have had in freedom.

No genetic modification is allowed: Organic products do not contain genetically modified organisms.

Raw materials must be treated gently: When processing organic food, only ten percent of E numbers allowed in conventional food are allowed in organic products. E numbers are food

additives that have been assessed for use within the European Union (Merck, 2020). Additionally, synthetic aroma and coloring substances are prohibited.

The labeling must be controlled: Only products enrolled in a controlling authority can be defined as organic. In Norway, the controlling authority is the Norwegian Food Safety Authority and Debio. For instance, products labeled “natural” or “free-range” are not defined as organic (Sana Bona, 2020).

2.1.2 Regulation

The Norwegian Food Safety Authority has assigned Debio to supervise and reach decisions regarding organic food. This is done in line with the requirements and regulations of the law (Økologiforskriften, 2017, § 2). Although there are some differences, the direction refers heavily to regulations from the EU (Almås, 2020). Organic products produced in Norway are guaranteed through a Debio label, see Picture 1. Imported products also carry the EU label for organic production (Økologisk Norge, 2019), see Picture 2.

Picture 1: Debio Label

Picture 2: Organic Leaf, EU

2.1.3 Debio

Debio has executive responsibility for organic food production and trade. In addition to this, they offer guidance and imparting of knowledge (Debio, 2020). Debio's label used to market and distinguish Debio-approved products is shaped like the Norwegian letter "Ø". This represents "økologisk", the Norwegian word for organic, see Picture 1. Debio also has a "Demeter" label for biological dynamic production as well as a sustainability label. Moreover, Debio provides three different validity labels used to market the number of organic products in service and grocery trading. A minimum of 15, 50, or 90 percent amount of organic food respectively. All approved businesses are controlled yearly by Debio's auditors in order to assure that the production standards are followed (Debio, 2020).

2.1.4 Organic Labels: Familiarity

In 2016, Miljømerking Norge, Fairtrade Norge, Debio and Oikos Økologisk Norge completed a consumer survey in order to map out the Norwegian customers' relationship to different labels (YouGov, 2016). According to their findings, about 24 percent of the respondents stated that labels to a large or relatively large degree influence their grocery shopping.

Answering the question of which labels the consumers are familiar with, Debio's "Ø" was ranked in fifth place as the label most people knew about, behind "Nøkkelhullmerket", "Svanemerket", "Nyt Norge" and "Fairtrade". Answering the question "How familiar are you with the meaning behind the Ø label?", 20 percent stated that they were familiar with Debio and knew what it represented, 43 percent were familiar with Debio and knew "some" about what it represented.

With data from 2019, the Norwegian Agriculture Agency (NAA) (Landbruksdirektoratet, 2020) published a research project covering some of the same aspects as in the YouGov survey. The findings are similar to some degree, but also reveal some changes in consumer behavior over the past three years (Vittersø, Bugge, Schjøll & Torjusen, 2020, p. 50). The study shows that one out of ten is not familiar with the Debio-label, and nearly one out of three said they do not recognize the EU's label for organic food. Correspondingly, 87 percent said they knew that the Debio-label indicates organic food, while only 9 percent knew that the EU's leaf indicates organic food. The researchers claim that the reason why relatively many

consumers are familiar with the meaning behind Debio's label is that the word "økologisk", meaning organic, is a part of the label (Vittersø et al., 2020, p. 50).

Moving on to the in-store-customer, the NAA found that customers only slightly take notice of whether the product is organic or not when shopping (Vittersø et al., 2020, p. 49). Only one out of ten looks for the Debio label "every time" or "almost every time" they go shopping. By comparison as much as one out of three responded that they search for the "Nyt-Norge" label every time, or almost every time, they go shopping. The "Nyt-Norge" label indicates that the commodities are Norwegian, and that the farmers have followed the Norwegian law and can guarantee it, and that the food is produced and packed in Norway.

2.2 Supply and demand for organic products

In this section, we look at the market, the supply of, and demand for organic products as well as financial information for these products.

2.2.1 Government Strategy for Organic Food Production

In 2005, the Government stated that by 2015, 15 percent of all food production and consumption should be organic (Stoltenberg et al., 2005, p. 13). This goal has later been adjusted, and in May 2018 the Norwegian Ministry of Agriculture and Food put forth a new strategy in order to increase the production of organic food. Instead of setting a numeric objective, the goal is now to adjust to the market. That is, the Government states that the development of organic production should be based on the demand for organic products. This implies that agriculture and market participants are expected to produce products where there exist demand and conditions to produce. The strategy is in force from 2018–2030 (Landbruks- og matdepartementet, 2018, p. 2).

2.2.2 Supply and Demand

In the following sections we give a brief overview of the supply of and demand for organic products in Norway. This is done with an emphasis on agricultural products.

Organic Food Production and Import

In order to facilitate Norwegian agricultural production, a living cultural landscape and settlements across the whole country, Norway has a tariff-based import regulation on agricultural goods. As the import regulation does not differentiate between organic and conventional products it is difficult to gather data on the actual amount of imported organic agricultural goods (Landbruksdirektoratet, 2020, p. 72). Therefore, it is challenging to recognize the amounts of national and international organic products in Norway. Nevertheless, imports of organic goods vary across the various product groups (Pekala, 2020, p. 55). More or less all organic dairy products are produced in Norway. The exception is organic cheeses where approximately 50 percent are imported. Organic eggs are 100 percent Norwegian, while fruits tend to be imported. More specifically, in 2018, 76 percent of all organic fruit, nuts, and berries sold through retail were imported (Pekala, 2020, p. 55). The production of Norwegian organic vegetables is neither adequate to meet the demand in the Norwegian market, and the NAA has implemented a tariff reduction on these products (Landbruksdirektoratet, 2020, p. 72).

The past years Norway has witnessed a decline in both the number of organic producers and the amount of agricultural land used for organic production. For instance, the NAA (Landbruksdirektoratet, 2020, p. 11) states that Norway produces less grain than what is demanded. About 60 percent of the wheat that is used to produce organic flour is imported. There is also a shortage of organic oats and organic grain for concentrate feed.

Organic Meat

The sales numbers for both organic beef, pork and mutton have declined. The NAA has received reports from marked actors; retailers, the food industry, and producers, that consumers to a large degree regard Norwegian production of conventional meat production as environmentally friendly, which reduces the willingness to pay for organic products. Considering organic poultry, the NAA report does not deliver specific sales numbers. Nevertheless, the production of organic poultry is in general low in Norway, and in 2019 the production was reduced with 5 percent. According to the report, the market actors find it challenging to communicate why the consumers, for instance, should pay extra for a package of organic chicken (Landbruksdirektoratet, 2020, p. 26). The price difference is big, and there are more and more conventional poultry meat producers in the market that stand out by using more slow-growing hybrids and special fodder, although they are not necessarily organic (Landbruksdirektoratet, 2020, p. 27).

There are other factors that may have a negative impact on the organic food market in Norway. According to the research by Pekala (2020), the support for Norwegian organic farmers does not appear sufficient in order to convince farmers to convert conventional farmland into organic. More, the authors present data proving that large farmers' associations are influential in Norway and can potentially affect the political agricultural agenda. Their interests tend to be more focused on locally sourced products, rather than organic (Pekala, 2020, p. 52).

Demand

Based on three surveys carried out by Organic-PLUS-survey, Ipsos and Consumption Research Norway, the NAA published a study on the Norwegian consumption of organic food (Vittersø et al., 2020). They found that three out of ten consumers eat organic food once a week or more. Only 4 percent answered that they eat organic food on a daily basis. A considerable fraction of the consumers stated that they eat organic food more seldom than once a week: 15 percent one to three times per month, and 23 percent once a month, and 13 percent stated that they never eat organic food. About 18 percent responded "do not know". This means that one out of three consumers do not eat organic at all and/or are not familiar with this product category. Due to the fact that this is based on stated consumption patterns rather than revealed, we also look at some numbers from the actual market shares.

The market share of organic products, as opposed to conventional products, in the retail grocery was about 2 percent in 2019. By comparison, organic food comes close to 15 percent of the market in Denmark and 9 percent in the market in Sweden (Vittersø et al., 2020, p. 44). Although the turnover of organic products has increased steadily in the past ten years, the increase in the first quarter of 2019 was the lowest in the past years. There was a fall in the turnover for organic baby food and snacks and desserts, with a decrease of 6,8 million and 14,9 million NOK respectively. On the other hand, the turnover of organic vegetables increased with 16,5 million Norwegian NOK in 2019 and therefore represents 25 percent of the total increase in turnover for organic products. Other products with increased sales were baking goods with 2.4 percent and eggs with 7 percent (Landbruksdirektoratet, 2019b, p. 5).

Place of Business

The majority of the organic products in Norway are purchased in low-price chains such as Rema 1000 and Kiwi, and there has been a steady increase in the amount of sales the past

years (Landbruksdirektoratet, 2019a, p. 44). A possible explanation for this may be the general increase in demand for organic products, which the past years have resulted in an increased supply of organic products in the low-price chains. In 2012, the share of organic sales in Norwegian low-price chains, as opposed to specialty stores, was 45 percent, and by 2018 it increased to 60 percent. For example, in 2016, Rema 1000 bought the organic producer Kolonihagen, and at the same time stated that they would be the biggest market participant in the market for organic food (Soma, 2016).

2.2.3 Meny

Meny, owned by Norgesgruppen (NG), is Norway's biggest supermarket chain with 186 stores. It is the only grocery chain that is certified by the Eco-Lighthouse (in Norwegian; Miljøtårnsertifisert). This implies that Meny aims to reduce energy consumption, lower emissions, reduce food waste and plastic packaging as well as increase selective sorting of waste and recycling. Additionally, Meny states that they intend to have a wide variety of sustainable products and use local producers. Today, Meny is the grocery chain with the highest share of organic products. According to their website, the stores offer about 500 organic products on average, but in total, the stores have access to 1500 organic products due to a large number of local producers (Meny, 2020a).

2.3 Literature Review

In this section we explore previous research on organic consumers with an emphasis on Scandinavia and Norway. This is done in order to put our work in a perspective and provide evidence that may be used to support our findings.

2.3.1 Purchasing Intention and Motivations for Purchasing Organic Products

Previous studies have shown that one of the main pillars of the consumer buying process is purchasing intention. Purchasing intention is frequently used to predict purchase behavior and behavioral intention is the best predictor of consumer actions, including the green market (Newberry, Klemz & Boshoff, 2003). Purchasing intention refers to the customers' intention and willingness to purchase a product or service. Furthermore, green purchasing intention is

defined as the willingness of individuals to give preference to green products over conventional products (Rashid, 2009).

There are various reasons why people purchase and consume organic food, including environmental consciousness, health, animal welfare, personal values and other motivations. Research presented by Hansen, Sørensen and Eriksen (2018), suggests three motivations for purchasing organic products. These three motivations are environmental, health, and social consciousness.

Hansen et al. (2018) found that organic food identity is positively driven by health consciousness and negatively driven by social consciousness. Further, they found that environmental consciousness is unrelated to organic food identity. Clark, Kotchen and Moore (2003) propose that organic purchasing is first and foremost motivated by biocentrism, the value to all living things. Moreover, Bartels and Hoogendam (2011) found that people who are in environmentally friendly consumer groups are often consumers that purchase organic foods. Whereas Mondelaers, Verbeke and Huylenbroeck (2009) are more in line with Hansen et al. (2018) and suggests that the health aspect is a more important driver of organic food identity than sustainability. Hence, the literature differs on the importance of environmental consciousness in terms of organic food consumption.

2.3.2 Conventional versus Organic Products

Organic products are often looked at as more environmentally friendly than conventional products. The Norwegian Scientific Committee for Food Safety (2014, p. 12) found that there were more crop losses in organic farming than conventional as there were more plant diseases, pests and weeds in organic production. As organic farming is without pesticides, there is a higher degree of damages to organic crops due to the richness and abundance of pollinating insects and harmful insects (Norwegian Scientific Committee for Food Safety, 2014, p. 12). Nutritional values are not necessarily better in organic farming than conventional, except for in fruits and berries. Furthermore, there are no consistent differences between an organic and conventional diet (Norwegian Scientific Committee for Food Safety, 2014, p. 22-23). In terms of animal health and welfare, there are small differences between organic and conventional farming due to the strong animal regulations in Norway compared to other countries

(Norwegian Scientific Committee for Food Safety, 2014, p. 14). Based on existing research, there is no grounds for concluding that organic food is better or worse than conventional foods.

2.3.3 Price and Willingness to Pay for Organic Products

Price has previously been tested as a barrier to green consumerism. High price premiums are often associated with organic products and results in different consumer signals. Consumers indicate that the higher price of organic products prohibits them from purchasing, but they also use price to form opinions on the quality of organic food items (Hill & Lynchehaun, 2002).

Kvakkestad, Berglann, Refsgaard and Flaten (2018) researched consumer attitudes and preferences toward organic products in Norway. The researchers found that respondents are willing to pay a higher price premium for several attributes. The most important being health and environmental concerns. Animal welfare had little importance. Some are worried about the pesticides that are being used in conventional farming. Therefore, consumers that are concerned with the environment and health often are willing to pay a higher price premium for organic products (Kvakkestad et al., 2018; Hasselback and Roosen, 2015). However, if the consumer does not see the perceived benefits from paying a higher price for the organic products, price becomes a barrier (Kvakkestad et al., 2018; Hansen et al., 2018). Lack of perceived superiority of the organic product regarding health benefits, environment, taste and safety become important reasons for not consuming organic food among those who already do not have a high consumption of such products (Kvakkestad et al., 2018).

2.3.4 Demographics of Organic Food Consumers

Gustavsen and Hegnes (2020) have researched if there is a relation between individuals´ personalities and choice of organic foods, using the big-five personality model. The model examines how individuals think and act and consists of five personality traits; extraversion, agreeableness, conscientiousness, emotional stability and openness to experience (Gustavsen & Hegnes, 2020). The researchers found that openness to experience often was positively related to organic food consumption, while extraversion was negatively related. Individuals with the trait openness to experience often understand organic food as being healthier than other foods and taste better. Furthermore, they are willing to pay a higher price for organic food than conventional (Gustavsen & Hegnes, 2020).

Age and gender are shown to have an influence on consumption of food (Lea & Worsley, 2005), attitudes toward both the environment (Zelezny, 2000; Diamantopoulos, Schlegelmilc, Sinkovics & Bohlen, 2003) and organic foods (Hughner, McDonagh, Prothero, Schlutz & Stanton, 2007). Women have a more positive attitude towards organic foods than men (Ureña, Bernabéu & Olmeda, 2008; Gustavsen & Hegnes, 2020). Organic foods are can be viewed as healthier, and women are often more health-conscious than men (Gustavsen & Hegnes, 2020). There is a strong positive correlation between higher education and attitudes toward organic foods. Gustavsen and Hegnes (2020) found that individuals with a university degree often have a higher willingness to pay than people with no university degree. Further, the higher the income, the more willingness to pay for organic foods (Gustavsen & Hegnes, 2020). However, in general, younger people are more likely to show a positive attitude (Grebitus, Steiner & Veeman, 2015) and pay a higher price for organic products (Gustavsen & Hegnes, 2020).

3. Methodology

This chapter presents the choices we have made in regard to research design, data collection and analysis. To identify the organic customers and their motivations to purchase organic products we have used data from NG that includes the purchasing behaviors from Trumf-members. Furthermore, to get a more in-depth insight we have conducted a survey that allows us to ask specific questions and hence get a deeper insight into the consumers' behavior than what we get from the NG data.

3.1 Choice of Research Design

In this analysis, we wish to explore what affects consumers purchasing decisions of organic products. With inductive reasoning, we wish to see what the organic market in Norway is like and how these customers are. The research will use quantitative data provided by NG. Next, a descriptive study will be developed using a survey as a research strategy. The time horizon of the study will be cross-sectional, which will help compare different variables at the same time.

3.2 Data

In this section we look at the NG data sample, as well as the survey sample. Furthermore, we make a plan for what should be included in the survey and how it will be distributed.

3.2.1 **Norgesgruppen Sample**

The data from NG includes purchases at Meny stores across Norway by [redacted] Trumf-members. The sample consists of [redacted] customers. These customers are from all over Norway, with most people residing in [redacted]. In the initial data set, the customers are in the ages of [redacted]. This gives us a sufficient number of both men and women across Norway, as well as a wide age span, which will give us a good sample to use in the analysis of who the organic customers are. See section 4.3 for more details.

3.2.2 Survey Sample

The consumer group that we wish to target are between the age of 20 and 94. The data from NG includes data from these ages and can therefore be used in the comparison. It is highly likely that most respondents to the survey will be in the ages between 20 and 60, as fewer people that are 60 and older are active on Facebook and LinkedIn. Hence, people in the ages between 20 and 60 will be easier to reach on social media compared to those 60 and older. Depending on the results of the survey, knowing the ages of the respondent will be used in the analysis to have a more reliable analysis and conclusion. Having a wide age group may give us the opportunity to look at what the differences are between different ages in terms of buying organic food.

Quota sampling, an alternative to probability sampling when the sample size is large enough and responses are relatively low, will be used to ensure that the sample is representative of all consumer groups. Qualitrics will be used to design the survey. The link for the survey can easily be shared via social media platforms making it easily accessible. The questionnaire will be restricted to Norwegian residents and responses from outside of Norway will be omitted. Social media will be the primary medium to distribute the survey due to its low cost for distribution as well as its high cost-effectiveness and efficiency. Two main platforms have been identified based on its large user-base and potential for high consumer engagement: Facebook and LinkedIn.

3.2.3 Survey

The survey will start with a short description of the questionnaire so everyone who fills out the survey can understand what is the expectation of this survey. After the description, questions regarding purchasing habits will be asked, such as how much of the shopping the respondent does for the household and what they view as important when they do their grocery shopping. Next, questions about their view on organic products will be asked. This will include questions about the price, taste and environmental impact of organic products. The survey will also include questions to map the demographics of the respondent. These will be questions that include information such as the age of the respondents and gender. The questionnaire can be found in the Appendix.

3.3 Method

In this section we establish how we are going to analyze the data we have received from NG and the data we obtain from the survey we are conducting.

3.3.1 **Data Analysis**

There are two categories in Statistical Analysis; Descriptive and Inferential Analysis. Both types of analysis will be used, depending on what is being tested and analyzed. Descriptive analysis will be used to analyze the survey data and the NG data. Furthermore, inferential analysis, more specifically regression analysis, will be used to analyze parts of the NG data where it is appropriate.

3.4 Validity and Reliability

Validity and reliability are two fundamental features in the evaluation of any measurement instrument used in research. Analyzing the validity, we look at what is measured and how well it is done. The reliability of the research, covers the faith that one can have in the data obtained from the use of the measurement instruments (Hardhan, 2017). In this section we assess the relevant validity- and reliability attributes for both the survey and the data received from NG.

3.4.1 **Survey data**

Validity

To secure construct validity, the survey was tested on a small group before it was published. All feedback from the test group proved that the survey was of tolerable length and that it contained questions which were comprehensible.

A challenge when conducting a survey with given responses is to ensure content validity. To obtain relevant information we had to ensure that the information related to the objectives. Therefore, terms and expressions should mean the same for all respondents as well as for us, the researches (Jacobsen, 2005). In the survey we gave the respondents the ability to rank statements on a given scale, instead of asking for their opinion in a self-written sentence. This is an example of how we minimized the risk of not getting consistency in the responses. More,

the content validity was ensured by considering our choice of words. We excluded terms such as “conventional products” when we discovered that not everyone was familiar with this expression.

Reliability

A challenge regarding the reliability is the stability in our survey. A majority of the questions are based on subjective opinions which may develop and differ over time. Because of this, the stability may be challenged.

3.4.2 Norgesgruppen Data

Validity

In quantitative research there are three major types of validity. Content validity is the extent to which a research instrument accurately measures all aspects of a construct. Construct validity is the extent to which a research instrument measures the intended construct. Last, criterion validity is the extent to which a research instrument is related to other instruments that measure the same variables (Heale & Twycross, 2015).

Analyzing the data from NG, there are some factors that may be lowering the construct validity of our results. More specifically, the validity of our findings can be proven reduced if the selection of data contains features that make it unrepresentative for the Norwegian population as a whole. In this section, we ask the question to which extent it is possible to make general assumptions about consumers’ organic choice behavior based on our sample of respondents and data.

First of all, Meny is a rather exclusive chain of stores. In the Norwegian market for grocery, around 2 out of 3 NOK are spent in discount stores such as Rema 100, Kiwi, Coop Extra and Bunnpris (Dahl & Valvik, 2020). Rema 1000 and Coop have a market share of 23.2 and 29.5 percent respectively (Dahl & Valvik, 2020), Meny has no more than 10.3 percent (Meny, 2020b) of the total grocery market. By only analyzing data from Trumf-members and transactions done in Meny stores, we may exclude certain customers’ profiles. Thus, making our results less representable for the population as a whole. Perhaps with an overestimated demand for organic products.

Second, Meny has the best and the widest range of organic goods (Meny, 2020a), and it is likely that this is known among the people who have an interest in and prefer to purchase and eat organic food. If Meny attracts a customer profile which, at the outset, purchases more organic than the average customer, the generalizability of our results may be weakened, once again with an overestimated demand.

Third, there is the case of in-store marketing and shelf placement. The organic products in Meny's stores are placed in between the conventional products within the different product categories (Meny, 2020a). The purpose behind it is to make it easier for the customer to catch sight of the organic products. Meny's way of making the organic products an integral part of the choice architecture may, as well, lead to higher sales of organic grocery and influence our results.

The locations and distribution of Meny stores across the country can also have an impact on our results, and we find little evidence that the stores are perfectly and evenly allocated across the country. Across the rural-urban nexus, we find most of the Meny stores in highly populated areas (Meny, 2020c). This may influence our data in ways we have not controlled. For instance, it may be that people living in bigger cities have certain characteristics that influence their consumption patterns, while people in counties with no cities have others. Previous research has demonstrated that in Denmark, preference for organic products is higher among the urban population than the rural (Landbruksdirektoratet, 2020, p. 64). This could also be the case in Norway. With an uneven allocation of stores, our data may contain uncontrolled factors that influence our results.

Last, our data is based on receipts from customers using the loyalty program, Trumf. We have not tested whether people enrolled in such programs have certain purchasing characteristics as opposed to people who are not. If the Trumf-members do have significant traits, this can affect the results.

To sum up, we have found that when comparing the data to the population as a whole, there could be a tendency that our sample overestimates preferences for organic food. Nevertheless, with supplementing data from the NAA and the survey, we believe this will not affect our thesis as a whole.

Reliability

The reliability of quantitative research is divided into three attributes. The homogeneity is to which extent to all the items on a scale measure one construct. The stability is the consistency of results using an instrument with repeated testing. Equivalence is the consistency among responses of multiple users of an instrument, or among alternate forms of an instrument (Heale & Twycross, 2015).

We obtained the same results independent of when we completed the analysis of the received data. Hence, we define our research and data material as stable. The given characteristics of the customers and their purchases were gathered from 2015 to 2017, and will therefore not change.

4. Norgesgruppen Data

In this chapter we analyze the data from NG. First, we present the data material and reason for the data processing. Second, we describe some characteristics of our selection of data. At last, we analyze the data material in order to answer our thesis statement.

4.1 Data Description

The data from NG is defined as a secondary data source as opposed to a primary one. Secondary data tends to be in large samples and collected over a long period of time (Institute for Work & Health, 2015). This is descriptive for our data set. The data consists of information such as the members' demographic and purchases which are valuable for our thesis, although it is not primarily gathered for this particular thesis.

We received five data files from NG. These files contained a list of their selection of conventional and organic products, a list of Meny's stores across Norway, and information on Trumf-members' age, gender and place of residence. Furthermore, the data consisted of a selection of the Trumf-members' receipts from [redacted].

4.2 Data Processing

The purpose of this section is to explain our choices while processing the data. The processing was performed in order to reduce the likelihood of obtaining misleading results in the analysis. Examining the data sets we found that the product register and the selection of Trumf-members contained variables with missing values. Moreover, we found variables that contained information irrelevant to our analysis. Subsetting the data we did the following:

Register of Products

Within the variable "Main groups" we found categories such as "Not grocery related products" and "Unspecified group". Observing the associated product names, we found either "Unspecified product" or product values such as "Local Product", with no further information.

As the product information is relevant for our analysis, we removed the products within these categories, and thereby reduced the list from [redacted] products.

Trumf-members

In the data set presenting the Trumf-members, we found variables with "missing county", "missing municipality", "unknown gender" and "unknown age". As this information is relevant for our analysis, both isolated and in combination with one another, we removed the members with one or more missing values entirely. As a result, the selection of Trumf-members was reduced from [redacted].

Data Processing Consequences

To obtain results of relevance for our thesis, we merged parts of the data sets together. In consequence of the performed subsetting, the number of values in variables, exceeding the number of products and Trumf-members, was reduced. Due to the large amount of data, we considered the reduction as justifiable.

4.3 Descriptive Statistics

In this section, we present a selection of general descriptive statistics in order to give grounds for further analysis. More specifically we look at the overall supply of organic products and within different product categories, as well as some characteristics of the Trumf-members.

4.3.1 **Supply of Organic Products**

We first look at the share of organic products offered within the different product categories. In section 4.3.3 we compare these numbers to the actually purchased products.

Examining the registers of products offered by Meny, we find that they offer [redacted] conventional and [redacted] organic products in total. Out of the [redacted] different main product groups, hereby "product categories", we find organic options in [redacted] of them. Product categories with no organic options were for instance equipment for cars and boats, newspapers, books and magazines. In the food-related product categories we found no organic options in the product categories [redacted], among others. Groups with no organic options are not included in our analysis.

In Figure 4-1 we present the product categories with the highest share of organic products relative to the conventional.

Figure 4-1: The Ten Product Categories with the Largest Shares of Organic Products as Opposed to Conventional

[redacted] is the category with the highest, with approximately [redacted] percent respectively. The product category of [redacted] also has a relatively large share.

4.3.2 The Trumf-members

We now present an overview of the Trumf-members used in our analysis; what characterizes them regarding their place of residence, age and gender.

Place of Residence

When considering the members' place of residence, we look at the [redacted] counties in Norway in the year [redacted]. In Figure 4-2 the counties with the highest numbers of registered Trumf-members relative to the population number are presented. That is, we here divided the number of Trumf-members registered within each county from our sample by the number of inhabitants within each county. We note, nevertheless, that the customers' registered county does not necessarily correspond to the county where the transactions are made and the products are purchased.

Figure 4-2: Share of Trumf-members within each County

Age

In order to identify generational trends in our analysis, we divide the Trumf-members by a five-year-interval and create 16 groups. We remove the members at the age of 19 years and younger assuming there are other people in these members' households who are in charge of grocery shopping. Furthermore, we merge the members of age 95 and higher due to the limited amount of data on these ages. In Figure 4-3 we present the Trumf-members divided into their respective age group.

Figure 4-3: Trumf-members distributed by Age Group

As shown in Figure 4-3 we find the highest frequency of members among the [redacted]-year-olds, followed by [redacted] and [redacted]. This seems reasonable looking at the population distributed by age in [redacted]. We find the highest frequency of people in [redacted] (Statistisk sentralbyrå [SSB], 2020a).

Gender

Among the Trumf-members we find that [redacted] are female, and [redacted] are men. In comparison, there were 50.4 percent women and 49.6 percent men in Norway in 2017 (SSB, 2020a). Hence, there are more [redacted] than [redacted] among in our selection of Trumf-members.

4.3.3 The Demand for Organic Products

In this section, we present the average purchases of organic products for all Trumf-members. The purpose of doing this is to create a basis for finding buying patterns that stand out among the different customers.

Organic Share

The average share of organic products purchased as opposed to conventional products is [redacted] percent.

Product Categories

In Figure 4-4 the product categories with the highest shares of organic products purchased as opposed to conventional by all the Trumf-members are presented. [redacted], [redacted] and [redacted] appear to be the most popular product categories for organic purchases. About [redacted] percent of all [redacted] products purchased is organic.

Figure 4-4: Categories with the Highest Shares of Organic Products Purchased

We note that these product categories resemble the product categories with the highest numbers of organic products offered, presented in Section 4.3.1.

4.4 The Organic Customer

In this section, we present our findings regarding what characterizes a consumer with a willingness to pay for organic products, the amount, and what they buy. Furthermore, we consider groups with little willingness to pay. The purpose of this section is to detect whether there are any characteristic differences within place of residence, age and gender.

4.4.1 Place of Residence

We now look at the members' buying patterns with their place of residence as a starting point. Moreover, we present possible explanations for why the share of organic purchases varies between the counties and municipalities.

Organic Share

In Figure 4-5 we present the share of organic products purchased based on each member's registered county. Hence, the figure shows the number of organic products purchased by each member divided by the total amount of products purchased by each member. The bar charts represent the average of these for each county. According to our data, the Trumf-members registered in [redacted], [redacted] and [redacted] buy the most organic products when comparing the amount to conventional products.

Figure 4-5: Share of Organic Products Purchased by Each Trumf-members' Registered County

Ordinary Least Square Regression Model

In order to check whether there are significant differences between the counties, we created a regression model. We now used the share of organic products sold in each Meny-store as the dependent variable. This was done by [redacted] in each

store by [redacted] in each store [redacted]. Hence, the organic product shares from [redacted] stores represent the unit of observation. The [redacted] were used as independent variables [redacted]

As seen in the output, not all of Norway's counties are represented. This is due to the fact that we do not possess data from stores in Aust-Agder, Finnmark, Nordland or Sogn og Fjordane, although there are; as presented in Figure 4-2, Trumf-Members registered there.

Our null hypothesis is that there is no statistical difference between the shares of organic products sold as opposed to conventional in the different counties. The alternative hypothesis was that there are differences between the counties. The output of the model is presented in Table 4-1.

[redacted]

Table 4-1: Model Output, Organic Share in Different Counties

We use a significance level of .05. That means, a 5 percent chance of concluding that differences exist when there are no actual differences. Hence a p-value in our output less than .05 is statistically significant and indicates strong evidence against the null hypothesis (McLeod, 2019). The intercept and reference category in this model is the category that comes first alphabetically, Akershus. We hence model whether the remaining counties sell significantly more or less organic products than Akershus when comparing to conventional products.

As shown in the table the shares of organic products sold are significantly lower in [redacted], [redacted], [redacted] and [redacted] than in [redacted]. The sales in [redacted] are significantly higher.

Data from the Norwegian Agriculture Agency

Excluding some of the counties due to limited amount of data, we find support in a report from the NAA presenting the share of turnover for organic products in the different counties (Landbruksdirektoratet, 2018, p. 45). This report helps us distinguish in which counties the inhabitants buy more and less organic products. We note nevertheless, that the NAA present numbers regarding all organic product purchases, while the numbers in the NG data represent Meny only.

The NAA report shows that the counties Oslo, Akershus and Sør-Trøndelag have the highest turnover shares for organic product purchases as opposed to conventional, Oslo with 2.75 percent (Landbruksdirektoratet, 2018, p. 45). These shares resemble our findings in Table 4-1 to some degree. We found Akershus and Sør-Trøndelag to have relatively high purchasing-shares for organic products. On the opposite edge of the scale; counties with low organic turnover shares, the NAA presents Finnmark, Sogn og Fjordane and Aust-Agder (Landbruksdirektoratet, 2018, p. 45). We do not possess sales numbers from these counties,

but found that the members registered in [redacted] and [redacted] have the lowest purchasing shares for organic products.

We now consider both our findings regarding where the Trumf-members are registered and how much they buy, the share of organic products sold in the different counties, and the report from the NAA representing the turnover. In result, we categorize [redacted], [redacted] and [redacted] as counties with high organic product purchasing shares. [redacted], [redacted] and [redacted] are categorized as counties with low.

In the following part, we look at potential reasons for why the purchasing behavior regarding organic products differs to a relatively large degree between the counties.

Organic Acreage

In a report from the NAA with data from 2017 we find an outline of the development in organic agricultural land. Nord- and Sør-Trøndelag and Buskerud have the highest shares of agricultural land used for organic food production with approximately 7 percent respectively. The lowest shares of organic agricultural land are found in Finnmark and Rogaland, both with 0.7 percent (Landbruksdirektoratet, 2018, p. 9-10).

We question whether relatively high shares of organic acreage as observed in Nord- and Sør-Trøndelag have an impact on the residents' consumer buying patterns.

Organic Acreage: Correlation Test

To evaluate the association between the share of organic agricultural land and the share of turnover for organic products, we use a Pearson's correlation test for continuous variables. The first variable [redacted] represents the land used for organic farming within each county divided by the total acreage within each county (Landbruksdirektoratet, 2018, p. 9). The second variable [redacted] is the turnover for organic food within each county divided by the total turnover for food within each county (Landbruksdirektoratet, 2018, p. 45).

Table 4-2: Model Output, Association between the Share of Organic Agricultural Land and the Share of Organic Turnover

In order to analyze the results of the correlation test in Table 4-2, we first consider the assumptions that have to be met evaluating the relationship. The variables are continuous, and creating a scatterplot, we find that the covariation is . The plot reveals some potential outliers, but we choose to keep all data as we find no reason to remove certain counties from the analysis. To see if the variables follow a normal distribution, we use a Shapiro-Wilk normality test. Our null hypothesis is that the data are normally distributed, and the alternative hypothesis that the data are not normally distributed. In our test results we find that the share of organic agricultural land has a p-value of . The turnover in organic purchases has a p-value of . For the share of agricultural land, the p-value is than the significance level .05. This implies that the distribution of the data is . For the share of turnover for organic products, this is not the case, and . Hence, all assumptions are not met, and are not able to determine whether or not the share of organic agricultural land and the share of organic purchases are significantly correlated with each other. If we were able to assume that the data were , we would still not be able to argue for a significant relation between the two variables. This is due to the fact that we have chosen a significance level of .05. In the output, we find a p-value of .

Income, Population Density, Age and Level of Education

The NAA states that in Sweden and Denmark, the consumers who purchase the most organic food have an income above average (Landbruksdirektoratet, 2020, p. 66-67). Further, they found that in Denmark, the preference for organic products is higher among the urban population than the rural (Landbruksdirektoratet, 2020, p. 64). With data from Statistics Norway we look at the various income levels in Norway's municipalities for 2017 (SSB,

2020b) and the population density in 2017 (SSB, 2020c) to see whether we find a significant relationship between income, population density and share of organic product purchases. In addition to this, we added the average age in each municipality with data from 2019 (Kommuneprofilen, 2020), and question whether or not age may be an explanatory variable.

According to research done on students in the eastern part of Norway published by Sparebank 1 Østlandet (2020), people with higher education consider climate and environmental characteristics as more important when purchasing a product, than people with no or lower education. Vittersø et al. (2020, p. 53) find that environmental concerns are ranked as the number one reason why Norwegians believe organic food is beneficial. This is when comparing environmental concerns to benefits such as animal welfare, health, taste and quality. When examining data published by Statistics Norway in 2017 (SSB, 2018), we find that the municipalities with the highest shares of educated people are Bærum, Asker, Oslo and Volda. Examining the data from NG, we find that the members registered in the municipalities Oslo and Bærum buy more organic products when comparing to conventional than average. These findings give us grounds to believe that education can influence the consumers' preferences for organic products.

Income, Population Density, Age and Level of Education: Regression Analysis

In our robust linear regression model, we used the share of organic product purchases in the [redacted] as the dependent variable [redacted] The yearly average income [redacted] the number of people per square kilometer land [redacted] and the average age [redacted] in each municipality were used as independent variables along with the share of students [redacted] and share of people with long [redacted] and short education [redacted] within each municipality. A person with long education is identified by having completed four or more years of higher education, while a person with short education is identified as having completed one to three years of higher education.

Our null hypothesis is that there is no relation between the dependent variable and the independent variables. Our alternative hypothesis is that at least one of the independent variables is useful in explaining the share of organic product purchases in the members' municipalities. In Table 4-3, the results from our robust linear regression model based on 37

observations are presented.

Table 4-3: Model Output, Share of Organic Products Purchased and Income, Population Density, Average Age and Level of Education within Norway's Municipalities

Looking at the data in Table 4-3, we find that the variable representing the population density, is significant with a p-value of [redacted] using a significance level of 5 percent. More specifically, this implies that more populated municipalities can explain higher shares of organic product purchases.

We do not reject the null hypothesis stating no relation between the dependent variable; the share of organic purchases, and the independent variables; average age, average income, the share of people with short education and share of students within each municipality. The variable representing the share of inhabitants who has completed four or more years of education has a p-value of [redacted], close to our significance level of .05. Nevertheless, we can not reject the null hypothesis stating no relation between the variables.

Products

Examining the most popular product categories for organic purchases, we found little variation between the registered counties. [redacted] was the most popular product category for every registered county, and [redacted] and [redacted] followed up with some variation in order. Hence, we cannot argue that there are significant differences in preferences for organic products between the members' registered counties.

4.4.2 **Age**

We now examine the organic purchases distributed across age groups, using the grouping presented in 4.3.2. Before proceeding with our analysis, we omit the age group "95+"; while examining general statistics for these members, we found that the results were not reliable due to the relatively limited amount of data.

Organic Share

In Table 4-4 the members of age 20 to 94 are presented with their average share for organic product purchases as opposed to conventional.

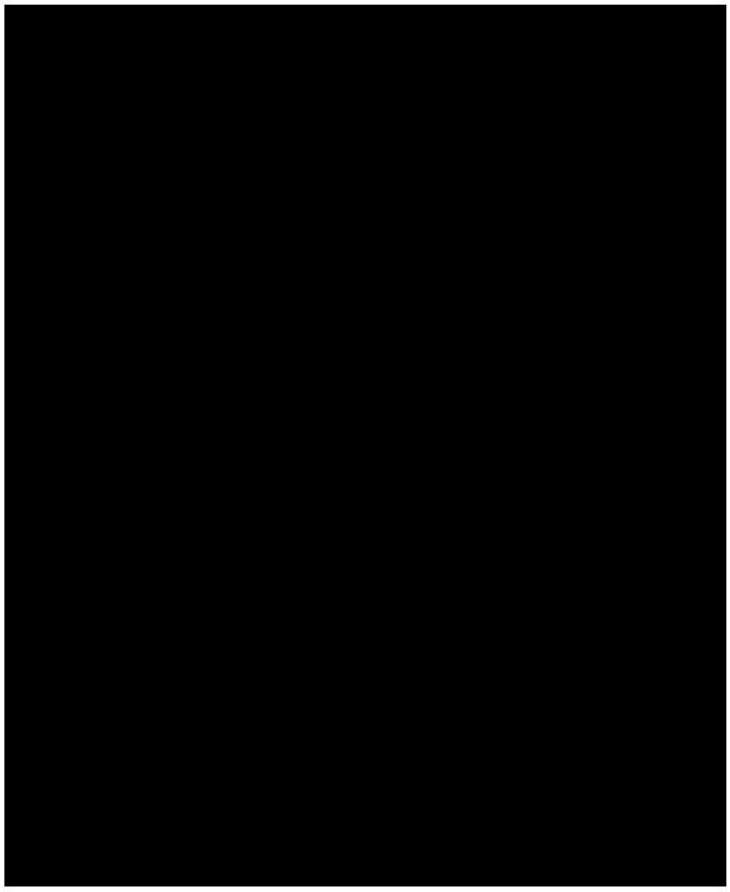

Table 4-4: Organic Products Purchased by Age Group

As shown in Table 4-4, the [redacted] buy more organic food than any other age group, followed by the [redacted]. The [redacted] buy the least, followed by the members aged [redacted].

Products

In this section we examine the most popular product categories for organic products within each age group. Although the categories vary in order, the most popular are [redacted], [redacted], [redacted], [redacted] and [redacted] for all age groups.

We now take a closer look at the variation between the age groups. Altogether, for members aged [redacted], [redacted] is the most popular product category. The only exception is for the [redacted] where [redacted] products are more popular. For [redacted] is the most popular organic product category. Considering the [redacted], that is, members from [redacted], organic [redacted] is more popular than any other product category. [redacted] is the most popular product category for organic products, with an exception for the members aged [redacted] and [redacted].

4.4.3 Gender

In this section we analyze the Trumf-members' organic purchases by gender.

Organic Share

Women buy more organic products than men. More specifically, [redacted] percent of the products women purchase are organic and the corresponding percentage for men is [redacted].

Products

Using product groups as a starting point, we now study whether women and men have different preferences when purchasing organic products.

Figure 4-6: The 10 Most Popular Organic Product Categories for Women

Figure 4-7: The 10 Most Popular Organic Product Categories for Men

Figure 4-6 presents the ten most popular categories for organic products for women and Figure 4-7 presents the ten most popular categories for men. Comparing the two figures we see that for both genders, [redacted] is the most popular category. Except for [redacted] products and [redacted] products, the ten most popular product categories resemble. Hence there are [redacted] divergence in preferences for organic products between gender.

5. Survey Analysis

In this chapter, we examine the data generated from our survey. The survey was conducted to map the respondents' purchasing intention, opinion on, and impression of, organic products.

5.1 Descriptive Statistics of the Survey

The survey was distributed on Facebook. We recorded responses from March 19 – March 23, 2020. The original dataset had 554 responses, but responses that were not 100 percent completed were deleted from the dataset. This was done to secure a reliable and valid dataset. Of the total responses, 84 responses were deleted. The reason why people did not fully complete the survey may be because they were not interested in the subject or thought the questions were too challenging. The survey only took about 2.5 minutes to complete, so we do not believe that the length of the survey was discouraging. The deleted responses did not change the dataset significantly, and hence do not have a big impact on the analysis. After deleting the uncompleted responses, we have 470 respondents to our survey.

5.1.1 Gender and Age

Figure 5-1 shows the share of gender of the different respondents.

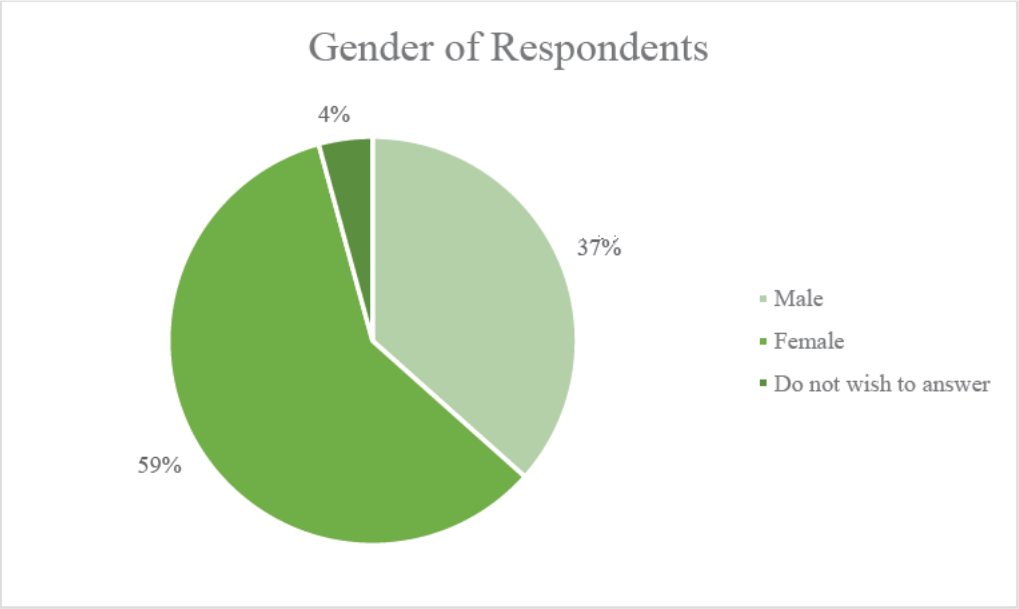

Figure 5-1: Gender of Respondents

Of total respondents, the majority are female with 59 percent, and 37 percent of the respondents are male. The remaining 4 percent chose not to answer this question. A possible explanation for why the majority of respondents are female may be that women in general are more eager to conduct volunteer surveys (Smith, 2008). Another possible explanation may be that females more often than men are part of loyalty programs and are often more interested in subjects concerning groceries (Audrain-Pontevia & Vanhuele, 2016). Consequently, women may be more interested in the survey subject and more willing to answer the survey. The optimal outcome would be to have a distribution of gender closer to fifty-fifty, but this is tough to obtain with an online survey as we were not able to target different people. However, as the gender is fairly distributed this gives us a good enough base for our research.

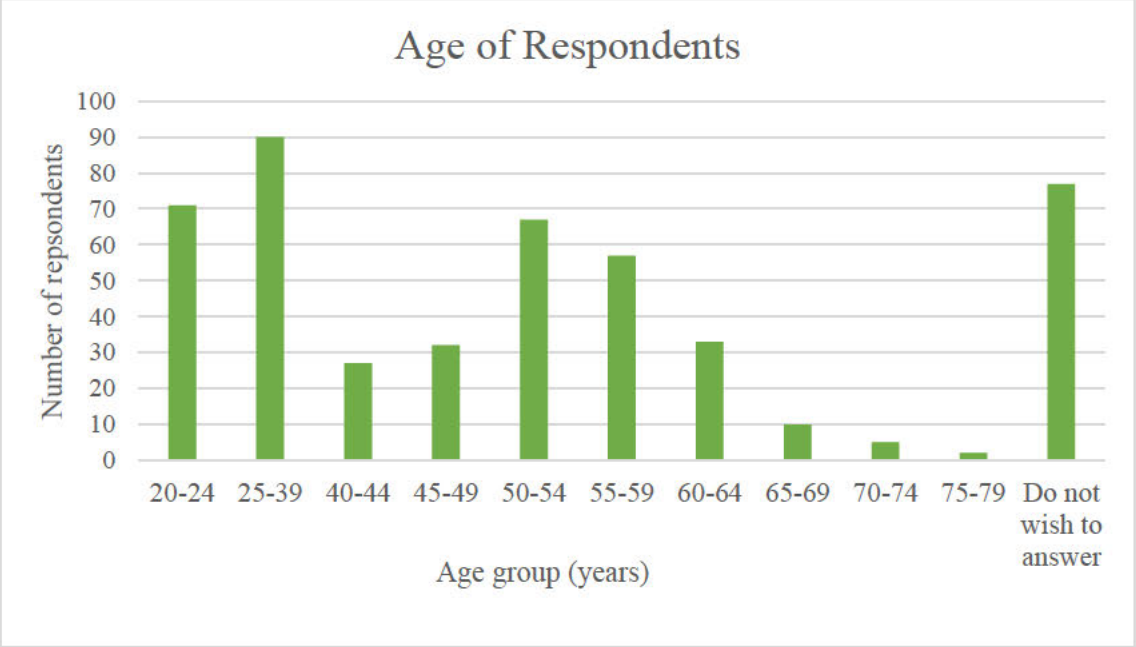

Figure 5-2: Age of Respondents

Figure 5-2 shows the distribution of the age of the respondents. Most of the respondents are in the age group 25-39. This makes sense as this age group was not divided correctly in the five-year ratio. However, this should not have a big impact on the survey results.

The respondents are more evenly distributed than what we expected. We assumed to have a larger share of young respondents as the survey was distributed on social media. Most of our connections on social media are young adults. Nevertheless, 47 percent are 49 years and younger and 37 percent are 50 and older. We reason that this gives a fair distribution of age.

More, we see that a relatively big number of the respondents did not want to answer this question. We do not know the reason for this.

5.2 Purchasing Behavior

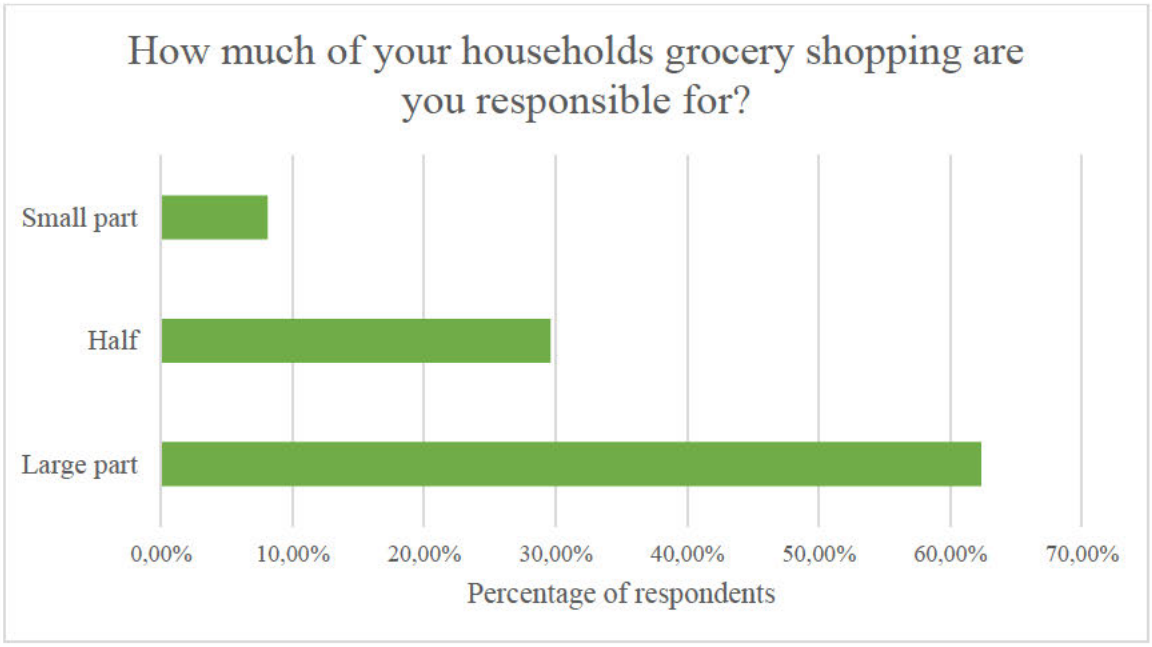

Figure 5-3: Respondents Grocery Shopping Responsibility

Figure 5-3 presents how much of the households' grocery shopping the respondents are responsible for. In the question regarding how much of the shopping the respondent is responsible for in their household (Appendix, Question 1), most of the respondents answered that they do the majority of the shopping for their household. Of total respondents, 62 percent stated that they do a large part of the grocery shopping, while 30 percent responded that they do half of the shopping. Only 8 percent of the respondents stated that they do a small part of the shopping for their household. This creates a good base for answering our research question. As most of the respondents do the grocery shopping for their household, they will be also the ones going to the grocery store to purchase, or not purchase, organic products. Hence, they are relevant to the research.

Figure 5-4: Importance of Different Factors when Grocery Shopping

The respondents were asked how important the following factors are when they do their grocery shopping; brand, price, organic, product packaging and locally produced. The question may be found in Appendix, Question 2. Furthermore, they were given the alternative to disclose other factors they see as important if any. The answers' alternatives have been numbered from 1-5, 1 being not important, 2 being neutral, 3 being somewhat important, 4 being important and 5 being very important. Figure 5-4 shows the mean of how important the respondents thought the different factors are when grocery shopping.

The factor that appears to be the most important for the respondents when they are grocery shopping is price. The importance of the different factors was somewhat spread, but the majority of the respondents had price as "somewhat important" or "more important". Following, the brand of the product and whether it is locally produced appears to have some significance to the respondents when they are grocery shopping. Product packaging appears to be somewhat important.

The factor of organic has the lowest mean, and respondents appear to not think organic is very important when they are grocery shopping. However, it is important to note that some thought organic was important, but the amount that stated that this is not an important factor, dragged the mean down. Of total respondents, 49 stated that they thought organic was important and

14 stated that it was very important. In comparison, 147 stated that organic was not important at all. Generally, respondents thought "other" were of larger importance than organic. However, none of the respondents disclosed what other factors they thought were important. Therefore, what other factors the respondents think is important is unknown.

5.3 Organic Products

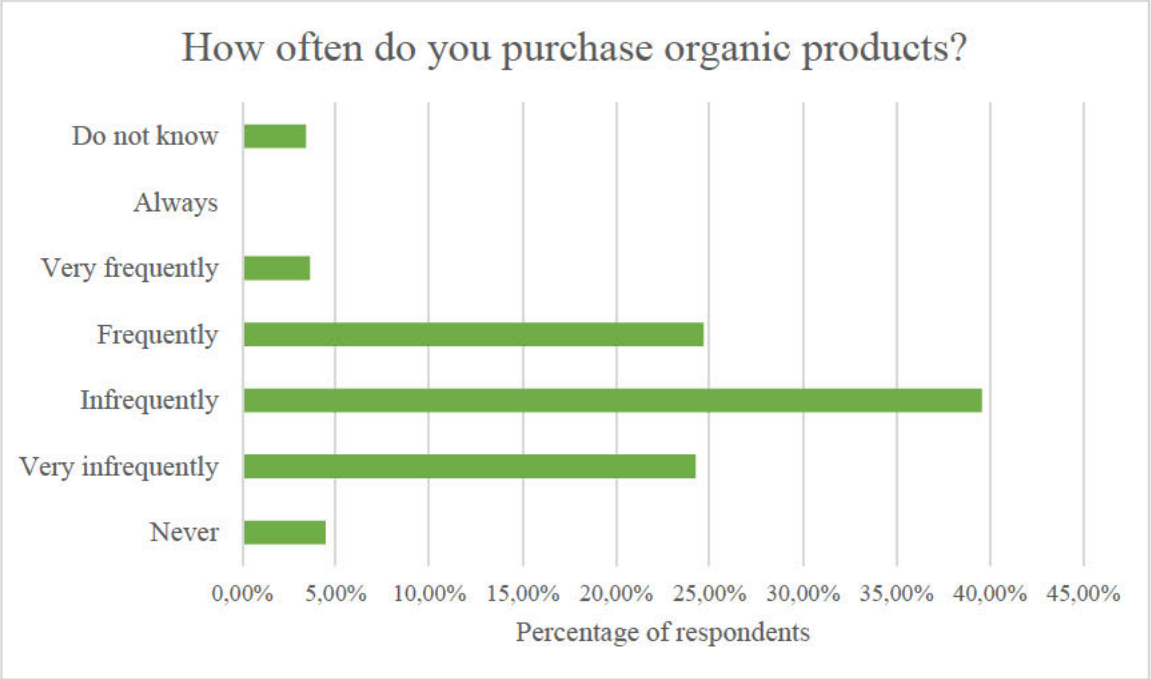

Figure 5-5: Respondents Share of Organic Purchasing

Figure 5-5 shows how often the respondents purchase organic products. The question as it was presented to the respondents may be found in Appendix, Question 3. Only 3 percent of the respondents purchase organic products often, while no respondents "always" purchase organic products. This makes sense as the NG-data revealed that there are categories that do not offer organic products. Hence, it is impossible to always purchase organic. A share of 24 percent reveals that they often buy organic products. However, a relatively big share of the respondents, 41 percent, reveals that they rarely purchase organic products.

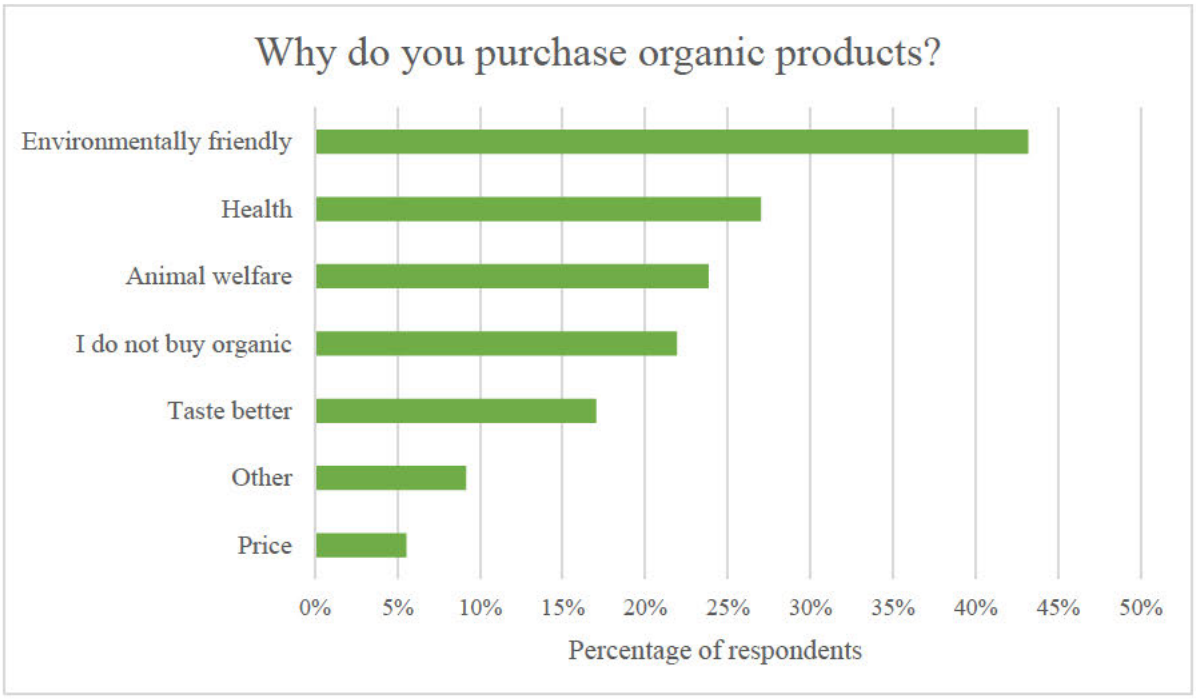

Figure 5-6: Reasons for Purchasing Organic Products

The respondents were asked why they purchase organic products, see Figure 5-6. The respondents were given the opportunity to select as many reasons as they wanted to why they purchase organic products. The question may be found in Appendix, Question 4. About 43 percent revealed that they purchase organic products because they deem it as environmentally friendly. This is an interesting observation as the trait is much debated. Other important factors were health and animal welfare. A smaller share, 22 percent of respondents, answered that they do not purchase organic products. Furthermore, the respondents were given the option to write their own answer if there were other reasons that they purchase organic. Some respondents wrote that they purchase organic products if conventional products are not available, or that they do not do it consciously.

Reasons for Purchasing Organic - Men	
Reason	**Percentage of Respondents**
Environmentally friendly	36 %
Health	27 %
Animal welfare	27 %
I do not buy organic products	25 %
Tastes better	22 %
Other reasons	12 %
Price	6 %

Table 5-1: Reasons for Purchasing Organic - Men

Reasons for Purchasing Organic - Women	
Reason	**Percentage of Respondents**
Environmentally friendly	47 %
Health	28 %
Animal welfare	22 %
I do not buy organic products	20 %
Tastes better	14 %
Other reasons	8 %
Price	6 %

Table 5-2: Reasons for Purchasing Organic - Women

Looking at the respondents' gender and their answers to reasons they purchase organic, the factors have the same order as looking at it all together. See Table 5-1 for reasons men purchase organic products and Table 5-2 for reasons women purchase organic products. There is a noticeable higher share of women as opposed to men that responded environmentally friendly. About 47 percent of women answered environmentally friendliness, while a smaller share, 36 percent, selected this option. A larger share of men than women selected that animal welfare was a reason for purchasing organic. Furthermore, a larger share of men selected that they do not buy organic products. Women and men appear to have somewhat of the same view on the reasons for purchasing organic, but more women than men may see environmentally friendliness as an important reason.

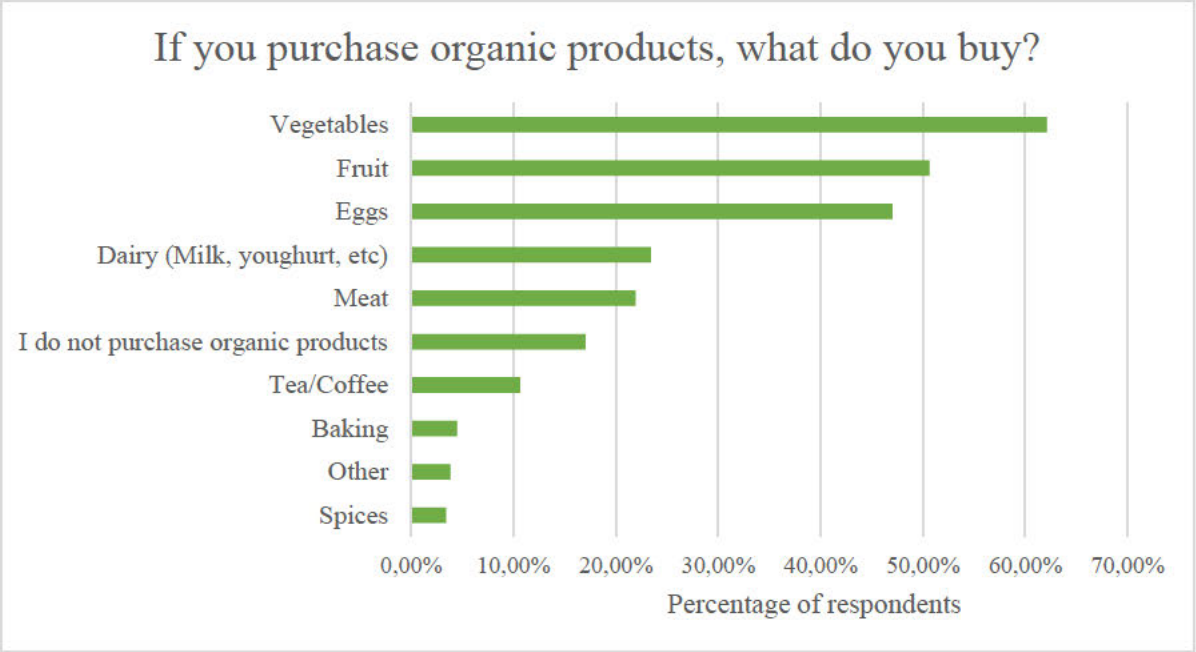

Figure 5-7: Respondents Organic Purchases

Figure 5-7 shows what type of organic products are purchased. The respondents were given the opportunity to select as many alternatives as they needed. The total for each alternative was divided by the number of respondents (470 respondents) to find the percentage for each alternative. A large part of respondents, 62 percent, purchase vegetables if they buy organic products. Furthermore, 51 percent purchase fruit and 47 percent purchase eggs. These three product categories, vegetables, fruit and eggs, seem to be the most important categories for the respondents when it comes to organic products. Other products, such as dairy and meat, appears to be less important, while baking products, spices, and tea and coffee are rarely purchased. Moreover, 17 percent said that they do not purchase organic products at all

Gender

Organic Product Purchases - Men	
Product Category	**Percentage of Respondents**
Vegetables	56 %
Fruit	45 %
Eggs	45 %
Dairy	30 %
Meat	29 %
I do not buy organic products	20 %
Tea/Coffee	13 %
Baking goods	6 %
Spices/Herbs	5 %
Other products	3 %

Table 5-3: Organic Product Purchases - Men

Organic Product Purchases - Women	
Product Category	**Percentage of Respondents**
Vegetables	67 %
Fruit	54 %
Eggs	49 %
Dairy	20 %
Meat	18 %
I do not buy organic products	16 %
Tea/Coffee	10 %
Baking goods	4 %
Spices/Herbs	4 %
Other products	3 %

Table 5-4: Organic Product Purchases - Women

Table 5-3 shows what the male respondents answered that they purchase when they buy organic products. Table 5-4 displays the corresponding information for females. Comparing the tables, we see that they have the same order for both gender, and if you do not sort by gender (see Figure 5-7). Vegetables and fruit have a noteworthy higher share for female respondents than men. Furthermore, dairy and meat have a larger share for males than women.

Age

Young adults (39 and down)	
Product Category	**Percentage of Respondents**
Vegetables	59 %
Fruit	49 %
Eggs	47 %
Dairy	19 %
I do not buy organic	19 %
Meat	19 %
Tea/Coffee	8 %
Baking goods	4 %
Other products	4 %
Spices/Herbs	1 %

Table 5-5: Young Adults' Organic Purchases

Adults (40 and up)	
Product Category	**Percentage of Respondents**
Vegetables	65 %
Fruit	51 %
Eggs	45 %
Dairy	27 %
Meat	20 %
I do not buy organic	14 %
Tea/Coffee	13 %
Spices/Herbs	6 %
Other products	5 %
Baking goods	4 %

Table 5-6: Adults' Organic Purchases

Table 5-5 displays what young adults, aged 39 and younger, responded to what kind of organic products they purchase. Table 5-6 has the same information, but for adults, aged 40 and older. Again, vegetables are the most purchased product category. More young adults, 19 percent, stated that they do not purchase organic compared to 14 percent for adults. The biggest difference between young adults and adults is the purchasing shares of dairy. As much as 27 percent of adults stated that they purchase organic dairy products, while only 19 percent of young adults stated the same. Hence, it appears that organic dairy products are more popular among those aged 40 and older.

5.4 Price Differences

We asked what the respondents believed was the price differences between two products. More specifically, we presented two packages of carrots from national brands, one conventional and one organic. See Appendix, Question 6 for details.

To explore our research question, the respondents were first presented with pictures presenting two different carrot packages. The first picture was a package containing 750 grams of organic carrots from the brand "Go Eco, Bama Dagligvare AS" with a shelf price of 39.87 NOK per kilogram. The organic products were imported from Denmark. The second picture was a carrot

package containing 750 grams of conventional carrots from "Gartner, Bama Dagligvare AS" with a shelf price of 37.20 NOK per kilogram. The conventional carrots were produced in Norway.

According to the product descriptions at Meny's website (Meny, 2020d), we found these two products of carrots to be the most comparable in terms of quality attributes. Among the alternatives were a package from the brand First Price and a package of Gartner's "Delikat Gulrot". The first appeared to be too cheap and the second belonged to specials. Comparing the prices for the chosen carrot products, organic carrots are in fact 2.67 NOK more expensive than the conventional, approximately 7 percent more expensive.

In the survey, the respondents were asked to guess or estimate the price difference between the organic and conventional carrot packages. The respondents had the option of answering any option from down to 30 NOK cheaper to 30 NOK more expensive.
Calculating the answers from the 470 respondents, we find that the average estimation of price difference is 7.68 NOK. The median is 9 NOK, and the mode 6 NOK. On average, the respondents estimated the organic carrots to be 28 percent more expensive than the conventional. As we assumed, the results demonstrate that there may exist a belief that organic products are expensive, and even more expensive than what they actually are.

5.5 Impression of Organic Products

The respondents were asked to state to what degree they agreed with six statements about organic products (Appendix, Question 8). The results are presented in Table 5-7.

Statement	Disagree	Partially Disagree	Neutral	Partially Agree	Agree
Organic products are more expensive than non-organic products	4 %	7 %	4 %	47 %	38 %
rganic products taste better than non-organic products	13 %	11 %	44 %	25 %	6 %

Organic products are healthier than non-organic products	9 %	14 %	27 %	38 %	12 %
Organic products have better quality than non-organic products	10 %	22 %	32 %	28 %	7 %
Organic products are more environmentally friendly than non-organic products	5 %	10 %	19 %	42 %	24 %
Organic farming is more animal friendly than conventional (regular) farming	4 %	7 %	23 %	38 %	29 %

Table 5-7: Six statements about Organic Products

Organic products are more expensive than non-organic products

The majority of respondents somewhat agree or totally agree with the statement that organic products are more expensive. More specifically, about 47 percent partially agreed and 38 percent agreed that organic products are more expensive. This reveals that the respondents view organic products as pricier. When the respondents previously were asked about what was important when they were doing their grocery shopping, price was one of the most important factors. As it appears that organic products are viewed as pricier than conventional products, this is likely a reason why people do not often purchase organic products.

Organic products taste better than non-organic products

When the respondents were asked about the taste of organic products versus conventional products, most were neutral to the statement with 44 percent. However, some, 25 percent, partially agreed. Taste appears to not be important when the customer decides to buy organic or conventional products.

Organic products are healthier than non-organic products

Respondents were more split when asked about whether organic products are more healthy than conventional products. A share of 38 percent partially agreed with the statement.

However, a relatively big share of 26 percent was neutral to whether or not they think organic products are healthier. About 14 percent partially disagreed that organic products are healthier. This shows that healthiness may not be a trait that is strongly connected to organic products in Norway.

Organic products have better quality than non-organic products

The respondents were even more divided when asked about the quality of organic products. A percentage of 32 were neutral, 28 percent partially agreed, and 22 percent partially disagreed to the statement. This shows that the view of organic products' quality is somewhat split. People often connect price to quality (Grewal, Nordfält, Roggeveen, Olbrich & Jansen, 2014). As organic products are viewed to be pricier, this may be a reason why some agree that the quality is better.

We have some respondents who do not buy organic products. Thus, a reason for why they are neutral may be that they have not tried organic products. Furthermore, if you do not purchase organic products you may partially disagree that organic products have better quality than conventional products. The customer may view organic products equally or less equal to conventional products in quality.

Organic products are more environmentally friendly than non-organic products

On the statement concerning environmentally friendliness, 42 percent responded that they partially agree that organic products are more environmentally friendly. A share of 24 percent said that they totally agree with the statement. In a previous question, a high count, 29 percent respectively, of respondents said that they purchase organic products because of environmental-friendliness. This shows that environmental-friendliness may be a trait that is strongly connected to organic products in Norway.

The *Organic farming treat animals better than conventional (traditional) farming*

A great number of respondents, 38 percent, partially agreed that organic farming treats animals better. Following, 29 percent totally agreed and 23 percent were neutral to the statement. Few respondents partially or totally disagreed. Hence, organic farming may be viewed as farming that treats animals better.

6. Discussion of Results

In this chapter, we discuss our main findings from the analysis of the data from NG and the survey. We answer the thesis' research question and objectives.

6.1 Discussion of Main Findings

The following research question ought to be answered with background from the analysis and with help from the literature that has been reviewed:

Who are the organic customers in Norway?

To help answer and narrow down the research question, the following two objectives were outlined:

1) *What are the characteristics of the customers that purchase organic products?*
2) *How does the availability of organic products within the different product categories influence the customers' shopping habits?*

Data from NG with information about their Trumf-members were used to analyze the members' purchasing behavior and demographics. Furthermore, a survey was developed and conducted on a representative selection to get insight into the respondents purchasing behavior and view on organic products. The analysis of both the data from NG and the survey will be used to answer the research question with its two objectives.

6.1.1 **Objective One**

Objective one: What are the characteristics of the customers that purchase organic products?

The purpose of the first objective is to find the characteristics associated with people that purchase organic products.

How much the Organic Customers Buy

Norway has a small share of organic product purchases compared to conventional products in contrast to other Scandinavian countries (Landbruksdirektoratet, 2020, p. 63). In our analysis, we found that only [redacted] of all purchases are organic at Meny's stores. From our survey data, only 3 percent said that they purchase organic products often and no respondents said that they always purchase organic. A larger share, 41 percent, stated that they rarely purchase organic products.

Place of Residence

In our NG-data we found that the Trumf-members registered in [redacted], [redacted] and [redacted] buy the most organic products when comparing to conventional. Completing an ordinary least square regression based on the Meny-stores' sales and their respective counties, we found significant results proving that the highest shares of organic products were sold in [redacted], and the lowest share in [redacted]. There were no huge differences between the choice of organic products. [redacted] were the most popular product category for organic purchases in all counties, followed [redacted] in different orders of importance.

Regarding characteristics of the different counties and municipalities, we found that the share of organic acreage within each county did [redacted]. Nevertheless, we found that an increasement in the [redacted] of organic product purchases while average [redacted] and average [redacted] were not. Neither is level of education.

Age

Among all age groups, people in the age of [redacted] buy the most organic food compared to conventional, with [redacted] percent compared to the average of [redacted]. The youngest age group, [redacted] buys the least with [redacted] percent. This is in line with Valvik (2012), who claims that young families, in the age group 30 to 39 are overrepresented in the consumption of organic food. Comparing our findings to other European countries, our numbers are similar. A report from the NAA states that in Denmark, women that are in the age of 30 to 49 and families with children consume more organic food than the average number among Danish citizens. In Sweden, the organic consumer is characterized as a female in the age of 35 to 60 (Landbruksdirektoratet, 2020, p. 66-67).

When it comes to organic product purchases, [redacted] were the most popular for all the age groups, although they vary in order. For the age group [redacted], baby food is the most popular. This may be explained by the fact that the average age to become a parent is 29.5 for women and 31.8 for men (SSB, 2020d). For the members aged [redacted] and [redacted], apart from the age group [redacted], [redacted] was the most popular product category for organic purchases. From our analysis, [redacted] products were the most popular for the age group [redacted]. In the survey data we looked mainly at young adults, aged 39 and younger, and adults, aged 40 and older. For both young adults and adults, vegetables, fruit and eggs were the most popular. Hence, [redacted] as a popular product category is in line with the NG data and the survey data. Baby food was not an option in the survey. Therefore, this cannot be compared to the data from NG.

Gender

In our analysis of both the data from NG and the survey, we found that when comparing organic to conventional products, [redacted]. This is in line with Landbruksdirektoratet (2020, p. 67) and (Ureña et al., 2008) that also found that females are usually the ones to purchase organic. The most popular organic product category is [redacted] for both men and women. Next, females purchase [redacted] the most, and males purchase organic [redacted]. In our survey data, we found vegetables, fruit and eggs to be the most popular product categories for both men and women. [redacted] appears to be a popular organic category, as it is popular for both genders in both datasets. Baby food and dry rice was not an option in the survey and cannot be compared to the NG data. However, [redacted] was an option in the survey data, but was not a top category for women. This is interesting as it is a top category for women in our NG data.

Purchasing Intention

In our survey, some of the respondents stated that they do not intentionally buy organic or that they choose to buy organic when a conventional product is not available. This is an interesting finding as the research presented by Vittersø et al. (2020, p. 49) discovered that people are not very familiar with the Debio-label, and that most do not recognize the EU label for organic food.

The finding may be reflected in the fact that we found that organic [redacted] is the second most popular organic product for women. About 17 percent of all purchased [redacted] is organic.

Nevertheless, fewer women stated that they purchase organic tea in our survey, that is only 9.7 percent. Furthermore, people only slightly take notice of whether the product is organic and very few look for organic labels when they go shopping (Vittersø et al., 2020, p. 49).

Incentives

Clark et al. (2003) and Bartels and Hoogendam (2011) found that environmental concern can positively drive organic and green consumerism. However, Hansen et al. (2018) found that environmental consciousness is unrelated to organic food identity. From our survey, we found that the biggest factor for why the respondents purchased organic products was that they view it as environmentally friendly. Hence, our research is more in line with Clark et al. (2003) and Bartels and Hoogendam (2011). Health and animal welfare are two other attributes associated with organic foods, and in our conducted survey 27 percent and 24 percent stated that this is the reason why they purchase organic. Health is also important, but from our findings in our survey data, environmentally friendliness and animal welfare are the two factors that are deemed the most important aspect of organic products. This is an interesting finding as researchers have suggested that the health aspect is a more important driver for organic food purchases than environmental consciousness (Hansen et al., 2018; Mondelaers et al., 2009).

Barriers

In the conducted survey, the respondents revealed that price is the most important factor when they are grocery shopping. The majority of the respondents stated that it was “somewhat important” or “more important”. Further, about 47 percent partially agreed and 38 percent agreed that organic products are pricier than conventional. On the other hand, more than 30 percent believe organic food tastes better and has better quality. Hence, we define price as a barrier to organic purchasing. The same results were found by the NAA (Vittersø et al., 2020, p. 54) using data from 2019 where one out of four consumers “totally agreed” that organic products are “too expensive”.

In our conducted survey, the respondents were asked to estimate the price difference between two options of a package of carrots, one organic and one conventional. On average, the respondents estimated the organic product to be 28 percent more expensive than the conventional, while the actual price difference was 7 percent. This may imply that people overestimate the price differences in organic and conventional products. A possible explanation for this could be a change in the distribution channels for organic products. The

sales of organic products in specialty stores and health food stores with higher prices have decreased in the past years (Landbruksdirektoratet, 2018, p. 51-52). At the same time, a general increase in demand for organic products has resulted in an increased supply of organic products in the supermarkets (Landbruksdirektoratet, 2019a, p. 44). One could question if not all respondents were aware of this change.

6.1.2 Objective Two

Objective two: How does the availability of organic products within the different product categories influence the customers' shopping habits?

The purpose of the second objective is to look at the supply of organic products in the different product categories and look at how this may affect what the customers buy. On average, grocery stores in Norway offer about 2 percent organic products as opposed to conventional products. We found that Meny offers [redacted] conventional products and [redacted] organic products. This means that of total offerings, about [redacted] is organic. Hence, Meny has a bigger offering than the average Norwegian grocery store. All the Meny stores do not offer all the organic products available to them. The stores offer about 500 organic products on average (Meny, 2020a). The categories with the highest share of organic products offered are, in order, [redacted]. [redacted] has the largest assortment of organic products, that is, [redacted] options. Furthermore, [redacted] has the second largest assortment of organic options, with [redacted], and [redacted] the third largest with [redacted].

Vegetables

[redacted] have overall been [redacted] product category for organic products that are purchased, both analyzing the NG and survey data. According to the NG data, of total assortment in the [redacted] category, about [redacted] is organic. However, [redacted] do not even make it to [redacted]. This is an interesting finding as both datasets reveal [redacted] to be a very popular category for organic purchasing. In the survey data, we also found that the respondents connect environmentally friendliness to organic products. This may be as it appears that a large number of respondents believe that organic farming is more environmentally friendly, and hence wish to purchase organic vegetables.

Baby Food

[redacted] was found in the NG data to be [redacted] products to purchase organic. This is also the product category with [redacted]. Baby food was not an option in the survey data, so we are not able to compare these numbers.

Tea

In the data from NG we found that [redacted]. However, in the survey data only 10 percent of women stated that they purchase organic tea/coffee. Looking at the supply of organic tea, relative to conventional tea, this product category has a [redacted]. Taking our analysis into account, it may be that customers do not intentionally purchase organic, but that other factors influence their choice of products. The NAA had similar findings, stating that customers only slightly notice if the product is organic or not (Vittersø et al., 2020, p. 49).

Eggs

[redacted] is a product category that has a [redacted] organic options, [redacted] respectively. In the survey data, eggs was a part of the top three most popular categories to purchase when looking at the data overall, but also when looking at gender or age. Hence, Meny offers a good assortment of organic eggs, and it is also often purchased. Furthermore, the NG data revealed [redacted]. In this case, as both survey respondents and the data from the Trumf-members reveals [redacted] this seems to be a category that customers intentionally buy organic. This may be connected to that survey respondents stated that they connect animal welfare to organic products. Customers may intentionally purchase organic eggs, as they believe that organic farming treats the chickens better. Furthermore, it is noteworthy that organic eggs are the only organic product category that is 100 percent Norwegian (Pekala, 2020, p. 55).

6.1.3 Answering the Research Question

Our analysis of the NG data reveals that the average organic customer is a [redacted]. When compared to conventional, the highest shares of organic products are sold in [redacted]. [redacted] organic product

purchases were found in [redacted] compared to [redacted].

Regarding the customers' choice of organic products, we found that [redacted] was bought [redacted] by both genders when comparing the numbers to conventional purchases. This is also the product category with [redacted]. [redacted] has the second-largest share of organic options offered and has the second-highest share of organic purchases among women and the fourth among men. Nevertheless, in our conducted survey, only 9 percent of the women and 13 percent of the men stated that they purchase tea when they buy organic products. In general, we found that the product categories with high shares of organic options resemble the product categories with high shares of the organic product purchased. This may indicate that the availability of organic products within the different product categories influences the customers' shopping habits.

If, and when buying organic products, the respondents in our survey answered that the environmental aspect incentivized them. Health and animal welfare were found as the second and third most important aspects.

The factor that appeared to be the most important for the respondents when they are grocery shopping is the price of the product. The survey revealed that the majority of respondents somewhat agreed or totally agreed with the statement that organic products are more expensive. Hence, we define price as the main barrier for organic purchasing. In our conducted survey, the respondents were asked to estimate the price difference between two options of a product, one organic and one conventional. On average, they estimated the organic product to be 28 percent more expensive than the conventional. The actual price difference was 7 percent. This may imply that people overestimate the price differences in organic and conventional products.

6.2 Weaknesses of the Analysis

In this section we present what we believe are the main weaknesses of our study.

Utilizing data from two different periods of time may have created some implications for our results. We compared consuming patterns from the NG data obtained [redacted], and stated preferences and consumer buying behavior from survey data obtained in 2020. Doing this, we assumed that the characteristics of the Trumf-members regarding preferences of products are valid up until today.

Another factor that may weaken our results, is the use of Trumf-members as a representative sample for the Norwegian customers. This could be a potential threat to external validity as well as to the generalization of the results. Even though we regard our sample as representative in means of age, gender and place of residence, they are all Trumf-members, and their product purchases are only recorded at Meny. See section 3.4.2 for more details.

Another weakness in our thesis concerns the Trumf-members' geographical belonging and registered purchases. In our analysis we used the Trumf-members' registered place of residence; their municipality and county, to distinguish purchasing behavior in the different geographical areas. Nevertheless, the Trumf-members registered place of residence is not necessarily the municipality and county where their purchases actually occur. A Trumf-member registered in Oslo may have moved to Hordaland without changing the registered place of residence or vice versa. More, we do not possess data from all counties. In our data there are no registered Meny-stores in Aust-Agder, Finnmark, Nordland or Sogn og Fjordane, although there are Trumf-members registered there. On the other hand, there are some advantages of analyzing the data in this manner. For instance, the purchasing consumer patterns of Trumf-members in municipalities with few residents, but large cabin areas will not be influenced by visitors from other municipalities. Members from Oslo or Bergen do most likely have other factors influencing their purchasing behavior than what we find in smaller municipalities.

Analyzing the survey data, we assumed that the respondents' statements reflected their consumer buying behavior and purchasing intention. Nevertheless, we were not able to control whether or not this was the actual case.

6.3 Further Research

To further research the organic customers in Norway, we believe it would be beneficial to conduct surveys over a longer period of time. The information provided to consumers will change as the market evolves. Hence, consumers' behavior toward organic foods may change as well. Furthermore, to conduct surveys in the actual grocery store could be beneficial. We wished to conduct our survey in several Meny-stores, and talk to the actual customers. Unfortunately, we were unable to go through with this due to COVID-19. Having a longer time-period to conduct the survey and conducting the survey in-store, could allow for more generalization of the customers, as one would be able to control different variables, such as age and gender. Further, this could help control external validity.

Our data from NG was obtained from Meny' stores. To get access to or collect data from other grocery stores, such as Rema 1000 and Coop, would allow for a deeper insight into the Norwegian organic customer. With such data, the differences between the grocery stores could be explored, and would have been an interesting trait. Rema 1000 and Coop have private labels for organic products as well as public. Hence, there are different organic products in the different grocery stores. To research the variations between the stores and how this affects the customers' purchasing habits of organic products, would be valuable when characterizing the organic customers and their consumer purchasing behavior.

Examining both the NG data and the survey data, we found that a large share of Trumf-members and the survey-respondents purchase organic eggs. According to Pekala (2020, p. 55) organic eggs in the Norwegian market are 100 percent Norwegian. It would be valuable to further research this finding, and explore if consumers purchase this product because it is organic, a national product, or both. This could help disguise the underlying motivation for the customer to purchase a product that is both organic and local.

The NG data revealed that the Meny stores offer a relatively wide assortment of organic tea. However, the survey data discovered that the respondents said that this is not a product they usually do not purchase organic. Therefore, we questioned whether the customers intentionally purchase organic tea, or if this is something usually purchased unintentionally due to the wider

assortment. This finding could be useful to further research, and look at what product categories customers intentionally or unintentionally purchase organic.

In our survey data, respondents revealed that the top three motivations for purchasing organic products are environmental friendliness, health and animal welfare. This is an interesting finding as organic products are not necessarily the most environmentally friendly product or the healthiest option in the store. Norway is unable to produce all organic products in the country (Pekala, 2020, p. 55) and the number of Norwegian organic producers is declining (Landbruksdirektoratet, 2020, p. 11). Hence, several organic products have to be imported, and the environmental advantages of organic food production may be weighted out by pollution. Furthermore, the health aspect is quite interesting as there is no evidence that organic food is healthier than conventional (Norwegian Scientific Committee for Food Safety, 2014, p. 22-23). Further, due to the strong animal regulations in Norway, organic farming are not necessarily more animal friendly than conventional (Norwegian Scientific Committee for Food Safety, 2014, p. 14). We believe further research on why customers connect these traits to organic products would be of interest.

7. Conclusion

The aim of this thesis has been to characterize who buys organic products in the Norwegian grocery market. More, we wanted to find what the different customer groups buy, and why. The motivation behind this analysis is our joint personal interest for, and curiosity around, the organic food market. Furthermore, the growing interest in the organic market from consumers, government, growers, distributors and retailers, makes this a time-relevant and interesting topic.

In this thesis we used data from NG obtained from [redacted] as well as data from a survey we conducted in March 2020. While the NG data gave us a general description of the organic customer, the aim of the survey was to get a deeper insight into the consumers' purchasing intention, as well as their stated preferences regarding organic food.

Our findings reveal that the average organic customer is a woman in the age of 35 to 39. The estimates find support in sited references. When compared to conventional, an analysis of the NG data showed that the [redacted]. Nevertheless, we note that a cited report from the NAA found that Sør-Trøndelag has the fourth-highest share in the turnover for organic products. The highest shares are found in Oslo and Akershus. In addition, higher shares of organic product purchases were found in densely populated municipalities.

While examining the customers' choice of organic products, we used product categories as a measure. [redacted] was bought most frequently by both genders when comparing the numbers to conventional purchases. This is also the product category with the highest share of organic products offered, and might explain the relatively high purchasing rates. Tea has the second-largest share of organic options offered and has the second-highest share of organic purchases among women and the fourth among men. Nevertheless, in our conducted survey, only 9 percent of the women and 13 percent of the men stated that they purchase tea when they buy organic products. In comparison, 67 percent of the women, and 56 percent of the men stated that they purchase organic vegetables. This may imply that the customers buy organic tea unintentionally.

If, and when buying organic products, the respondents in our survey answered that the environmental aspect incentivized them. Health and animal welfare were found as the second and third most important aspects.

The factor that appeared to be the most important for the respondents when they are grocery shopping is the price of the product. The survey revealed that the majority of respondents somewhat agreed or totally agreed with the statement that organic products are more expensive. Hence, we define price as the main barrier for organic purchasing. The same results were found by the NAA using data from 2019. In our conducted survey, the respondents were asked to estimate the price difference between two options of a product, one organic and one conventional. On average, they estimated the organic product to be 28 percent more expensive than the conventional. The actual price difference was 7 percent. This may imply that people overestimate the price differences in organic and conventional products.

In this thesis we have characterized the customers with a willingness and an ability to pay for organic products. More, we have presented what they buy, and to some degree, why. That being said this thesis can be of value for market participants aiming to target different customer groups with the belonging products of interest.

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Appendix

Question 1

Hvor stor del av husholdningens dagligvareinnkjøp er du ansvarlig for?

- ○ Liten del (1)
- ○ Halvparten (2)
- ○ Stor del (3)

Question 2

Hvor viktig er følgende faktorer når du handler?

	Ikke viktig (1)	Nøytral (2)	Litt viktig (3)	Viktig (4)	Svært viktig (5)
Varemerke (1)	○	○	○	○	○
Pris (2)	○	○	○	○	○
Økologi (3)	○	○	○	○	○
Produktpakning (4)	○	○	○	○	○
Lokalt produsert (5)	○	○	○	○	○
Annet (6)	○	○	○	○	○

Question 3

Hvor ofte kjøper du økologiske produkter?

- ○ Aldri (1)
- ○ Svært sjelden (2)
- ○ Sjelden (3)
- ○ Ofte (4)
- ○ Svært ofte (5)
- ○ Alltid (6)
- ○ Vet ikke (7)

Question 4

Hvorfor kjøper du økologisk? (Her kan du velge flere alternativer)

- ☐ Helse (1)
- ☐ Dyrevelferd (2)
- ☐ Smaker bedre (3)
- ☐ Miljøvennlig (4)
- ☐ Pris (5)
- ☐ Kjøper ikke økologisk (6)
- ☐ Annet: (7) _____

Question 5

Hvis du kjøper økologiske produkter, hvilke produkter kjøper du? (Her kan du velge flere alternativer)

- ☐ Frukt (1)
- ☐ Grønnsaker (2)
- ☐ Bakevarer (3)
- ☐ Egg (4)
- ☐ Kjøtt (5)
- ☐ Meieri (melk, yoghurt, etc) (6)
- ☐ Te/Kaffe (7)
- ☐ Krydder (8)
- ☐ Jeg kjøper ikke økologiske produkter (9)
- ☐ Annet (10) _____

Question 6

Hva tror du er prisforskjellen mellom disse økologiske og ikke-økologiske gulerøttene?

Økologisk er ... kr billigere — Økologisk er ... kr dyrere

-30 -24 -18 -12 -6 0 6 12 18 24 30

Prisforskjell (NOK) ()

Question 7

Hva tror du er prisforskjellen mellom disse økologiske og ikke-økologiske eggene?

Økologisk er ... kr billigere — Økologisk er ... kr dyrere

-30 -24 -18 -12 -6 0 6 12 18 24 30

Prisforskjell (NOK) ()

Question 8

Hvor enig er du i følgende utsagn:

	Helt uenig (1)	Delvis uenig (2)	Nøytral (3)	Delvis enig (4)	Helt enig (5)
Økologiske produkter er dyrere enn ikke-økologiske produkter. (1)	○	○	○	○	○
Økologiske produkter smaker bedre enn ikke-økologiske produkter. (2)	○	○	○	○	○
Økologiske produkter er sunnere enn ikke-økologiske produkter. (3)	○	○	○	○	○
Økologiske produkter har bedre kvalitet enn ikke-økologiske produkter. (4)	○	○	○	○	○
Økologiske produkter er mer miljøvennlig enn ikke-økologiske produkter. (5)	○	○	○	○	○
Økologisk landbruk er mer dyrevennlig enn konvensjonelt (vanlig) landbruk. (6)	○	○	○	○	○

Question 9

Hvor gammel er du?

▼ Yngre enn 20 (1), 20-24 (2), 25-39 (3), 40-44 (4), 45-49 (5), 50-54 (6), 55-59 (7), 60-64 (8), 65-69 (9), 70-74 (10), 75-79 (11), 80-84 (12), 85-89 (13), 90 + (14), Ønsker ikke svare (15)

Question 10

Hvilket kjønn er du?

- ○ Mann (1)
- ○ Kvinne (2)
- ○ Ønsker ikke svare (3)