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Consumer Perceptions, Attitudes and Behavior towards Healthy Foods: The Case of Czech and Dutch Millennial Consumers

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Declaration of Authenticity

I hereby declare that the master's thesis presented herein is my own work, or fully and specifically acknowledged wherever adapted from other sources. This work has not been published or submitted elsewhere for the requirement of a degree program.

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Abstract:

A poor diet quality, poor health outcomes and obesity are examples of major health concerns across the world and a healthy diet has become a major topic of public discussion worldwide. The aim of this research paper is to analyze the differences in healthy foods perception and attitudes between the Czech and Dutch millennials, in order to get crucial information that is necessary for a better market orientation and development to ultimately further expand the healthy foods industry. For the purpose of this study, a survey was conducted among 344 millennials in the Czech Republic and the Netherlands. The Dutch millennials were found to consume healthy foods on a higher level than Czech millennials. Furthermore, also the gender is found to significantly influence healthy foods consumption. One of the key aspects for success in the healthy foods industry is to communicate the perceived health benefits. These benefits slightly differ for Czech and Dutch millennials. Besides that, the industry is generally lacking in triggering emotional appeals in the marketing communication. By applying the recommendations following from the results of this paper, better strategical and tactical marketing decisions can be made in order to accomplish a movement of change towards more healthy foods consumption.

Key words:

Healthy foods, Perception, Consumer behavior, Millennial, The Czech Republic, The Netherlands

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1. Introduction

A poor diet quality, poor health outcomes and obesity are examples of major health concerns across the world (World Health Organization, 2017). People may get sick because of their poor diet and billions of dollars are spent on health care issues. Keeping that in mind, it is in favor for the whole global society as well as for governmental institutions that people improve their food purchasing behavior in the near future. Moreover, today foods are not just needed to satisfy hunger of consumers or to provide them with necessary nutrients, but to prevent nutrition-related diseases and to improve both the physical and mental well-being of the consumers as well (Annunziata & Pascale, 2009). At the moment, the healthy food buying behavior is globally changing, but not in the right direction. For instance, research showed that the number of times people eat fruits and vegetables globally does not increase, but decrease (Payne, Niculescu, Just, & Kelly, 2014).

In the world as it exists today, there is still too little attention paid to educate millennials the value of a healthier lifestyle and eating habits (Küster, Vila, & Sarabia, 2019), even though this is very relevant for this demographic group of people that will shape the future of the society. To help millennial consumers in making healthier decisions when purchasing and consuming foods, it is highly important to get to understand them well. Consumer behavior of this generational group is a topic of discussion, but not fully understood at the moment (Küster et al., 2019). Moreover, existing literature does not provide a clear image of healthy foods perception of millennial consumers in the European Union. Besides that, differences in perception between specific European countries are also not well-explored. However, this is crucial information for market orientation and development of healthy foods. According to several research papers, key success factors are to better understand consumer perceptions, attitudes and behavior towards healthy foods and its determinants (Geeroms, Verbeke, & Van Kenhove, 2008). Studying these aspects within Europe is extremely important, as within the European Union there exists a high heterogeneity of demand (Castellini, Canavari, & Pirazzoli, 2002). This means that there is a lot of difference in European demand for healthy foods, which can be a consequence of the different perceptions in the various countries.

The aim of this research paper is to analyze the differences in healthy foods perception and attitudes between the Czech Republic (a Central and Eastern European country) and the Netherlands (a Western-European country). This paper tries to fill the following literature gaps:

- Specifically the generational group of millennials has seldomly been investigated when it comes to healthy food choices and habits;
- Former research papers about healthy foods perceptions and attitudes seldomly focus on the differences in perception within a market with a high heterogeneity of demand, such as the healthy foods market in Europe;
- Although some researchers have tried to investigate differences in gender or age globally, there has not been conducted any research to find out these differences within the generational group of millennials.

A systematic literature review will be followed by a survey among Czech and Dutch millennials in order to meet the research objectives and finally answer the following research question:

- *What is the difference in the perception, attitude and behavior of Czech millennials and Dutch millennials towards healthy foods?*

The main purpose of this research paper is to get a better understanding of specifically Czech and Dutch millennial consumers and to derive indications that may lead to better strategical and tactical marketing decisions in the healthy foods market.

2. Theoretical Review

Major health concerns across the world are caused by a lack of a good diet quality (World Health Organization, 2017). For this reason, governmental institutions are globally trying to improve the diet quality of their citizens. However, nowadays they are not alone anymore. Moreover, a major business trend these days is corporate social responsibility (CSR), which can be described as a business model that is not only accountable to the company itself, but also to the society and the environment (Porter & Kramer, 2007). In this way, both stakeholders and the public may take advantage of the existence of a business. This can be a trigger for companies with a lot of experience in successfully marketing their products to focus more heavily on the healthy foods industry. For both government bodies and businesses, it is essential to better understand consumers and their perception, attitudes and behavior.

First of all, it is of importance to define healthy foods. Health is defined by the World Health Organization as a *" state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity"* (World Health Organization, 2017). What kind of foods are healthy and what kind of foods are not is widely discussed in the literature, but basically all researchers agree on one thing. Healthy foods are supposed to provide you with nutrients that a human body needs to functionate well (Croll, Neumark-Sztainer, & Story, 2001). Certain nutrients include vitamins, protein, minerals, carbohydrates, fat and water. For a healthy diet, it is necessary to eat a variety of foods. Examples of healthy foods are fruits, vegetables, fish, healthy nuts, grains, meat and eggs. Healthy eating results in maintaining people's health, making people feel good and giving them energy. Moreover, healthy eating patterns are favorable for a reduced cancer risk, heart health, stroke prevention, diabetes management, strong bones and teeth, a better mood, a better memory, an improved gut health and the health of the next generation (Croll et al., 2001).

Measuring the health of a population is generally a very challenging undertaking. The most simple and oldest method to measure health is to measure death records (National Research Council (US), 2010). Later on, mortality and life expectancy were improved indicators for measuring health of a population. On individual basis there is also not a direct and simple solution. One way of measuring health is by measuring the body-mass index ("BMI"). The BMI is an index value that is derived from the weight and height of an individual (Jacobs, 2018). The BMI is calculated by dividing the weight (kg) by the height (m^2). However, many researchers agree that using BMI for measuring health is misconstrued and wrong. Lambert

Adolphe Jacques Quetelet, a Belgium mathematician who found the formula to calculate BMI, even said himself explicitly that the measurement is not correct to be used to indicate health (Nevill, Stewart, Olds, & Holder, 2006). Moreover, BMI is just a quick and easy way to measure the degree of obesity among the population of a country. Even as a measurement for obesity there are limitations. The fact that muscles weight more than fat has led to many miscalculations in the past.

There simply is not any easy method to measure health. To indicate health of an individual, more advanced technology is necessary (Younossi, Guyatt, Kiwi, Boparai, & King, 1999). Relatively easy ways of measuring health with technology are measuring blood pressure, cholesterol levels and blood sugar levels. However, it is easier to look at the healthy foods consumption of an individual. Indicators can be glasses of water drank or vegetables and fruits eaten. Therefore, some researches look to healthy foods consumption to determine someone's health (Younossi et al., 1999). Besides healthy foods, physical activity and sleep can also be seen as indicators for health.

2.1 Consumer Behavior in Healthy Foods Sector

First of all, it is important to investigate the current situation of the buying behavior of consumers. Consumer behavior is "*a dynamic interaction of affect and cognition, behavior, and the environment by which human beings conduct the exchange aspects of their lives"* (First & Brozina, 2009). It includes the thoughts, feelings and actions consumers have during the purchase. Besides that, it involves the whole environment that causes those thoughts and feelings. For effective marketing strategies, it is crucial for marketers to fully understand the group of consumers they are targeting.

There are various determinants of food choices to discuss. People eat and drink different types of foods and drinks, different amounts in different places, multiple times a day. It is good to take a closer look to what determines the underlying decisions on different levels. Story, Kaphingst, Robinson-O'Brien, & Glanz (2008) describe the determinants in four different levels: The individual factors (1st level), the social environment (2nd level), the physical environment (3rd level) and the macro-level environment (4th level). This is displayed in figure 1.

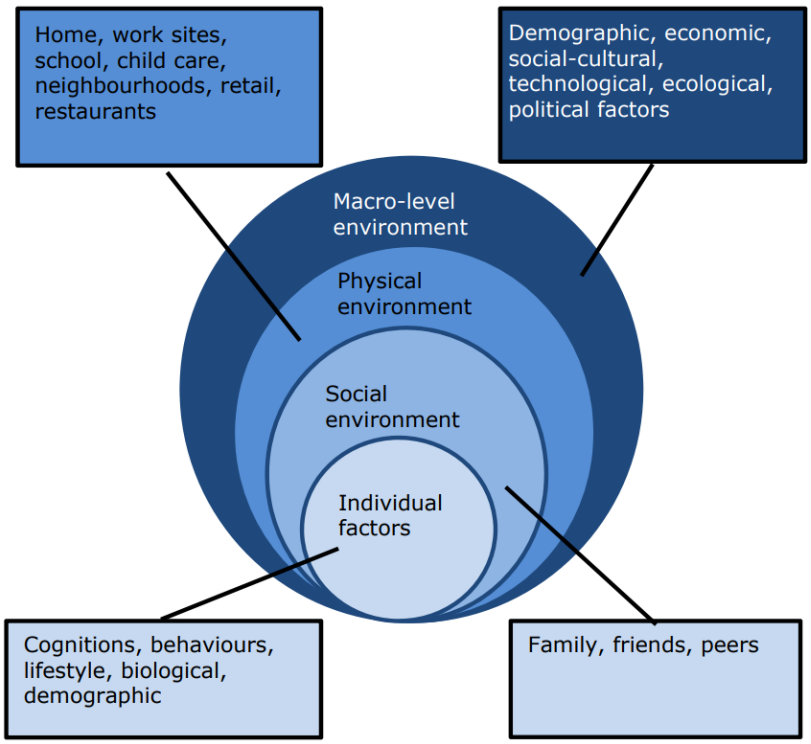


Figure 1 - Determinants of the food decision of consumers at four different levels (Geurts, Van Bakel, Van Rossum, De Boer, & Ocké, 2017)

Individual factors as determinants of food decisions include for example cognitions, behaviors, lifestyle, biological and demographic factors (Story et al., 2008). For instance, a consumer's taste is determined when he or she is born (Story et al., 2008). The social environment includes friend, family and peers. Consumers can be influenced by them in food decisions through for example role modelling and social support (Story et al., 2008). The culture in which the consumer anticipates is incredibly important for the social environment as well. For instance, migration changes the behavior towards dietary patterns as the cultural changes influence the attitude, behavior and orientation of the whole society. This can be defined as acculturation. Acculturation changes consumer behavior over time. The physical environment encircles the setting where people consume the food, such as home, work, school, neighborhoods, retail and restaurants (Story et al., 2008). In this level, the availability of healthy foods strongly affects the foods consumption. Factors on macro-level include factors that are part of the bigger society. On this level the "DESTEP" factors play a role, which are the demographic, economic, social-cultural, technological, ecological and political factors (Story et al., 2008).

Consumers mainly make their food decisions based on two factors: habit and routine (Geurts et al., 2017). Looking to the daily eating behavior, habits of consumers take a tremendous part of the choices. Consuming healthy foods such as fruits and vegetables is strongly related to

consumption habits (Sleddens et al., 2015). Important to discuss, is the fact that habitual behavior does not require a lot of information for consumers. Besides that, buying intentions are not clear predictors of the buying behavior and specific cues can easily trigger the consumers. This differs from non-habitual consumer behavior (Sleddens et al., 2015). When it comes to food decisions, factors such as knowledge and motivation play a relatively small roll in the final food decision.

Looking to consumer behavior of healthy foods, there are some other extensive mechanism playing a role. Social modelling, social norms and social support affect the consumer decisions (Story et al., 2008). The amount and type of foods that others in the environment of a consumer eat, affects his or her consumption pattern (Cruwys, Bevelander, & Hermans, 2015). This is called social modeling. For instance, children tend to copy the healthy eating pattern of their parents or other peers. Furthermore, the eating pattern of the inmates of a student influences his/her food consumption as well. A healthy eating flat mate thus affects the healthy foods consumption of a student. Demographic factors such as sex and age do not appear to affect social modelling (Cruwys et al., 2015). However, role modelling does affect social modelling. A role model is a person whose behavior is emulated by other people (Story et al., 2008). This means that individuals such as professional athletes or entertainment artists can affect the food consumption of consumers. Also a reference group, which can be defined as a group to which an individual consumer or other group of consumers is compared, directly influences the behavior of individuals. (Story et al., 2008). To sum up, the effects of social modeling are the highest when an individual desires to affiliate with a person or a group, or when he or she perceives him or herself similar to the model (Cruwys et al., 2015). Modeling is attenuated but still significantly existing when it comes to healthy snack options and meals such as breakfast, lunch and dinner.

Another mechanism is the influence of social norms on consumers. Social norms are informal understandings that guide individuals to appropriate actions looking to the behavior of members of a society (Robinson, Thomas, Aveyard, & Higgs, 2014). Furthermore, the social groups can be defined at for example the level of nationality, friendship or family grouping. Social norms can be communicated directly, but also indirectly. A systematic review of numerous studies shows that social norms about food consumption affect both the choice of food and the amounts eaten (Robinson et al., 2014). How strong social norms affect a consumer, depends on the individual. Individual factors namely influence the food choice besides the social norms.

The third mechanism is the social support. This is the perception of an individual to be supported or assisted by the social environment or a supportive social network (Shaikh, Yaroch, Nebeling, Yeh, & Resnicow, 2008). For example, adults' buying behavior of vegetables and fruits was found to be highly influenced by the social support. Moreover, social support was a strong predictor of consumers' consumption behavior. Besides that, younger people tend to be highly influenced by their parents when it comes to healthy food decisions. The review of Shaikh et al. (2008) states that more than 75% of the available studies concludes that the fruit and vegetable consumption of the youth is highly affected by the intake of the family. Moreover, especially adolescents tend to copy the healthy food consumption behavior from their parents. This early adaption of food patterns will positively affect the healthy foods consumption in the future.

When it comes to food decision making, many researchers agree that consumers face two different competing goals when deciding what foods to eat: pleasure vs. health (Laran & Janiszewski, 2009). On the point-of-purchase (POP), consumers are confronted with marketing attempts to entice them to choose the hedonic snack option that is less healthy over the options they perceive as healthier. Nevertheless, there is an opportunity for marketers to promote healthy products that achieve both pleasure and health. Accordingly, consumers might feel empowered to choose the healthy option. As many consumer decisions are daily made automatically, positioning healthy products as offering hedonic rewards can help consumers to generate an automatic buying habit to choose for healthy products (Laran & Janiszewski, 2009). For instance, consumers may choose daily for a sweet, nice and ripe banana over the candy bar when getting hungry.

2.2 Consumer Perception of Healthy Foods

Many governmental institutions are aware of the necessity to change the consumer behavior towards healthier purchases (World Health Organization, 2017). One of the actions taken by such organizations is to educate children and adolescents more about a healthy diet. In many countries, this has been done already for decades. For this reason, adolescents already have a significant amount of knowledge about healthy foods. They can more easily differentiate between healthy and not healthy and they believe that a healthy diet includes balance, variety and moderation (Croll et al., 2001). However, despite all their knowledge they still experience many difficulties with eating healthy and they frequently consume products that they perceive as unhealthy (Croll et al., 2001). Mentioned barriers to healthy eating involves the costs, a lack

of time, limited availability of healthy foods in schools and universities and a lack of concern to follow recommendations for a healthy lifestyle.

An American research gives another view on this matter. Research has for example shown that Americans acknowledge confusion when it comes to foods and nutrition. 80% of the Americans notice conflicting information on which foods to eat and avoid (International Food Information Council, 2018). This conflicting advice leads to the fact that many Americans are not sure about their food choices. Out of those who notice conflicting information on what to eat and avoid, 59% doubt their choices because of that. Not all Americans are equally affected by this conflicting information. Millennials are found to be more likely to doubt their food choices than older adults (International Food Information Council, 2018).

The conflicting information on food starts with the fact that Americans often absorb information from non-reliable sources of information on what to eat. For instance, Americans do trust registered dietitians and healthcare professionals, but they rely even more heavily on less-trusted information sources (International Food Information Council, 2018). They frequently base their food choices on what friends and family choose. This reliance on less-trusted sources can lead to conflicting information on nutrition and this can cause people to doubt their food choices.

Furthermore, this consumer segment experiences heightened stress while doing grocery shopping. Especially consumers at a lower level of healthy food consumption were found to rely more on friends. Besides that, they mainly use personal healthcare professionals and health coaches as information sources (International Food Information Council, 2018).

The attention of consumers towards healthy foods has been changing over the years. In the past, people were generally focused on the reduction of substances that are perceived in a negative way (Annunziata & Pascale, 2009). Nowadays, this is moving towards a focus on positive characteristics of a product, for instance freshness and naturalness. Therefore, the demand is shifting towards foods with a strong healthy image. However, it's highly important to realize that healthy attributes are credence goods and can not be reviewed by consumers directly. As a consequence, the quality and amount of information the consumer possesses and that is supplied on the market strongly affects the consumer decision-making process (Annunziata & Pascale, 2009).

There is evidence to say that consumers in general make healthier decisions when they believe the food alternatives taste good as well (Colby, Elder, Peterson, Knisley, & Carleton, 1987).

Research showed consumer decision behavior in a restaurant where three different messages on the menu were tested. The first message clearly emphasized the healthful aspects of the products, such as a relatively low percentage of fat, cholesterol and sodium. The second message mainly communicated a great flavor and as an addition that the food choice was healthful. The third message did not stress any healthy aspects, but simply noted that this option was a daily special. Apparently the people were by far more interested in the taste of the food than its healthfulness (Colby et al., 1987). To sum up, if an item of the menu emphasizes taste over the healthy aspects, consumers tend to make healthier choices. According to Colby et al. (1987), these results are also very useful for general POP communication messages that include the healthy aspect of a product. This means the finding above may also have implications in food-labeling programs in grocery stores for instance.

After taste, the costs of foods is found to be the second most important factor influencing the consumer (Geurts et al., 2017). For the healthy foods, this is not a positive finding. Currently, the structure of food pricing is that foods high in sugar or fat provide calories at low costs, while healthier products provide calories at higher costs (Geurts et al., 2017). Especially consumers with limited resources may choose energy-dense foods with added fats and sugars in order to safe money. Research has shown that subsidizing healthy foods such as fruits and vegetables in places like schools, restaurants or worksites can increase the amount of purchases (Faith, Fontaine, Baskin, & Allison, 2007).

Consumers regularly have to face an overwhelming array of consumption choices in the food-rich environment we live in today. Bublitz & Peracchio (2015) state that one of the reasons for consumers experiencing confusing choices is the increase in the availability of snack options that target health conscious consumers. According to them, consumers may be helped navigating in the confusing world of health claims by increasing the selection of foods consumers directly identify as a healthy choice (e.g. fruits and vegetables that are ready to eat).

Another interesting finding is the fact that consumers generally perceive organic food as healthy food. However, the term “organic” refers not to the healthiness of a product, but to the process how the foods are produced (First & Brozina, 2009). Organic foods are produced without the usage of hormones, genetically modified organisms, antibiotics or artificial chemicals. A food product can only get a label of organic foods when it is free of artificial food additives. This does not automatically mean that organic foods are healthier. Many researches that compare the nutrient content of organic foods with non-organic foods provide mixed results. For instance, organic foods are more likely to contain extra antioxidants and vitamins (Smith-

Spangler et al., 2012). In the contrary, many other researches do not find evidence to recommend organic over non-organic food. A review of 55 studies resulted in the finding that there is no difference in the nutrient content of organic and conventional foods (growing foods such as fruits or vegetables that are not organic) (Dangour et al., 2009). Nevertheless, 87% of the people in Romania believes that organic food is healthier than conventional food (Petrescu & Petrescu-Mag, 2015). It is important to realize that people perceive these organic foods as healthier, even though there is no significant difference. Also, several studies refer to healthy foods by using the term organic. Looking to some of the researches above, this is not correct. However, organic food crops are produced in a natural way and belong mostly in the category of healthy foods. Some exceptions of organic products that are not healthy are organic produced sodas and organic macaroni with organic cheddar cheese. The products are produced without the use of artificial colors and preservative, but the amount of sugar and lack of nutrients assures that they are not part of the healthy foods category (Smith-Spangler et al., 2012).

This is not the only case where the perception of consumers differs from the scientific knowledge. Generally, consumers do not distinguish between the food aspects such as healthiness, safety and sustainability (Ueland et al., 2012). Consumers tend to use these terms interchangeably. Moreover, not only organic foods are perceived to be healthy, but also sustainable products are mostly regarded as healthful. Basically, consumers distinguish two different types of food. They either classify foods as good or as not good (Ueland et al., 2012). Furthermore, a significant part of the consumers automatically expects that the food supply is completely safe.

When looking for food, people prefer to choose better quality foods (Ott & Murali, 2017). In general, people perceive that foods have better quality when it is antibiotic- and hormone-free. Moreover, humanely raised meats are perceived to have a higher quality. Another interesting fact is that consumers in general are willing to pay a higher price for not only the option with better quality, but also the healthier options. 84% of consumers said it is reasonable to pay more for food options that are more healthy (Ott & Murali, 2017).

An ongoing trend is that consumers buy more and more often foods in a grocery store and spend less time on food preparation (Geurts et al., 2017). This is mainly because of a social-cultural driving force regarding convenience. Therefore, consumers choose more frequently for ready-to-eat foods when purchasing food products. The market of those ready-to-eat foods is growing. However, ready-to-eat foods contain a lot of conservatives. Another factor that plays a role is

the shift in power towards the retail sector. About 66% of the food budget of a household is spent in grocery stores nowadays (Geurts et al., 2017).

2.3 Consumer Marketing in the Foods Industry

These days, there are many marketing tools that are used to market a food or beverage with the focus on a certain target. It is important to get a better understanding of consumer marketing in the healthy foods industry. Therefore, it is necessary to discuss the marketing tools used for non-healthy foods and to compare them with the current situation of healthy foods marketing. According to Bublitz and Peracchio (2015), there is namely a contrast in the marketing approach of marketing of healthy and non-healthy products. A significant difference can be seen in the approach businesses use for positioning or to advertise their products.

Regarding the positioning, the finding that consumers perceive taste as the most important factor in their food decision is crucial. By positioning healthy products as good tasting instead of just focusing on the nutritional benefits, producers can change consumers' expectations and appeals for these kind of products (Colby et al., 1987). Even though advertising nutritional information may not attract and persuade consumers in the first sight, the industry of foods has integrated many health and nutritional claims to promote various categories of foods (Caswell, Ning, Liu, & Mojduszka, 2003). Health related product messages and claims with a focus on nutritional content have successfully increased product categories such as: *"cookies, frozen desserts, baked goods, salted snacks, processed meats, cheese, cereal, pasta sauces, vegetables, juices, soft drinks, condiments, salad dressings, margarines and spreads, butter, and peanut butter"* (Caswell et al., 2003).

Looking to advertising, brands generally use emotional advertising or informational advertising to promote their products.

2.3.1 Emotional advertising

Emotional advertising is a term to describe how brands focus on facilitating consumers' understanding and acceptance of an advertising message in an emotional way (Rucker, 2017). When it comes to foods marketing for young adults, emotions are often used to relate to positive and pleasurable experiences (Geuens, De Pelsmacker, & Faseur, 2011). Furthermore, the marketing efforts in this specific industry need to be very creative. Ads need to capture the attention of the consumers, which is getting harder because of tremendous competition in food advertising (Geuens et al., 2011). Furthermore, creative marketing campaigns lead to positive

emotions. As a result, an ad can positively influence consumers' responses to products (Geuens et al., 2011).

In the hedonic foods industry (i.e., foods and beverages higher in calories, sugar or fat, also called: "dulgent foods"), the emotional marketing approach has been found to be very successful. Almost all big companies such as Mc Donald's, Coca Cola, PepsiCo, Nestle, Kraft Heinz Company and Danone use emotional appeals to market their products (Geuens et al., 2011). As a result, the companies mentioned have market values up to hundreds of billions of US Dollars (QTC, 2017).

Besides in the hedonic food industry, the method of emotional advertising has been proven to be effective in the industry of healthy foods as well. Bolthouse Farms used emotional advertising for their marketing campaign of baby carrots. The CEO of Bolthouse Farms and Former Coca-Cola executive Jeff Dunn parallels the marketing campaigns of the snack food industry. Their ad starts with a male riding a grocery shopping cart down of a high snowy mountain and ends up with explosions that represent the "extreme" genre, often used in advertising of high caffeine beverages. The tag line of the campaign: *"Eat 'em like junk food"* (McGray & Douglas, 2011). Moreover, Jeff Dunn believes that it's a *"silly use of advertising dollars to tell people that vegetables are healthy"* (McGray & Douglas, 2011). Instead, Bolthouse Farms uses sex appeal and humor to sell carrots. Facts are that this prompted viral sharing on social media and that the Bolthouse Farms baby carrots sales eventually went up by 10-12% after those campaigns (McGray & Douglas, 2011).

By using successful marketing practices that have been used in the dulgent foods industry, an alternative way can be created to increase the consumption of healthy products (Holbrook & Hirschman, 1982). Positive marketing should *"leverage the resources of marketing knowledge to maximize the mutual benefit for consumers, organizations and society"* (Mittelstaedt, Kilbourne, & Shultz, 2015). Increasing the healthy foods consumption will namely also be influencing the society in a positive manner, by for example reducing obesity and healthcare costs. Accordingly, it is in public interest to let people make healthier food decisions.

2.3.2 Informational advertising

The second approach that is more often used in the sector of healthy foods is informational advertising. Emotional advertising will not help consumers to avoid the confusion in their choice. Bublitz & Peracchio (2015) also state it is important to integrate traditional food advertising models when promoting healthy products. They emphasize the importance of the

selection of a target audience, positioning strategies, product packaging, and integrating emotional appeals in the message, but they also understand the opportunity that comes with the health benefits of healthy products. For that reason, they suggest a dual message strategy. Moreover, companies selling healthy foods and beverages may use a humorous appeal or a hedonic taste in the strategy, but can claim the nutrient content to attract customer attention and to persuade the consumer to buy their product at the same time (Bublitz & Peracchio, 2015). They describe the consumer's marketplace experience in the following model in figure 2.

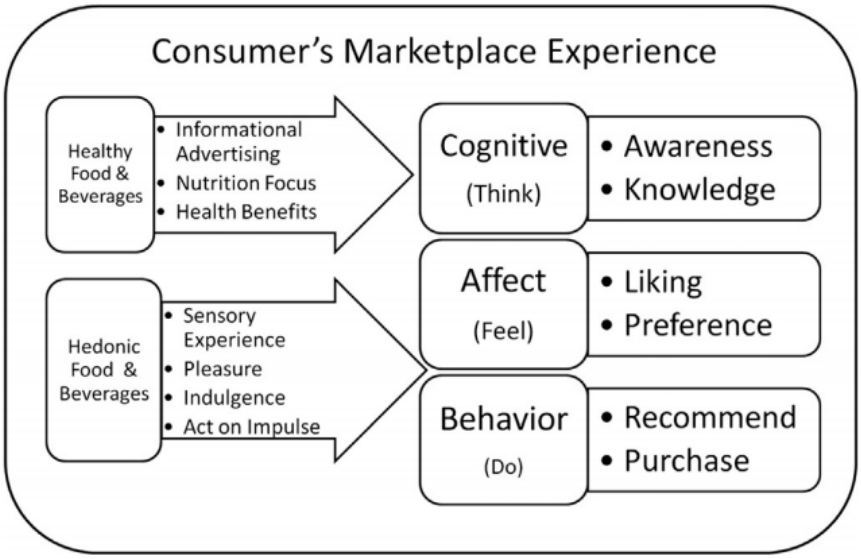


Figure 2 - Healthy vs. hedonic advertising approach (Bublitz & Peracchio, 2015)

The model shows that the more traditional way of thinking suggests that healthy food & beverages mainly stick to informational advertising, nutrition focus and health benefits in order to educate the consumer rationally. Brands of hedonic foods and beverages generally involve a more emotional experience in de consumer marketplace, by emphasizing emotional appeals such as sensory experience, pleasure, indulgence and act on impulse. Bublitz & Peracchio (2015) suggest that this traditional method is outdated and that businesses in the healthy foods industry must imply a strategy that creates a more combined experience rather than just informative or emotional.

Earlier in this chapter there was stated that consumers frequently base their food choices on what friends and family choose (International Food Information Council, 2018). This advice can cause conflicting information for the consumers, but also brings an opportunity. Advertising at one targeted group may influence the consumption among another group of consumers. For example, advertising campaigns of fast-food companies targeted at parents has been show to affect children's fast-food consumption (Grier, Mensinger, Huang, Kumanyika, & Stettler,

2007). Moreover, as advertising of fast-food increases, the perception of the parents changes positively. They assume such foods are more socially acceptable. This led to an increase of the consumption of the advertised fast-food. Even though this research was concentrated on fast-food consumption, the same change in perception of people may be found when promoting healthy foods. Focusing more on a combination of emotional appeals and nutritional education in the advertising of healthy products can thus result in a better perception among the social environment of the consumer. This may also trigger social support. One of the key components of advertising decisions is how to target a specific audience, and marketers in the healthy foods sector may need to broaden the reach to customers with the social power to positively affect the consumption of healthy food and beverages (Bublitz & Peracchio, 2015). Parents can be an example of a consumer group with such power. As parents model healthy choices, their children most likely follow (Birch & Fisher, 1995).

The consumer decision-making process is according to Annunziata and Pascale (2009) highly influenced by the amount and quality of information he or she possesses and which is available on the market. Information or health claims have been found to be influencing food choices and other intentional and attitudinal variables (Roosen, Marette, Blanchemanche, & Verger, 2007). Moreover, evidence shows that information about health increases the awareness of the consumer or the expectations about the level of healthiness of a product. This also produces more positives attitudes towards it (Roosen et al., 2007). As a consequence, it surely is important to educate the consumers about healthy foods.

2.3.3 In-store Marketing Tools

There are also in-store marketing tools that can be very useful in the communication with consumers. As 70% of the consumers' purchasing decisions are made in-store, this is very important to analyze (Rook, 1987). Moreover, 55% of the purchases consumers make are unplanned (Eye Faster, 2013). Many consumers make a shopper list before doing groceries, but the list does not match with their shopping budgets (Payne et al., 2014). A shopping list mainly serves as a guide, but consumers are willing to spend more. This gap between the willingness to pay and the resource allocation of the items on the list is a significant part of the total shopping budget, namely about 50% (Payne et al., 2014). This creates a big opportunity for unplanned purchases and therefore in-store shopper marketing is very important. Healthy food producers may take advantages of this opportunity.

Perceptions of products starts with the initial reaction of a consumer to and beliefs about the product, so it all starts with the positioning strategies (Raghunathan, Naylor, & Hoyer, 2006). The perception of consumers has been discussed already earlier in this paper. Then there are several in-store marketing tools to communicate towards consumers under the concept of point-of-purchase ("POP") marketing (Payne et al., 2014). Examples of tools are shelve communication materials, floor communication and shopping cart placards. In-store (digital) retail displays offer yet another tool that can be used to persuade the consumer to choose for healthy (Bublitz & Peracchio, 2015). Moreover, the product packaging is another powerful tool for communicating with potential customers (Küster, Vila, & Sarabia, 2019). All the marketing tools mentioned above will be further discussed below.

The fact that also the packaged food industry has targeted consumers that are health conscious, makes it clear that there is demand for healthy products (Raghunathan et al., 2006). However, in general there are not many strong brands in the industry of healthy foods. This may cause a lack of POP communication in retail stores. Those brands namely have the task of cooperating with retail in order to implement joint campaigns (In-Store Marketing Institute, 2010). Retailers generally act very reactive when it comes to shopper marketing. However, effective retailer-manufacturer collaborations can lead to mutually beneficial business results for both retailer and manufacturer.

Payne et al. (2014) successfully achieved to increase healthier purchases in grocery stores by implementing shopper marketing. According to them (2014), the best tools to communicate salient in a way that is easy to interpret for consumers and easy to compare with their past shopping behavior, are the shopping cart and the communication on the grocery store floors. Two different shopping cart experiments were conducted. The first experiment divided the cart in two parts. The first part stated: "*In the Front of Your Cart… Please Put Only Healthy Foods Such as… Fruits, Vegetables, Dairy, Meat*." (Payne et al., 2014), while the other part read: "*In the Back of Your Cart… Please Put Everything Else Such as… Chips, Detergent, Soft Drinks, Breakfast Cereal."* (Payne et al., 2014).

With a second experiment in another grocery store, they put an ad in- and outside of the shopping cart containing the message: "*In this store, most people choose at least five produce items."* (Payne et al., 2014). Then the five most popular fruits and vegetables were listed. In both experiments the goal of these social messages was to let the consumers perceive it as socially normal to buy fruits and vegetables. A crucial psychological part of the experiment is the fact that other people can look into other shopping cart as well. Earlier was already stated

that the social support affects the consumer decisions (Shaikh et al., 2008). Besides that, at the cashier the consumers have to show their purchases once again to other people. Both experiments significantly increased healthy food sales with approximately 10% while keeping other factors (i.e. consumer budget, grocery profitability) constant (Payne et al., 2014).

Besides experimenting with the shopping cart, this research also examined floor communication. Payne et al. (2014) suggested a 'health direction' by placing floor arrows in another grocery store guiding the consumers through the healthy produces. All the arrows contained one of the three different messages: "*Follow the green arrow for your health/a healthy heart/a healthy weight."* (Payne et al., 2014). Once again, the sales of fresh produces increased by 9% while keeping all other factors constant.

2.3.4 Packaging

Numerous of studies use the term "involvement" or "food involvement" to evaluate how important healthiness is to individuals (Annunziata & Pascale, 2009). A term widely discussed in the literature is the food involvement of consumers. Food involvement can be described as *"the degree to which an object or idea is centrally related to an individual's value system"* (Küster et al., 2019). Furthermore, individuals with a high level of food involvement think it is very important to maintain their own health correctly and they have a health-conscious self-identity. Even though existing literature does not show a direct link between product packaging perception and food involvement, there seems to be an evident one. For instance, involvement does have an effect on information searching and the product package is a very powerful tool to communicate with consumers or to provide them with information (Küster et al., 2019). Besides that, consumers tend to use extrinsic cues as an indicator for product quality. For this reason, product packaging can be a very important tool when it comes to informing the consumers.

Furthermore, product packaging is one of the most important factors in the purchase decision of consumers at the point of sale (Silayoi & Speece, 2013). According to the authors, packaging elements can affect buying behavior. A major role is played by the visual elements of the package. Also, information on the package is found to be of importance, especially when the consumers are higher involved in the buying process. When it comes to healthy foods, the challenge is to combine the informative message, which is preferred to be simplified, together with the visual elements that attract consumers. Visual elements such as graphics, size, color and shape are more important to attract consumers with a lower level of involvement.

Consumers also tend to rely more on the visual elements when being under time pressure. Below, this is all displayed in the conceptual model in figure 3 (Silayoi & Speece, 2013).

Part of the dual communication strategy is to educate the consumers about the health value of a product. Even though visual elements in product packaging and emotional marketing are attracting the consumers towards a product, people with a higher level of involvement tend to rely on label information quite heavily for their final decision (Silayoi & Speece, 2013). There is obviously a need to provide young consumers with more information about food (Küster et al., 2019). The European Commission shares this opinion (European Commission Eurostat, 2008). As long as consumers have relatively high levels of involvement and information searching, informative food product packaging by for instance labeling can be a great tool to communicate and inform.

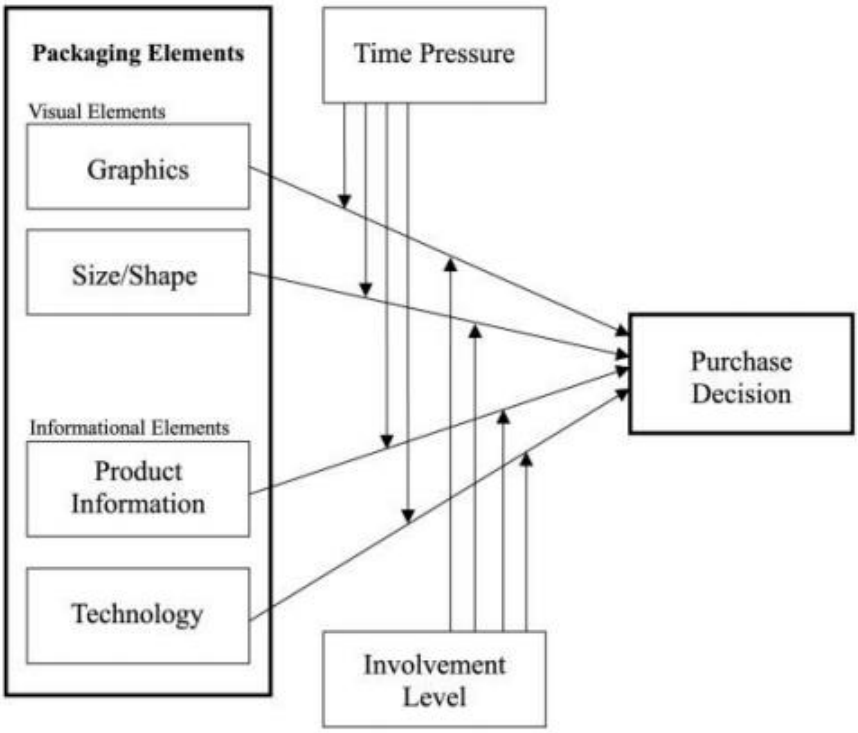


Figure 3 - Conceptual model of packaging elements and product choice (Silayoi & Speece, 2013)

It is necessary to realize what kind of image people will associate with certain colors or symbols. For instance, 'heart healthiness' can be expressed by a red heart on the packaging. Moreover, people associate green with ecological products. Consumers tend to associate ecological aspects with healthy products (Kozup, Creyer, & Burton, 2003), even though this does not necessarily

has to be the case. In addition, context also significantly influences consumers. Despite identical nutritional information on packaging, consumers tend to prefer products with a longer ingredients list, a fresh view, a sustainable production process and genetically modified organisms (International Food Information Council, 2018). Those elements positively affect the consumers' product perception.

2.3.5 Sustainability

In the first sight, about every single consumer has a positive attitude towards sustainability. However, when grocery shopping, consumers tend to base their choices on the taste, price and convenience (Van Dam & Jonge, 2015). The main reason for this is that the consumers decide at a concrete level in the grocery shop. Their wish for a sustainable world on the other hand works at a higher construal level, where their ideal images are considered (Van Dam & Jonge, 2015).

Consumers have a different interpretation of the sustainability of foods (Siegrist, Visschers, & Hartmann, 2015). Several people interpret sustainable foods as foods where the animal welfare was assured during production. Others think of organic foods when it comes to sustainability. The distance from farm to fork, which includes the environmental impact, is also considered by some as the most important factor of sustainable production. Nevertheless, factual information about the environmental footprint of certain products is moderately lacking among the consumers (Siegrist et al., 2015). Generally, consumers underestimate the impact of meat production for the environment, while they acknowledge how important waste reduction is for the planet.

Millennial consumers have a very high level of awareness about sustainability (Hanks, Odom, Roedl, & Blevis, 2008). Sustainability is trending among this generational group. More and more millennials start to act more conscious in their buying behavior. However, even though many millennials are perfectly aware of the importance of sustainable products, in general this does not significantly translate into more sustainable purchasing decisions (Hanks et al., 2008).

In the Netherlands, the groups of consumers who prefer to eat healthy and sustainable is currently small but growing (Geurts et al., 2017). This group of consumers is willing to pay a higher price for the sustainable choice. Also, in the United States, the importance of sustainability is on the rice. 60% of the consumers stated to think it is of importance that the food they consume is produced in a sustainable way (International Food Information Council,

2018). This is an increase of 50% compared to the year before. Therefore, it is obvious that sustainability is trending, especially among the generation of millennials.

2.4 Millennials

This research paper is focused on finding the best marketing approach specifically towards millennials (also called Generation Y), as the millennials will shape the future of the society. Millennials are defined as consumers within the age range of 18-34 and born in between the years 1984-2000 (Reportlinker, 2015). Besides being the largest generation in the workforce, this generational group is also one of the most important demographic groups. Millennials have their own role in the food consumption process, so for many businesses it is critical to understand them well. Even though the behavior of the millennial generation is often a topic of discussion, it is not fully understood (Küster et al., 2019). However, many research papers agree on several things. For instance, the generational group of millennials is a globalized generation (Küster et al., 2019). Therefore, this generation appears to show globally more similar behavior than any other generation. Another fact widely agreed on is that this generation totally relies on technology-based sources of information. Millennials tend to trust apps, blogs and roll models on social media.

Reporterlinker (2015) identified opportunities to effectively target the millennials in 2025. Something very important to understand, is the so called “always on, always connected” mentality of the generational group. With multiple digital devices they share experiences to express their selves and to project an individualistic and personal brand, both online and offline. Younger adults also rely more on technology based information sources, including for instance bloggers and fitness apps (International Food Information Council, 2018). Besides that, the millennials are challenging the traditional perception of gender identities (Reportlinker, 2015). Their children will grow up in a world of gender fluidity. For this reason, FMCG brands will be forced to reconsider gender-oriented marketing strategies. Another major key finding is that this part of the society will have to deal with the negative health effects of overconsumption of protein. This means for the FMCG industry that innovation concepts for new product development offer opportunities in the mimicking of meat consumption experiences with plant-based foods. Furthermore, companies will be challenged to deliver health-enhancing ingredients through new creative product concepts. Health is one of the five themes that will play an extensive role for the millennial generation. The other big themes that will be reflected in behavior, concerns and attitudes are gender identity, sharing economy, employment & work and marriage & housing (Reportlinker, 2015).

Also Küster et al. (2019) describe the importance of educating the millennials about the necessity of a healthier lifestyle and in particular healthier food decisions. Nowadays, a person's lifestyle plays a significant role when it comes to food decisions (Küster et al., 2019). A lifestyle is the general way of life based on the connection between living conditions and individual behavioral patterns driven by sociocultural factors and individual characteristics. Positive health-related behavior of a consumer can be described as a healthy lifestyle.

People mainly tend to change their lifestyle into a healthy lifestyle for two reasons: to directly improve their health or to pursue a healthier life (Kelly et al., 2017). A healthy lifestyle does not only include healthy foods consumption, but also factors such as sports, sleep and rest. Several studies showed a positive relationship between those factors. Physical activity and sufficient sleep can therefore positively influence healthy foods consumption (Kelly et al., 2017). Moreover, there has been also found a direct link between physical activity and healthy food decisions (Meyer & Reguant-Closa, 2017). Additionally, the authors confirmed the relationship between stress, sleep and foods consumption.

Earlier this paper, food involvement was already mentioned as a factor that may influences consumer behavior. Chan, Prendergast, Gerard, Grønhøj, Alice, & Bech-Larsen and Tino (2011) state that the degree of healthy perceptions may influence the food decision of millennials and thus food involvement. A consumer involved in food tends to seek for more information and thus make a more rational decision than a non-involved consumer. Indicators for healthy foods perceptions are characteristics of food, food choice and healthy concepts held by the society (Chan et al., 2011).

Even though the millennials are the main point of discussion for this research paper, it does not directly mean that other generational groups should not be included at all. Earlier is stated that when parents model healthy choices, their children most likely follow (Birch & Fisher, 1995). That means that also generation X, born in between 1946-1964, has an important influence on the millennials in their food decision.

The International Food Information Council (2018) researched top drivers of food decisions in different generational groups. Taste, price and healthiness are the key top drivers impacting the decisions for foods and beverages. However, looking to the millennials, specifically product healthiness is a top driver. Once again this shows the importance of a more intensive marketing strategy for healthy food products. Looking to the age group of millennials, another very interesting finding is that they seem to be less cost-conscious than the other generations. They

already expect that they will have to pay more for healthy and quality ingredients and products (Ott & Murali, 2017).

2.5 Healthy Foods in Europe

When it comes to foods, the European Union does a lot of insourced and outsourced research (European Commission Eurostat, 2008). However, European researches focus many times on food safety, organic foods and labeling of food products. Therefore, specific market information and data on healthy food perception and consumer behavior in the healthy foods sector is hard to gather. This can be problematic for market orientation and development and besides that, for successfully negotiating the opportunities on the market (Annunziata & Pascale, 2009). Key success factors for that are namely a better understanding of the consumer perception of healthy foods, consumer behavior in this industry and the determinants of both aspects.

In Europe there is a big demand for healthy products. Healthy foods in the European Union have a total turnover of 5.7 billion euros (Annunziata & Pascale, 2009). In both the Czech Republic and in the Netherlands, the agricultural production has increased every year in the period 2013-2017, which is the period with the latest data available (FAO, 2017). This might be caused by technological developments, but it also means a slightly growing demand. The healthy food supply chain is namely a typical example of an consumer driven sector (Annunziata & Pascale, 2009). There is also found to be a larger product diversity, a shift from basic to processed foods (Geurts et al., 2017). In general, consumers spend about 10% to 15% of their income on foods.

The European market for healthy foods is also one of the three dominant markets when it comes to sales. The three most dominant markets including Europe, the United States and Japan contribute over 90% of the total sales of functional foods (Annunziata & Pascale, 2009). Functional foods can be described as foods with ingredients that add additional health value, what is announced to the customer at the same time. There is a significant difference between markets such as the ones in the United States/Japan and the one in Europe.

What differs the European market from others, is that it is characterized by high heterogeneity of demand within the European Union (Castellini, Canavari, & Pirazzoli, 2002). The first reason for this is the existence of marked regional differences in perception of healthy foods and the willingness to choose for healthy foods instead of other options. These differences are mainly caused by socio-demographic differences (Castellini et al., 2002). Besides that, the existence of divergent dietary habits from country to country in the European Union also plays a role. For

example, the amount dietary intake in the Netherlands is with an average of about 350 grams of milk among the highest in Europe (Geurts et al., 2017). According to Geurts et al. (2017), There is a relatively big differences with Central and Eastern European (CEE) countries, such as Czech Republic. Moreover, European consumers will never be a general phenomenon, for various reasons (Horská, Ürgeová, & Prokeinová, 2011). These reasons include the impact of different cultures, incomes, differences in GDP, unemployment rates and inflation rates.

Research showed that in Hungary, also among the CEE countries, there is a very specific segment active in buying healthy products such as vegetables, fruits and dairy products. Looking to the consumption habits, the typical buyers of healthy foods are high educated middle aged women with a relatively high income who live together with a family (European Commission Eurostat, 2008). Even though Czech Republic and Hungary are both pare of the CEE countries, this does not mean the mentioned finding directly applies for Czech Republic as well. Furthermore, many research papers consider one group of East European consumers, but just like the whole European Union, neither the CEE countries can be completely similar. A cluster analysis defining the consumer perception in Poland, the Slovak Republic and the Czech Republic shows that each country has its own specific traditions and habits, which consequently influences the consumer decisions (Horská et al., 2011). However, research suggests that Europeans mainly trust health professionals and government agencies as sources of information (Annunziata & Pascale, 2009).

2.5.1 Healthy Foods: The Czech Republic and the Netherlands

Regarding the economies of the two countries in issue, there is a significant difference in the economical development, as can be seen in the graph of GDP in figure 4 below (World Bank Group, 2017). The GDP per capita in the Netherlands was in 2017 respectively 48,5; against 20,4 in the Czech Republic (World Bank Group, 2017). The GDP of one of the founding countries of the European Union is more than double the number of the GDP of Czech Republic.

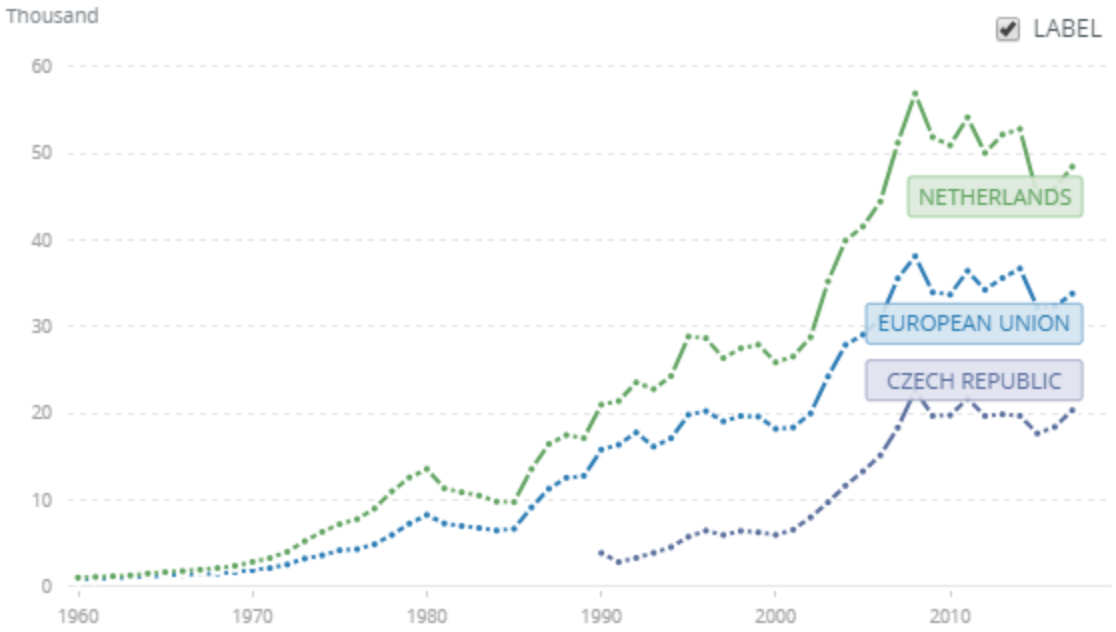


Figure 4 - GDP per Capita of the Netherlands, the Czech Republic and the European Union (World Bank Group, 2017)

At the same time, there is a difference in Consumer Price Index (CPI) as well. The CPI is a number that shows the weighted average of prices of a basket with regular consumer goods and services (Chen, 2019). However, the difference in CPI between both countries is not as big as the difference in GDP. The Netherlands has a CPI rate of 2,8%; against a respective 2% in the Czech Republic (Country Economy, 2019).

Several international studies have found evidence that lower income is associated with poor access to healthful foods available in supermarkets and grocery stores (Yang, Beebe, & Sadowski, 2010). Moreover, there has been found by international studies that consumers with a higher income are associated with healthier purchasing behavior (Geurts et al., 2017). In the meanwhile, consumers with a lower income tend to buy products and foods that can be described as less healthy. Furthermore, there seems to be also evidence for a national relationship between income and access to healthy foods. Various studies concluded that low-income communities are more often impacted by poor access to healthy foods in terms of retailers (Yang et al., 2010).

Regarding the studies above, there seems to be an evident and positive link between income and healthy food consumption. Besides that, the fact is that the Netherlands is scoring significantly higher when looking to GDP per capita. Consequently, the Dutch consumers may

consume more often healthy foods than Czech consumers. However, this is currently a research gap, so there is no literature supporting that.

It is necessary to get a clear image of the Czech and the Dutch culture and to find out more about their perception of foods in general. First of all, Czech consumers are very price sensitive. The price factor is of big importance in the purchase decision of foods (Horská et al., 2011). Furthermore, compared to other Central-European consumers in Poland and Slovakia, the price has the biggest impact on Czech consumers. Another factor that plays an important role in their consumer behavior is a quality symbol on the product package. A very dominant position is hold by "Klasa" in the marketing strategy of foods.

Another finding states that Czechs positively perceive new packaging or new flavors. The country-of-origin is less important for Czech people. Moreover, they perceive Czech products as quality products in comparison with imported products. For instance, Czechs highly believe in the following Czech products: *"Skoda auto, Budvar, Pilsener Urquell and Bata"* (Horská et al., 2011). The hypermarket is the most popular shopping place for Czech consumers (Horská et al., 2011). Regarding the sector of healthy products, meat products, milk products, fruits and vegetables are the most popular items in the Czech Republic. Alcohol consumption is extremely popular for Czechs. The obesity rate in the Czech Republic is 26% (Jan, Pavel, Tomáš, Dita, & Josef, 2014). 50% of the people with overweight is found to spend more than 4 hours watching television a day.

Regarding the people in the Netherlands, there is found to be a difference between the Dutch and the non-Western people living in the Netherlands. The Netherlands has a multicultural society, and this is displayed in the consumption of foods as well. For instance, looking to the age group in between 18 years and 25 years old, 24,1% of the Dutch society is overweight (Statistiek, 2019). Moreover, the non-Western people in the society is overweight twice as much as the Dutch people (Geurts et al., 2017). In figure 5 below, there is a graph showing the differences in food intake in Amsterdam between people with different cultural backgrounds (Geurts et al., 2017). Like in several other global studies, a research in the Dutch market gave evidence that females are associated with a higher level of foods consumption than males are.

Dutch people increasingly buy ready-to-eat foods in grocery stores and spend less time on preparing food (Geurts et al., 2017). A general Dutch meal that serves as dinner mostly consists out of vegetables, potatoes and meat or fish. The groups of consumers who prefer to eat healthy

and sustainable is currently small but growing (Geurts et al., 2017). Just like the Czech Republic, the Netherlands also is in the top 3 of highest of alcoholic beverages.

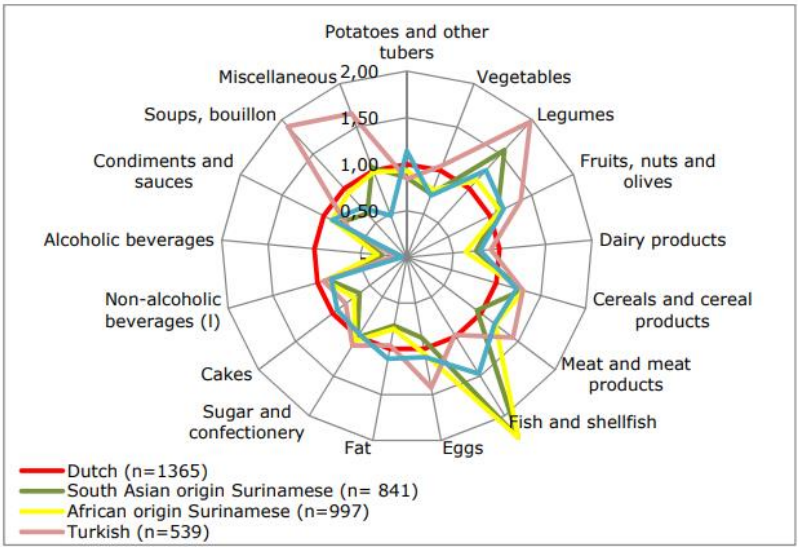


Figure 5 - Cultural differences in food intake in Amsterdam compared to native Dutch people (Geurts et al., 2017)

The intake of fruits, vegetables and other healthy products is the highest among the higher educated people in the Netherlands (Geurts et al., 2017). This finding is based on the whole population of the Netherlands. The paper did not distinguish in age or generation. There are other research papers suggesting that education is positively related to healthy foods consumption (Annunziata & Pascale, 2009). However, specifically the age group of millennials itself is not discussed in the literature.

2.6 Challenges for the Healthy Foods Industry

One of the key challenges for brands selling healthy foods may be the difference in profit margin of healthy products. Because healthy products are less processed, they may not provide the same amount of revenue as products in the hedonic food industry (Bublitz & Peracchio, 2015). As a consequence, it will be more challenging to create a budget that will be sufficient enough to fund the expensive advertising campaigns or other investments in marketing activities. Goldberg & Gunasti (2007) suggest that government subsidies and tax incentives may be needed in order to fund such activities. Governmental subsidies may help the process in educating people while integrating emotional appeals. Moreover, offering subsidies to companies producing and selling healthy products may lead to the attraction of the hedonic food producers, so they can apply their successful marketing strategies in a healthier product category. However, examples like Bolthouse Farms show that there are market opportunities

without governmental interruption. This companys succeeded in offering attractive market prices for the carrots while implementing extensive marketing campaigns (McGray & Douglas, 2011).

Another alternative solution for the profit margin issue for producers is to create cooperative marketing agreements to promote a commodity in general instead of a specific brand. In the 1980s, an association of Californian raisin growers gathered to create a creative marketing campaign to promote the commodity. For instance, they used Claymation raisin figurines in their advertising campaign singing a local popular song "I Heard it Through the Grapevine". As a result from their cooperative campaign, the sales of raisins increased with 10% (Varian, 2006). Also another analysis of the affect of cooperative marketing agreements in the Diary industry shows a net cost to benefit ratio increasing revenue for the producers and farmers of dairy products (Nicholson & Kaiser, 2008). There is also data showing that limiting fast food exposure by certain advertising bans and more federal control over advertisements can reduce the consumption of hedonic foods, but in a minimalistic way (Dhar & Wertenbroch, 2000).

Another issue that may come up when applying healthy foods promotion is the reaction of for instance big fast food companies. Those companies have an immense budget for their marketing activities and they will surely react on a change of perception in the industry. There are two different ways to react, an offensive marketing strategy and a defensive marketing strategy (Kotler & Singh, 1981). The starting point for an attacking strategy is the principle of mass, meaning that *"superior combat power must be concentrated at the critical time and place for a decisive purpose"* (Kotler & Singh, 1981). The companies with superior combat power are in this case the hedonic food producers. They have much greater strength and endurance. For this reason, it is likely for the bigger companies to choose an offensive strategy, or in a defensive case as the situation of today's food industry better known as the "*counteroffensive defense*" (Kotler & Singh, 1981). A counteroffensive defense includes the different offensive strategies, but as a reaction on another attack.

An example of an offensive strategy is a frontal attack. For a frontal attack, the attacker mainly focuses on attacking the strength of the competition (Kotler & Singh, 1981). For example, a fast food company can claim their products to be healthier than the products of healthy foods suppliers. The greater strength and endurance needed for this strategy is not going to be an issue for hedonic food producers. However, it is not very likely that they will attack healthy foods in such a way. The general image of those companies of not being healthy makes it a relatively bad strategy.

Another example of an offensive strategy that is more likely to succeed is a flanking attack. By implementing this strategy, the attacker will confront the competition on their weaknesses (Kotler & Singh, 1981). In this case, hedonic food producers may emphasize the superior taste of their products with massive marketing campaigns. Mainly because of the superior resources, it is hard for healthy food producers to defend their selves.

Hedonic food producers may also apply another defensive strategy than counteroffensive defense. One of the expected strategies may be mobile defense. This means that a firm wants to stretch domain over other or new territories (Kotler & Singh, 1981). These territories can serve in the future as a center for counterattacks or defense. In the food industry this strategy may lead to huge investments into research and development, in order to get to new types of healthy products. These new product categories can be used for further counterattacks against healthy food producers. However, big and successful brands focusing more on producing and marketing products in the healthy foods sector may help in the process to engineer a shift towards more healthy foods consumption.

2.7 Hypothesis

For this research paper, two hypotheses and two null hypotheses were generated. First of all, $H1_0$ and $H1_1$ are presented below:

> *$H1_0$: Dutch millennial consumers are not associated with a higher level of healthy foods consumption than Czech millennial consumers.*
>
> *$H1_1$: Dutch millennial consumers are associated with a higher level of healthy foods consumption than Czech millennial consumers.*

The amount dietary intake in the Netherlands is among the highest in Europe, relatively much higher than in Czech Republic (Geurts et al., 2017). This study also suggests the Netherlands is among the healthier countries in the European Union. Czech Republic has just like other CEE countries more to gain according to Horská et al. (2011). Looking at this information, it is interesting to test if there is a significant difference between the healthy foods consumption of the two countries. For these hypothesis, the independent variable is "country of origin" and the dependent variable is "healthy foods consumption".

Several studies investigated differences in gender globally. However, there has not been conducted any research to find out the difference of gender in the generational group of millennials. The hypothesis regarding the effect of gender are:

> *$H2_0$: Gender, regardless of culture, has no effect on the healthy foods consumption of millennials.*
>
> *$H2_1$: Gender, regardless of culture, has an effect on the healthy foods consumption of millennials.*

Several international research papers claimed there is evidence that gender influences healthy food consumption. Furthermore, female consumers may consume more often healthy foods than male consumers. Expected is that this also counts for millennial consumers. Thus, the prediction is that females consume more often healthy foods, regardless of the culture. The independent variable in these hypotheses is "gender", affecting the depend variable "healthy food consumption".

3. Methodology

This study will add a contribution to help both policy makers and firms to get insights in the current situation of the consumer perceptions of Czech and Dutch millennials towards healthy foods. The report also may help government bodies to get a clear picture of the consumer behavior of one of the most important generational groups. The research objectives are as followed:

- Explore differences in the healthy foods perception in between Czech and Dutch millennials;
- Analyze the perceived degree of orientation of Czech and Dutch millennials towards healthy foods consumption;
- Understand the attitude of Czech and Dutch millennials towards healthy foods;
- Evaluate propensity of Czech and Dutch millennials towards healthy foods;
- Explore the level of confidence of Czech and Dutch millennials in various information sources;
- Verify the presence of various groups with different attitudes towards healthy foods.

For the purpose of this study, a survey was conducted among 344 respondents, of which 146 are male and 198 are female. A quantitative approach was used to be able to identify possible differences among the respondents in for instance attitude, purchasing behavior, perception and knowledge. 185 of the respondents had a Czech nationality and 159 respondents have a Dutch nationality.

The aim was to target millennials in between the age range of 18-35 years old. The population consists out of the sum of both Czech and Dutch millennials. The generational group of Czech millennials consists in total of 1.992.200 people (PopulationPyramid, 2016). The number millennials in the Netherlands involves in total 3.199.170 Dutch citizens (CBS StatLine, 2018). Therefore, the total population for this research consists of 5.191.370. With a confidence level of 95%, the minimum sample size needs to consist of at least 267 respondents (Creative Research Systems, 2019).

The questionnaire was pretested on 10 respondents. The pilot test was done face to face in order to ensure the statements were clear and to identify questions that were hard to understand and redundant variables. Besides that, the pretesting gave a clear idea on the time the people needed to fulfill the survey. The questions were derived from an American food survey conducted by

International Food Information Council (2018). The majority of the respondents found some of the questions very hard to understand. Besides that, it was easy to observe that there were too many options for answers in particular questions. For example, the question: "*How much do you trust information from the following on which foods to eat and avoid?"* had fourteen different options for answering. Several respondents in the pilot research stated there were too many options and that some of the answers were too similar in their eyes. For instance, four people did not know the difference between "conversation with registered dietitian nutritionist", "conversation with personal healthcare professional" and "conversation with wellness counselor or health coach". Adaption of question was thus necessary. In this case, the three answer options were converted into one option, named: "Conversation with a health expert". In the same way, more questions were modified in order to make the survey more understandable for the respondents. According to the pilot test, some questions were removed as well. It took all respondents about 5-10 minutes to complete the questionnaire.

In total, the respondents were presented a total of 22 questions. The questionnaire started with a screening question: *"Which category below includes your age?"*. Respondents younger than 18 years old or older than 35 years old were excluded from the research. The first section consisted out of seven questions asking for detailed socio-demographic information on parameters such as gender, age, nationality, education and occupation. The second part of the survey aims to find out the propensity of consumers towards healthy foods, important perceived attributes and to verify their food purchasing and consumption behavior. This part of the questionnaire considers the healthy conscience of the consumers and their perceived degree of healthiness. Other variables that are considered here are product attributes and their degree of effect on consumers during the food purchasing process. The third part of the questionnaire focuses on potential barriers towards healthy food purchases, perceived benefits for the consumers and their level of confidence in several information sources. The questionnaire is included in appendix 1.

The questionnaire consisted of 21 closed questions and one open question. Levels of importance were numerically coded by using a 5-point Likert scale. This showed the relative levels of importance of or concerns for different perceived attributes or barriers. The survey was conducted online via Google Forms, an online survey administration application made by Google.

The research was conducted in between 09/04/2019 until 26/04/2019. The sampling method used for this research was a mixture between convenience sampling and random sampling. First

of all, the survey was shared within the network of the student via three social media channels: Facebook, Instagram and LinkedIn. Besides that, in order to gather more respondents, a random sampling method was used at the University of Economics, Prague. The 23rd and the 24th of April, every 10th student entering the main entrance was asked to fill in the survey. This means all students entering had an equal chance of selection, which makes the sampling completely random. This method led to a total of 109 respondents. Approximately 250 students were personally asked to fill in the survey, which makes the response rate of this sampling method 43,6%. The other 235 respondents were gathered by social media. Because of the sampling method where social media was used for, measuring the response rate was not possible. Participation was voluntary. As a stimulus for people to fill in the survey, participants received an exclusive document after completing the survey containing 7 tips for a healthier lifestyle. The list of tips is included in appendix 2.

Partly because the random sampling method was conducted in the university, this research is not 100% representative for the whole population. Also, convenience sampling is not the most reliable sampling method. However, the outcomes of the research will suggest certain findings. To secure the validity of the research, questions of the American Food and Health Survey of the International Food Information Council (2018) were used, coded by the same 5-point Likert scale.

Nevertheless, some questions were modified after the pretesting. Besides that, there was a risk that the respondents interpret questions subjectively. For instance, the question "*How often do you consume healthy food?"* can be defined differently by people. For this reason, the question measures the perception of the healthy foods consumption instead of the healthy foods consumption itself. This slightly decreases the validity of the research paper, but still gives a valuable variable for this research. Therefore, to increase the validity, a further explanation was added to the question: *"(Healthy foods in the form of a meal that contains vegetables, grains, diary and proteins)".* Likewise, the statement about sustainability included the information: *"... produced in a sustainable and environmentally friendly way",* to not leave "sustainable" to the respondent's own interpretation. Another important question to discuss here is the one that determines the variable "income". In the first place, income was determined by the question: *"How much total combined money did all members of your household earn last year?"*. Five different income categories were given. Despite that, four out of ten respondents answered "*I don't want to answer*" and another two respondents stated to be struggling to come up with an answer. The question was modified to "*How would you perceive your own income?"*. This leads

to a more subjective answer, but the modification was done anyway in order to secure the response rate, strive for a low bounce rate and ensure a sufficient sample size. Moreover, instead of removing the question, it was adapted to still be able to indicate differences in income.

The data was collected digitally. Afterwards, the data set was analyzed by the statistical computing software SPSS (version 25.0.0.0.). In SPSS, multiple tests were conducted in order to analyze the data. Moreover, linear regression analyses, independent samples T-Tests were conducted in order to evaluate and interpret the variables. These mentioned tests were also used for hypothesis testing. To examine other associations, contingency tables, Chi-square analysis and Cramer's V analysis were conducted. A 95% confidence interval was used for all analyses. Besides SPSS, Microsoft Office Excel (updated version of Office 365) was used to organize the data and to generate graphical outputs.

4. Results

The responses of the survey were analyzed in order to reject or fail to reject the null hypothesis. Therefore, it is necessary to partially analyze the data as a total sample and partially separated by country of origin. To start with, an explorative analysis will be done to describe the descriptive variables of the data.

The data demonstrates that most of the respondents are predominantly female (57,6%). 146 (42,4%) Respondents declare to be male. Table 1 gives an overview of division of gender in age groups per country at the same time.

Overview of Age Groups by Gender and Country

	Respondents (n)	Respondents (%)
Female	**198**	**57,6%**
The Czech Republic	**109**	**31,7%**
18-21 years old	54	15,7%
22-25 years old	47	13,7%
26-29 years old	5	1,5%
30-35 years old	3	0,9%
The Netherlands	**89**	**25,9%**
18-21 years old	18	5,2%
22-25 years old	46	13,4%
26-29 years old	20	5,8%
30-35 years old	5	1,5%
Male	**146**	**42,4%**
The Czech Republic	**76**	**22,1%**
18-21 years old	33	9,6%
22-25 years old	31	9,0%
26-29 years old	9	2,6%
30-35 years old	3	0,9%
The Netherlands	**70**	**20,3%**
18-21 years old	9	2,6%
22-25 years old	36	10,5%
26-29 years old	14	4,1%
30-35 years old	11	3,2%
Grand Total	**344**	**100,0%**

Table 1 - Division of age groups by gender and country (Source: Author)

Looking to the variables gender and country, the Czech females are forthcoming as the biggest group with a percentage of 31,7%. Most of them are included in the age groups between 18 years and 21 years old and between 22 years and 25 years old (29,4%). Also in The Netherlands the respondents are predominantly female. 25,9% appears to be female, while 20,3% answers to be male.

Table 1 shows that in almost all of the groups, the age category of 22-25 years old is the most popular one. The most popular age category of the Czech females forms an exception for that. It is noticeable that the division among age categories is very similar between both countries of issue.

The respondents are equally divided between both countries looking to the division between males and females, as can be seen in table 1. Moreover, 37,5% of the respondents is a normal student. As 33,7% of the respondents is a working student, the majority (more than 2/3) of the consumers is enrolled at a university. In total, 61% of all respondents state to have some kind of job. In figure 6 the division of the respondents in occupation is displayed.

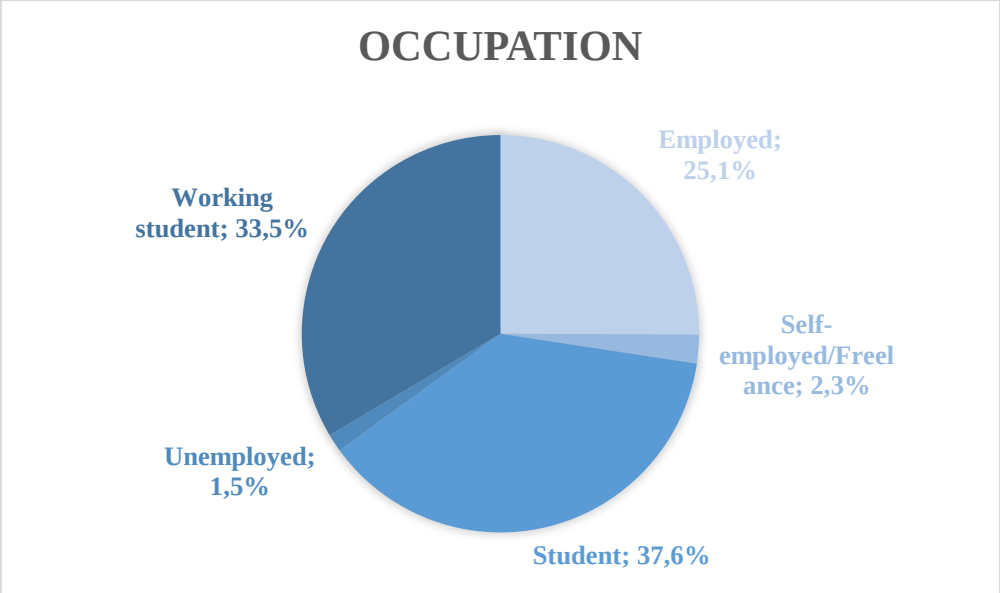


Figure 6 - Occupation (Source: Author)

The education of the consumers was measured by asking to their highest obtained degree. The results are graphically shown in figure 7 . 43,9% of the respondents answers to have a bachelor's degree and also 43,9% has a high school degree. Not many consumers answered to have no degree at all (2,3%). A doctorate degree also appears to be rare among the sample (0,3%).

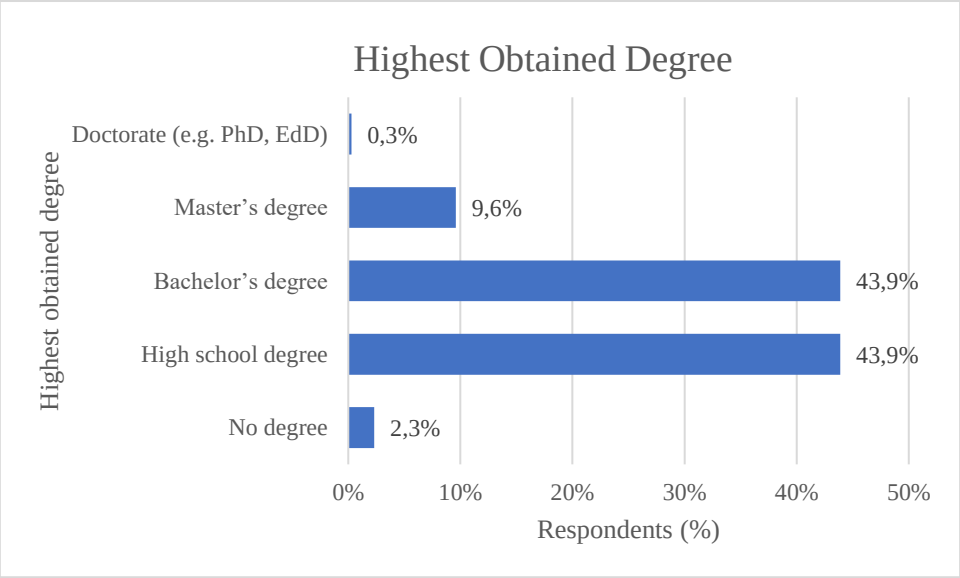


Figure 7 - Highest obtained degree (Source: Author)

The millennial consumers were asked to rate the following statement on a scale from 1 to 5: *"When I'm buying food, I feel often confused by what products are healthy or not."*. The answers are graphically displayed in figure 8. In total, a minority with an average of about 28% feels confused about what is healthy and what is not. The majority on the other hand (on average 47,7%), disagrees with the statement and does not experience confusion when it comes healthiness of food products. There appears to be only a very small difference between Dutch and Czech millennial consumers.

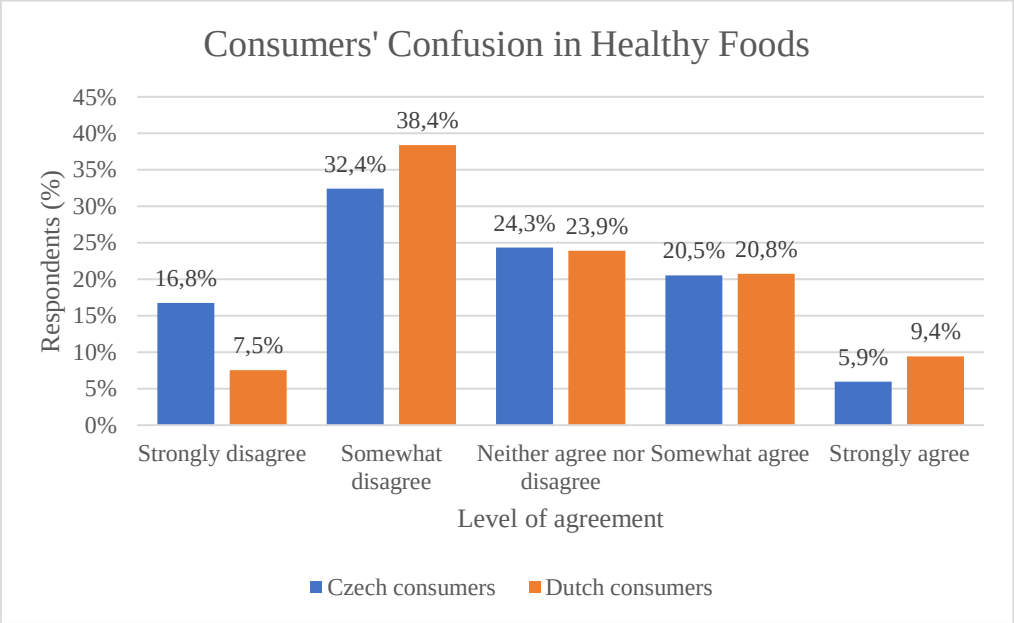


Figure 8 - Consumers' confusion when consuming healthy foods (Source: Author)

One of the questions was concerning the price of healthy foods. It was formulated as followed: *"Would you be willing to spend more money on healthy foods?"*. A pie chart of the answers is displayed below in figure 9. Individual pie charts for Czech consumers and Dutch consumers are relatively similar. Those can be found in figure 27 and figure 28 in appendix 3.

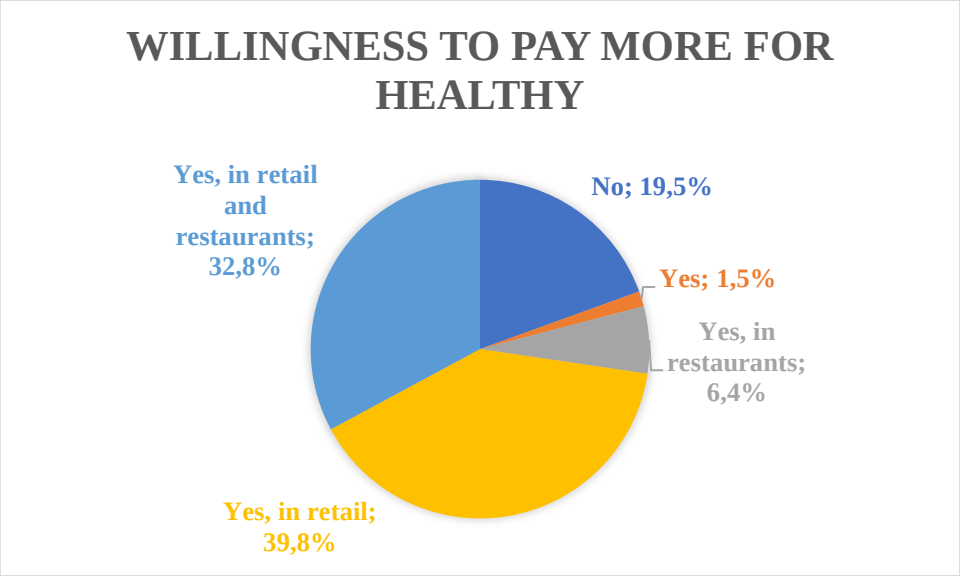


Figure 9 - The consumers' willingness to pay more for healthy foods (Source: Author)

In total, of 82% of the consumers is willing to pay more money for foods when they are healthy. For 32,8% of the consumers it does not matter if it is in a restaurant or in retail. 71,6% wants to pay extra money in retail, while 39,2% may spend more money in restaurants for the healthy option.

The millennials were asked: *"How much more are you willing to spend on healthy food?"*, if answered that they wanted to pay more for healthy foods. The outcome is showed in figure 10. There are relatively small differences between Czech and Dutch millennial consumers. The majority indicated they were willing to pay up to 20% more for healthy foods. The categories "more than 40%", "up to 40% more" and "more than 30%" were not popular among the respondents. Respectively below 3% for the first two categories and below 15% for the third category.

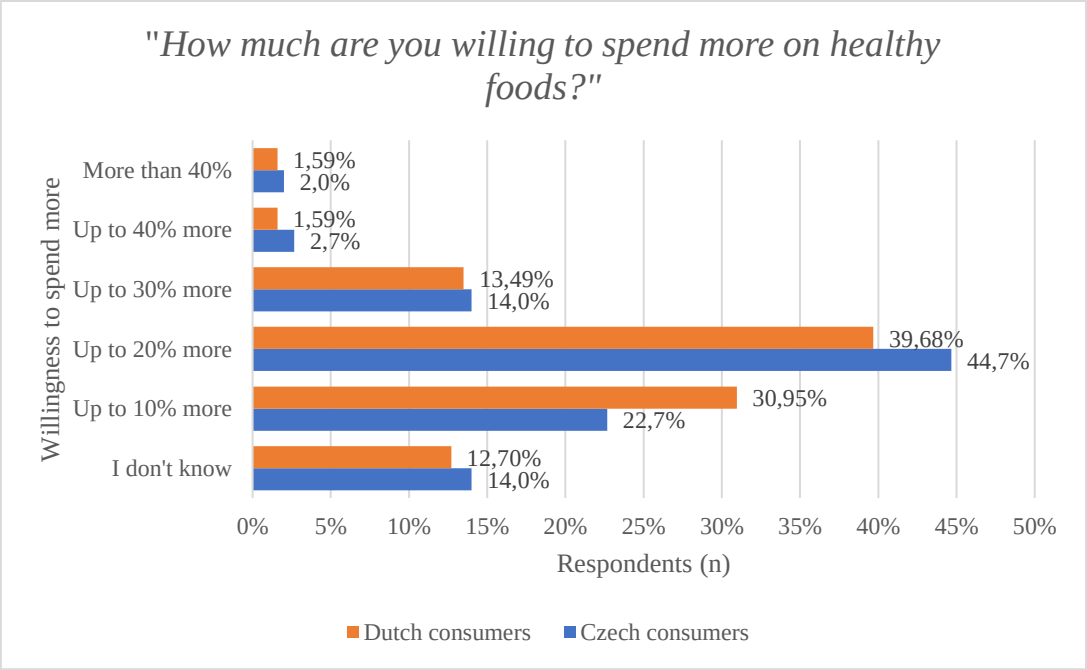


Figure 10 - The consumers' willingness to spend more on healthy foods (Source: Author)

Regarding the healthy food consumption, respondents were asked how often they eat healthy foods in the form of a healthy meal. The responses are showed in figure 11 in percentage.

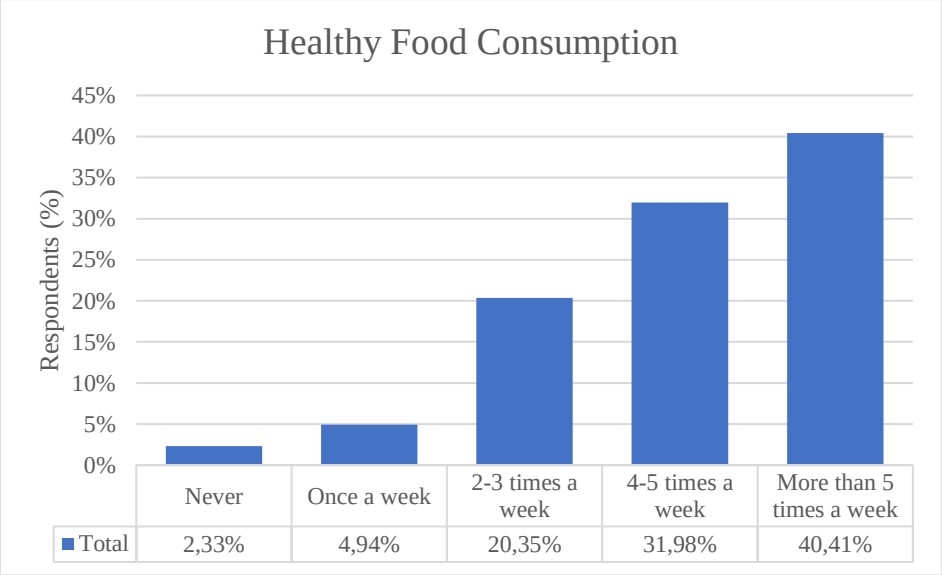


Figure 11 - Healthy Foods Consumption (Source: Author)

More than 40% says to consume healthy more than 5 times a week. This is the biggest group of millennial consumers. The second biggest group is responding to be eating healthy foods 4-5 times healthy foods a week. Only in the case of about 28% of the consumers, healthy foods are consumed less than three times a week. It is interesting to take a look what kind of descriptive variables influence the healthy foods consumption. Therefore, a linear regression analysis was done in SPSS.

First of all, it is highly important to check if the model is significant. Therefore, it is necessary to look at the ANOVA analysis in table 2.

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	95,524	4	23,881	31,983	,000[b]
	Residual	253,124	339	,747		
	Total	348,648	343			

Table 2 - ANOVA table: The effect of different factors on healthy foods consumption (Source: Author)

The dependent variable in table 2 is healthy foods consumption. Four different independent variables were tested, the country of origin, the education (highest obtained degree), the occupation and the gender. The ANOVA analysis in table 2 shows a *F*-value of 31,983 with a number of degrees of freedom of 4 and a significance level of ,000. Therefore, $F(4) = 31{,}983$, $p < ,001$. The model is significant if the *p*-value is less than alpha (α), which is ,05 with a 95% confidence interval. As this is the case, there can be concluded that the model is statistically significant. The model summary is displayed in table 3.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,523[a]	,274	,265	,864

Table 3 - Model summary: The effect of different factors on healthy foods consumption (Source: Author)

The value of the adjusted *R*-square is ,265. This means that 26,5% of the variance in healthy foods consumption can be explained by one's gender, country of origin, occupation or education. The regression coefficients are showed in table 4.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,201	,307		10,420	,000
	Country	,834	,100	,413	8,338	,000
	Degree	,002	,071	,001	,030	,976
	Occupation	,017	,084	,009	,199	,843
	Gender	,678	,095	,333	7,130	,000

Table 4 - Coefficients table: The effect of different factors on healthy foods consumption (Source: Author)

Once again, the dependent variable in table 4 above is healthy foods consumption. The Beta value (β) is the slope of its variable. For instance, ,834 indicates the slope for country of origin. The β-value of the constant line, 3,201, is the y intercept. Therefore, the equation of the slope for using country of origin to predict healthy foods consumption is:

$$y = ,834x + 3,201$$

Furthermore, the equations of the slopes of the other independent variables as predictors of healthy foods consumption in the order of education, occupation and gender are:

$$y = ,002x + 3,201$$

$$y = ,017x + 3,201$$

$$y = ,678x + 3,201$$

To determine if the slope is significant, it is necessary to go over the corresponding significance value ("*p*-value"). The T-Test compares the mentioned slope to a slope of 0 and shows t = 8,338, p = < ,001. This significance value is below ,05, the critical value for a 95% confidence interval. Accordingly, the country of origin has a statistically significant effect on the healthy foods consumption.

According to the regression analysis, the level of education does not significantly affect the consumers' consumption of healthy foods: t = ,030, p = ,976. This is much higher than the critical value. Consequently, the degree does not significantly affect the healthy foods consumption of the millennial consumers. Also, occupation has a higher *p*-value than the critical one: t = ,199, p = ,843. Consequently, the independent variable occupation is not significantly affecting the dependent variable healthy foods consumption. Allying to the country, also the gender seems to be significantly influencing the consumers' consumption of healthy foods: t = 7,130, p < ,001. This means there is a statistically significant effect.

Furthermore, an independent-samples T-Test has been executed in order to find a significant difference between Czech and Dutch millennial consumers when it comes to healthy foods consumption. With healthy foods consumption as a dependent variable and country of origin as an independent variable, the conducted T-Test had the outcome in table 5.

Group Statistics					
	Country_	N	Mean	Std. Deviation	Std. Error Mean
Healthy foods consumption	0	185	3,65	1,118	,082
	1	159	4,47	,625	,050

Table 5 - Group statistics: The effect of country of origin on healthy foods consumption (Source: Author)

The variable "healthy foods consumption" was coded in values from 1 to 5. The number 1 stands for never eating healthy foods, while the 5 stands for eating healthy foods more than 5 times a week. The Czech Republic is coded into "0", while the Netherlands is coded into "1". The mean of the Czech Republic (3,65) differs from the mean of the Netherlands (4,47). Another interesting fact is that the descriptive analysis shows that the minimum mean of Dutch millennial consumers is 3, which stands for the fact that all Dutch respondents stated to consume healthy foods more often than 2-3 times a week. Diversely, the minimum mean of Czech consumers was 1. This number demonstrates that a respondent never eats healthy foods during the week. To see if the difference in means is significant, table 6 shows the statistical view on this matter.

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Healthy foods consumption_	Equal variances assumed	58,133	,000	-8,190	342	,000	-,818	,100	-1,014	-,621
	Equal variances not assumed			-8,522	296,409	,000	-,818	,096	-1,006	-,629

Table 6 - T-Test: The effect of country of origin on healthy foods consumption (Source: Author)

Table 6 shows: $t(342) = -8,190$, $p < ,001$. This demonstrates that the difference between the two countries is statistically significant, which explains that the mean of the healthy foods consumption of Dutch consumers is significantly higher than the mean of the Czech consumers. This is graphically shown by the means plot in figure 12. Once again, the "0" represents the Czech Republic and the "1" represents the Netherlands.

Means Plot – Healthy Foods Consumption by Country

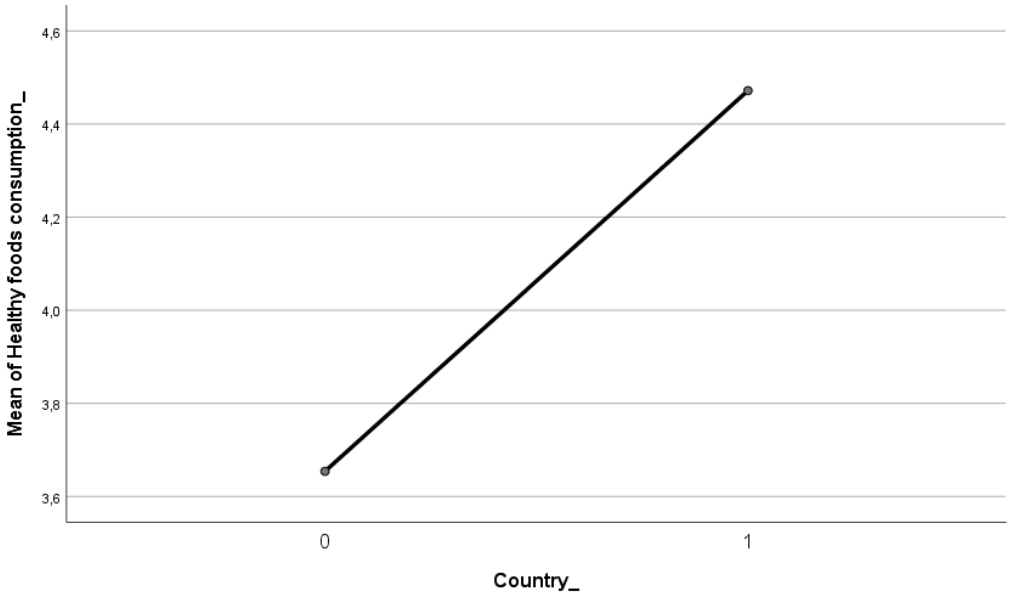


Figure 12 – Means plot: Healthy foods consumption by country (Source: Author)

As can be seen in table 4, also the gender appeared to be of significant influence when determining the healthy foods consumption. For that reason, another independent samples T-Test was conducted in order to find differences between man and women in consumption. With healthy foods consumption as the dependent variable and gender as the independent variable, the group statistics of the outcome is showed in table **7**.

Group Statistics					
	Gender_	N	Mean	Std. Deviation	Std. Error Mean
Healthy foods consumption	Male	146	3,66	1,141	,094
	Female	198	4,31	,794	,056

Table 7 - Group statistics: The effect of gender on healthy foods consumption (Source: Author)

The mean of male millennials appears to be 3,66. This is lower than the mean of 4,31 that comes forward for the female consumers. To assure this difference is significant, the outcome of the T-Test is displayed in table 8 below.

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Healthy foods consumption _	Equal variances assumed	27,420	,000	-6,233	342	,000	-,651	,104	-,856	-,445
	Equal variances not assumed			-5,913	244,089	,000	-,651	,110	-,867	-,434

Table 8 - T-Test: The effect of gender on healthy foods consumption (Source: Author)

In this case, table 8 shows: $t(342) = -6{,}233$, $p < ,001$. Thus, the difference between male and female in healthy foods consumption is statistically significant. Moreover, women occur to consume more often healthy foods than men. The significant difference in means is graphically displayed in the means plot in figure 13**.**

Means Plot – Healthy Foods Consumption by gender

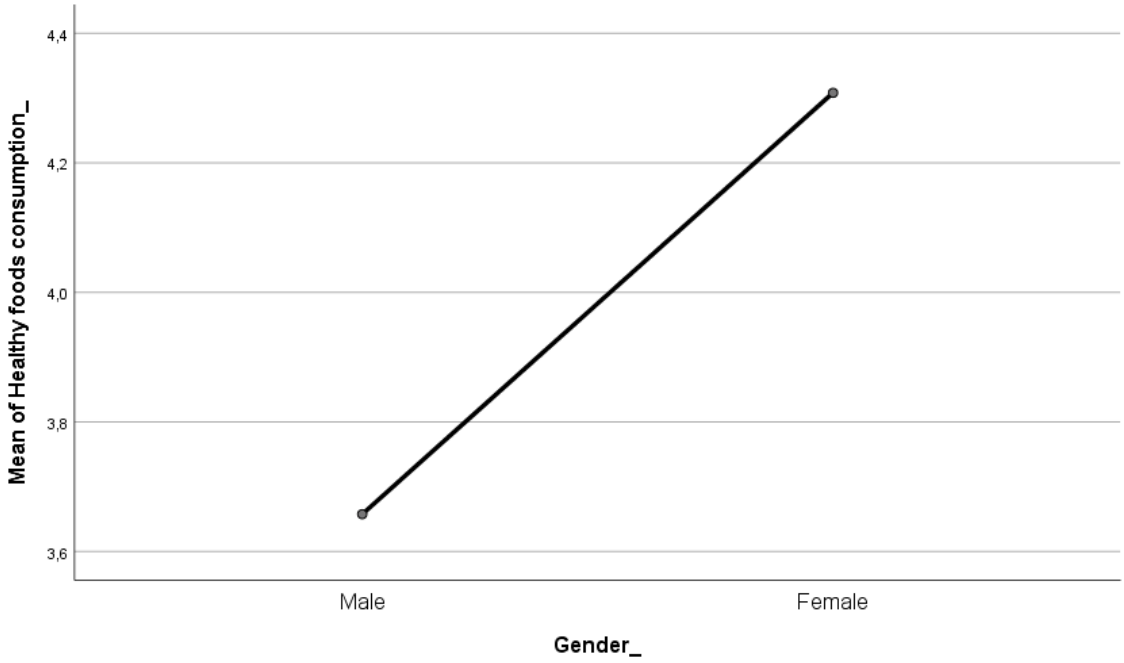


Figure 13 – Means plot: Healthy foods consumption by gender (Source: Author)

Respondents were asked to rate their own health in the questionnaire. They had to rate their health on a scale from 1 to 5. Number 1 means “poor”, while number 5 stands for “excellent”. The relationship between healthy foods consumption and health perception is interesting to

discuss. First, the following contingency table in table 9 was generated to get an overview of both variables.

Healthy foods consumption * Health Perception Crosstabulation							
Count							
		Perception of own health					Total
		1	2	3	4	5	
Healthy foods consumption	Never	2	0	1	1	4	8
	once a week	1	1	5	7	3	17
	2 - 3 times a week	3	11	27	27	2	70
	4 -5 times a week	0	9	37	60	4	110
	more than 5 times a week	0	5	19	92	23	139
Total		6	26	89	187	36	344

Table 9 - Contingency table: Relation between healthy foods consumption and health perception (Source: Author)

In general, the crosstabulation shows that consumers that eat very often healthy foods, also rate their own health relatively high. However, it seems that this does not work in the contrary. This means, looking to the respondents that state to never eat healthy foods, there is still a relatively high rate for their health perception. To find out if there is a significant relationship between the two variables, a Chi-Square test was done. The result is presented in table 10.

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	95,125[a]	16	,000
Likelihood Ratio	78,990	16	,000
Linear-by-Linear Association	24,361	1	,000
N of Valid Cases	344		
a. 12 cells (48,0%) have expected count less than 5. The minimum expected count is ,14.			

Table 10 - Chi-Square Tests: Relationship between healthy foods consumption and health perception (Source: Author)

However, as shown in table 10, 12 cells (48%) have expected count less than 5. The Chi-Square Test assumes that this needs to be lower than 20%. For that reason, it is not credible to use the Chi-Square test. Another test that can be used to measure the strength of the relation is the Cramer's V. Therefore, another descriptive test was done with the output in table 11.

Symmetric Measures					
		Value	Asymptotic Standard Error[a]	Approximate T[b]	Approximate Significance
Nominal by Nominal	Phi	,526			,000
	Cramer's V	,263			,000
Interval by Interval	Pearson's R	,267	,066	5,113	,000[c]
Ordinal by Ordinal	Spearman Correlation	,302	,055	5,862	,000[c]

Table 11 - Cramer's V: Relationship between healthy foods consumption and health perception (Source: Author)

The Cramer's V is a measure of association. The higher the Cramer's V is, the stronger the relationship between the two tested variables. In this case, the Cramer's V is ,263, p <,001. This means that the relationship between the two variables can be defined as moderate, but not as strong.

Another test was conducted to observe the effect of the country of origin of the consumer towards the perception of sustainability. The respondents were asked how much they agreed on a scale from 1 to 5 with the following statement: *"For me it's important that the products I consume are produced in a sustainable and environmentally friendly way"*. The difference between Czech and Dutch millennial consumers is graphically displayed below in figure 14.

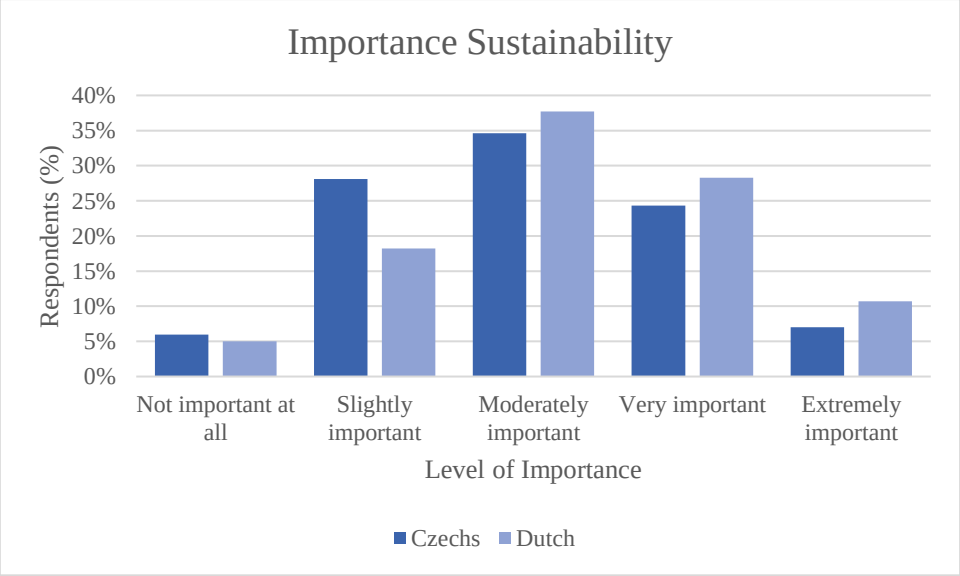


Figure 14 - The importance of sustainability (Source: Author)

For a deeper analysis, a linear regression was carried out. For this analysis, the country of origin is determined as the independent variable and the perception of the consumers towards sustainability as the dependent variable.

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,111[a]	,012	,010	1,026

Table 12 - Model summary: The effect of country of origin on perceived importance of sustainability (Source: Author)

As showed in table 12, the value of the adjusted *R*-square is ,010, which is relatively low. Thus, only 1% of the variance in the perception of one's importance of sustainability can be explained by the nationality. However, the ANOVA-analysis in table 13 shows: $F(1) = 4{,}303$, $p = ,039$). As $p < 0{,}05$, the model is statistically significant.

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4,525	1	4,525	4,303	,039[b]
	Residual	359,681	342	1,052		
	Total	364,206	343			

Table 13 - ANOVA table: The effect of country of origin on perceived importance of sustainability (Source: Author)

The regression coefficients are showed in table 14. The output gives: $t = 2{,}074$, $p = ,039$ 0,05. Thus, there is a significant influence of country of origin on perceived importance of sustainability.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,984	,075		39,574	,000
	Country_	,230	,111	,111	2,074	,039

Table 14 - Coefficients table: The effect of country of origin on perceived importance of sustainability (Source: Author)

The significant difference in means is graphically displayed in figure 15. There can be seen that the Netherlands (1) has with 3,21 a higher mean than the 2,98 of the Czech Republic (2). Therefore, Dutch millennials perceive sustainability as more important than Czech millennials do.

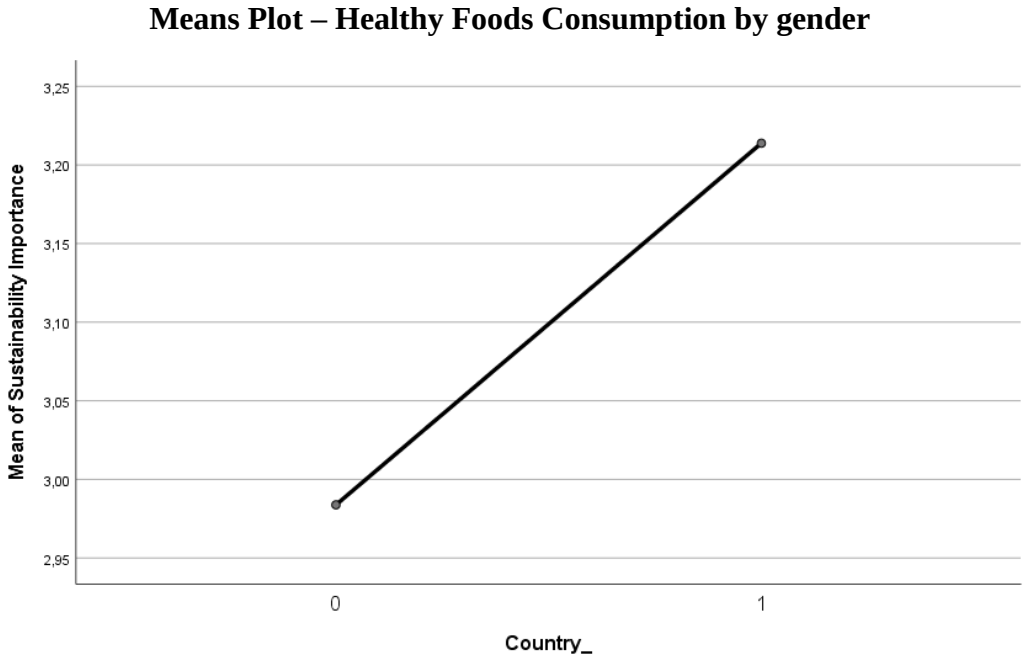


Figure 15 – Means plot: Importance of sustainability by country (Source: Author)

Analyzing the relationship between the importance of sustainability and healthy foods consumption may leads to extra insights. For instance, do the people who eat often healthy foods perceive sustainability as more important? The contingency table in table 15 shows the relationship.

Healthy foods consumption * Sustainability Importance Crosstabulation							
		Sustainability Importance					Total
		Not important at all	Slightly important	Moderately important	Very important	Extremely important	
Healthy foods consumption	Never	1	7	0	0	0	8
	Once a week	1	10	3	3	0	17
	2/3 times a week	5	20	27	14	4	70
	4/5 times a week	6	23	45	28	8	110
	More than 5 times a week	6	21	49	45	18	139
Total		19	81	124	90	30	344

Table 15 - Contingency table: Relation between healthy foods consumption and perceived importance of sustainability (Source: Author)

Once again there are ten cells with an expected count less than 5. For that reason, the assumption of the Chi-square test (expected count must be <40%) is again violated and a different course of action needs to be taken. Therefore, the Cramer's V in table 16 needs to be considered. The

Cramer's V value of ,184, p <,001, shows that there is only a small to moderate relationship between the two variables.

Symmetric Measures			
		Value	Approximate Significance
Nominal by Nominal	Phi	,368	,000
	Cramer's V	,184	,000

Table 16 - Relation between healthy foods consumption and perceived importance of sustainability (Source: Author)

Respondents were also asked how they perceived their own income on a scale from 1 (poor) to 5 (excellent). Eleven respondents did not answer this question, so n = 333. Besides that, respondents were also asked to indicate their access to healthy foods from 1 (poor) to 5 (excellent). The generated contingency table is displayed in table 17.

Income * How would you rate the access to healthy foods in terms of retailers? Crosstabulation							
		How would you rate the access to healthy foods in terms of retailers? (supermarkets, food markets, etc.)					Total
		Poor	Fair	Good	Very good	Excellent	
Income	Poor	4	4	10	12	11	41
	Fair	2	12	15	22	13	64
	Good	1	24	53	52	30	160
	Very good	2	10	14	24	11	61
	Excellent	0	1	3	2	1	7
Total		9	51	95	112	66	333

Table 17 - Contingency table: Relation between income perception and access to healthy foods (Source: Author)

The contingency table in table 17 does not show a clear relation between the two variables. It does not seem there is a significant distribution between income and access to healthy foods. Moreover, people with an excellent income are relatively equally divided over the five categories that determine the access to healthy foods. At the same time, there does not seem to be a proportional difference in the division of the categories for respondents who rated their access to healthy foods as excellent.

Symmetric Measures			
		Value	Approximate Significance
Nominal by Nominal	Phi	,228	,370
	Cramer's V	,114	,370

Table 18 - Relation between income perception and access to healthy foods (Source: Author)

To measure the exact association of the two variables, the Cramer's V value was calculated and can be seen in table 17. The Cramer's V is in this case 0,114, p = ,370. As expected after analyzing the contingency table, this indicates a weak relationship. However, the corresponding p = ,370. Therefore, the results of this research suggest that there is no significant relationship between the two variables.

One part of the questionnaire covered the importance of various factors on the purchase decision of foods in general. The question was stated as: *"How big of an impact do the following factors have on your decision to buy foods in general?"*. There were five factors given that had to be ranked in a 5-point scale from "not important at all" to "extremely important". The factors were: Taste, price, healthiness, convenience and sustainability. The outcomes of the three most important factors are graphically shown in the bar charts in figure 16, 17 and 18.

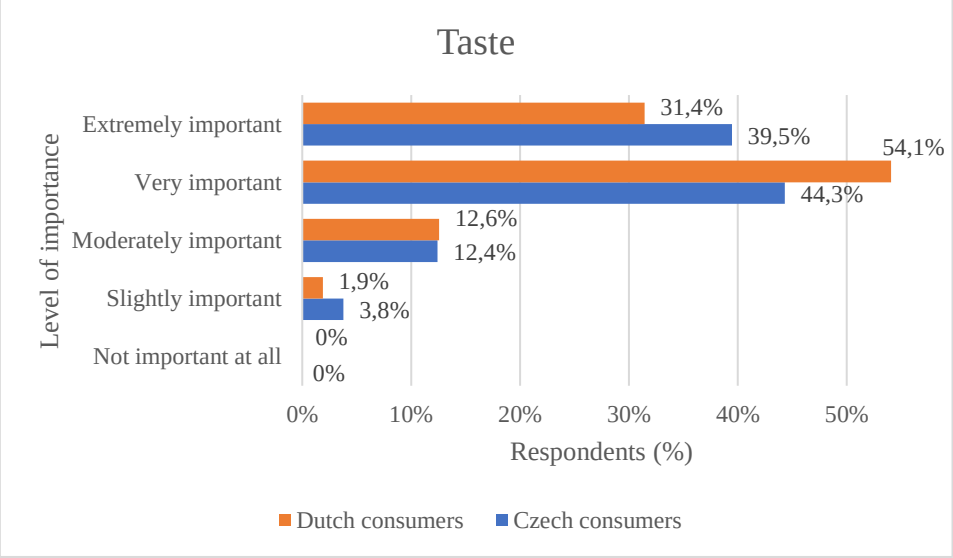


Figure 16 - Importance of taste in foods decision (Source: Author)

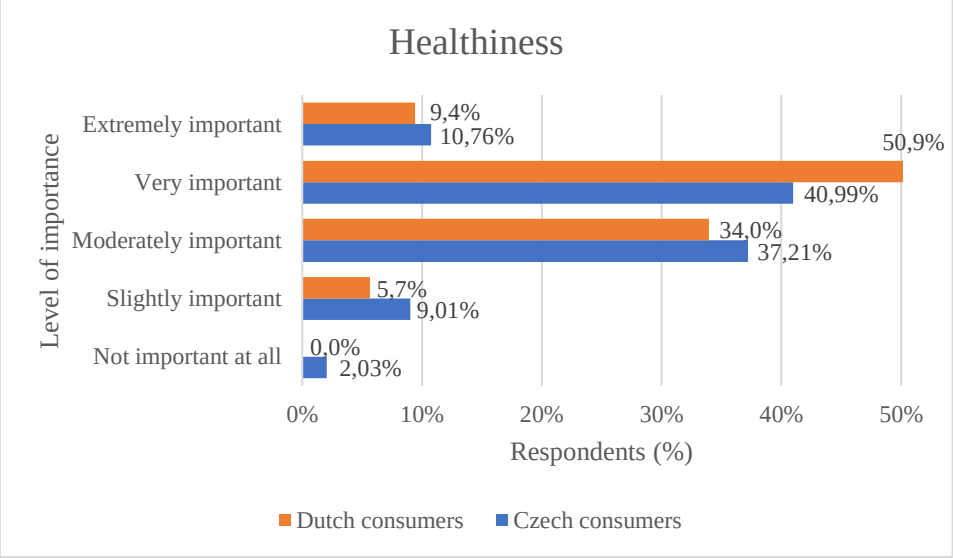


Figure 17 - Importance of healthiness in foods decision (Source: Author)

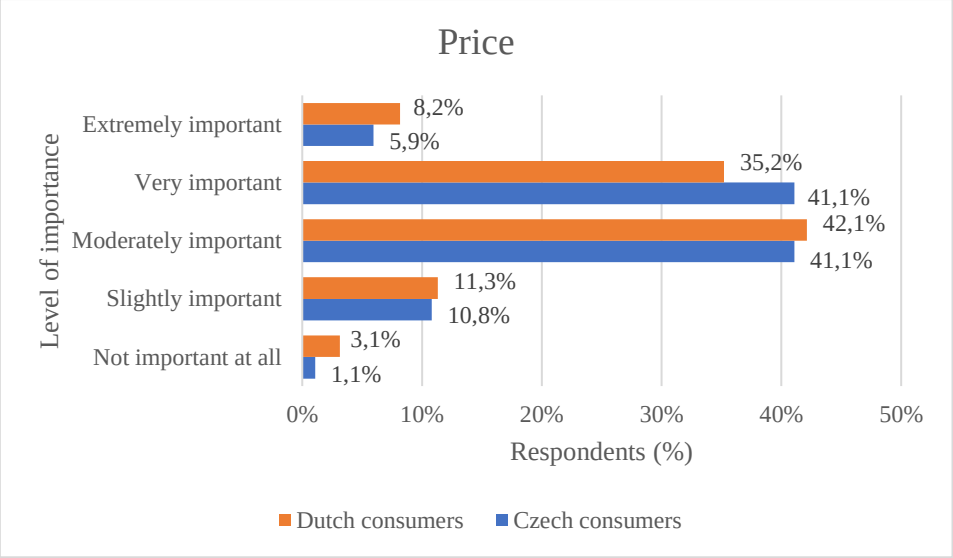


Figure 18 - Importance of price in foods decision (Source: Author)

Taste appears to be the most important factor that millennial consumers consider when purchasing food products. Over 80% of the Czech consumers declare that the taste is very or extremely important for foods. This is also the case for over 85% of the Dutch millennial consumers. Also, the healthiness and the price appear to be of great importance for both Czech and Dutch consumers. Both factors got rated very similar, particularly for Czech millennials. However, it appears that the healthiness of food products is especially for the Dutch consumers relatively more important. For both factors counts that less than 15% thinks these elements are "slightly important" or "not important at all". Something else that catches the eye, is the fact that Czech and Dutch millennials do generally not seem to tremendously differ in how important they perceive the different factors. However, independent samples T-Tests were conducted in order to find significant differences. Therefore, the country of origin was taken as an independent group variable and the specific factor as the independent variable.

Group Statistics					
	Country_	N	Mean	Std. Deviation	Std. Error Mean
Impact of taste	0	185	3,40	,802	,059
	1	159	3,34	,899	,071

Table 19 - Group statistics: The effect of country of origin on the importance of taste (Source: Author)

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Impact_ Taste	Equal variances assumed	1,138	,287	,658	342	,511	,060	,092	-,120	,241
	Equal variances not assumed			,653	319,701	,514	,060	,093	-,122	,242

Table 20 - T-Test: The effect of country of origin on the importance of taste (Source: Author)

Table 19 and 20 display the outcome of the T-Test of the group variable country on the dependent variable "the importance of taste". Once again, the Czech Republic is coded by the value of 0 and the Netherlands is coded by the value of 1. Czech consumers have a mean of 3,40 out of a 5-point scale, while Dutch consumers have a mean of 3,34. Table 20 shows: $t(342) = ,658$, $p = ,511$. $p > ,05$, so there is no significant difference. Thus, the difference in country of origin does not significantly influence the perceived importance of taste.

Group Statistics					
	Country_	N	Mean	Std. Deviation	Std. Error Mean
Impact of healthiness	0	185	3,37	,970	,071
	1	159	3,64	,732	,058

Table 21 - Group statistics: The effect of country of origin on the importance of healthiness (Source: Author)

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Impact - healthiness	Equal variances assumed	11,705	,001	-2,919	342	,004	-,274	,094	-,459	-,089
	Equal variances not assumed			-2,980	336,531	,003	-,274	,092	-,455	-,093

Table 22 - T-Test: The effect of country of origin on the importance of healthiness

As discussed before, it seems that Dutch consumers think the healthiness of a product is a relatively more important factor than it is for Czech consumers. Table 21 demonstrates a mean of 3,37 for Czech millennials and 3,64 for Dutch millennials. Table 22 gives the following data: $t(342) = -2,919$, $p = ,004$. Therefore, there is a significant difference in the perceived performance of the factor healthiness between Dutch and Czech consumers.

Group Statistics					
	Country_	N	Mean	Std. Deviation	Std. Error Mean
Impact of price	0	185	3,40	,802	,059
	1	159	3,34	,899	,071

Table 23 - Group statistics: The effect of country of origin on the importance of price (Source: Author)

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Impact - price	Equal variances assumed	1,138	,287	,658	342	,511	,060	,092	-,120	,241
	Equal variances not assumed			,653	319,701	,514	,060	,093	-,122	,242

Table 24 - T-Test: The effect of country of origin on the importance of price (Source: Author)

The third decisive factor for the consumers is price. As can be seen in table 23, the mean of Czech consumers is 3,40. The Dutch consumers have a mean of 3,34. Table 24 demonstrates: $t(342) = ,658$, $p = ,511$. This explains that there is no significant difference between both countries.

The last two factors that came out to be the least relevant of all mentioned elements are convenience and sustainability. Those elements are displayed in figure 19 and 20. Around 30% of the Czech and Dutch consumers thinks convenience is important. The biggest group perceives this factor is moderately important. Sustainability is rated as the least important of the five factors. It seems that the Dutch consumers slightly rate this element higher. The factor is perceived as slightly or not important by over 40% of both groups.

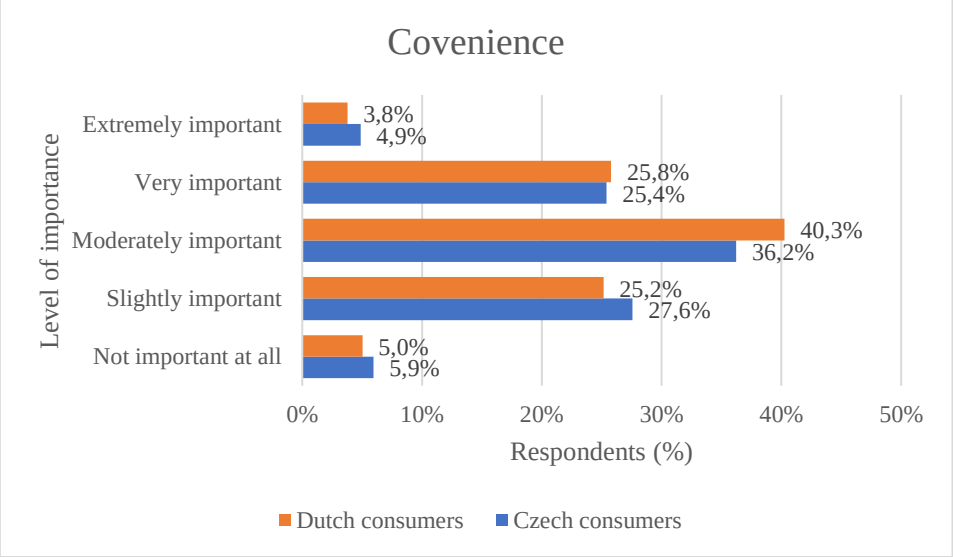


Figure 19 - Importance of convenience in foods decision (Source: Author)

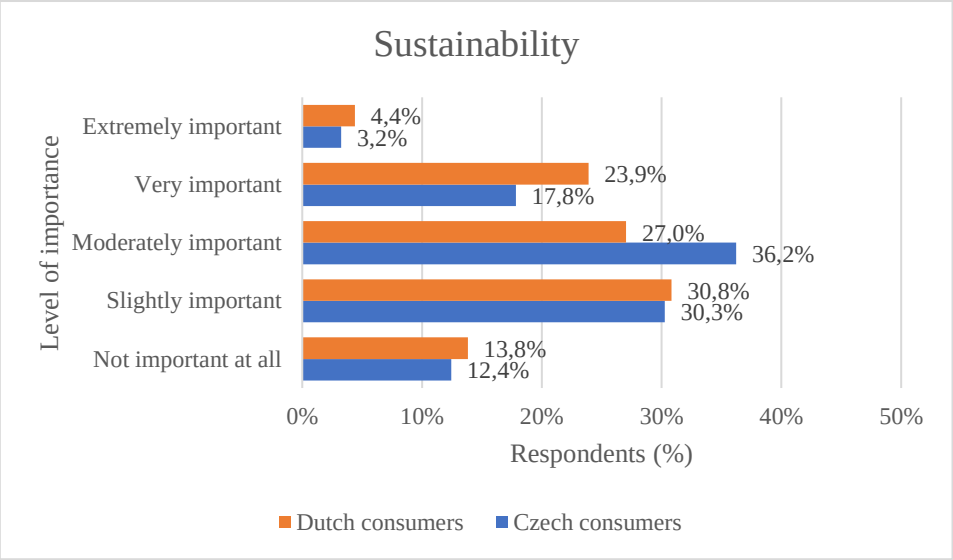


Figure 20 - Importance of price in foods decision (Source: Author)

Respondents were asked what kind of benefits they perceive from buying healthy foods by the following question in the questionnaire: *"Which of the following health benefits are you interested in getting from foods or nutrients?"*. The answers are graphically displayed in figure 21.

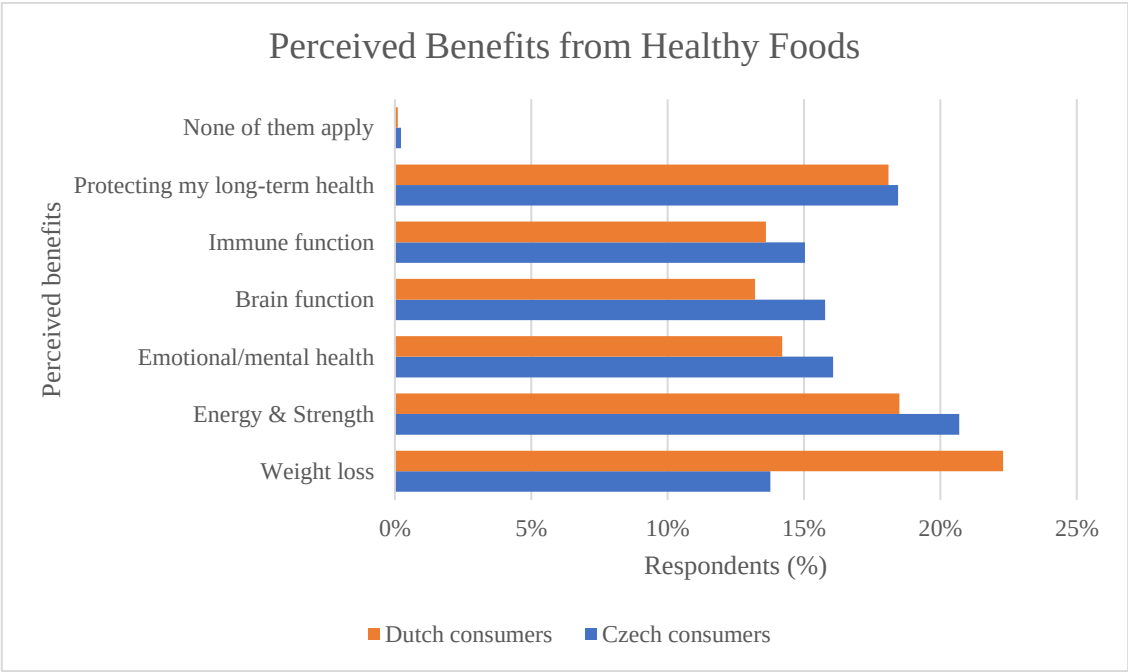


Figure 21 - Perceived benefits from healthy foods (Source: Author)

Looking to the perceived benefits, there is a clear difference between Czech and Dutch consumers. For Czech consumers, "energy and strength", "protecting my long-term health" and "emotional/mental health" show up to be the most important perceived benefits. However, other benefits are following closely. The Dutch millennials share a different opinion. They

strongly differ in especially perceiving "weight loss" as their biggest benefit. "Energy and strength" and "protecting my long-term health" are respectively perceived as the 2nd and 3rd biggest benefits.

The question: *"Which of the following reasons prevent you from eating more often healthy foods?"*, was asked to explore possible barriers to healthy foods. The result is showed in figure 22. The outcome is very clear. The costs of healthy foods are without doubt the biggest barrier to purchase healthy foods for the millennials. The other mentioned barriers are much less important in the perception of both Czech and Dutch consumers.

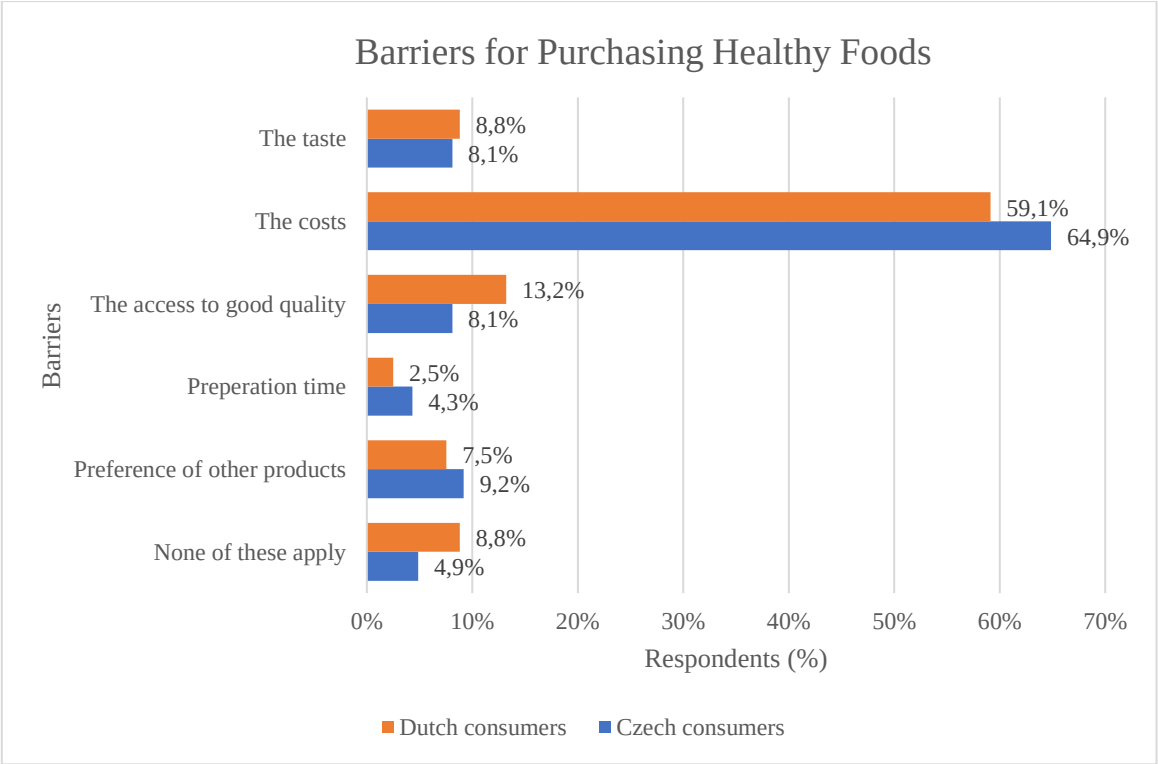


Figure 22 - Barriers for purchasing more often healthy foods (Source: Author)

Furthermore, millennial consumers were asked first which information sources they used to get information from and afterwards how reliable they perceive the various sources. The first question: *"How often do you get information from the following on which foods to eat and avoid?"*. The outcomes, filtered by country, are showed in the stacked bar charts in figure 23 and 24.

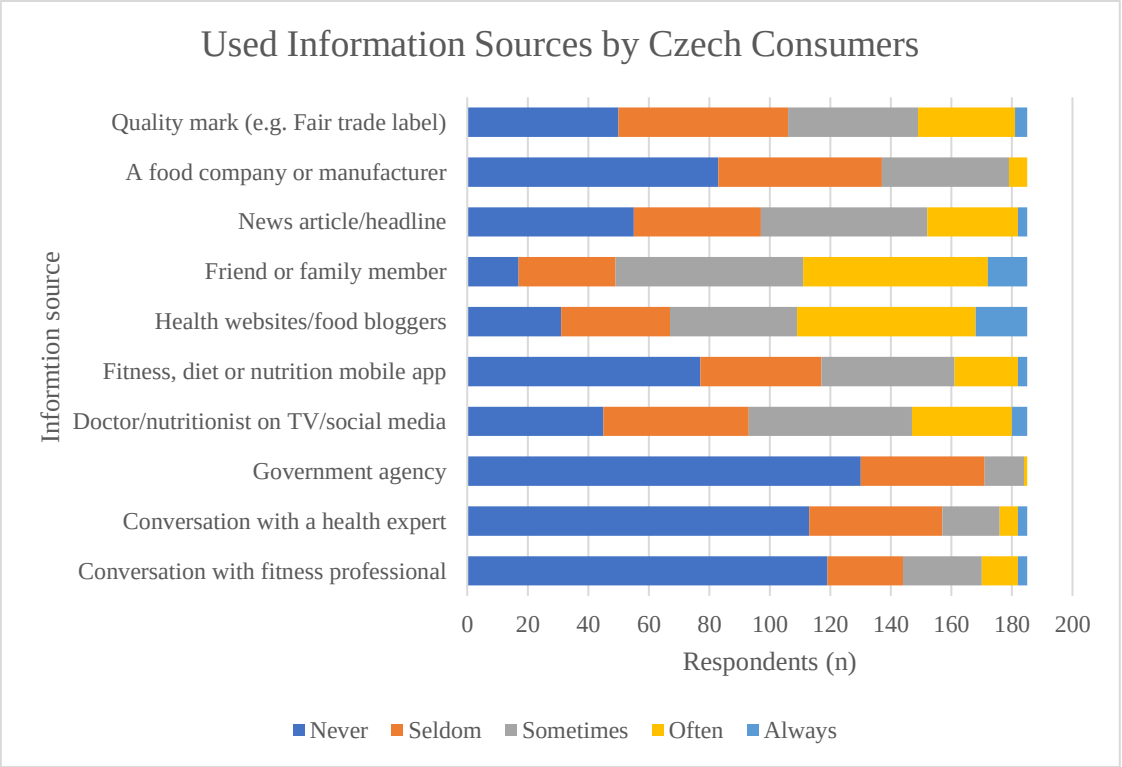


Figure 23 - Used information sources by Czech consumers (Source: Author)

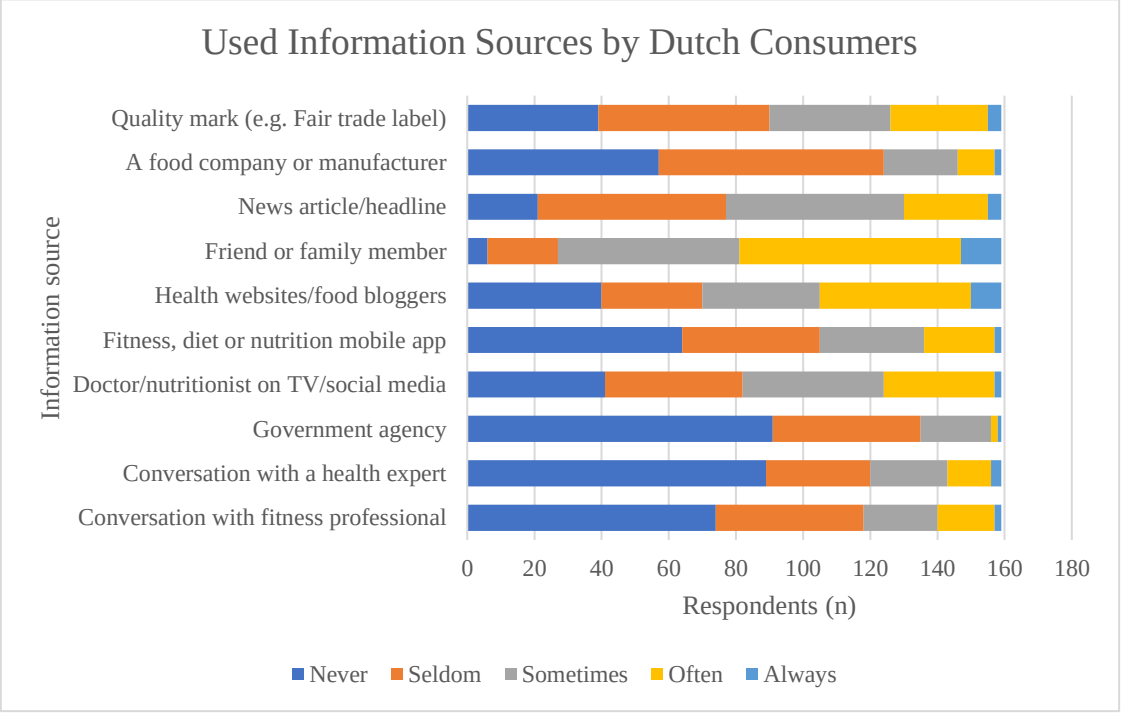


Figure 24 - Used information sources by Dutch consumers (Source: Author)

First of all, there can be concluded that the distribution of the stacked bars in both graphs seem to be similar to each other. Where Czech consumers answer to use health websites and food bloggers the most as information sources, Dutch consumers rely the most on their friends or family members. The Czech millennials take friends and relatives as the 2nd most used

information source, followed by a doctor/nutritionist on TV or social media. Dutch people rely after friends and family mostly on health websites/food bloggers and quality marks. Government agencies are the least used sources of information for both Czech and Dutch consumers. More than 75% of the Czech consumers answers to never or seldom get information from fitness professionals or health experts. For Dutch consumers these are also the least popular sources to get information from after government agencies. There was also a graph generated for the whole data set. That bar chart can be seen in figure 29 and 30 in appendix 4. There is visible that over the all millennial consumers together, friends and family members are the most used sources to get information from.

The following question was related to the previous one: "*How much do you trust information from the following on which foods to eat and avoid?"*. Two graphs for Czech and Dutch consumers were generated. Those can be seen in figure 25 and 26.

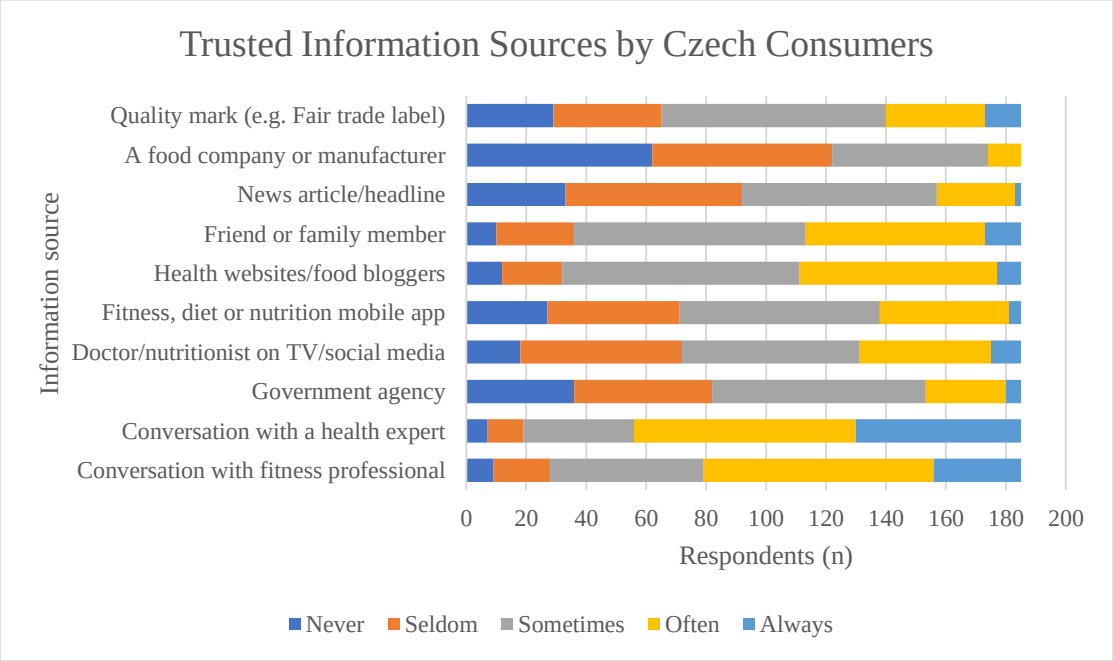


Figure 25 - Trusted information sources by Czech consumers (Source: Author)

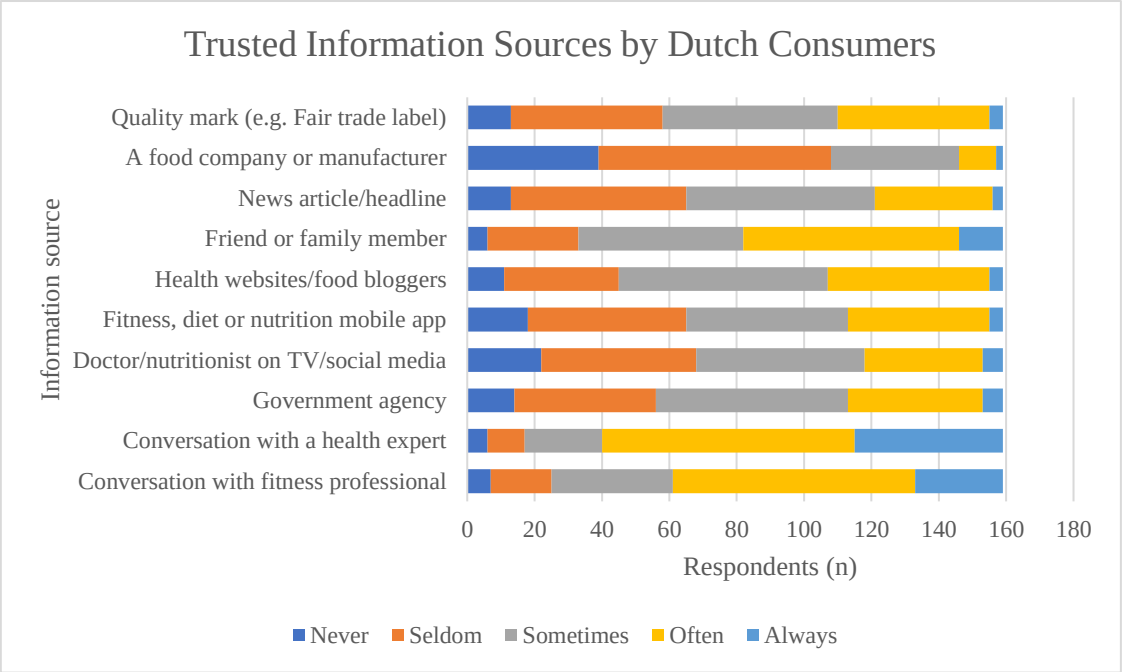


Figure 26 - Trusted information sources by Dutch consumers (Source: Author)

Even though conversations with health experts was among the least used sources for both countries, Czech and Dutch respondents answered to rely mostly on these experts when it comes to trust. The same counts for fitness professionals, who appear to be the 2nd most trustworthy source of information. The Czech and Dutch millennial consumers also indicate to have the 3rd most reliable source of information in common: friends or family members.

Both Czech and Dutch respondents demonstrate that they do not trust food companies and manufacturers by rating them as the least reliable source of information. The 2nd source Czechs do not trust, are news articles and headlines. This is different from Dutch consumers, just like the fact that Czech consumers do not trust government agencies. These agencies are the 3rd least reliable information source for them. For Dutch consumers, the 2nd least popular source is a doctor or nutritionist on TV or social media.

A graph from all Czech and Dutch millennial consumers together is showed in figure 31 and 32 in appendix 5. As both figure 31 and figure 32 demonstrate the same outcomes as the most and least trustworthy source of information, it is not a surprise that health experts and fitness professionals are the most popular information sources to trust and food companies and manufacturers the least popular source.

5. Discussion

Health and disease problems that occur related to the consumption of foods is a motivating factor all over the world to include healthier options in a diet, with healthy outcomes as a goal. Research has shown that when consumers evaluate food products, one of the major quality dimensions is the healthiness (M Wills, Storcksdieck, Kolka, & Grunert, 2012). It is of great essence to get crucial information that is necessary for a better market orientation and development, with the purpose to eventually engineer a movement of change towards more healthy foods consumption. Furthermore, it is incredibly important to explore similarities and differences between European countries. This research examines and specifically compares the perception of Czech and Dutch millennial consumers.

To start with, the first null hypotheses ($H1_0$) states that Dutch millennial consumers are not associated with a higher level of healthy foods consumption than Czech millennial consumers. The results show that there exists a significant difference in the frequency of healthy foods consumption between the two groups. The Dutch millennials appear to consume healthy foods on a higher level than Czech millennials. Therefore, this research paper suggests that $H1_0$ must be rejected.

$H2_0$ indicates that regardless of culture, one's gender does not affect healthy food consumption of millennials. Besides the country, the results demonstrate a statistically significant difference in the influence of males and females on healthy foods consumption. Moreover, females in the generational group of millennials turn out to consume significantly more often healthy foods than males. As a consequence, this paper suggests that, additionally to $H1_0$, $H2_0$ must be rejected as well.

The results suggest that the other two tested descriptive variables, education and occupation, do not show a significant effect on healthy foods consumption. Concerning the level of education, this is in contrast with the literature. Evidence has been found that a lower educational level is associated with the usage of fewer healthy foods (Geurts et al., 2017). An explanation for the difference can be given by looking at the sample of this research. 41,6% of the respondents have a high school degree and are currently enrolled at a university. A significant part of this group will obtain a bachelor's degree within the upcoming few years. 43,9% of the respondents already obtained a bachelor's degree. Moreover, the difference in behavior of bachelor students and people who just obtained a bachelor's degree may be relatively small. Geurts et al. (2017)

examined the whole population including all age groups. Logically, it is harder to find significant differences within the generational group of millennials on educational level than looking at the whole population of a society. Therefore, even with a better structured sample it can be hard to find significant differences on educational level within a group of millennial consumers.

Another interesting finding is that people who eat healthy foods maximum once a week, perceive their own health to be relatively good compared to people who eat healthy foods more often. This may have to deal with the Dunning-Kruger effect, a cognitive bias. This occurs when people with very little knowledge on a topic tend to significantly overestimate themselves (Dunning, 2011). However, the results suggest there is a moderate relationship between healthy foods consumption and the perception of one's own health. Concerning the millennials that do not eat healthy foods regularly, better education may be necessary.

Sustainability is trending among millennials (Hanks et al., 2008). The results of this paper show that millennials perceive sustainability as more important than other generations do (International Food Information Council, 2018). However, Hanks et al. (2008) also argue that even though this generational group is perfectly aware of the importance of sustainable products, this does not significantly translate into more sustainable purchasing decisions. This paper demonstrates that this also counts for the Dutch and Czech millennials purchasing foods. Out of five factors that have an impact on purchasing food products, sustainability was rated as the least important factor to base decisions on. There is a significant positive relation between the perceived importance of sustainability and healthy foods consumption, but this is only a small to moderate one. Therefore, there can not be concluded that people who consume often healthy foods necessarily think sustainability is more important. Besides that, factual information about the environmental footprint is moderately lacking among the consumers (Siegrist et al., 2015). Therefore, the usage of sustainability as a product attribute should be expressed in a concrete way in order to effectively trigger the millennial consumers. An example could be: *"Brand x realized that 500 m^2 of trees in the Amazon rainforest got saved in 2018"*.

Concerning the perceived benefits from healthy foods, there is one major difference between Czech and Dutch millennial consumers. Dutch millennial consumers appear to perceive weight loss as the most important benefit of eating healthy, while this is among the smallest perceived benefits for the Czech millennials. Besides that, millennials from both countries perceive "energy & strength" and "protecting my long-term health" as huge benefits that result of the

consumption of healthy products. These major perceived benefits are in line with similar studies conducted in Europe (Annunziata & Pascale, 2009).

Compelling information also comes forward by analyzing the information sources millennial consumers use and trust. Looking to the most common used information, there are two findings that stand out. First, just like other generational groups, millennials heavily acquire information from friends and family members. This may lead to consumer confusion, as friends and family are not a reliable source when it comes to healthy products and this can lead to conflicting information (International Food Information Council, 2018). Besides that, digital sources such as health websites and food bloggers are a popular used information source for both Czech and Dutch millennials. This is in line with the trend that millennials rely heavily on digital information sources (Küster et al., 2019).

Regarding the information sources millennials trust, both Czech and Dutch consumers perceive health experts and fitness professionals as the most trustworthy information sources. However, both groups do not use these sources to gather information from very often. For millennials, the least trustworthy source of information is a food company or manufacturer. This aligns the trend that millennials increasingly distrust companies and their marketing activities (Mangold & Smith, 2012).

How the millennial consumers perceive the complexity of the healthy foods market is an interesting topic. An American food survey showed that 80% of the consumers experiences confusion about what is healthy or not (International Food Information Council, 2018). Among Czech and Dutch millennial consumers this appears to be entirely different. Only respectively around the 30% of them agrees to feel often confused about what foods to take. A reason for the difference can be the complexity of the American survey. Before this question came up in that survey, many difficult questions about specific nutrients were already asked. This may have discouraged the respondents in the American survey and made them doubt their knowledge on healthy foods. Moreover, in the pretesting various respondents pointed out that some of the questions were difficult. Another reason may be that millennials in particular are better educated about healthy foods than other generations . Besides that, a reason may be that the European consumers are better educated than the American consumers. Governmental institutions all over the world are trying to improve healthier consumer behavior (World Health Organization, 2017). Especially countries in the European Union put a lot of effort in better educating its citizens from a young age on. To sum up, the complexity of the American survey, a better

educated generational group and the difference between the American and European cultures and standards can be seen as an explanation for the difference in the outcome.

Still, only 47,7% of the respondents of the questionnaire of this paper answered to not notice any confusion. Therefore, there is still a big challenge to better educate consumers when it comes to healthy foods. Especially regarding millennials, there is still not enough attention paid to educate them the value of healthier eating habits (Küster, Vila, & Sarabia, 2019).

However, factors such as knowledge and motivation turned out to play a relatively small role in the final food decision (Sleddens et al., 2015). Even though it is important, just educating the generational group of millennials about healthiness of foods in order to change their consumption will most likely not be enough.

Using emotional appeals when marketing healthy foods appeared to be successful before (McGray & Douglas, 2011). As the demand is shifting towards foods with a strong healthy image (Annunziata & Pascale, 2009), creating such a distinctive image in the perception of the consumer is more important than ever before. A dual message strategy that both triggers emotional appeals and claim the nutrient content of the product is a more modern way to attract consumers. Furthermore, evidence shows that consumers in general make healthier decisions when they believe the food alternatives taste good as well (Colby et al., 1987). The results of this paper also suggest that taste is an extremely important factor that in influences the decision of millennial consumers to the highest degree. The taste appears to be the key top driver impacting decisions for foods.

Other researchers, focused on more generational groups together rather than just millennials, describe the price as the second key top driver influencing foods decisions (Geurts et al., 2017). However, there appears to be a difference when it comes to millennials. Even though there is just a very small difference in the perception of importance, millennials seem to choose the healthiness of a food product as the second most important factor over the price. This is a very interesting finding for particularly Czech millennial consumers, as they traditionally tend to be extremely price sensitive (Horská et al., 2011). The factor healthiness is closely followed by the factor price, which is therefore the third key top driver impacting foods decisions. Convenience is less crucial as a driver in the consumer decision. However, the trend of a growing demand for ready-to-eat foods may increases the importance in the future (Geurts et al., 2017).

Concerning the price, 82% of the consumers was willing to spend more money on healthy foods. This is in line with the existing literature, suggesting that millennials expect to pay more for healthy (Ott & Murali, 2017). Among millennials, 84% said it is reasonable to pay more for the healthier food options with better quality in another study. Both Czech and Dutch millennial consumers mainly want to spend extra money for healthy options in grocery stores. The majority of Czech and Dutch consumers is willing to pay up to 20% more.

At the same time, the costs of healthy foods occur to be a barrier to the highest degree. This is a genuine challenge for the industry. Profit margins of healthy products are namely generally lower than profit margins of hedonic foods (Bublitz & Peracchio, 2015). A challenge is to create enough marketing budget for promoting healthy products with a relatively low profit margin. Further research can be done to determine opportunities for the healthy foods sector, for instance investigating the promotion of a commodity in general instead of specific brands.

Dutch and Czech millennials appear on various aspects to show similar behavior. For instance, graphical outputs of reasons that prevent eating healthy and actions taken to save money on food do not demonstrate big differences between the two nations. Even though there is an existence of a high heterogeneity in the European market (Castellini, Canavari, & Pirazzoli, 2002), the fact is that the millennial generation is a globalized one and shows similar consumer behavior (Hanks et al., 2008). This is also clearly visible from the results. Therefore, this generation appears to show globally more similar behavior than any other generation.

5.1 Limitations

The results of this study must be interpreted with caution and a number of potential limitations should be borne in mind. The first limitation is related to the sample bias. The sample is namely gathered via the method of convenience sampling and random sampling at a university. For that reason, the sample is not completely representative for the population of Dutch and Czech millennials. A more structured sampling method can eliminate the bias and provide results that are entirely representative.

A second limitation concerns the language barrier that may have limited the amount of people that is actually able to fill in the survey. The survey was conducted in English, which may did exclude the lower-educated part of the population from participation. For that reason, the pretesting was of considerable importance. Modification of various questions was necessary in order to improve the readability for the respondents. Offering the survey in the Czech and the Dutch language can eliminate this limitation in future research.

Another limitation that has to deal with the limited ability to conduct a thorough analysis of the results that were gathered. For instance, the majority of the respondents is enrolled at a university. Therefore, the reliability of the variable "income" is in question. Moreover, according to the life-cycle theory of consumption, the current consumption of a consumer is determined not only by current income, but also by expected income from work in the future (Deaton, 2005). As nowadays a decent part of the millennial generation is studying, the level of current income is a less reliable variable to base assumptions on. The used scales for variables concerning the used and trusted sources of information were also not completely sufficient. The scale was replicated from another research (International Food Information Council, 2018), but consisted of a subjective time scale from "never" to "always". An improved scale for these questions can be a more specific time scale, such as a scale from "once a week" to "more than five times a week. Besides that, the absence of an exploratory factor analysis is a possible limitation. This analysis can be used to secure the legitimate method of choice to estimate the construct validity of a survey and its scale (Thompson, 2004).

5.2 Future research

The current study gives valuable insights in the perception of Czech and Dutch millennials towards healthy foods. Yet there are unanswered questions that can serve as a direction for future research.

How specifically the properties of healthy foods can be communicated most effectively, is an essential topic for the development of the industry. The fact that the millennial generation is relatively skeptical towards marketing communication compared to other generations (Hanks et al., 2008), shows the importance of an excellent strategic approach. Not succeeding in implementing an effective approach may lead to a flow of enormous amounts of information to the millennials. This may bring a risk of an overload of information that eventually can lead to a lack of interest by the public and consumer confusion among the generational group (Annunziata & Pascale, 2009). Further research may also involve effective communication through government bodies. This may dramatically improve the achievability of realizing a shift towards more healthy foods consumption.

Another topic that brings opportunity for further research is the exploration of the target audiences. For instance, it is interesting to investigate how changes in the marketing strategy will affect the consumer behavior of health-conscious millennials, millennials who do not consider health information and dieting millennials in the Czech Republic and the Netherlands.

Moreover, how will such strategical changes influence children, adolescents and adults? Besides the countries issued in this study, it is also valuable to examine millennial consumer behavior in the healthy foods sector in other European countries, such as North-European and South-European countries.

As both the literature and the results show that millennials rely heavily on digital sources, another topic of interest may be the digital media. For example, how are millennial consumer perceptions influenced and attitudes shaped by internet as a source of information? And how can digital media such as the internet, mobile apps and social media be leveraged to promote healthy foods?

Finally, it is advantageous to study how to face the challenges presented in this paper. For instance, how should the industry react against offensive marketing attacks of hedonic food producers? Or how can cost structures be improved in order to keep the prices of healthy foods low? Further research can indicate opportunities for the healthy foods industry, by for example exploring how commodities in general can be promoted efficiently instead of particular brands only.

6. Conclusion

Major health concerns across the world start with a poor diet quality (World Health Organization, 2017). Moreover, a healthy diet has become a major topic of public discussion worldwide. Therefore, it is becoming increasingly important to determine the factors that are affecting consumer behavior and attitudes towards healthy foods, with the goal of seeking for opportunities for further expansion of the healthy foods industry. In a market with a high heterogeneity of demand such as the European Union, it is essential to avoid market generalization. This paper focuses on the healthy foods perception of Czech and Dutch people in the generational group of millennials. A survey was conducted among 344 respondents to determine consumer perceptions, attitudes and behavior towards healthy foods.

Despite the presence of limitations, primarily related to the sample that is not completely representative for the Czech and Dutch millennial population, this paper features some very interesting findings, suggestions and implications. The main findings of this paper are consistent with the results of other studies, such as the major perceived health benefits, trusted information sources, millennials' perception of sustainability, key decision factors and barriers towards healthy foods. Moreover, some important insights in the specified generational group were gained.

To start with, Dutch millennials were found to consume healthy foods on a higher level than Czech millennials. Besides that, the results suggest that regardless the culture, millennial women consume healthy foods significantly on a more regular base than millennial men. The millennial generation is a more globalized generation than others have ever been, but cultural differences still lead to diversity in perceptions and attitudes. Therefore, understanding the specific consumer perceptions, attitudes and behavior from Czech and Dutch millennials towards healthy foods is crucial for succeeding in the market of foods.

From the marketing perspective, one of the key aspects for success in the healthy foods industry is to communicate the health benefits. Creating a strong healthy image in the minds of the consumers became extremely important over the last years. The most important perceived benefits for Czech millennials are energy, strength and long-term health protection. These dimensions are also relevant for the Dutch millennial consumers, but they perceive weight loss as the most important benefit that comes from healthy products. Digital media can be utilized for efficiently communicating these benefits to the millennial consumers. Besides that, the

millennials from both countries expressed to have a strong level of confidence in information declared by health experts and fitness professionals, who therefore can be effectively used as promoters of campaigns.

However, just educating the consumers will not engineer a movement of change. It is extremely important to also trigger emotional appeals in the communication. Taste is found to be the key top driver impacting foods decisions, for millennials from both nations. This finding needs to be leveraged in order to stimulate the millennial consumers to make a healthier decision.

Regarding sustainability, Dutch millennial consumers perceive this as a more important driver than Czech millennials. However, even though both groups are perfectly aware of the importance of sustainable products, this does not significantly influence their purchasing behavior. Just like convenience, sustainability is trending among millennials and will most likely become a more important driver impacting foods decisions in the future.

For millennials from both countries, the costs of healthy foods are a major key driver and a substantial barrier at the same time. Millennials generally do expect they have to spend more money on healthy foods. The results suggest that the majority of both Czech and Dutch millennials are willing to spend up to 20% more on the healthy option. The challenge for the healthy foods industry in both countries is to ensure sufficient profit margins that can cover marketing activities to promote healthy products, but to keep the prices attractive for the consumers at the same time.

To conclude, healthy foods is a topic widely discussed, also in the Czech Republic and the Netherlands. The healthiness of products is trendy and popular among the millennial generation, what brings many opportunities for expanding the healthy foods industry. Only educating consumers is not sufficient to succeed in the market. Implementing successful marketing strategies of producers of hedonic foods by triggering emotional appeals is essential to accomplish a movement of change towards more healthy foods consumption. By applying the recommendations following from the results of this paper, better strategical and tactical marketing decisions can be made. An increase in consumption of healthy foods will not only positively affect the producers of these products, but is eventually beneficial for the whole Czech and Dutch society.

Bibliography

Annunziata, A., & Pascale, P. (2009). Consumers' behaviours and attitudes toward healthy food products: The case of organic and functional foods. *IDEAS Working Paper Series from RePEc; St. Louis*. Retrieved from http://search.proquest.com/docview/1697471174/3BE3B962F6364436PQ/3

Birch, L. L., & Fisher, J. A. (1995). Appetite and Eating Behavior in Children. *Pediatric Clinics of North America*, *42*(4), 931–953. https://doi.org/10.1016/S0031-3955(16)40023-4

Bublitz, M. G., & Peracchio, L. A. (2015). Applying industry practices to promote healthy foods: An exploration of positive marketing outcomes. *Journal of Business Research*, *68*(12), 2484–2493. https://doi.org/10.1016/j.jbusres.2015.06.035

Castellini, A., Canavari, M., & Pirazzoli, C. (2002). *FUNCTIONAL FOODS IN THE EUROPEAN UNION: AN OVERVIEW OF THE SECTOR'S MAIN ISSUES*. 1–17.

Caswell, J. A., Ning, Y., Liu, F., & Mojduszka, E. M. (2003). The Impact of New Labeling Regulations on the Use of Voluntary Nutrient-Content and Health Claims by Food Manufacturers. *Journal of Public Policy & Marketing*, *22*(2), 147–158. https://doi.org/10.1509/jppm.22.2.147.17637

CBS StatLine. (2018, July 17). CBS StatLine - Bevolking; geslacht, leeftijd en burgerlijke staat, 1 januari. Retrieved April 27, 2019, from https://statline.cbs.nl/StatWeb/publication/?VW=T&DM=SLNL&PA=7461BEV&D1=0&D2=a&D3=1-27,101-105,121-123,131&D4=l&HD=110621-1139&HDR=T,G3,G1&STB=G2

Chan, K., Prendergast, Gerard, Grønhøj, Alice, & Bech-Larsen, Tino. (2011, September 12). (PDF) Danish and Chinese Adolescents' Perceptions of Healthy Eating and Attitudes Toward Regulatory Measures. http://dx.doi.org/10.1108/17473611111163278

Chen, J. (2019, April 5). Consumer Price Index (CPI) Definition. Retrieved May 2, 2019, from Investopedia website: https://www.investopedia.com/terms/c/consumerpriceindex.asp

Colby, J. J., Elder, J. P., Peterson, G., Knisley, P. M., & Carleton, R. A. (1987). Promoting the Selection of Healthy Food Through Menu Item Description in a Family-Style Restaurant. *American Journal of Preventive Medicine*, *3*(3), 171–177. https://doi.org/10.1016/S0749-3797(18)31273-X

Country Economy. (2019, March). Country comparison Netherlands vs Czech Republic CPI (overall index) 2019. Retrieved May 2, 2019, from countryeconomy.com website: https://countryeconomy.com/countries/compare/netherlands/czech-republic?sc=XE0B

Creative Research Systems. (2019). Sample Size Calculator - Confidence Level, Confidence Interval, Sample Size, Population Size, Relevant Population - Creative Research Systems. Retrieved April 27, 2019, from https://www.surveysystem.com/sscalc.htm

Croll, J. K., Neumark-Sztainer, D., & Story, M. (2001). Healthy Eating: What Does It Mean to Adolescents? *Journal of Nutrition Education*, *33*(4), 193–198. https://doi.org/10.1016/S1499-4046(06)60031-6

Cruwys, T., Bevelander, K. E., & Hermans, R. C. J. (2015). Social modeling of eating: a review of when and why social influence affects food intake and choice. *Appetite*, *86*, 3–18. https://doi.org/10.1016/j.appet.2014.08.035

Dangour, A. D., Dodhia, S. K., Hayter, A., Allen, E., Lock, K., & Uauy, R. (2009). Nutritional quality of organic foods: a systematic review. *The American Journal of Clinical Nutrition*, *90*(3), 680–685. https://doi.org/10.3945/ajcn.2009.28041

Deaton, A. (2005). *Franco Modigliani and the Life Cycle Theory of Consumption* (SSRN Scholarly Paper No. ID 686475). Retrieved from Social Science Research Network website: https://papers.ssrn.com/abstract=686475

Dhar, R., & Wertenbroch, K. (2000). Consumer Choice between Hedonic and Utilitarian Goods. *Journal of Marketing Research*, *37*(1), 60–71. https://doi.org/10.1509/jmkr.37.1.60.18718

Dunning, D. (2011). Chapter five - The Dunning–Kruger Effect: On Being Ignorant of One's Own Ignorance. In J. M. Olson & M. P. Zanna (Eds.), *Advances in Experimental Social Psychology* (Vol. 44, pp. 247–296). https://doi.org/10.1016/B978-0-12-385522-0.00005-6

European Commission Eurostat. (2008, January). *Social Statistics and Information Society - Health and Food Safety*. Retrieved from https://ec.europa.eu/eurostat/documents/4187653/5774125/F5-WGM-20080225-EN.PDF/3f215a43-cfe1-46e3-a94f-fc8cff18d9d4?version=1.0

Eye Faster. (2013). *Impulse Purchase Insights - How Eye Tracking Helps You Understand Impulse Purchase Behavior*. Eye Faster LLC.

Faith, M. S., Fontaine, K. R., Baskin, M. L., & Allison, D. B. (2007). Toward the reduction of population obesity: macrolevel environmental approaches to the problems of food, eating, and obesity. *Psychological Bulletin*, *133*(2), 205–226. https://doi.org/10.1037/0033-2909.133.2.205

FAO. (2017). Global trends in organic agriculture markets and countries' demand for FAO assistance, Global Learning Opportunity-International Farming Systems Association Roundtable. Retrieved April 22, 2019, from http://www.fao.org/faostat/en/#data/QC

First, I., & Brozina, S. (2009). Cultural influences on motives for organic food consumption. *EuroMed Journal of Business; Bingley*, *4*(2), 185–199. http://dx.doi.org.zdroje.vse.cz:2048/10.1108/14502190910976538

Geeroms, N., Verbeke, W., & Van Kenhove, P. (2008). Consumers' health-related motive orientations and ready meal consumption behaviour. *Appetite*, *51*(3), 704–712. https://doi.org/10.1016/j.appet.2008.06.011

Geuens, M., De Pelsmacker, P., & Faseur, T. (2011). Emotional advertising: Revisiting the role of product category. *Journal of Business Research*, *64*(4), 418–426. https://doi.org/10.1016/j.jbusres.2010.03.001

Geurts, M., Van Bakel, A. M., Van Rossum, C. T. M., De Boer, E., & Ocké, M. C. (2017). Food consumption in the Netherlands and its determinants, Background report to 'What's on our plate? Safe, healthy and sustainable diets in the Netherlands. *RIVM*, 72.

Goldberg, M. E., & Gunasti, K. (2007). Creating an Environment in Which Youths Are Encouraged to Eat a Healthier Diet. *Journal of Public Policy & Marketing*, *26*(2), 162–181. https://doi.org/10.1509/jppm.26.2.162

Grier, S. A., Mensinger, J., Huang, S. H., Kumanyika, S. K., & Stettler, N. (2007). Fast-Food Marketing and Children's Fast-Food Consumption: Exploring Parents' Influences in an Ethnically Diverse Sample. *Journal of Public Policy & Marketing*, *26*(2), 221–235. https://doi.org/10.1509/jppm.26.2.221

Hanks, K., Odom, W., Roedl, D., & Blevis, E. (2008). Sustainable Millennials: Attitudes Towards Sustainability and the Material Effects of Interactive Technologies. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*, 333–342. https://doi.org/10.1145/1357054.1357111

Holbrook, M. B., & Hirschman, E. C. (1982). The Experiential Aspects of Consumption: Consumer Fantasies, Feelings, and Fun. *Journal of Consumer Research*, *9*(2), 132–140. https://doi.org/10.1086/208906

Horská, E., Ürgeová, J., & Prokeinová, R. (2011). Consumer's food choice and quality perception: Comparative analysis of selected Central European countries. *Agricultural Economics (Zemědělská Ekonomika)*, *57*(No. 10), 493–499. https://doi.org/10.17221/103/2011-AGRICECON

In-Store Marketing Institute. (2010). *Shopper Marketing Best Practices: A Collaborative Model for Retailers and Manufacturers*. Retrieved from http://www.thepartneringgroup.com/shopper-marketing-best-practices-a-collaborative-model-for-retailers-manufacturers/

International Food Information Council. (2018, October 9). *2018 Food & Health Survey*. Retrieved from https://foodinsight.org/wp-content/uploads/2018/05/2018-FHS-Report-FINAL.pdf

Jacobs, M. (2018). Adolescent smoking: The relationship between cigarette consumption and BMI. *Addictive Behaviors Reports*, 100153. https://doi.org/10.1016/j.abrep.2018.100153

Jan, C., Pavel, G., Tomáš, K., Dita, H., & Josef, M. (2014). Walking and Obesity in the Adult Population of the Czech Republic. *Procedia - Social and Behavioral Sciences*, *117*, 633–638. https://doi.org/10.1016/j.sbspro.2014.02.274

Kelly, S., Stephens, J., Hoying, J., McGovern, C., Melnyk, B. M., & Militello, L. (2017). A systematic review of mediators of physical activity, nutrition, and screen time in adolescents: Implications for future research and clinical practice. *Nursing Outlook*, *65*(5), 530–548. https://doi.org/10.1016/j.outlook.2017.07.011

Kotler, P., & Singh, R. (1981). Marketing Warfare in the 1980s. *Journal of Business Strategy*, (Vol 1), 30–41.

Kozup, J. C., Creyer, E. H., & Burton, S. (2003). Making Healthful Food Choices: The Influence of Health Claims and Nutrition Information on Consumers' Evaluations of Packaged Food Products and Restaurant Menu Items. *Journal of Marketing*, *67*(2), 19–34. Retrieved from JSTOR.

Küster, I., Vila, N., & Sarabia, F. (2019). Food packaging cues as vehicles of healthy information: Visions of millennials (early adults and adolescents). *Food Research International*, *119*, 170–176. https://doi.org/10.1016/j.foodres.2019.01.051

Laran, J., & Janiszewski, C. (2009). Behavioral Consistency and Inconsistency in the Resolution of Goal Conflict. *Journal of Consumer Research*, *35*(6), 967–984. https://doi.org/10.1086/593293

M Wills, J., Storcksdieck, S., Kolka, M., & Grunert, K. G. (2012). *Symposium 2: Nutrition and health claims: Help or hindrance: European consumers and health claims: Attitudes, understanding and purchasing behaviour* (Vol. 71). https://doi.org/10.1017/S0029665112000043

Mangold, W. G., & Smith, K. T. (2012). Selling to Millennials with online reviews. *Business Horizons*, *55*(2), 141–153. https://doi.org/10.1016/j.bushor.2011.11.001

McGray, & Douglas. (2011, March 22). How Carrots Became The New Junk Food. Retrieved March 3, 2019, from Fast Company website: https://www.fastcompany.com/1739774/how-carrots-became-new-junk-food

Meyer, N., & Reguant-Closa, A. (2017). "Eat as If You Could Save the Planet and Win!" Sustainability Integration into Nutrition for Exercise and Sport. *Nutrients*, *9*(4). https://doi.org/10.3390/nu9040412

Mittelstaedt, J. D., Kilbourne, W. E., & Shultz, C. J. (2015). Macromarketing approaches to thought development in positive marketing: Two perspectives on a research agenda for positive

marketing scholars. *Journal of Business Research*, *68*(12), 2513–2516. https://doi.org/10.1016/j.jbusres.2015.06.038

National Research Council (US). (2010). *Accounting for Health and Health Care: Approaches to Measuring the Sources and Costs of Their Improvement.* Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK53336/

Nevill, A. M., Stewart, A. D., Olds, T., & Holder, R. (2006). Relationship between adiposity and body size reveals limitations of BMI. *American Journal of Physical Anthropology*, *129*(1), 151–156. https://doi.org/10.1002/ajpa.20262

Nicholson, C. F., & Kaiser, H. M. (2008). Dynamic market impacts of generic dairy advertising. *Journal of Business Research*, *61*(11), 1125–1135. https://doi.org/10.1016/j.jbusres.2007.11.011

Ott, A. N., & Murali. (2017, February 6). Are consumers willing to pay the price for healthier foods? Retrieved April 2, 2019, from Hudson Pacific: News & Views website: https://news.hudsonpacific.co/are-consumers-willing-to-pay-the-price-for-healthier-foods-f1c2d425b27c

Payne, C. R., Niculescu, M., Just, D. R., & Kelly, M. P. (2014). Shopper marketing nutrition interventions. *Physiology & Behavior*, *136*, 111–120. https://doi.org/10.1016/j.physbeh.2014.03.029

Petrescu, D. C., & Petrescu-Mag, R. M. (2015). Organic Food Perception: Fad, or Healthy and Environmentally Friendly? A Case on Romanian Consumers. *Sustainability; Basel*, *7*(9), 12017–12031. http://dx.doi.org.zdroje.vse.cz:2048/10.3390/su70912017

PopulationPyramid. (2016). Population Pyramids of the World from 1950 to 2100. Retrieved April 27, 2019, from PopulationPyramid.net website: https://www.populationpyramid.net/czech-republic/2016/

Porter, M. E., & Kramer, M. R. (2007). Strategy and society: the link between competitive advantage and corporate social responsibility. *Strategic Direction*, *23*(5), 76–93. https://doi.org/10.1108/sd.2007.05623ead.006

QTC. (2017, June 26). Top 10 World's Largest Food & Beverage Companies in 2017. Retrieved May 1, 2019, from QTC Recruitment website: https://qtcrecruitment.com/top-10-worlds-largest-food-beverage-companies-2017/

Raghunathan, R., Naylor, R. W., & Hoyer, W. D. (2006). The Unhealthy = Tasty Intuition and Its Effects on Taste Inferences, Enjoyment, and Choice of Food Products. *Journal of Marketing*, *70*(4), 170–184. https://doi.org/10.1509/jmkg.70.4.170

Reportlinker. (2015, November 12). Today's Millennials in 2025 : Identifying opportunities to effectively target this generational group in the future. Retrieved March 17, 2019, from https://www.prnewswire.com/news-releases/todays-millennials-in-2025--identifying-opportunities-to-effectively-target-this-generational-group-in-the-future-300178051.html

Robinson, E., Thomas, J., Aveyard, P., & Higgs, S. (2014). What everyone else is eating: a systematic review and meta-analysis of the effect of informational eating norms on eating behavior. *Journal of the Academy of Nutrition and Dietetics*, *114*(3), 414–429. https://doi.org/10.1016/j.jand.2013.11.009

Rook, D. W. (1987). The Buying Impulse. *Journal of Consumer Research*, *14*(2), 189–199. https://doi.org/10.1086/209105

Roosen, J., Marette, S., Blanchemanche, S., & Verger, P. (2007). The effect of product health information on liking and choice. *Food Quality and Preference*, *18*(5), 759–770. https://doi.org/10.1016/j.foodqual.2006.12.002

Rucker, D. (2017, October 5). Emotion In Advertising: The Difference Between A Spark And A Backfire. Retrieved March 3, 2019, from Forbes website: https://www.forbes.com/sites/derekrucker/2017/10/05/emotion-in-advertising-the-difference-between-a-spark-and-a-backfire/

Shaikh, A. R., Yaroch, A. L., Nebeling, L., Yeh, M.-C., & Resnicow, K. (2008). Psychosocial predictors of fruit and vegetable consumption in adults a review of the literature. *American Journal of Preventive Medicine*, *34*(6), 535–543. https://doi.org/10.1016/j.amepre.2007.12.028

Siegrist, M., Visschers, V. H. M., & Hartmann, C. (2015). Factors influencing changes in sustainability perception of various food behaviors: Results of a longitudinal study. *Food Quality and Preference*, *46*, 33–39. https://doi.org/10.1016/j.foodqual.2015.07.006

Silayoi, P., & Speece, M. (2013). Packaging and purchase decisions: An exploratory study on the impact of involvement level and time pressure. *British Food Journal*. https://doi.org/10.1108/00070700410553602

Sleddens, E. F. C., Kroeze, W., Kohl, L. F. M., Bolten, L. M., Velema, E., Kaspers, P., … Brug, J. (2015). Correlates of dietary behavior in adults: an umbrella review. *Nutrition Reviews*, *73*(8), 477–499. https://doi.org/10.1093/nutrit/nuv007

Smith-Spangler, C., Brandeau, M. L., Hunter, G. E., Bavinger, J. C., Pearson, M., Eschbach, P. J., … Bravata, D. M. (2012). Are organic foods safer or healthier than conventional alternatives?: a systematic review. *Annals of Internal Medicine*, *157*(5), 348–366. https://doi.org/10.7326/0003-4819-157-5-201209040-00007

Statistiek, C. B. voor de. (2019, April 10). Kwart 18- tot 25- jarigen te zwaar [Webpagina]. Retrieved April 10, 2019, from Centraal Bureau voor de Statistiek website: https://www.cbs.nl/nl-nl/nieuws/2019/15/kwart-18-tot-25-jarigen-te-zwaar

Story, M., Kaphingst, K. M., Robinson-O'Brien, R., & Glanz, K. (2008). Creating healthy food and eating environments: policy and environmental approaches. *Annual Review of Public Health*, *29*, 253–272. https://doi.org/10.1146/annurev.publhealth.29.020907.090926

Thompson, B. (2004). Exploratory and Confirmatory Factor Analysis: Understanding Concepts and Applications. *Applied Psychological Measurement*, *31*(3), 245–248.

Ueland, Ø., Gunnlaugsdottir, H., Holm, F., Kalogeras, N., Leino, O., Luteijn, J. M., … Verhagen, H. (2012). State of the art in benefit–risk analysis: Consumer perception. *Food and Chemical Toxicology*, *50*(1), 67–76. https://doi.org/10.1016/j.fct.2011.06.006

Van Dam, K., & Jonge, J. (2015). The Positive Side of Negative Labelling. *Journal of Consumer Policy*, *38*, 19–38. https://doi.org/10.1007/s10603-014-9274-0

Varian, H. (2006, June 1). Economist's View: Got Real California Raisins? Retrieved March 24, 2019, from https://economistsview.typepad.com/economistsview/2006/06/got_real_califo.html

World Bank Group. (2017). GDP per capita (current US$) | Data. Retrieved May 2, 2019, from World Bank national accounts data, and OECD National Accounts data files. website: https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=EU-NL-CZ

World Health Organization. (2017). *Double-duty Actions for Nutrition: Policy Brief*. Retrieved from https://www.who.int/nutrition/publications/double-duty-actions-nutrition-policybrief/en/

Yang, L., Beebe, R., & Sadowski, B. (2010). *The Grocery Gap - Who has Access to Healthy Food and Why It Matters*. 44.

Younossi, Z. M., Guyatt, G., Kiwi, M., Boparai, N., & King, D. (1999). Development of a disease specific questionnaire to measure health related quality of life in patients with chronic liver disease. *Gut*, *45*(2), 295–300. https://doi.org/10.1136/gut.45.2.295

Appendix

Appendix 1 – Questionnaire

Healthy Food Survey

Currently I'm writing my master thesis about the perception on healthy foods. You'd help me a lot by taking 5-10 minutes of your time to fill in my survey!

All answers will be 100% anonymous.
All answers will only be used for academic purpose and have no commercial value.

I appreciate your time a lot. As a thank you, you'll receive a list with 7 tips for a healthier lifestyle after filling in the survey!

*Vereist

General

1. Which category below includes your age? *

Markeer slechts één ovaal.

- ◯ Younger than 18 years old
- ◯ 18-21 years old
- ◯ 22-25 years old
- ◯ 26-29 years old
- ◯ 30-35 years old
- ◯ Older than 35 years old

2. What is your gender? *

Markeer slechts één ovaal.

- ◯ Male
- ◯ Female

3. What country are you from?

4. What is the highest level of school you have completed? *

Markeer slechts één ovaal.

- ◯ No degree
- ◯ High school degree
- ◯ Bachelor's degree
- ◯ Master's degree
- ◯ Doctorate (e.g. PhD, EdD)

5. What is your work status? *

Markeer slechts één ovaal.

- ◯ Employed
- ◯ Self-employed/Freelance
- ◯ Student
- ◯ Working student
- ◯ Unemployed
- ◯ Anders: _____

6. How would you perceive your income?

Markeer slechts één ovaal.

	1	2	3	4	5	
Far below average	◯	◯	◯	◯	◯	Far above average

7. Do you smoke and/or drink alcohol?

Markeer slechts één ovaal.

- ◯ Yes, I smoke
- ◯ Yes, I drink alcohol
- ◯ Yes, I smoke and drink alcohol
- ◯ No
- ◯ I don't want to answer

Foods

8. How big of an impact do the following factors have on your decision to buy foods in general? *

Markeer slechts één ovaal per rij.

	Not important at all	Slightly important	Moderately important	Very important	Extremely important
Taste	◯	◯	◯	◯	◯
Price	◯	◯	◯	◯	◯
Healthiness	◯	◯	◯	◯	◯
Convenience (easyto use/consume)	◯	◯	◯	◯	◯
Sustainability (environmental friendly)	◯	◯	◯	◯	◯

9. How often do you consume healthy food? (Healthy foods in the form of a meal that contains vegetables, grains, diary and proteins) *

Markeer slechts één ovaal.

- ◯ Never
- ◯ Once a week
- ◯ 2-3 times a week
- ◯ 4-5 times a week
- ◯ More than 5 times a week

Healthy Foods

Do you agree or disagree with the following statements?

10. "When I'm buying food, I feel often confused by what products are healthy or not." *

Markeer slechts één ovaal.

	1	2	3	4	5	
Strongly disagree	◯	◯	◯	◯	◯	Strongly agree

11. "For me it's important that the products I consume are produced in a sustainable and environmental friendly way" *

Markeer slechts één ovaal.

	1	2	3	4	5	
Strongly disagree	◯	◯	◯	◯	◯	Strongly agree

12. In general, how would you describe your own health? *

Markeer slechts één ovaal.

	1	2	3	4	5	
Poor	◯	◯	◯	◯	◯	Excellent

13. How would you rate your diet according to what you think a health expert would recommend? *

Markeer slechts één ovaal.

	1	2	3	4	5	
Poor	◯	◯	◯	◯	◯	Excellent

14. How would you rate the access to healthy foods in terms of retailers? (supermarkets, food markets, etc.) *

Markeer slechts één ovaal.

	1	2	3	4	5	
Poor	◯	◯	◯	◯	◯	Excellent

15. Which of the following reasons prevent you from eating more often healthy food? Select all that apply *

Vink alle toepasselijke opties aan.

- [ ] The costs
- [ ] The access to good quality
- [ ] The taste
- [ ] Preference of other products
- [ ] None of these apply
- [ ] Anders: _____

16. In the past 12 months, have you done any of the following things to save money on food? Select all that apply *

Vink alle toepasselijke opties aan.

- [ ] Using coupons
- [ ] Purchasing more products on sale
- [ ] Cut back on eating out or getting take out from restaurants
- [ ] Shopping at discount stores
- [ ] Purchasing fewer food or beverages
- [ ] None of the above
- [ ] Anders: _____

17. Would you be willing to spend more money on healthy food? *

Markeer slechts één ovaal.

- ◯ Yes, in retail (supermarkets, convenience stores etc.)
- ◯ Yes, in restaurants
- ◯ Yes, in retail and restaurants
- ◯ No *Ga naar vraag 19.*

Price

18. How much more are you willing to spend money on healthy food?

Markeer slechts één ovaal.

- ◯ Up to 10% more
- ◯ Up to 20% more
- ◯ Up to 30% more
- ◯ Up to 40% more
- ◯ More than 40%
- ◯ I don't know

Health Benefits

19. Which of the following health benefits are you interested in getting from foods or nutrients?

- [ ] Weight loss
- [ ] Energy & Strength
- [ ] Emotional/mental health
- [ ] Brain function (memory, focus, cognition)
- [ ] Immune function
- [ ] Protecting my long-term health
- [ ] None of the above

Information

You're almost done!

20. How often do you get information from the following on which foods to eat and avoid? *

Markeer slechts één ovaal per rij.

	Never	Seldom	Sometimes	Often	Always
Conversation with a health expert					
Conversation with fitness professional					
Government agency					
Doctor/nutritionist on TV or via social media					
Fitness, diet or nutrition mobile app					
Health-focused websites/food or nutrition bloggers					
Friend or family member					
News article/headline, or news on TV					
A food company or manufacturer					
Quality mark (e.g. Fair trade label)					

21. How much do you trust information from the following on which foods to eat and avoid? *

Markeer slechts één ovaal per rij.

	Never	Seldom	Sometimes	Often	Always
Conversation with a health expert					
Conversation with fitness professional					
Government agency					
Doctor/nutritionist on TV or via social media					
Fitness, diet or nutrition mobile app					
Health-focused websites/food or nutrition bloggers					
Friend or family member					
News article/headline, or news on TV					
A food company or manufacturer					
Quality mark (e.g. Fair trade label)					

22. Could you give an example of someone who inspires you on social media when it comes to a healthy lifestyle?

Appendix 2 – Incentive Survey

THANK YOU FOR FILLING IN THE SURVEY! ENJOY THE TIPS BELOW

1. Eat a variety of foods

More than 40 different nutrients are needed for good health. No single food can supply all of those, so vary in what you eat.

- ➔ *High-fat lunch? Follow by a low-fat dinner*
- ➔ *Large meat portion? Perhaps choose fish the next day*
- ➔ *For snacks, choose yoghurt, a handful of fresh or dried fruits, vegetables (like carrot sticks) or unsalted nuts*

ADVANTAGES OF EXERCISING:

- Helps burning calories
- Good for heart and circulatory system
- Maintains & increases muscle mass
- Helps focusing
- Improves overall health well-being
- Increases lifespan
- Lowers risk of diseases
- Higher bone density
- Reduces stress and anxiety

2. Make exercising a habit

Physical activity has plenty of advantages. Pick a type of exercise you like and start scheduling it in your week to make it a habit. For instance, dedicate yourself to do some sports every Tuesday, Thursday & Saturday; on fixed times! During these times you work-out and don't plan other activities. Once you create a routine out of it, it will be very easy to maintain. Don't forget to vary in exercises. Surprise your body.

Important! *Keep it realistic. Rather make a habit out of doing sports 2/3 times a week throughout the year than going 5 times for six weeks to quit afterwards.*

3. Drink more water

Water is needed for carrying out body functions, removing waste and to carry nutrients & oxygen around the body. Besides that, it's proven that drinking more water helps to fill your stomach and it makes you less hungry and less likely to overeat. Quick tip: Drink a glass of water before each meal.

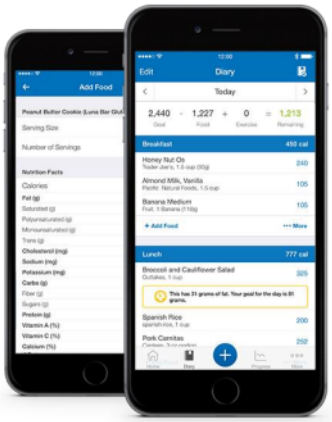
4. Enjoy plenty of fruits and vegetables

Fruits and vegetables are among the most important foods for giving us enough vitamins, minerals and fibre. We should try to eat at least 5 servings a day. For example, a glass of fresh fruit juice at breakfast, perhaps an apple and a banana as snacks, and a good portion of different vegetables at each meal.

- ➔ *Too few fruits and vegetables? To start with, introduce one extra piece a day*
- ➔ *Did you know that a single orange includes more health benefits than vitamin C pills?*
- ➔ *Pick different-colored fruits/vegetables. Different colors = different health benefits*

5. Know what you eat

Paying attention to portion size will help not to consume too many calories and will help to eat all the foods we enjoy, without having to eliminate any. Favorite foods high in fat? Eliminating them abruptly could fire back and make us return to the old habits. Choose low fat options instead, eat them less frequently, and in smaller portions.



- ➔ *Lose weight? Gain weight? Tracking what you eat helps to achieve goals*
- ➔ *The faster you lose weight, the more likely you are to be losing mostly water and muscle, rather than fat. If the deficit in calories is too big, it will most likely result in just burning muscle, so avoid that*
- ➔ *Free apps such as* **MyFitnessPal** *make it very easy to track your recommended daily calorie intake that will fit your goals*

6. Replace saturated with unsaturated fat

Fats are important for good health and proper functioning of the body. However, too much of it can negatively affect weight and cardiovascular health. Different kinds of fats have different health effects.

- ➔ Limit the consumption of total and saturated fats (often coming from foods of animal origin), and completely avoid trans fats; read the labels
- ➔ Eat fish 2-3 times a week, with at least one serving of oily fish. This will contribute to the right intake of unsaturated fats
- ➔ When cooking, boil, steam or bake, rather than frying. Use for example olive oil

7. Avoid alcohol

Just kidding! Once you follow the tips given before, you can drink some beers during the weekend and still gain the results you want, period.

Appendix 3 – Consumers' Willingness to Spend More by Country

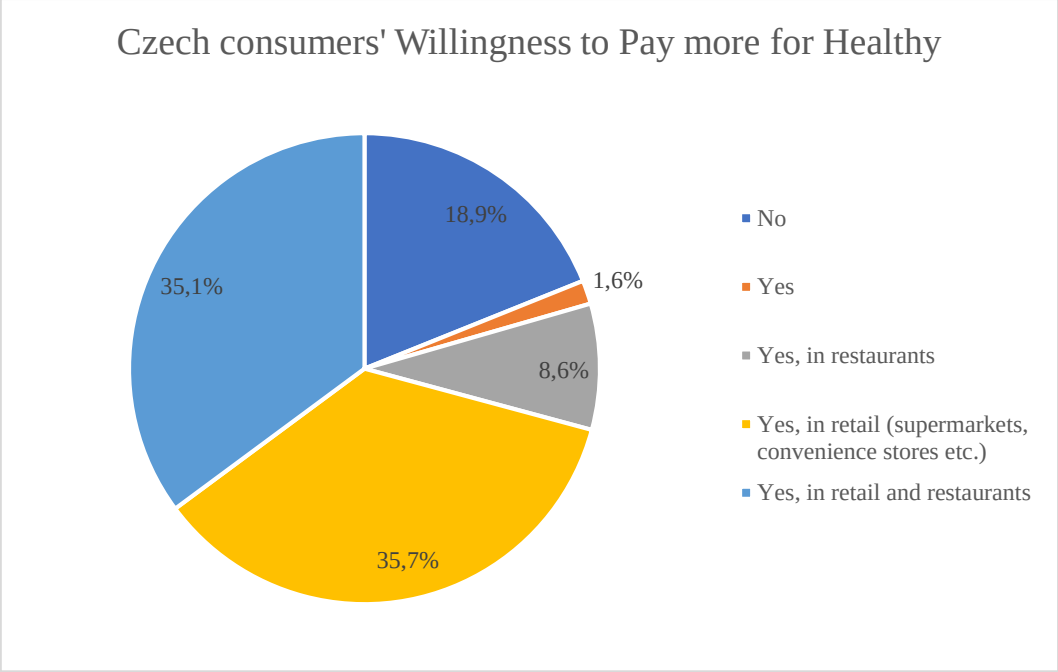


Figure 27 - Czech consumers' willingness to pay more for healthy foods (Source: Author)

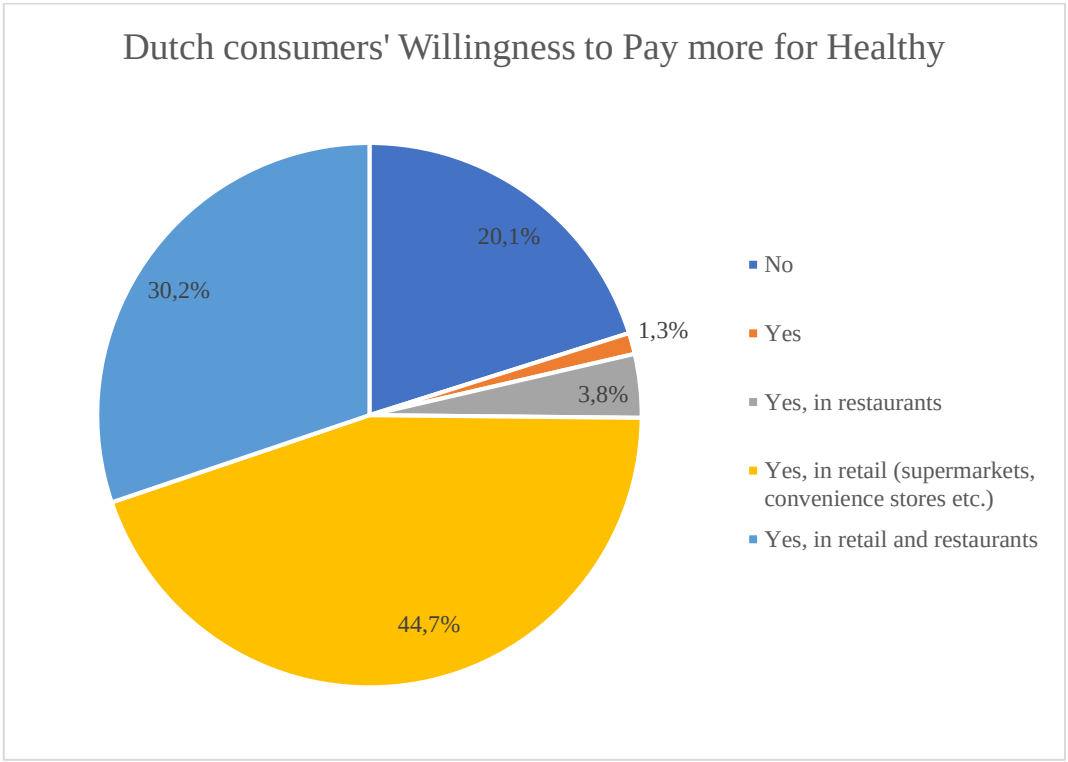


Figure 28 - Dutch consumers' willingness to pay more for healthy foods (Source: Author)

Appendix 4 – Consumers' Confusion by Country

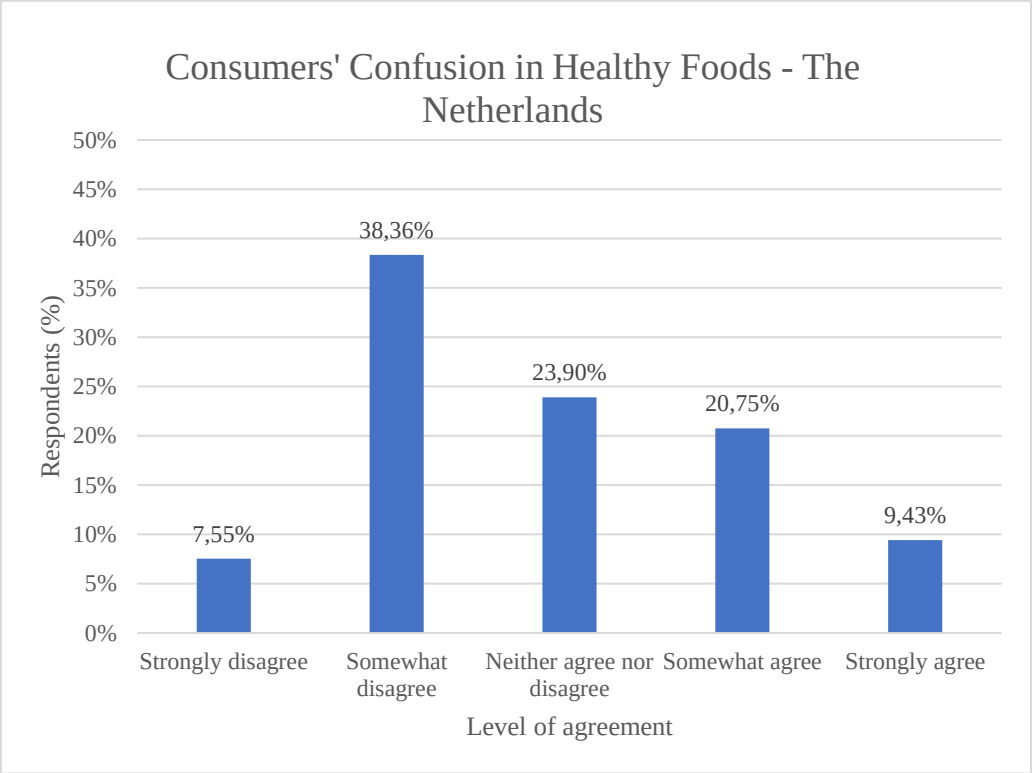


Figure 29 - Consumers' Confusion in Healthy Foods - The Netherlands (Source: Author)

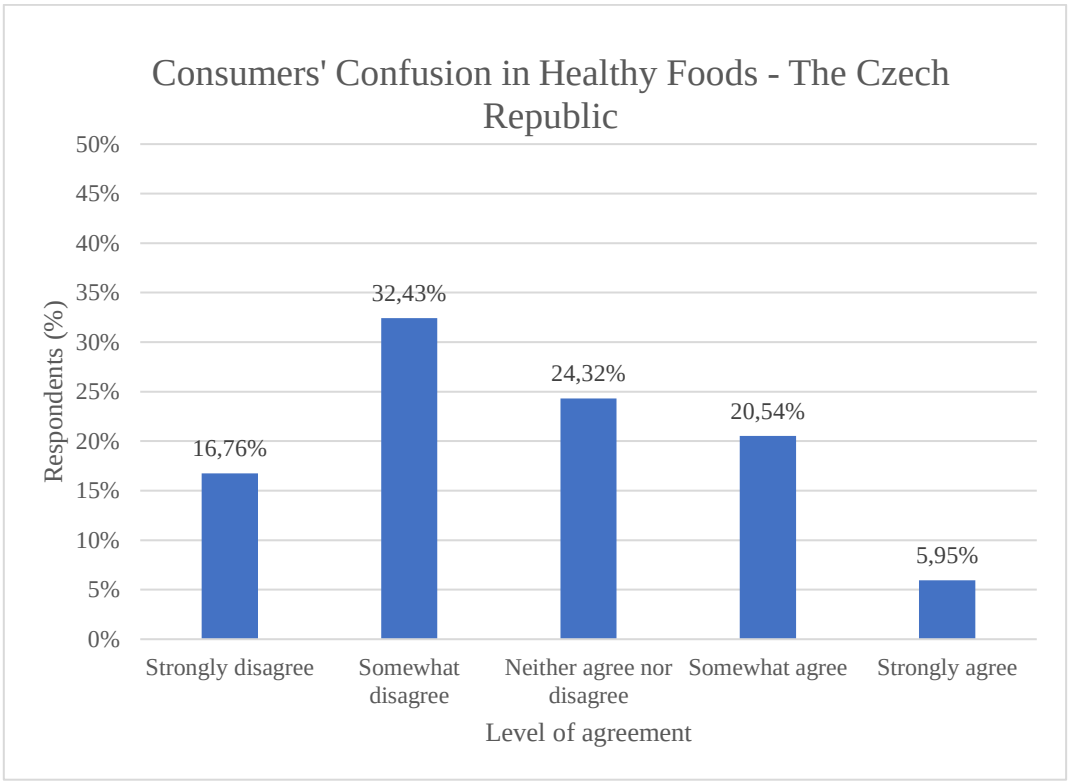


Figure 30 - Consumers' Confusion in Healthy Foods - The Czech Republic (Source: Author)

Appendix 5 – Used and Trusted Information Sources

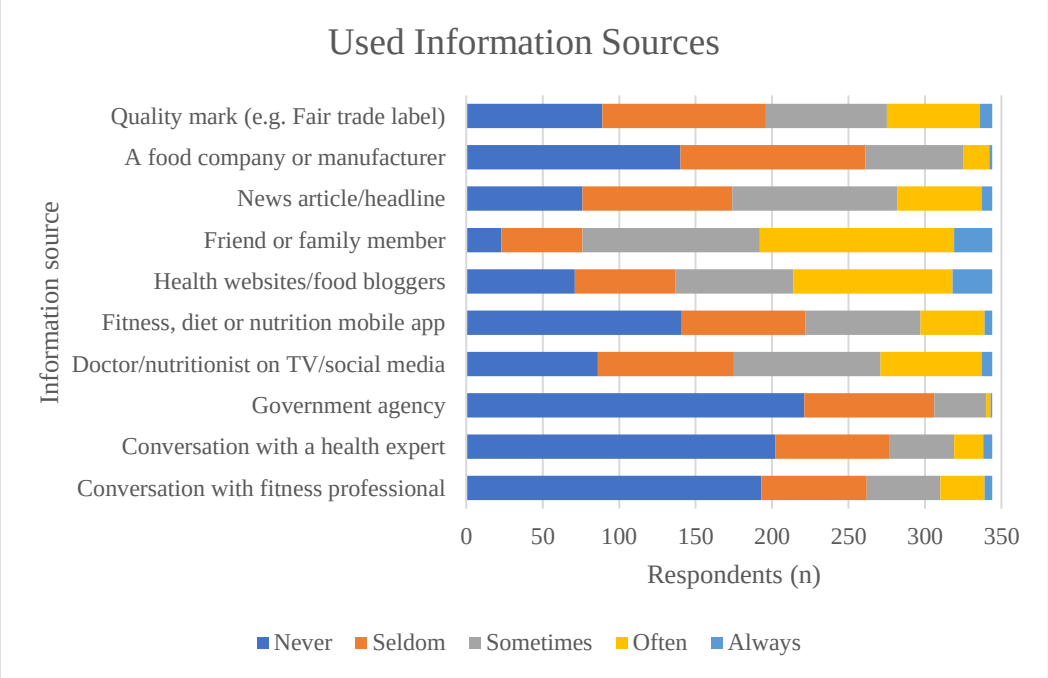


Figure 31 - Used information sources in general (Source: Author)

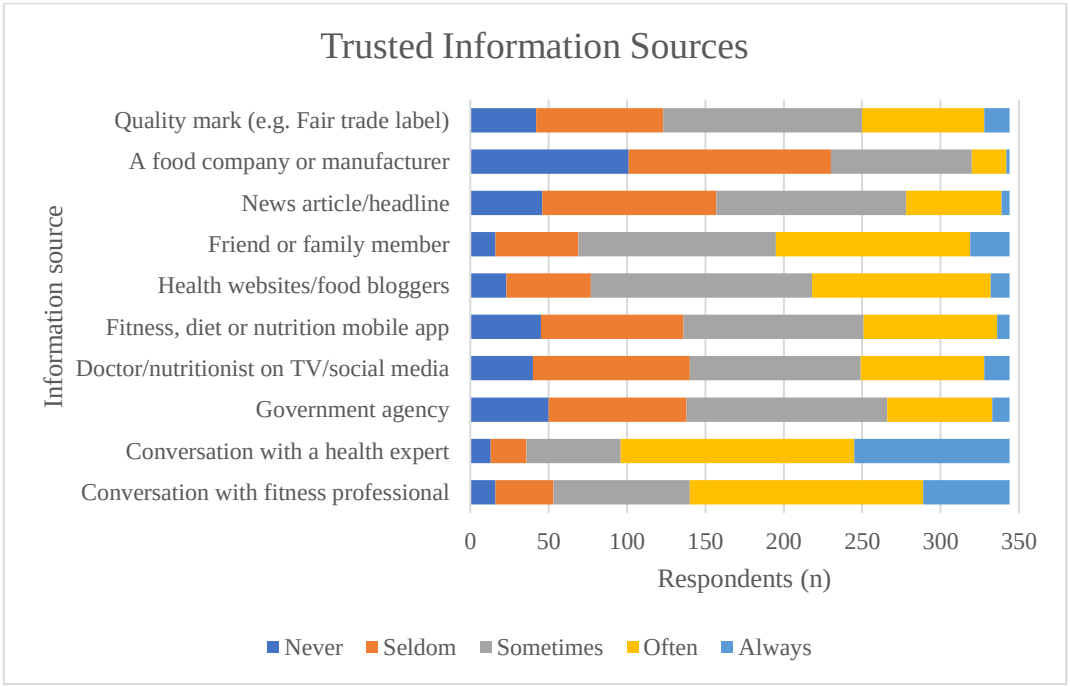


Figure 32 - Trusted information sources by Czech consumers (Source: Author)