

Master Thesis

Consumer's right to informed choice regarding organic labelling

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Abstract

Demand for good food and good farming is on the rise. People are becoming more health- and environment-conscious, and are turning towards organic foods. Not only are organic foods present at the farmers-markets, but also, they are becoming more and more usual to be seen on the shelves of the conventional supermarkets. With this the supply chains are getting longer; there are more distribution and trade via conventional wholesalers to meet the demand for organic food products. The organic market is growing fast and is becoming an important food market niche. Today there can be found more than 200 eco-labels. Most of the eco-labels are for organic foods, but also there are the ones, which consider environment, fair wages for the small producers etc. To sell the organic produce, producers have to apply for a certification procedure, whether it is national, private, or an EU organic logo.

Having multiple logos on the label can be a good solution for the producer to enhance their products' trustworthiness. However, the consumers in turn have to find their way in "the sea" of logos on the label. The EU concept of the "average consumer" entails that he/she can understand all the information and make informed choices. In other words, consumers in the EU are expected to comprehend the meaning of the logos on the label. However, overload of information on the label, can violate the right of "informed choices" concept. Consumers might not be able to make an informed choice because there is too much information to understand while shopping.

The objective of this research was to gain insight into the legal framework for organic in the EU, and the consumer understanding and perception towards organic logos in Estonia. This thesis examines the Estonian consumer perception on organic logo and their motivation for buying organic food products; followed by analysis of the "average consumer" notion in the CJEU case law, finding that organic logo leads consumers to perceive food products with that logo as more "healthier" than conventional food products. The research findings indicate to the problem of consumers' false perception of characteristics of organic logo and organic food, which in turn hampers making informed decisions.

The thesis concludes by arguing that the problem with making informed choices regarding organic foods is apparent. However, the answer to the question of what could be done about it is complicated. Based on findings, organic logo confuses consumers regarding to its characteristics – food products labelled as organic are perceived to be healthier than conventional food products. The thesis proposes that the public policy has ability to tackle the problem and suggests increasing involvement from regulators and consumer organisations to increase consumer knowledge about organic foods and how to make a healthy food choice.

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List of Abbreviations

Art.	Article
BE	Behavioural Economics
CJEU	Court of Justice of the European Union
DG AGRI	Directorate-General for Agriculture and Rural Development
DG ENVI	Environment Directorate-General
GFL	the General Food Law Regulation
GMO	Genetically Modified Organism
EU	European Union
FIR	Food Information and Consumer Regulation
Reg.	Regulation
UK	United Kingdom

1. Introduction

1.1. Background

Globalisation, increased income and new consumer attitudes towards the safety and quality of food have changed the diets of consumers all over the world. Within a couple of decades, people have become more health-conscious. Furthermore, with the recent food scandals—such as the “horse meat” crisis in Europe and environmental problems—peoples’ awareness is rising, and consumers have begun to turn to organic agriculture, which has always been perceived to deliver high-quality, healthy food.

The term *organic* refers to the farming system, which is *sustainable*.¹ However, it must be kept in mind that these two terms are not defined in the same way. Organic production does not always mean sustainable production. Sustainable agriculture aims to use farming practises that do not deplete natural resources. *Organic agriculture* refers to the production side of farming, where a set of rules must be followed by farmers who would be certified as organic producers. For example, the use of GMOs, pesticides, and hormones are banned in organic agriculture. Large industrial farms can be certified as organic growers but nevertheless use farming practises that do not consider sustainability, and a sustainable farm can grow products that are not organic. *Organic agriculture* stands for good food and good farming practises where health and ecosystem have been kept in mind.

Organic foodstuffs are regulated by all the same food-safety and labelling legislation that applies to non-organic foodstuffs. Foodstuffs must meet various requirements concerning ingredients and food allergens, and labelling must not mislead the consumer. *Organic* is a term that is used in labelling and that indicates that the foodstuff has been produced according to the set of criteria laid down by the legislator. *Organic* is an important term for today's consumer market for the purchasing and consumption of organic foods.

Legal aspects and organic market

Council Regulation (EC) No. 834/2007 sets out the minimum conditions for use of the term *organic*, which refers to the production method. The regulation sets out the principles and objectives of organic production (Bremmers and van den Meulen, 2014). The regulation defines *organic* as coming from or related to organic production. *Organic production* is defined in the regulation as follows (European Commission, 2007):

¹ In other words: Resource-conserving

[T]he use of the production method compliant with the rules established in this Regulation, at all stages of production, preparation and distribution.

Organic agriculture is defined in the Codex Alimentarius Guidelines for the Production, Processing, Marketing and Labelling of Organically Produced Foods (WHO/FAO, 1999) as,

a holistic production management system which promotes and enhances agro ecosystem health, including biodiversity, biological cycles, and soil biological activity. It emphasizes the use of management practices in preference to the use of off-farm inputs, taking into account that regional conditions require locally adapted systems. This is accomplished by using, where possible, cultural, biological, and mechanical methods, as opposed to using synthetic materials, to fulfil any specific function within the system.

Before 1990, organic foods in the market were not regulated. Since 1990, several countries have established laws and standards for organic foods. Today, there are 82 countries in the world that have laid down standards, and products carry one or more organic logos out of hundreds.

The organic market is growing around 20% per year in the European Union (EU) (Hughner, McDonagh, Prothero, Shultz II, and Stanton, 2007). On the consumer side, organic goods were sold for 72 billion USD worldwide 2013 (Research Institute for Organic Agriculture, 2015). In Europe, sales were up to 22 billion euro. Sales in the United States reached 35 billion USD in 2013. On the production side, organic farmland is flourishing. It expanded from 37 million hectares in 2012 (Pino, 2012) to 43.1 million hectares in 2013 (FIBL/IFOAM, 2015) and is managed by two million producers worldwide.

1.2. Consumer motivation for buying organic products

Several studies show that consumers who choose to buy organic foods are driven by ethical factors like sustainability (Pino, 2012). This describes consumers in EU, for example, where 65% of consumers support organic because it plays a role in protecting the environment (European Commission, 2010). Not only do consumers prefer organic modes of production, 84% of consumers in the EU think that the farmers should be encouraged to produce organically (Eurobarometer no 336, 2010).

Other studies show that food-safety concerns and perceived healthiness are driving forces for choosing organics (Padel and Foster, 2005; Baker, et al., 2004). Many consumers are aware of the possible health risks which come with conventional (non-organic) foods and GMOs. This is seen to influence consumers who are pregnant, who are suffering from an illness or who fear the spread of food-borne illnesses (Pino, 2012). The sustainable nature of organic

farming is widely acknowledged, but the health and nutrition benefits are still widely debated.

1.3. Organic agriculture in Estonia

Estonia is used as an example in this study because consumption of organics is becoming more popular there year by year, and numerous organic restaurants and food companies are opened there every year. In addition, it advertises itself as a country where around half of the surface is certified as organic (Kabrits, 2015; Mahe Eesti, 2017).

Organic agriculture is defined differently in each country. One of the most common substitutes for *organic agriculture* is *ecological agriculture*, which is also used in Estonia. *Organic agriculture* was defined for the first time in 1997 by the Organic Farming Act. Estonia is the fifth country in Europe in which the organic portion of organic agricultural land reaches 14.9% (European Commission, 2015a). In 2014, 155,600 hectares of organic production land was registered in Estonia (TNS Emor, 2015b).

Estonia was chosen as a subject for this research because the consumption of and demand for organic foods have been growing quickly in Estonia and because organic production and products are getting more and more attention by the media and consumers. The export of organic foods has increased in recent years as well. In 2015, the idea of an “Organic Estonia” was launched by a group of people (Kabrits, 2015). Their idea is to market Estonia as the first country in the world where more than 51% of the land and its produce is organic.

1.4. Problem definition

The demand for good food and good farming is on the rise. People are becoming more health and environment conscious and are turning towards organic foods in Estonia. Organic foods are found at farmers-markets and are also becoming more and more common on the shelves of conventional supermarkets. As a result, the supply chains are becoming longer; there are more distribution and trade via conventional wholesalers to meet the demand for organic food products. The organic market is growing quickly and is becoming an important food-market niche. As the organic food is becoming more popular among Estonian consumers, it is growing its popularity among public policy makers as well. The Ministry of Rural Affairs of Estonia proposed a programme called 'Organic Estonia'. The message of that programme is to promote Estonia as an organic country, where 51% of the country's area would be certified as organic (Ministry of Rural Affairs of Estonia, 2017).

To sell organic produce, producers have to apply for certification, whether it is the national (e.g., the Estonian “organic”), the private (the term *private* covers the farmer’s associations, their umbrella organisations, certification bodies, and other private organisations) (Janssen and Hamm, 2010), or the EU organic logo.

Multiple logos on the label are a good way for producers to enhance their products’ trustworthiness. However, consumers must find their way through “the sea” of logos on the label. The EU concept of the “average consumer”² entails that he/she can understand all the information and make informed choices. In other words, consumers in the EU are expected to be able to comprehend the meaning of the logos on a label. However, an overload of information on a label can violate the “informed choices” concept. Insights from behavioural economics show that consumers get overwhelmed when they have too much information. Moreover, consumers behave irrationally, are impatient and all consumers behave differently (MacMaoláin, 2007). Consumers might not be able to make an informed choice because there is too much information to understand while shopping (Janssen and Hamm, 2010).

The EU aims to promote organic food and agriculture. Implementation of the EU organic logo in 2010 was aimed to foster an internal organic market (Zander, Padel, and Zanolì, 2015). To achieve this, consumer knowledge about the content of the organic logo is necessary. However, according to recent studies, consumer knowledge about organic logos is rather low (Janssen and Hamm, 2010; Hughner, McDonagh, Prothero, Shultz II, and Stanton, 2007). Article 1 of Regulation 834/2007 lays down the aim of the European Commission for organic production: “This Regulation provides the basis for the sustainable development of organic production while ensuring the effective functioning of the internal market, guaranteeing fair competition, ensuring consumer confidence, and protecting consumer interests” (European Commission, 2007). Therefore, to fulfil its aims, the EU logo must be widely known. With that, one can question, if the consumers have an understanding of organic logo and making informed choices in a country that aims to be internationally known as organic.

1.5. Research Questions

Main research question: Are consumers able to make informed choices when buying organic?

² There is no unified definition for “average consumer”. The wording varies in different directives, but CJEU case law defines it as a person who is reasonably well-informed and can make right decisions accordingly.

Sub-questions:

- How organic foods are regulated at the EU and member state levels?
 - What is the role of the authorities?
 - What requirements exist for getting a product certified as organic?
- What is consumer perception of the term *organic*?
 - Which consumers are buying organic?
 - Can consumers grasp the concepts behind the organic logos?
 - Do consumers perceive the organic logo as a sign of a high-quality product?
 - Which logos compete with the organic logos and what is the market structure?
 - Is it possible that consumers confuse non-organic quality logos to be indicators of organic foods?
- Which issues hamper making the informed choice when buying organic foods?
- What solutions and policy implications can be made to empower consumers and increase their knowledge of organic logo?

1.6. Research Objective

The objective of this study is to gain insight into the legal framework for organic in the EU and into the consumer understanding and perception of organic logos in Estonia. The term *organic* and its meaning are explored, as is the role of labelling. Consumer surveys that have been carried out in the EU and Estonia are examined and relevant literature is reviewed and taken into account. In conclusion, suggestions for empowering consumers and increasing their knowledge of organic logos are given.

All of this will be achieved,

- By considering the legal framework of organic in the EU and on the Member State level.
- By analysing the definitions of *organic consumer*, *organic production*, average consumer and *informed choices*.
- Analysing the consumer understanding of *organic* and its meaning.
- Exploring ways to increase consumer knowledge of organic logos.

1.7. Materials and Methods

The materials used for this research projects are the following:

- Regulations and directives in the EU framework for labelling and organic production
- Books in relation to food law, organic legislation, and labelling
- Scientific articles on consumer behaviour, perception, and behavioural economics in relation to food law
- Consumer studies conducted in Estonia and the EU
- Case law of the Court of Justice of the European Union (CJEU) regarding food law and the notion of the ‘average consumer’

1.8. Research Strategy

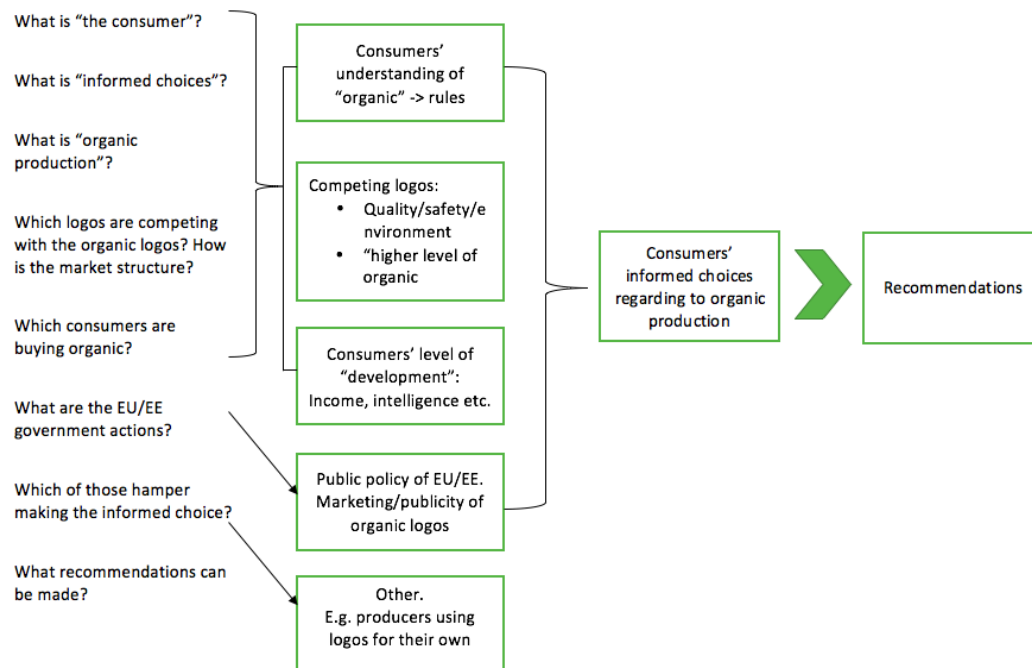
To obtain a correct view of the research problem, this project consists of literature study and an analysis of legislation and consumer studies. Relevant European Union websites have been searched for legislation. The rest of the study was conducted using articles and journals that are scientifically relevant to the topic.

In addition, results of several consumer studies are examined to gain insight into consumer knowledge concerning organic logos that could support the theoretical research or contradict the findings. Examples of CJEU case law are analysed to compare the term *average consumer* with findings from the scientific literature, behavioural economics and consumer studies in order to define the gaps in consumer knowledge and making informed choices when purchasing organic foods. Finally, suggestions for public policy interventions are presented as option to increase consumer awareness and knowledge on organic logo.

In short, a conjoint literature study and examination of consumer studies is used to answer the above-mentioned research questions.

1.9. Research Framework

In order to answer the main research question and sub questions, the thesis starts with number of questions, which form different chapters and finally help to answer the main research question of whether consumers are able to make informed choices when buying organic food products. When the analysis finds shortcomings in organic legislation, possible public policy initiatives are presented, which would help to close the gap.



2. Organic production, market, and policy

The following chapter gives a short introduction to organic production and its development in Europe. Then, organic production in Estonia and its legislation on organic production will be discussed. Since Estonia is in the EU, European Commission regulations will be described in this chapter to give the reader knowledge on EU law for organics. This chapter will start giving an overview of the production and the market of organics in Estonia. Then, relevant regulations will be analysed.

2.1. What is an “organic production”?

Organic production is a farming system, where the attention is focused on the preserving and increasing the diversity of the ecosystem and environment. This production method uses farming practices without harming the environment. It does not rely on external inputs, such as pesticides, fertilizers, irradiation, which is commonly used in conventional agriculture. In contrast, its principals are the effective use of local renewable resources, such as crop rotation, biological pest control, and recycled farm manure. These methods contribute to using natural environment to increase the agricultural productivity. For example, to have nitrogen in the soil, the legumes are planted; crops are rotated to renew soil; natural insect predators are being encouraged.

Organic agriculture has its own principles that must be followed when growing organic:

Principle 1. Synthetic fertilisers (such as mineral nitrogen fertilisers) and pesticides are prohibited. The soil is kept fertile by local organic fertilisers, such as manure and compost. Pests, diseases, and weeds are kept in control by mechanical actions, which can be crop rotation and encouraging the growth of natural enemies of pests, which in turn helps to maintain biodiversity.

Principle 2. Animal welfare is important in organic agriculture. Animals must be able to satisfy their intrinsic needs. The access to the grasslands and outside must be provided. The goal of organic livestock is not having a potential fast growth of the animals and maximum dairy production, but long-term and of high-quality production from healthy animals. The number of animals is kept in balance with the size of the grassland.

Principle 3. In organic livestock business, the animal and plant breeding belong to the one and the same production cycle. Animal breeding is in balance with the plant breeding,

because the feed comes from plant breeding, and the manure from the animals ends up back in the field as a fertilizer, which increases soil fertility and structure.

Principle 4. Genetically Modified organisms (GMOs) are not grown and used in the organic production. Seeds of the origin of GMO are not sown and animals are not fed with the feed containing GMOs. The use of GMOs in the production of organic foods is prohibited as well.

Principle 5. Synthetic flavourings, additives, and ionisation are not used in the processing of organic foods. While the use of hundreds of E-numbers, where many are synthetic, are allowed to use for the conventional foods, then only a few natural additives are permitted to use for processing organics.

Principle 6. A food product can be called as organic, when at least 95 per cent of ingredients are from the organic agriculture. Organic food products in the European Union market have the bear the EU organic logo. Organic production is controlled and trustworthy. Inspections are carried out at least once per year, besides unannounced controls.

2.1.1. Background of organic agriculture

Traditional farming has been practised for thousands of years. Experts argue that before the development of synthetic fertilisers in the early 20th century, all the food production was “organic”.

With the industrial revolution and popularisation of inorganic methods, the farming was getting more reliance to synthetic fertilisers and pesticides. The first half of the 20th century saw enormous advances in biochemistry and engineering, which rapidly changed the farming. Introduction of the gasoline-powered tractors, hybrid seeds, and nitrogen fertilisers, resulted in bigger fields and more specialised cropping to make the use of the machinery.

Due to increasing use of technology and chemicals in agriculture, organic farming movement emerged to go back to traditional agricultural practises. Now, members of social and intellectual elite promoted organic farming. In 1920s, Rudolf Steiner, an Austrian scholar, was the first one to put Holism practises into use in agriculture. Holistic point of view highlights agriculture that mimics natural systems. Supporters of organic agriculture believed that healthy soil is connected to healthy crops, healthy crops to healthy people, and healthy people to healthy societies (Organic Farming, 2012). Another important figure during the development of organic farming was Sir Albert Howard. Like Steiner, he emphasised the

importance of organic farming in promoting individual and social health, and maintaining soil fertility for future generations (Organic Farming, 2012).

During mid-20th century, the concept for organic farming was developed. The term “*organic farming*” was first used in 1940 by Lord Walter Northbourne in “*Look to the Land*” to describe an alternative for chemical agriculture. After the World War II, organic farming received unreceptive attitude from governments in Europe and was even interpreted as a social movement that is threatening conventional agricultural policy, where technological progress was a mean of improving farm income and securing food supplies (Padel and Lampkin, 2007). In ‘60s and ‘70s, the organic movement and its goals were more supported as a lifestyle not a political advocacy. With the overproduction and environmental problems, organic farming gained credibility as another development route from governments.

Even though, organic farming as a concept has been existing over 80 years, only since the mid-1980s has it become a significant focus point for policy-makers, institutions, consumers, environmentalists, and farmers in Europe (Stolze and Lampkin, 2009). It becoming an attention point coincided with increasing concerns over negative environmental impact of post-war agricultural developments. The mid-1980s introduced policies, which supported agri-environmental initiatives, including organic farming. Organic farming was defined legally in the EU in 1990s, when rules for organic production, labelling and inspection were laid down.

2.2. Organic production in Estonia

In 1985, only 100,000 hectares of land counted as organic in European Union, which makes it around 0.1 percent of the total agricultural area (Petty, 2013). By 2013, there were 43.1 million hectares of organic land and 2 million organic producers worldwide. In Europe, organic agricultural land contributed to it with 11.5 million hectares with 330,000 farmers (Vetemaa and Mikk, 2015).

Significant growth in the organic sector in the last couple of decades is the outcome of a combination of policy support, growth of consumer demand, and animal health, food safety and economic problems in the conventional agricultural sector (Padel and Lampkin, 2007). Policy support for organic farming is in several forms, such as legal definition of organic farming; legislative inspection, certification, and labelling activities; and financial support for farmers, who want to convert into organic producing.

During the last decade, the organic farmland has increased about 500,000 hectares each year. This is a substantial growth, considering that the organic area represents only 5.4% of total utilised agricultural area in the EU (DG AGRI, 2014b). The size of organic area and number of holdings has shown fast growth during last ten years (Figure 2 and 3).

Estonia is the 5th country in Europe with share of organic area in the total utilized agricultural land (European Commission, 2015a). Organic farming has significantly increased in Estonia with the last 10 years by 3.4 times.

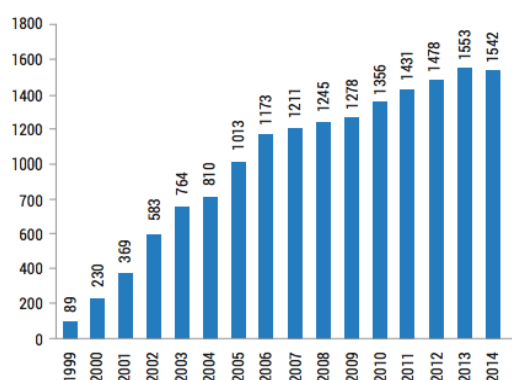


Figure 2. The number of organic producers 1999-2014 (Vetemaa and Mikk, 2015)

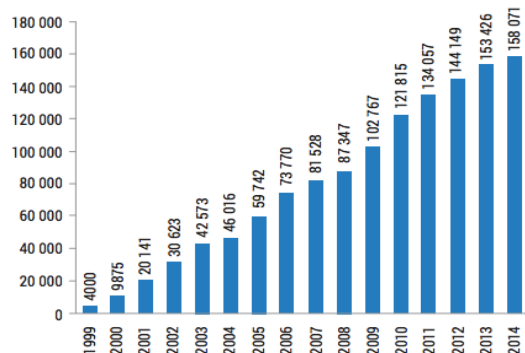


Figure 3. Area of organic land 1999-2014 (Ministry of Agriculture, 2015)

By 2014, organic farmland was 16 percent (158,071 hectares) of the total agricultural land of which 88 percent has gone through a conversion period. Large areas of organic land are grassland (74 percent in 2014), as it is common for organic agriculture (Ministry of Agriculture, 2015). However, it must be considered that short-term grasslands are important in crop rotation for maintaining soil fertility.

2.3. Market of organics

Market share of organic food is increasing year by year in Estonia. Most of the organic food selection is imported from other Member States; however, it is observed that the assortment of locally produced organic food is expanding (Ministry of Agriculture, 2015). Price of the organic foods depends mainly on the food group. Sometimes organic foods are cheaper or the price is close to the conventional foods (for example for tea mixtures, beef, sheep meat), other times organic foods cost twice as much as conventional foods (for example some vegetables, flour, eggs). Artisan labour, production costs, and large logistical expenses are shaping mainly the higher price (FAO, 2016).

Small health and food shops can be found all around Estonia; half of them are in Tallinn (capital city). These shops can also be found in most cities and other smaller towns. Roughly

10 online stores for organic foods are available. Furthermore, more and more organic food products are sold in large supermarkets as well. Organic products can be found most in the organic food stores; however, surprisingly the highest turnover from the sales of organic food comes from the conventional stores.

The Ministry of Rural Affairs points out in their annual report that even though market is widening for organic food and consumer's interest is increasing, a lot of organic agricultural crops are still sold as conventional crops to processing industries (Ministry of Agriculture, 2015). The main reason for it is the lack of processing companies for organic agricultural crops.

In general, organic production and its products are gaining support from governments, producers, and from the consumers. Even though, organic production has a small share of overall production in Europe and in Estonia, it has been a popular topic of discussion over several decades by governmental level, in environmental groups, and becoming a lifestyle of many consumers.

2.4. Policy for organic farming in Estonia

Organised activity of organic producing methods in Estonia begins in the early 1990s, when standards for organic farming started to be developed (Vetemaa and Mikk, 2015).

Faster development of organic agriculture started in 1999 when the national logo for organic foods was introduced. Since then the number of producers and the area of organic farmland has increased at a relatively rapid pace. In 2001, a new regulation for organic production was developed to fulfil the EU requirements for exporting. The new regulation established a state supervision system and an Organic Production register.

When Estonia joined the EU in 2005, the need for revising national regulation came up. To eliminate the duplication of national and EU legislation, the New Organic Farming Act was enacted from 1st of January in 2007, which harmonised national regulation with EU regulation. The national regulation has been repeatedly changed, since it considers surveys by the experts of EU and revealed shortcomings when enacting the regulations.

Estonia has introduced other national or regional public measures, for example support for marketing and processing of products, promotion campaigns and events, and support for research projects related to organic farming (Ministry of Agriculture, 2015). The latest national action plan for organic farming aims to improve the competitiveness of organic

farming and increase the consumption of organic food. The action plan set a goal of having 20 percent of the population being regular organic food consumers by 2020 (Ministry of Agriculture, 2015).

2.5. Regulation (EEC) No 2092/91

In the 1980s, the consumer demand for products with specific characteristics, such as geographical indicators and special quality, led to the increase of consumption of organic products and it became clear that those products could be put on a niche market (Moschitz and Stolze, 2007). However, there was not a one EU-wide definition of what can be called officially an organic product and how the food products should be labelled.

These issues were addressed in the EU with the Regulation (EEC) No 2092/91 in 1991 on organic production of agricultural products. It set out (1) minimum rules for production and processing of organic products that have to be met to label a product “organic”; (2) an inspection programme for all food operators that are involved in placing an organic product on the market, whether they are from EU or imported from third countries; (3) a legal protection for “organic” in different EU languages; (4) a voluntary logo for identifying organic products (Westermayer and Geier, 2003). This regulation set the minimum standards that were EU-wide; in addition, Member States were free to introduce stricter standards if they wished to do so.

One of the main effects of this regulation is that it gives a precise definition of the organic farming sector. This has helped the organic sector to have an identity and ensure the consumers that the products they put on the market are credible, and that the products really are organic. Since the implementation of the regulation, the organic production and the number of producers have increased rapidly over the last decades: from 105,000 ha in 1985 (Stolze and Lampkin, 2009) to 9.6 million ha in 2010 in the EU (DG AGRI, 2013a). The organic sector has found its place in the market: it has gained a full recognition from the public, supermarket chains, food industry, and public organisations (Westermayer and Geier, 2003).

In addition, the regulation gave green light to importing organic products from third countries into the EU. Furthermore, this regulation introduced fair competition conditions (same rules and conditions for everybody, where the competitive actions of one does not harm the ability to compete of the others) to the farmers who are involved in organic production with other producers within the EU, or in third countries, who are not using organic producing methods

or using these methods only to a certain extent (Westermayer and Geier, 2003). Having these conditions motivates the farmers to invest in converting towards organic farming.

Another effect of this regulation is free movement of organic goods within the EU. This means that any product that has been produced in the EU or has been imported from a third country, benefits from the free circulation. The product can be placed on the whole EU market with its hundreds of millions of consumers.

The regulation forced the sector to have a strong inspection system. It introduced mandatory inspections by approved and supervised inspection bodies. This plays a role in maintaining the credibility of organic products in the eyes of the consumer (Stolze and Lampkin, 2009). A sector losing the trust of the consumers would be a failure that could probably never be restored since trust is hard to build, but it can be easily destroyed. Therefore, maintaining credibility should be the very first responsibility of the operators in the organic sector.

2.6. Regulation (EC) No 834/2007

In 2007, the European Council of Agricultural Ministers agreed on a new Council Regulation (EC) No 834/2007 that determines the legislative framework of the EU organic farming sector, which replaced the Regulation (EEC) No 2092/91. The new regulation came into force in January 2009. It provides principles, aims and overarching rules of organic production and its labelling. This regulation applies to: live or unprocessed agricultural products; processed agricultural products used as food; feed; vegetative propagating material and seeds for cultivation³.

The Regulation legally defines the terms “organic”⁴ and “organic farming”⁵, and expresses several aims in regards to the environment, preservation of natural resources, animal health, and production methods. In addition, it defines the requirements for controls, trade with third countries, and labelling of organic food products. Detailed rules for implementation have been laid down in the Commission Regulation (EC) No 889/2008 on organic products and labelling of organic products and Commission Regulation (EC) No 1235/2008 on imports of products from third countries.

³ Article 2 of Regulation (EC) No 834/2007.

⁴ Organic is defined as “coming from or related to organic production”.

⁵ Organic production is defined in the regulation as follows (European Commission, 2007):

“Means the use of the production method compliant with the rules established in this Regulation, at all stages of production, preparation and distribution.”

General rules from other Regulations on agricultural production, processing, marketing, labelling, and controls have been incorporated into the legal framework, such as Commission Regulation (EC) No 882/2004 on controls and compliance with feed and food law, animal health and animal welfare rules and Regulation (EU) No 1169/2011 on provision of food information to consumer.

2.7. Objectives and principles

Article 1 of Regulation (EC) No 834/2007 sets three global objectives for the regulation on organic farming: “*ensure effective functioning of the internal market*”, “*guarantee fair competition*” and “*ensure consumer confidence and protect consumer interests*”.

General objectives of the regulation that organic production must pursue are described in the Articles 3 to 7 of the Regulation (EC) No 834/2007. One of the aims is to establish a sustainable management system for agriculture, which puts more attention to biodiversity; emphasis on the environmental protection; achieving higher animal welfare standards; and aims to produce products of high quality. It applies to all stages of production, preparation and distribution of organic produce, and to all the operators involved at any stage of production, preparation and distribution.

The regulation puts emphasis on encouraging the use of new techniques and substances in organic production, that are a better fit than the techniques used before. Furthermore, it points out that the use of genetically modified organisms (GMOs) or their derivatives does not match the concept of organic production and consumers’ perception of organic products. Thus, GMOs must not be used in organic farming or in the production process of organic products.

It also puts focus on the use of renewable resources and the recycling of waste and by-products of plant and animal origin by putting the nutrients back to the soil. This is to minimise the use of non-renewable resources⁶. In addition, plants should get their nutrients through the soil eco-system, not by adding soluble fertilizers to the soil.

The regulation focuses also on the livestock. It also should meet high animal welfare standards and animal-health management should be based on disease prevention. Animals should have access to open air or grazing areas whenever possible, since the organic production of livestock is a land-related activity.

⁶ Recital 11 of Reg. (EC) No 834/2007.

2.8. Specific rules

Production rules

Organic products should be produced with such processing methods that guarantee maintaining the trustworthiness and fundamental qualities of the product in all stages of production. Products can be labelled as organic only when all or almost all the ingredients of agricultural origin are organic (recital 20 of Regulation (EC) No 834/2007). The regulation emphasises that it is important to keep consumers' confidence in organic products and terms used to indicate organic products should be protected from using them on non-organic products throughout the Community (preface 23 of Regulation (EC) No 834/2007).

The production rules in Article 11-12 of the Regulation (EC) No 843/2007 lay down provisions for:

- Plant production
- Livestock production including aquaculture animals
- Production of seaweed
- Production of processed food and feed

Furthermore, specific provisions are made for the conversion period and products and substances used in organic farming and the conditions for their approval.

Labelling

The Regulation lays down the requirements for the products to be able to carry the organic label (Articles 23-26 of Regulation (EC) No 834/2007), and to create more transparency for the consumer. Correspondingly, the use of terms referring to organic production is only limited to products, which are produced in accordance with the rules, laid down in the organic farming legislation. Processed foods with ingredients from at least 95% of organic agriculture origin are allowed to use the EU-logo on its labelling. The use of certain product indications is mandatory, such as the number of the control body, the new Community organic production logo, and indication where the agricultural raw materials were farmed. The last two requirements have not been required before by the legislation for organic farming.

Controls

To ensure that all organic operators at all stages of production, preparations and distribution of organic products comply with the rules of organic farming and that consumers' confidence is ensured, an effective control body has to be set up in all Member States. All activities should conform to the rules on official controls on food and feed law. Requirements are

defined in the Articles 27-31 of Regulation (EC) No 834/2007 with respect to the set-up of the control system, obedience to the control system, documentary obligations, actions in the case of infringement and irregularities and rules on the exchange of information.

The control system consists of two parts: 1) the annual controls on-site of organic operators, and 2) the public surveillance system that encompassed the whole EU framework of actions of national competent authorities and accreditation bodies that supervise and monitor the organic control system at the level of control bodies (Sanders, 2013).

Member States must designate one or more competent authorities that are responsible for controls. The organic operators at various stages of the supply chain have to submit their activities to the control body and specify the kind of documents that are required from them. If any irregularity is found, the rules foresee that the product cannot be marketed as organic. If a severe infringement is found, the control body has the right to prohibit the organic producer from marketing organic products for a certain time. To guarantee that the product is coming from organic production, it is required that competent authorities and control bodies exchange information from the controls, especially if irregularities or infringement have occurred.

Trade with third countries

In the last two decades, organic supply and distribution chains have become increasingly organised globally. Large numbers of organic products that are sold in the EU are important as a result. Therefore, it is important for farmers and consumers in EU that imported products from third countries are produced in accordance with the equivalent requirements and that the control bodies guarantee the same level of consistency as in EU.

Rules for trade with countries outside of EU are laid down in Articles 32-33 of Regulation (EC) No 834/2007. The Regulation approved two approaches:

- Organic products from third countries may be placed on the market, if the product and control requirements comply exactly with Regulation (EC) No 834/2007. Control bodies, which are certified by the EU, are providing the proof of compliance.
- Organic products from outside of the EU may be sold in the EU as organic if production rules and control requirements are equivalent to the EU rules. The equivalency is recognised through bilateral agreements between the EU and third countries.

The adequacy of import regime is determined by the effectiveness of the control system in third countries, such as whether the system is able to ensure that the production and processing of organic food is equivalent with the EU rules.

2.9. Organic regulation – state of play

In March 2014, the European Commission presented a proposal for a new regulation on organic production to reform the current EU legislation and impose stricter rules. The organic sector and European Parliament have been critical towards the Commission proposal, because proposed rules for production would likely make the conversion of conventional farm to organic more difficult or even cause organic farmers to switch back to conventional farming.

The new proposal aims to address the issues of clarifying and simplifying the rules where possible; encourage fair competition for farmers; address consumer concerns about environment and quality; streamline the controls and reform trade system. For example, this proposal requires farms that register as organic farms to be entirely organic: meaning that farms will be prohibited growing organic and non-organic agricultural products. The EC has developed an Action Plan for producers and retailers to cope with the future rules: conversion period will not be possible, organic operators need to develop a system that improves their environmental performance. The Action Plan seeks to ensure consumer confidence in the EU organic logo. To do that, Commission could consider information and educational campaigns. Also, the Commission will conduct regular consumer surveys on the awareness of the EU organic logo.

Since 2014, when the first proposal was presented, 14 trilogues have taken place, but no agreement has been achieved. Last discussion was on December 6, 2016, where no final agreement was reached. The proposal is waiting for a first reading at the European Parliament (EP). Since January 2017, the Maltese presidency has held trilogues with the EP to reach a first reading agreement by mid-2017.

Conclusion

Organic farming is an agricultural sector, which is constantly growing in the EU and in Estonia. Furthermore, organic market growth has been faster than production growth in recent years in (Ministry of Agriculture, 2015) in Estonia. While the organic land area has grown by 38 percent between 2006 and 2011, the organic market size has increased by 56 percent in this period.

Organic farming and market is well developed in Estonia (as well in the EU) and number of organic farmers and products with organic label is increasing. Organic industry has expanded significantly in recent years, not only in volume but also in terms of variety of products that are offered in the market. It has made its way from fresh produce to processed goods, such as snacks, frozen produce, and dairy (Klonsky, 2000). In addition, organic products have moved from being sold only in specialised organic stores to being sold in supermarkets. Data from the public consultation organised by the EC shows that most of, many of Europeans buy their organic products from specialised shops (67 percent) and supermarkets (65 percent) (European Commission, 2013).

Organic regulation for production and labelling of organic product has been in place for 10 years. However, the intentions to clarify and simplify that regulation have not been successful in recent years. The negotiations have taken place over the past 3 years and are continued in 2017.

3. Informed choice and labelling

Previous chapter gives the reader the knowledge of organic production and the use of organic logo. This chapter discusses the regulation on labelling, organic labelling and as well other non-organic logos that might hamper the informed decision-making. It aims to give a sound understanding of making informed choices in order to involve that term in the following chapters.

3.1. Food Information Regulation

The free movement of safe and wholesome food is essential to the functioning of the internal market in the EU and contributes to the health and well-being of consumers as well to their social and economic interests.⁷ According to the General Food Law Regulation (GFL), the general principle of food law is to provide a basis for the consumer to make informed choices about the food they consume and to prevent any practises that could mislead the consumer⁸. To guarantee the high level of health protection for consumers and their right to information, it is necessary to ensure that consumers are properly informed about the food they consume⁹. Information concerning a food product must be made available to the consumer by means of a label, other accompanying material, or any other means, such as verbal communication¹⁰.

Food information regulation (FIR) considers two main consumer interests: the right to information and freedom of choice. These interests integrate into one protective standard called informed choice (Edinger, 2016). Allowing consumers to make informed choices is essential to the welfare of consumers and to effective competition in the market. Education and information campaigns are important mechanisms for improving consumers' understanding of food information¹¹.

There are numerous initiatives in the EU and at the national level that aim to help consumers to make informed choices. Several of these are focused on health, such as those regarding salt, sugar, or calorie content. Labels for fresh produce relating to sustainability in regards production or processing methods, such as the EU organic logo, can also be found on the market. Such labels assure that production methods have complied with the standards specified by the logo.

⁷ Recital 2 of Regulation (EU) 1169/2011 on the provision of food information to consumers (Food Information Regulation).

⁸ Art. 8(1) of Reg. 178/2002.

⁹ Recital 3 and Art. 3(1) of Reg. 1169/2011.

¹⁰ Art. 2(2)(a) of Reg. 1169/2011.

¹¹ Recital 10 of Reg. 1169/2011.

In principle, food labels should be understandable to all consumers to help them make better-informed food choices. One of the labels governed by FIR is the EU organic label. It is a voluntary food logo that producers can have on their organic food products when their production methods meet the requirements set by the organic legislation. Voluntary food information may not mislead the consumer as to the characteristics of food, regarding its nature, identity, properties, composition, quantity, durability, country of origin, method of production or manufacture¹².

3.2. Labelling

Organic food products are grown on agricultural land that has undergone a transitional period or comes from animals that also have gone through a transitional period (Vetemaa and Mikk, 2015). The transitional period covers the change from conventional food production to organic food production, and lasts for 2-3 years. During this period, all the requirements of organic farming must be met. The organic logo aims to assure the consumer that the product has been produced according to the rules of organic farming. Studies show that consumers are willing to pay more for products that carry a logo than for products that do not have a label on them (Rousseau and Vranken, 2013).

Logos are used to give more information to consumers about products and to thereby make their decision-making process easier (DG SANCO, 2006). Organics are credence goods, as their quality characteristics cannot be ensured before purchasing and consumption (Gracia and de-Magistris, 2016); therefore, a label is important for consumers who would identify organic foods and for producers who would signal the presence of desirable quality attributes.

Labelling will have its desired effects when, a) consumers are informed properly about the meaning of the label; b) the information provided is comprehensible; c) consumers are interested in having this information accessible for their buying choices (BEUC, 2015; DG SANCO, 2006).

3.3. EU organic logo

The EU organic logo is usually called a "euro-leaf". It symbolises the marriage of Europe and nature. It shows that the product is in line with all the requirements and regulations for the organic-farming sector established by the European Union. For processed



Figure 4. EU organic logo (DG AGRI, 2016d)

¹² Art. 7(1) and Art. 36(2)(a) of Reg. 1169/2011.

products, it means that at least 95% of the ingredients are of organic origin.

The use of the EU organic logo is compulsory for pre-packed food within the European Union¹³. Though the use of the EU organic logo is mandatory, the organic logo is not used exclusive. National and private labels may be used on the organic products next to the EU organic logo.

The Euro-leaf can also be used on a voluntary basis for non-pre-packed organic food products which are produced within the EU and which satisfy the requirements set out under Regulation (EC) No 834/2007 and for any organic products that are imported from third countries and recognised as equivalent in accordance with Regulation (EC) 834/2007.

When the product does not satisfy the requirements set out under Regulation (EC) 834/2007, the organic logo cannot be used. The EU organic logo must not be used in the case of in-conversion products and foods mentioned in articles 23(4)(b) and (c) of Regulation (EC) No 834/2007. Products from the hunting and fishing of wild animals are not considered organic and therefore cannot bear the EU organic logo.

When the EU logo is used, additional information must accompany it. The code of the control body must be placed in the same visual field as the EU organic logo, and the indication of the place of farming must be directly below the indication of the code of the control body (DG AGRI, 2016d).

The code of the control body must appear as follows: AB-CDE-111. *AB* is the ISO code for the country where controls take place; *CDE* is the term establishing a link with organic production (like *BIO*, *ORG*, *ÖKO* or *EKO*, etc.); and *111* is the attributed reference number composed of one or three digits (DG AGRI, 2016d).

The place of farming should be indicated as follows:

- "EU Agriculture" – if the raw materials have been farmed in the EU,
- "non-EU Agriculture" – if the raw materials have been farmed in a third country,
- "non-EU/EU Agriculture" – if the raw materials have been farmed in part outside of the EU and in part in the EU.

¹³ Art. 24(1)(b) of Reg. 834/2007.

The following is an example of the presentation of the EU organic logo on a product:



EE-BIO-111

EU/non-EU Agriculture

The EU organic logo is aimed to give a clear message of organic agriculture and of the EU in a picture rather than in words, to be easily recognisable, to have high-quality graphical design elements, to be applicable in different colours and sizes of food labels, and to not compete with national logos while creating fair market competition and bringing consumer awareness.

The logo can be attached to every coloured background; however, the logo must be distinguished from the background. When the logo cannot be distinguished, the outer line version must be used (e.g., a white outer line must be used to make a contrast). In addition, a black-and-white colour theme can be used when the original green colour cannot be used. It has to be printed onto a white/light background. It can be used in different sizes, but it cannot be smaller than 5 mm x 9 mm.



Figure 5. The EU organic logo (DG AGRI, 2016d)

3.4. Which other labels compete with the EU organic logo?

Different food labelling schemes co-exist in the EU market with the aim of informing the consumer and creating trust on quality characteristics of a food product. In this subchapter, an overview of organic and non-organic logos will be given that are the most probable to compete with the EU organic logo and which have been used in studies the most. The large number of logos may mislead the consumers, mainly because of the characteristics of each logo that consumer might not understand entirely and that creates misconceptions.

Estonia's national organic logo, the Fairtrade logo, the German national organic logo Bio, and the Estonian national quality logo are considered in this paper as logos that are

competing with the EU organic logo in the Estonian market. These logos are often seen on the food packages in Estonian market.

Estonian national organic logo



Retrieved from: <http://julgedhoolida.ee/wp-content/uploads/2014/07/Eesti-mahemargis.jpeg>

This voluntary national organic logo was taken into use in 2005. It can be used in labelling of food product or feed, where the requirements of organic production have been met in the production line (Riigi Teataja, 2006). Logo can be used in black and white or in colour.

Fairtrade International (FLO)



Retrieved from: <http://treadingmyownpath.com/wp-content/uploads/2014/05/Fairtrade-logos.jpg>

Fairtrade is a non-profit, multi-stakeholder association that develops and reviews fair trade standards, assists producers in gaining and maintaining their certification. Fairtrade International's aim is to promote sustainable development and empower disadvantage producers in developing countries through the Fairtrade certification system. The Fairtrade Standards are developed to address the imbalance of power in trading relationships, unstable markets, and the injustices of conventional trade (Fairtrade International, 2016). Fairtrade does not certify products for organic standards.

German national organic logo Bio



Retrieved from: http://www.organic-bio.com/ob-logos/lb9_151.jpg

Bio is a German national organic logo that is most commonly on the organic food products in Estonia. The logo meets also the Euro leaf standards.

Suitsupääsuke (“Approved Estonian Taste”)



Retrieved from: http://www.agri.ee/sites/default/files/public/juurkataloog/Ohutu_toit/tunnustatud_maitse.jpg

This is a well-known national non-organic quality logo, which is given to food products where the ingredients are 100% from Estonia and that have successfully gone through a laboratory and sensory testing. This logo does not require ingredients to be organic.

3.5. Conclusions

EU food information legislation aims to ensure that consumers are accordingly informed and can make informed choices. Labelling will have its wanted effects when consumers are informed appropriately on the meaning of the label, the information provided is comprehensible, and consumers are interested in having this info accessible for their buying choices. Especially with organic food labels, since consumers cannot verify the quality of organic food product before and after consumption.

The mandatory EU organic logo was introduced in 2010 for all the organic produce by the European Commission to ensure the effective functioning of the internal market; supporting sustainable agriculture practises; and ensuring consumer confidence and protecting consumers' interests. In addition, different food labelling schemes co-exist in the EU market with the aim of informing consumer and creating trust on quality characteristics of a food product. This however, could contribute of consumer confusion among different quality, sustainability, and organic logos, which could hamper making informed choices.

4. Background of organic consumer

This chapter begins by presenting an overview of organic production and what organic production stands for. The last part of this chapter focuses on describing the organic consumer based on findings from the literature. This chapter aims to provide the reader with background information about organic production and organic consumers so that it is easier to understand the chapters that follow.

4.1. Who is an organic consumer?

A consumer is a person who decides whether to buy an item and who is influenced by marketing and advertising efforts regarding the product. A purchase decision consists of different phases such as recognition, information search, evaluation of alternatives, product choice and outcome (Zander and Hamm, 2010).

The decision-making process while shopping for food products is complex. It is influenced by the fact that food preference and liking is dynamic and subject to change (Marian, 2014). The decision-making process varies from person to person and from product to product over the course of a lifetime (Köster and Mojet, 2007). Many factors influence food choice; for example, food choice can be influenced by the sensory properties of the food, by the perceived health benefits, by the eating situation, and by individuals' attitudes towards information about the food product.

The identification of the organic consumer has been investigated for more than 20 years. It is understandable that many researchers wish to identify the characteristics of organic-food buyers in the mass market. However, the profile of the typical organic consumer remains vague.

Another focus of research has been to identify a more comprehensive profile of a regular consumer of organic foods. For regular consumers, organic food consumption is a way of life. Consumers of organic foods have values that influence their personalities, attitudes, and consumption behaviour (Hughner, McDonagh, Prothero, Shultz II, and Stanton, 2007). Furthermore, organic consumption is regularly related to consumers with an alternative lifestyle that includes, for example, active environmentalism and vegetarianism.

While some studies are contradictory, consistent results have emerged from the studies. In general, the organic food buyer is female, has children and is older. Some studies have found that the main buyers of organics are women, new families, and the elderly, who purchase

organics from a health perspective. But some studies are more general. For example, they indicate that regular organic consumer tends to be educated, wealthy and from a higher social class (Padel and Foster, 2005). Magnusson et al. (2001) report that young consumers have mostly positive attitudes towards organic foods; however, the actual buyer is an older consumer. One reason for this could be the high price of organic foods, which would also explain why young consumers do not buy organic foods very readily. However, regular organic consumers tend to mention higher price as a limiting factor less often than occasional consumers. Lockie et al. (2002), on the contrary, finds that income and age have very little influence on the level of consumption. Roitner-Schobesberger et al. (2008) report that 60 percent of the consumers they studied do not see price as a limiting factor and that 29 percent say it is a reason for not buying organic.

Several studies of the demand of organic foods indicate that the main reasons for consuming organics involve concerns for health and food safety. Awareness of and knowledge about food hazards tend to be higher among females and individuals with higher incomes and more education (Shafie and Rennie, 2012).

In general, consumers believe that eating healthily is more efficient than medication in managing illness, and they strongly associate health with diet (Hughner, McDonagh, Prothero, Shultz II, and Stanton, 2007). They are convinced that organics benefit health more than conventional foods do. Health is indicated to be the most important factor in purchasing organic foods among both regular and occasional consumers of organic food.

In addition to health consciousness, consumers are motivated to buy organic by environmental issues, better taste, and social factors such as supporting local production. British consumers believe that organics provide a way to meet individual and social values. The main motives for choosing organic food are health followed by environmental and animal-welfare factors (Shafie and Rennie, 2012).

It could be said that consumers see organic consumption as an investment that secures better health and a better environment in the future for themselves and their children. Consumers associate organic foods with benefits for human health, non-use of pesticides and fertilizers, and care for the environment and animal health.

4.2. Consumer motives for buying organic

All consumer decisions have either a positive or a negative impact on economic, social, and environmental levels. Because conventional food is grown and produced with the use of

artificial fertilisers, growth hormones, artificial pesticides, and synthetic additives, it could negatively affect the environment and the quality and safety of the food, all of which plays a large role in influencing consumers' perceptions of conventional and organic foods.

Davies et al. (1995) report that the main reasons consumers choose organic foods are concern for the environment and health reasons. Availability and price are the main influences on the actual purchase of organic produce. Scifferstein and Oude-Ophuis (1998) report that food quality, absence of pesticides, environmental friendliness, and taste are the most important factors affecting organic demand.

A comprehensive list of consumer motives is presented in the extensive literature review Hughner et al. (2007). See Table 1.

Table 1. Consumers' motives for purchasing organic food. Source: (Hughner, McDonagh, Prothero, Shultz II, and Stanton, 2007)

Motives	
i.	Health and nutritional concerns
ii.	Superior taste
iii.	Concern for the environment
iv.	Food safety and lack of confidence in the conventional food industry
v.	Animal-welfare concerns
vi.	Support of local economy
vii.	More wholesome
viii.	Nostalgia
ix.	Fashionable

Ethical motives—such as concerns for the environment, animal welfare, and food-safety—are found to be the next most important motives for purchasing organic foods after health motives (Magnusson, Arvola, Hursti, Aberg, and Sjoden, 2003).

4.2.1. Health consciousness

Consumers today are very health conscious and are ready to take actions on behalf of their health (Michaelidou and Hassan, 2008). Health-conscious consumers are aware and concerned about their wellness and are ready to take action to improve or maintain their health and quality of life. These consumers wish to prevent any illnesses by engaging in healthy behaviours and being self-conscious (Michaelidou and Hassan, 2008). Health-conscious people are usually involved with nutrition and physical fitness.

Previous studies have identified health as the main reason for purchasing organic produce. Hutchins and Greenhalgh (1997) report that 93 percent of their respondents purchase organics for health reasons, while fewer than 30 percent of respondents buy organics for environmental reasons. Organic food buyers are aware that food intake influences their health; they appreciate the naturalness¹⁴ and are willing to switch foods to improve their health. Perceived healthiness is a quality parameter for many consumers.

In addition, organic food is perceived to be more nutritious than conventional food. Nutrition is often linked to personal health by consumers. Regular consumers relate “organic” attributes largely to health and safety, while non-regular consumers consider other attributes such as taste or place of purchase.

The Food Standards Agency in the UK has examined the potential human-health benefits of consuming organic foods. The main goal of the report was to find out if measurable benefits result from the consumption of organics. The benefits of organic food are considered to be their vitamins, minerals and other health-benefiting properties, whereas the negative aspects of conventional food are perceived to be the presence of artificial chemicals used in the production, processing and storage (Pearson, Henryks, and Jones, 2011). The study concluded that there is no current evidence that there are health benefits from consuming organic foods in contrast to conventional foods.

There is not enough of evidence in the scientific literature to support or deny consumer’s perception on organic foods being healthier choice. To measure the health benefits, a long-term comparison of organic and conventional foods should be made and production systems should be monitored at the same sites over several years to get significant results (Pearson, Henryks, and Jones, 2011).

4.2.2. Better Taste

For some consumers, taste is the main reason to purchase organic foods (Hughner, McDonagh, Prothero, Shultz II, and Stanton, 2007). Better taste is usually connected with the idea that a product is of good quality. Naspetti and Zanolli (2009) find that good taste is one of the important attributes that gives pleasure to regular consumer when they consume organic foods. Regular consumers are very confident that organic food tastes better than conventional food. Still, there is little evidence in the scientific literature for the superiority of organic over conventional food.

¹⁴ Described as a no-chemical approach in food production.

Some consumers associate organic food with higher quality and therefore with better taste. An individual consumers' perception of one characteristic can be affected by his or her assessment of other characteristics. This is called as a "halo effect", and examples have been found in consumers' evaluations of the calorie content of organic and conventional foods. For example, in a study conducted by Lee et al. (2013), consumers were presented with two identical goods (cookies, yoghurt, and chips), both organic, but with different labelling: organic and conventional. Significant halo effects were found in consumers' judgement of calorie evaluation and health judgements. However, the evaluation of taste was more mixed. Organic-labelled yoghurt was perceived to be more flavourful and tastier, organic-labelled cookies were perceived to be less flavourful and less tasty, and organic-labelled chips were perceived as to have a less artificial taste.

An English study reports that organic orange juice is found to be better tasting by consumers (Fillion and Arazi, 2002). No difference was found in a Swedish study (Grankvist and Lekedal, 2007).

Nevertheless, there is no scientific support for the belief that organic food tastes better than conventional foods, as taste is subjective and depends on many influences the consumer. Studies show, however, that better taste can be used as an argument in marketing organic foods.

4.2.3. Environmental Concern

Environmentally friendly consumers are consumers who are ecologically conscious and buy produce that is produced in a way that is not harmful to the environment or society (Michaelidou and Hassan, 2008). Over the last decade, people have become more aware of environmental problems such as climate warming, the efficient use of resources, and pesticide residues in ground water. These issues have been intensified by food scandals (e.g., the horsemeat scandal). Concerns about environmental issues have been positively correlated with the consumption of organic food. Michaelidou and Hassan (2008) indicate that environmental concern is the most important factor influencing the intention to buy organic food.

Climate change has been an important concern in recent decades. Organic agriculture is believed to have less climate impact than conventional farming. A recent report from EPOK concluded that there is a draw between climate impact per produced amount in organic and conventional agriculture (Hoffman and Wivstad, 2015). Another study in Sweden examined

the climate impact of organic and conventional agriculture. It concluded that organic crop production generates fewer greenhouse gases; however, the level of climate impact depends on harvest level and the use of nitrogen fertilisation (Hoffman and Wivstad, 2015). However, recent studies show that organic farming may be even worse than conventional farming. Organic farming has substantially lower yields than conventional farming by around 19-25 percent. Therefore, more land is needed in organic farming, which results in increased use of water, more stress on land and, in third countries, destruction of rainforests (Seufert and Ramankutty, 2017).

In addition, the presence of genetically modified organisms in foods is not tolerated by the consumers. Genetically modified (GM) food is seen as manipulative and unnatural, while organic is perceived as preserving the naturalness of the environment (Dreezens, Martijin, Tenbult, Kok, and Vries, 2005). According to a study conducted by Naspetti and Zanolini (2006), consumers are expressing worry over the use of genetically modified organisms (GMOs) in organic fruit and vegetables. However, the use of GMOs in organic production is prohibited (Art. 9 of Regulation (EC) No 834/2007/EC). Organic producers can rely on labelling or on any accompanying document which ensures the GMOs were not used during the production. Organic production legislation states that organic labelling cannot be used if a food requires a GMO label.

4.2.4. Food-safety concerns

Growing consumer concerns about safety due to the presence of fertilisers, pesticides (e.g., nitrates, pesticide residues) and pathogenic micro-organisms are considered to be one of the motives for the increasing demand for organic food. Though the maximum residue levels (MRLs) for organic foods are much lower than those for conventional foods, consumers do not wish to have any pesticide residues in their food.

Food can become contaminated at any time during cultivation, harvest, storage, processing, distribution, or preparation. Primary contamination sources for microbial contamination are soil, air, water, untreated animal manure (as fertiliser), animal skins and intestines and food-processing machinery. Consumers associate organic food with less contamination by microbial contaminants than conventional food (Hoefkens, Verbeke, Aertsens, Mondelaers, and VanCamp, 2009).

In general, consumers believe that organic production uses little or no pesticide (Yiridoe, et al., 2005; Baker, et al., 2002). Organic meat consumers believe the meat to be of higher

quality, safer and superior in terms of labelling and production methods (O'Donovan and McCarthy, 2002).

Given the prohibition on the use of pesticides in organic production, it is reasonable to believe that consumers expect that organic foods contain fewer chemical residues than conventional foods. However, environmental contaminants can be found in both food products. Organic foods contain one third of the pesticides found in conventional foods (Baker, Benbrook, Groth, and Benbrook, 2002). The use of synthetic pesticides is not permitted in organic production, but a small number of bio pesticides can be used. Bio pesticides tend to have a lower environmental impact than that of synthetic pesticides since it is a type of pest-management intervention that contains micro-organisms or natural products (e.g., sulphur, copper).

4.2.5. Animal Welfare Concerns

Concern for animal welfare (ethical consideration) seems to motivate consumers to purchase organic foods; however, it does so to a lesser extent than environmental and health concerns. This motive is not commonly mentioned, but it is especially important for consumers in countries where intensive animal farming systems are used. This is noticeable from the increased demand for free-range eggs, the increased number of vegetarians and more stringent legislation regarding use.

Ethical consumerism is increasing worldwide, and ethical values are becoming more important in making purchase decisions. In a study conducted in five European countries (Austria, Germany, Italy, Switzerland, and the UK), consumers ranked animal welfare as the highest of ethical attributes (e.g., locally produced, fair prices for the farmers, etc.) (Zander and Hamm, 2010).

Animal welfare is related to the core of organic farming values. Organic animal production aims to achieve enhanced animal health and welfare. Different requirements are set in organic farming with respect to housing (outdoor access, larger space requirement, and enrichment of animals' environment), feed (GMO-free feed, animals must have access to outdoor grazing), slaughter and restricted use of drugs (Hoffman and Wivstad, 2015). Consumers believe that *organic* and *animal-friendly foods* are equivalent terms: i.e., they believe that animal welfare indicates food quality.

4.2.6. Consumer deterrents of purchasing organic foods

Consumers usually have a positive attitude towards organic food products. However, there are several reasons why consumers do not choose to purchase organic: e.g., high price premiums, lack of availability, scepticism towards organic labels and authorities, insufficient knowledge of organic food products and contentment with conventional food products. High price is typically recognised as a barrier to the purchase of organic food products (Hughner, et al., 2007) (Yiridoe, et al., 2005).

Price plays a large role in consumers' judgement of a product. Organic food is more expensive than conventional food products because (1) it involves higher production, processing, and distribution costs; (2) there are differences in the levels of supply and demand; and (3) consumers perceive organic products to be of higher quality and are therefore willing to pay higher price.

4.3. Estonian average organic consumer image – insights from consumer surveys

The literature shows that better knowledge plays a large role in increasing consumption. Hence, reliable information about specific characteristics of organic farming could increase organic consumption and the consumer's willingness to pay. Several studies indicate that consumers lack knowledge of organic farming and production standards (Janssen and Hamm, 2012; Harper and Makatouni, 2002). This chapter considers consumer studies¹⁵ that represent the Estonian consumer perception of the organic logo. This is an important insight if we are to determine what the real average consumer perceptions of the organic logo are.

4.3.1. Results of consumer surveys

In recent years (2012-2014¹⁶), the overall perception of organic foods has stayed the same among Estonian consumers. Around 40% of consumers know that no chemical fertilisers have been used in the production of organic foods (TNS Emor, 2015).

What is surprising is the consumer motivation for buying organic foods – over two thirds of consumers state 'healthiness' as their main motivation¹⁷. A study from Estonian Institute of

¹⁵ Studies that are used in this chapter are conducted by TNS Emor, a leading research agency in Estonia, and have been ordered by the Ministry of Agriculture of Estonia. In every study, 500 to 1000 participants took part of a survey. Based on the results, a general Estonian consumer perception is calculated.

¹⁶ Consumer surveys conducted after 2014 are not available at the time of writing this research.

¹⁷ 65% in 2012, 61% in 2014 and 67% in 2016 (TNS Emor, 2015; TNS Emor, 2014; Estonian Institute of Economic Research, 2016).

Economic Research (2016) indicates that ‘healthiness’ is mostly associated with diverse diet and consumption of fruits and vegetables. Around 50% of consumers associates ‘healthiness’ with low-sugar, -salt and -fat content in a food product. In contrast, only a third of consumers read the nutritional labelling of a food product (TNS EMOR, 2014a).

A survey of 2011 (TNS Emor, 2011) shows that more than half of consumers (52%) perceive organic products as agricultural products that are sold directly by the farmer. In 2012, 46 percent of respondents think that products bought straight from the producer/farmer are organic (TNS Emor, 2014b). However, it must be pointed out that consumers are most likely buying conventional products rather than organic ones. In 2013, 55 percent of respondents think organic food is bought straight from the local organic producer and is controlled by national standards. 43% of respondents said that they buy organic because it is produced locally (TNS Emor, 2015). 35% buy organic foods because they are tastier than conventional food products in 2013 (by 2014, it had increased by 10%).

Most consumers are aware of the concept of organic farming; however, when going more into detail, some lack of knowledge became obvious. Roughly, half of the respondents (57%) knew about the existence of a third-party system control and certification. Surprisingly, less than a third (27%) of the respondents knew that organic food does not need to be produced in small farms and locally (TNS Emor, 2015).

4.3.2. Consumer's ability to recognise and know the compulsory EU logo

In a study commissioned by the EC, Estonia was one of the countries studied. The study states that around one third (34%) of the Estonian respondents indicate that they have seen the EU organic logo before (Sanders, 2013). However, 38 percent claim not to have seen the logo, and 26 percent did not know. The survey investigated whether consumers really know the message of the EU organic logo. Only six percent of respondents knew that the EU logo indicates organic food according to common European standards. A somewhat larger share (16%) of respondents knew that the logo indicates organic food. Another small share knew that the EU logo is associated with the European Union or with something natural and ecological (5% and 15% accordingly). Remarkably, almost half of the respondents did not know what the logo represents.

Most widely recognised food logos in Estonia are non-organic quality logos. The next most-recognized logos are the national organic logo (53%) and the EU organic logo (41%) (Figure

6). The most recognised logo is the quality logo for products that use ingredients grown in Estonia (TNS Emor, 2015b).

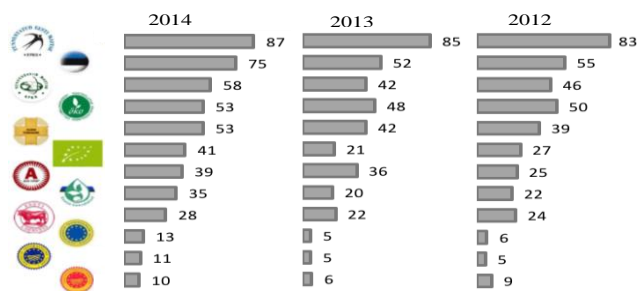


Figure 6. Recognition of food logos (% of respondents per year) (TNS Emor, 2015b)

In another study, where a national survey was conducted in Estonia, participants were confronted with eight different logos: two important organic logos, the Fairtrade logo, a non-organic quality food logo, a fake organic logo, the EU organic logo, the old EU organic logo and the German Biosiegel logo (Zander, Padel, and Zanolli, 2015). Participants were asked to identify those indicating organic food. The best known was the Estonian national organic logo (73%), which was followed by non-organic quality logo, which is perceived to indicate organic food by 46% of respondents. Only one quarter of respondents recognised the EU organic logo. Fourteen percent of the respondents recognised Fairtrade to be organic. However, Fairtrade does not certify organic production. Consumer trust is the highest for the national organic logo and for the non-organic food-quality logo, followed by the EU organic logo. Thus, the EU organic logo is fairly trusted.

Participants indicated that the national organic logo (46%) and the non-organic quality food logo (36%) are the most relevant to their purchase decisions (TNS Emor, 2015b).

4.4. Conclusion

Policy measures and marketing strategies have both increased consumers' ethical concerns regarding food safety and healthiness and environment and animal welfare. Moreover, due to recent food-safety crises—such as the E. coli outbreak and the horsemeat scandal—consumers have started to value safer and more authentic food with more controlled production methods. Consumers who are anxious about the origins and the production methods of their food products have turned to organic foods because of how they are produced (Willer and Lernoud, 2014).

Interest in the consumption of organic foods has grown remarkably in recent years as consumers have reacted to the media concerning the health and environmental effects of

pesticides, GMOs, quality, and food safety. The development of the organic market depends mainly on consumer demand. Consumer demand for organic products in Estonia is driven mostly by health motives. Organic food is perceived to be healthier, more nutritious (and less calorific) and fresher than conventional counterparts.

In the subsequent chapter the focus will be on behavioural economics to gain insights how information could be communicated to consumers better and which factors should be considered when analysing consumer behaviour regarding decision-making process.

5. Consumer perception and behaviour: insights from behavioural economics

Behavioural economics (BE) is an expanding field of study that can provide insights into why consumers select certain products. Insights from BE can help to improve legislation, particularly when it comes to consumer information. BE could help to ensure that labelling and logos properly communicate information to consumers. One can ask whether information regarding organics could be better communicated to consumers for them to make informed choices. The following chapter elaborates on the theory of behavioural economics and how it could be used to improve legislation.

5.1. What is behavioural economics?

In recent years, the neoclassical view of human behaviour has been challenged by behavioural economics. BE is a field of expertise that applies psychology to economics to determine how people make economic decisions (Samson, 2014). It can provide understanding of the behaviour of the standard model¹⁸. Rational consumers are supposed to deal with risky situations by weighing outcomes with their probability of occurrence. Furthermore, they are assumed to ignore information that is irrelevant to their payoffs and to take a consistent approach to discounting over time. Unlike standard economics theory as used in food law, BE assumes that real consumers are ‘non-rational’.

Thus, BE could contribute to improving policies and improving the consumer position in the market (Micklitz, Reisch, and Hagen, 2011). BE considers the behaviour of the market and how its participants deal with the information they receive while considering their cognitive limitations.

5.2. Behavioural economics theory

The interest of psychology in economical underpinning dates to 18th and 19th century thinkers. The classical concept of psychologically informed economics is reflected in the work of Herbert Simon in 1950's. Simon observed that not all human beings behave according to the standard model of rationality, which illustrates how people are expected to behave in decision-making situations. Furthermore, Simon noted that the real world is so complicated that the theory of utility maximisation is almost irrelevant to the real choices

¹⁸ *Standard model* – approach to consumer behaviour. Model shows how consumers are expected to behave (Mehta, 2013).

people make (Mehta, 2013). Simon proposed that decision-making theories should be grounded in a theory of choice that gives attention to how people process the information provided to them, emphasizing that there might be limits to the calculation abilities people have (Mehta, 2013).

‘Bounded rationality’ is one of the three bounds that are used to analyse behavioural economics for law. People display (1) bounded rationality, (2) bounded willpower, and (3) bounded self-interest. These bounds represent how most people deviate from the standard economic model (Dangi and Vaidya, 2014).

5.3. Bounded rationality

In standard economics, “*Homo economicus*” or “man” is described as perfectly rational and in possession of complete knowledge while making rational economic choices. Simon, however, argues that the rationality of humans is limited to the knowledge they have, to the cognitive limitations of their minds and the time they have for decision-making (Gigerenzer and Selten, 2002). Thus, Simon used the term *bounded rationality*. Furthermore, he argued that the concept of rationality has limits in terms of incomplete information about substitutions, risk, and uncertainty.

Since individuals lack the ability to make the optimum decision, they apply their rationality after simplifying the choices that are available (Dangi and Vaidya, 2014). Hence, psychological theory is very important for an appropriate description of the process of making economic choices. Simon claims that individuals have only bounded rationality and are forced to make decisions not by ‘maximisation’ but by ‘satisficing’¹⁹. This means that, when a decision satisfies certain requirements, although it might not be the best decision, people are satisfied. According to Simon, people ‘satisfy’, because of their inability to ‘maximise’ (Brown, 2004). Therefore, bounded rationality means that information is not processed according to the model of perfect means-end rationality but is biased by limits of the cognitive system (Jolls, Sunstein, and Thaler, 2000).

In addition to bounded rationality, people also show bounded willpower. This means that people sometimes perform actions that are not in their long-term interests. They simply eliminate any temptations to surrender to their desire for an immediate reward (Dangi and

¹⁹ Satisficing is a hypothesis which allows to the conception of diverse decision procedures and which permits rationality to operate in an open not pre-determined space (Barros, 2010).

Vaidya, 2014). For example, a person has a slice of cake even though he or she wants to lose weight. Bounded willpower is also described as limited willpower. Such behaviour is considered as irrational from the viewpoint of traditional economics.

The third bound that people tend to show is bounded self-interest. This means that people are willing to sacrifice their own interest to help others (Dangi and Vaidya, 2014). Examples of this include helping strangers or giving money to charities. This shows that people are sometimes willing to help others at the expense of their own self-interests.

5.4. Consumer perception: insights from psychology

Researchers in different areas of psychology have developed dual-process models for information processing. These models have been used in studies of decision making. Gaining insight into cognitive psychology can help us understand how people process the information they are given through labelling (Järvilehto, 2015), in this thesis labelling organics. Analysis of the information-processing of consumers and their judgement can contribute to deepening our knowledge of consumer behaviour and moreover, can contribute to better legislation regarding information communication through labelling.

Information processing depends on consumer cognition. The cognitive processes are divided into two groups – intuition and reasoning, so called fast and slow models (Järvilehto, 2015). There are various dual-process models of information processing, but they all share the assumption that people alternate between two modes: 'intuitive' and 'analytical' thinking.

Intuition is a main factor in making judgements, which are directly reflected in a person's impressions (White, 2005). Intuition is classified as a process which is rapid, intuitive, and effortless and in which emotions play a role. In contrast to the intuitive process, the analytical process is characterised by reasoning. The analytical process is described as a slow, cognitive, effortful system in which logical reasoning exists (Järvilehto, 2015).

Analytical thinking is associated with effective decision making because of logical reasoning and has few decision biases. Intuitive thinking, on the other hand, is associated with the generation of biased impressions (Morewedge and Kahneman, 2010). A key task for psychologists is to identify situations that make intuitive thinking work in the decision-makers favour (Milkman, Chugh, and Bazerman, 2008).

5.5. Conclusion

One of the central concepts in food law is the rational ‘average consumer’. Previous analyses of BE and its three bounds have shown that the concept of bounded rationality can be helpful when looking at legislation on food law. One of the main aims of EU food law is to provide food information: consumers have the right to be informed about products so they can make informed choices. Thus, food law aims to provide and maintain consumer protection. Thaler and Sunstein (2003) argue that it is possible to make paternalistic regulations. The policy would benefit consumers who were non-rational in their behaviour. It would guide them towards making appropriate decision that is in their own best interest.

Food-information and legal consumer-protection laws have their origins in standard economic theory, which is based on rationality. The consumer is expected to be well-informed and to make an informed economic choice. Nevertheless, when analysing the literature on behavioural economics, one can question the concept of the rational, well-informed, traditional consumer that is applied in the EU food law. Engaging insights from behavioural economics and psychology could help to achieve more efficient consumer protection and the option to make better-informed choices by taking the more realistic behaviour of consumers into account.

6. The ‘Average consumer’ in CJEU case law

The case law of the Court of Justice of the European Union (hereinafter the CJEU or the Court) regarding the average consumer can help us understand how the average consumer and consumer protection are addressed. Consumer protection is closely related to the issue of how information is provided efficiently to consumers.

The notion of ‘average consumer’ comes from the free-movement-of-goods case law of the CJEU (Duivenvoorde, 2015). The average-consumer benchmark was established by the CJEU in the 1998 *Gut Springenheide*²⁰ case to tackle over-protective national laws connected to unfair commercial practises. In later cases, the CJEU emphasizes that cultural, social, and linguistic features can be considered when applying the ‘average consumer’ benchmark. The overall case law of CJEU describes the fact that the ‘average consumer’ is not easily misled. As is shown below, the cases that refer to the case of *Gut Springenheide* concern a clash between the free movement of goods and consumer-protection measures regarding unfair practises.

6.1. Cassis de Dijon²¹

The Cassis de Dijon case concerned a clash between the food company Rewe-Central ('the company' in what follows) and the state agency German Bundesmonopolverwaltung für Branntwein. The company applied for an import permit for their liqueur from France. However, the state agency denied the company's request, stating that the liqueur lacks sufficient alcohol to be sold in German market. The explanation given is that the consumer would be misled by traders selling liqueur that is similar to its competitors but with a lower alcohol percentage. The rule was meant to protect public health by making a clear distinction between light alcoholic beverages and strong liquors—a rule that could be undermined by allowing liqueurs such as Cassis de Dijon into the German market (Duivenvoorde, 2015).

In this case, the CJEU (the court) did not apply an explicit benchmark for the consumer. However, the ruling is a starting point for the development of the benchmark for an average consumer. The court did not find it necessary to produce an expert opinion or to order a consumer-opinion study. The judgement shows that the court assumed that consumers do not base their purchasing decisions on a purely general impression of a product. Rather, the

²⁰ Case C-210/96 - *Gut Springenheide and Tusky v Oberkreisdirektor des Kreises Steinfurt* [1998] ECR I-4657 [ECLI:EU:C:1998:369].

²¹ Case C-120/78 *Rewe-Zentral AG v Bundesmonopolverwaltung für Branntwein* [1979] ECLI:EU:C:1979:42.

ruling assumes that consumers read product labels, or at least note the indication of the country of origin and the alcohol percentage on such labels. The court requires the consumer to be sufficiently attentive to avoid being misled by foreign products due to their different names, labels, or packaging.

6.2. Gut Springenheide²²

The benchmark for the average consumer was explicitly identified in 1998 by the court in the case of Gut Springenheide. In this case, the notion of the ‘average consumer’ – reasonably well-informed and reasonably observant and circumspect – achieved its benchmark (Mak, 2010).

Gut Springenheide GmbH (‘the company’) marketed egg packages with the description ‘six-grain – 10 fresh eggs’. The package included supplementary information stating that six varieties of grains account for 60% of the feed mix. The German Office of Supervision of Foodstuffs argued that both the information provided on the package and the name was misleading (Incardona and Poncibo, 2007). The company argued that the appeal court was incorrect to judge that the name and information were misleading without offering an expert opinion to prove their judgement. The German administrative court referred the appeal to the Court of Justice concerning the interpretation of Article 10(2)(e) of the Council Regulation (EEC) No 1907/90, asking whether the statement was likely to mislead the consumer and what kind of consumer should be applied in this case.

The court ruled that, to determine whether the statement was liable to mislead the consumer, the national court should consider the presumed expectations of an average, reasonably well-informed consumer (Zboralska, 2011). The following outtake from the case shows how the notion of the ‘average consumer’ was born:

*[...] to determine whether the description, trade mark or promotional description or statement in question was liable to mislead the purchaser, the Court took into account the presumed expectations of an **average consumer who is reasonably well-informed and reasonably observant and circumspect**, without ordering an expert's report or commissioning a consumer research poll.*²³

The Court ruled that to determine whether the description of a product was liable to mislead consumers, the national court should take presumed expectations of an average, reasonably

²² Case C-210/96 - *Gut Springenheide and Tusky v Oberkreisdirektor des Kreises Steinfurt* [1998] ECR I-4657 [ECLI:EU:C:1998:369].

²³ Paragraph 31 of the judgement (Case C-210/96) [ECLI:EU:C:1998:369].

well-informed consumer into account (Zboralska, 2011). Hence, the answer provided by the CJEU is applicable to European law connected to potentially misleading information in general and not only to the regulation on the marketing and labelling of eggs.

6.3. Lifting²⁴

The lifting case is another important development in the ‘average consumer’ benchmark after the *Gut Springenheide* decision. This case deals with cultural, social, and linguistic factors and the role of consumer opinion research (Duivenvoorde, 2015).

The cosmetics company Lancaster sold firming skin cream under the name 'Monteil Firming Action Lifting'. Lancaster was brought before the Landgericht Köln by its competitor, Estée Lauder, who argued that that the name 'lifting' misleads consumers, as *'it gives purchasers the impression that use of the product will obtain results which, above all in terms of their lasting effects, are identical or comparable to surgical lifting, whereas this is not the case so far as the cream in point is concerned'*²⁵.

Landgericht Köln made clear that, to justify a prohibition, a considerable number of consumers (approximately 10-15%) would need to be misled according to German law. However, it doubted whether this test would infringe the European law when the case law of the CJEU on the average consumer was considered²⁶. The national court went on to ask whether prohibiting the name would restrict the free movement of goods, since the name was used in other member states without being disputed.

Advocate General Fennelly emphasised that the task of CJEU is to provide guidelines to national courts on how to balance the free movement of goods and the protection of consumers. Moreover, Fennelly emphasised that the benchmark for the average consumer plays an important role in balancing those interests and that the interpretation of this concept should be strict. In addition, Fennelly emphasized that, *'the presumption is that consumers will inform themselves about the quality and price of products and will make intelligent choices'*²⁷. The court made clear that social, cultural, and linguistic differences between consumers in different EU Member States could lead to different conclusions, such that, while a statement in one Member State is not misleading, it can be misleading in another (Zboralska, 2011).

²⁴ Case C-220/98 *Lifting– Crème* [2000] ECR I-117 [ECLI:EU:C:2000:8].

²⁵ Paragraph 32 of the judgement (Case C-220/98) [ECLI:EU:C:2000:8].

²⁶ Paragraph 17 of the judgement (Case C-220/98) [ECLI:EU:C:2000:8].

²⁷ Opinion of the Advocate General, paragraph 25 [ECLI:EU:C:2000:31].

6.4. Adolf Darbo²⁸

The Adolf Darbo case further interprets the ‘average consumer’ benchmark in terms of the consumer being ‘informed’ and ‘observant’²⁹. Adolf Darbo manufactured strawberry jam in Austria and sold it in Germany under the name ‘d’Arbo Naturrein’. The German consumer organisation criticised the name ‘Naturrein’ (naturally pure) because the jam contained additive pectin and residues of lead, cadmium, and pesticides. The organization asked that the name be prohibited because such use would be contrary to German law, more specifically, to Art. 17(1)(4) and (5) of the LMBG³⁰. First, consumers do not expect to find the additive in question in jam given the description ‘naturrein’. Second, the latter is likely to mislead consumers, since the fruit used in the jam originates from land and air that is polluted³¹. Third, the jam cannot be described as naturally pure given that it contains residues of lead, cadmium, and pesticides.

Darbo argued that the use of ‘naturrein’ is not misleading, as consumers expect residues to be present in food products, such as jam, because they are aware of land and air pollution; and as pectin is a common ingredient used when making jam³². CJEU ruled that the consumer is not being misled, as pectin is named in the ingredients list on the product (Incardona and Poncibo, 2007). In this case, the court ruled that the average consumer reads labels before purchase:

*[...] consumers whose **purchasing decisions depend on the composition** of the products in question **will first read the list of ingredients**, the display of which is required by Article 6 of the Directive. In those circumstances, **an average consumer who is reasonably well informed and reasonably observant and circumspect** could not be misled by the term naturally pure used on the label simply because the jam contains pectin gelling agent whose presence is duly indicated on the list of its ingredients.*

Furthermore, in terms of the presence of pesticides in the jam, CJEU appealed to the ‘common sense’ of the consumer. The argument that the term naturally pure is misleading because of the mere presence of residues³³ could not be supported, because the residues are naturally occurring and the fruit is inevitably exposed to such pollutants, as stated by the Advocate General Leger in his opinion:

²⁸ CJEU 4 April 2000, Case C-465/98, ECR 2000, p. I-2297 (*Adolf Darbo*) [ECLI:EU:C:2000:184].

²⁹ MacMaoláin, 2007, p. 11.

³⁰ Paragraph 14 of the judgement (Case C-465/98) [ECLI:EU:C:2000:184].

³¹ IDIB.

³² Paragraph 14 of the judgement (Case C-465/98) [ECLI:EU:C:2000:184].

³³ Paragraph 27 of the judgement (Case C-465/98) [ECLI:EU:C:2000:184].

*It is common ground that lead and cadmium are present in the natural environment as a result, in particular, of air pollution and pollution of the aquatic environment [...] Since garden fruit is grown in an environment of that kind, it is inevitably exposed to the pollutants present in it.*³⁴

In the end, the court found no reason to prohibit the name because of the argument that the name was misleading.

In this case, the consumer was concerned about pectin. However, the producer provided the information about pectin on the labelling; thus, the information about the product is well communicated to the consumer. Here the notion of ‘average consumer’ appears to be a useful tool, as the complaint of the consumer organisation seems to be unreasonable. Thus, consumers cannot be assumed to be completely ignorant and can be expected to read labels when they have problems with one of the ingredients. However, consumers who have sufficient knowledge and take note of the information on the label are not the majority of consumers.

6.5. Douwe Egberts v Westrom Pharma³⁵

The case of Douwe Egberts is interesting for the Advocate General’s remarks on the ‘average consumer’ benchmark, which provides insights into the nature of the benchmark itself. The case brings up the issue of the expected behaviour of the average consumer *versus* the actual behaviour of the consumer.

Westrom Pharma produces coffee, which it claimed to be ‘an absolute breakthrough in weight control’, and it promised ‘slimming, better weight control and slowing down excess fat deposits’³⁶. Douwe Egberts argued that the statements are not allowed under Belgian law, which prohibits labelling and presentation of food where there are references to slimming and ‘medical recommendations, attestations, declarations or statements of approval’. The CJEU ruled that the general prohibitions laid down by the Belgian law are neither permissible under the Directive 2000/13/EC³⁷, nor under the free movement of goods principle (Duivenvoorde, 2015). Rather, it should be decided on a case-by-case basis whether a statement is possibly fraudulent nature. Paragraph 46 describes the judgement in detail:

³⁴ Paragraph 27 of the judgement (Case C-465/98) [ECLI:EU:C:2000:184].

³⁵ Case C-239/02 - *Douwe Egberts NV v Westrom Pharma NV and Others* [2004] [ECLI:EU:C:2004:445].

³⁶ Paragraph 16 of the judgement (Case C-239/02) [ECLI:EU:C:2004:445].

³⁷ Article 18(1) and (2) of Directive 2000/13/EC on the approximation of the laws of the Member States relating to the labelling, presentation and advertising of foodstuffs.

*Finally, as regards the possible difficulty of establishing in certain cases the fraudulent nature of a certain statement, it should be recalled that it is for the national courts in all doubtful situations to form a view, taking into account the **presumed expectations of an average consumer who is reasonably well informed and reasonably observant and circumspect**.*³⁸

Moreover, it is assumed that consumers read labels before their purchase:

*It should be remembered in this context that, when assessing whether or not product information is misleading, the Court takes as its **point of reference** the presumed expectations of an average consumer who is reasonably well informed and reasonably observant and circumspect. This presupposes that, before acquiring a given product (for the first time), a consumer will always take note of the information on the label and that he is also able to assess the value of that information. It seems to me that a consumer is sufficiently protected if he is safeguarded from misleading information on products and that he does not need to be shielded from information whose usefulness with regard to the acquisition and use of a product he can himself appraise.*³⁹

Thus, according to Advocate General Geelhoed, a consumer is expected to always study the label before purchasing the product the first time and to process the information to make an adequate decision. In his opinion, Advocate General Geelhoed states that,

*[...] the consumer has an **interest in not being misled**. So long as the information concerned is correct, it must be assumed that the average consumer who is reasonably well informed and reasonably observant and circumspect will be capable of forming an opinion on the products advertised without his economic and health interests being harmed [...]*⁴⁰

This opinion shows expectations about how consumers should behave: consumers should assess the information critically since it is in their interest not to be misled. The opinion seems to reflect both the desired behaviour of a consumer and how the consumer behaves when making purchase decisions.

6.6. Teekanne⁴¹

The German company Teekanne marketed a fruit tea called ‘Felix Himbeer-Vanille Abenteuer’ (‘Felix raspberry and vanilla adventure’). The package of tea displayed a vanilla pod and raspberries and included indication stating ‘fruit tea with natural flavours’. Actually,

³⁸ Paragraph 46 of the Judgement (Case C-239/02) [ECLI:EU:C:2004:445].

³⁹ Paragraph 54 of the Opinion (Case C-239/02) [ECLI:EU:C:2004:445].

⁴⁰ Paragraph 79 of the Opinion (Case C-239/02) [ECLI:EU:C:2004:445].

⁴¹ Case C-195/14 *Bundesverband der Verbraucherzentralen und Verbraucherverbände - Verbraucherzentrale Bundesverband e.V. v Teekanne GmbH & Co. KG* [2015] [ECLI:EU:C:2015:361].

the tea did not contain any natural ingredients from vanilla or raspberry – not even flavourings obtained from them. The ingredient list stated that the fruit tea contained ‘natural flavouring with a taste of vanilla’ and ‘natural flavouring with a taste of raspberry’.

A German consumer-protection association took an action against Teekanne, arguing that items on the fruit tea packaging misleads consumers regarding the tea’s ingredients because consumers would expect vanilla and raspberry ingredients or at least natural vanilla and raspberry flavouring⁴².

Teekanne noted – referring to the CJEU’s previous cases – that the packaging was not misleading and it was sufficiently clear to the average consumer from the ingredient declaration that the tea did not contain any natural vanilla and raspberry aromas.

The case was referred to the CJEU, which was asked if:

‘Is it permissible for the labelling, presentation and advertising of foodstuffs to give the impression, by means of their appearance, description or pictorial representation, that a particular ingredient is present, even though that ingredient is not in fact present and this is apparent solely from the list of ingredients provided for under Article 3(1)(2) of Directive 2000/13/EC?’

The CJEU departs from its previous case law and states that the fact that ingredient declaration is shown on the packaging “does not in itself exclude the possibility that the labelling of those goods and methods used for it may be such as to mislead the purchaser”⁴³. Labelling includes “any words, particulars, trademarks, brand name, pictorial matter or symbol relating to a foodstuff and placed on its packaging. Some of those items may in practice be misleading, erroneous, ambiguous, contradictory or incomprehensible.”⁴⁴ The Court further explains that in such case the list of ingredients may not be able to correct “sufficiently the consumer’s erroneous or misleading impression”⁴⁵. The Court held that the labelling “taken as whole”⁴⁶ may not give the impression that it contains an ingredient that it does not in fact contain, even though it is clear from the ingredient declaration that this particular ingredient is not present in the product. The interpretation of the ‘average consumer’ is left to national courts.

⁴² Paragraph 13 of the judgement (Case C-195/14) [ECLI:EU:C:2015:361].

⁴³ Paragraph 38 of the judgement (Case C-195/14) [ECLI:EU:C:2015:361].

⁴⁴ Paragraph 39 of the judgement (Case C-195/14) [ECLI:EU:C:2015:361].

⁴⁵ Paragraph 40 of the judgement (Case C-195/14) [ECLI:EU:C:2015:361].

⁴⁶ Paragraph 41 of the judgement (Case C-195/14) [ECLI:EU:C:2015:361].

6.7. Conclusion

Teekanne case marks a significant shift from the CJEU's previous case law in terms of packaging and labelling. The CJEU decided that a labelling of a product might be misleading to consumers regardless a correct ingredient declaration⁴⁷. In prior cases, the average well-informed consumer was supposed to be able to read the ingredient list on a product, and thus, be protected from being misled. It is important to pay attention to the fact that even an accurate ingredient declaration may not always correct a false association with the impression that the package gives.

In addition, the Court took a different approach to the 'average consumer' – consumers pay more attention to visual elements than textual elements, which influence consumer's decision-making process (Schebesta and Purnhagen, 2016). This is because consumers behave differently and so is their information processing process. Therefore, when interpreting who is the 'average consumer', insights from behavioural sciences should be taken into account to define a more realistic consumer.

Based on insights gained from previous chapters will help to apply such insights in following chapters to the case study of organic labelling and whether consumers are able to make informed choices.

⁴⁷ Paragraphs 38 to 41 of the judgement (Case C-195/14) [ECLI:EU:C:2015:361].

7. Application of relevant insights: the case of making informed choice in relation to organic labelling

This chapter focuses on pinpointing the flaws in food law, specifically in the case of organic labelling in the EU. Previous paragraphs have explained the notion of the average consumer in CJEU case law and findings from behavioural economics regarding human perception and behaviour. Based on findings from previous chapters, this chapter focuses on the most crucial findings on making informed choices in relation to the purchasing of organic food products. By including these concepts in food law, the way the information is communicated to consumers through the labelling of organics could also be improved as well.

7.1. Does the organic label really represent what consumers think it does?

Consumer surveys show that the EU organic logo, in terms of its characteristics, is not widely known among Estonian consumers. The following table lists common consumer perceptions of organic foods and raises doubts about whether they correctly grasp the concept of the organic logo.

Consumer perception	Conclusion
Organic as a sign of quality product	Yes
Organic as better for animal welfare	Yes
Organic as using less pesticide	Yes
Organic as environmentally friendly	Basic knowledge, but few misperceptions
Organic as healthier/more nutritious	No

Organic logo as a quality indicator

Organic food production is regulated so that organic food will be perceived as food of higher quality (European Commission, 2013). Indeed, consumer surveys show that the organic label is perceived as a logo for a quality product (discussed in the Chapter 4). In this sense, the regulation fills its aim. However, when we consider which quality parameters are associated with organic foods, we can see that consumers have basic knowledge about what the organic label represents: less pesticide residue and produced in an environmentally friendly way.

Overall, it could be said that the perception of the organic logo as a sign of a quality product is correct.

Organic as better animal welfare and less pesticide residues

Consumer knowledge regarding animal welfare and less pesticide use in organic farming is correct. Organic legislation lays down standards for animal welfare and for the use of pesticides⁴⁸. Consumers believe that organic food is completely free of chemical pesticides. This perception, however, does not actually represent the standards laid down by the legislation on organic foods and their labelling. By law, organic foods can still have 5% of the chemical pesticides that are used in the production of conventional foods (European Commission, 2016). Though synthetic pesticides are prohibited from use in organic farming, this does not mean that organic food products are entirely free of pesticides.

In conclusion, consumers correctly understand these aspects of the organic logo.

Organic as environmentally friendly, local production

European legislation describes organic production as environmentally friendly production that maintains biodiversity. Studies show that organic production indeed has a positive impact on biodiversity, and organic farms have higher soil and water quality (Seufert and Ramankutty, 2017).

However, organic production has recently faced criticism. Seufert and Ramankutty (2017) show that organic farms may be even more harmful to the environment than conventional farming. Compared to conventional modes of production, organic production has substantially lower yields (around 19-25%). Lower yields may lead to the need for more farmland and to increased water usage. Since a lot of organic produce is grown in third-world countries, the need for more farmland might lead to the destruction of rainforests.

Moreover, over two thirds of consumers in Estonia believe that the organic logo indicates an organic food that is produced by local farmers. This is a false perception. Indeed, some organic produce in the food stores can be from local farmers, but the organic logo does not state that all organic produce has to be produced locally.

In conclusion, consumers have a basic knowledge of the characteristics of organic farming. Consumers do understand that organic production uses environmentally friendly production methods, but have misperception that only local producers produce organic food.

⁴⁸ Recitals 12 and 17 of the Reg. (EC) No 834/2007.

Are organic healthier than conventional food products?

Are organic products healthier and more nutritious than their conventional counterparts are? Various scientific studies have concluded that organic products are no more nutritious than their conventional counterparts are (Lee et. al, 2013; Pearson et. al, 2011). The term '*healthy*' is mainly associated with the organic logo – 67% of organic food purchases have 'healthiness' as the main decision- making motive among Estonian consumers (Estonian Institute of Economic Research, 2016). Half of Estonian consumers associate 'healthiness' with low-sugar, -fat, -salt content (TNS Emor, 2015b).

Estonian experts, who have responded to this outcome, say that this perception is due to the over-popularisation of organic food products in the media and information overload on food product labels have not given the right idea concerning organic foods.

Consumer studies show that "healthiness" is the main motivation for Estonian consumers when buying organic foods. At the same time, less than one third of consumers pay attention to nutritional labelling. The law expects consumer to be reasonably well-informed and reasonably circumspect. If the real behaviour of consumer would be as the law expects, he or she would pay attention to nutritional labelling, and would make decisions according to that information. However, real consumer is impatient, poorly-informed and easily influenced. He or she makes their purchase decision by their previously formed perception of organic foods. Thus, the EU organic logo misleads consumers as to the nature of organic foods.

The FIR states that public campaigns play a large role in informed decision-making. Applying communication strategies eliminates the need to make changes in the legislation, while empowering consumers and helping them make better decisions.

This in mind, more effort should be put into carrying out public campaigns to increase the knowledge of consumers. Educational campaigns help consumers to read food labels to make informed decisions. Currently, consumers in Estonia are lacking the knowledge on how to make healthy food choices. Secondly, organic consumption should be established as a social norm to nudge consumers into buying organic foods if this is desired by Estonian policy on organic consumption.

7.2. 'Average consumer' vs. 'a consumer'

Findings from behavioural economics show that consumers are irrational and do not behave as expected (Dangi and Vaidya, 2014). In the CJEU case law, the 'average consumer' is a rational and well-informed human being who behaves as expected and is not easily misled⁴⁹. However, this definition is far from realistic and does not predict individual human behaviour. The notion of the 'average consumer' does not represent the real average consumer in Estonia.

Insights from consumer studies and behavioural economics help to understand the behaviour of the Estonian consumer. Estonian consumers easily associate the organic logo with certain perceptions (e.g. 'healthiness') that actually do not let them make informed choice. Furthermore, few consumers make distinction between nutritional value and a production method of organic and conventional food products.

Information requirements make sense only if consumers are rational and can process a very large amount of information (Incardona and Poncibo, 2007). Since consumers are selective regarding which information they pay attention to – it does not matter how much information the label provides, only what information consumers notice.

7.3. Information overload

The amount of information that is communicated to the consumer can have an impact that is opposite to that intended by the legislator. Specifically, more information can lead to confusion instead of clarification (Jacoby, 1983). Sometimes more information can lead to '*information overload*'⁵⁰. Wright (1975) finds that respondents who received more information were uncertain and unhappy, possibly because of a lack of understanding. Several studies have pointed out that consumers usually do not comprehend or use the information that is available to them (Jacoby, 1983). Furthermore, cognitive limitations affect everyone, no matter what their education or intelligence is.

First, before consumers process the product information, it has to gain their attention (Incardona and Poncibo, 2007). Consumers may not notice the information on products because they are not able to see and hear everything that surrounds them. Furthermore, complex, and various information requirements may even encourage information overload and lead to confusion (MacMaoláin, 2007). As seen in the CJEU case law, the 'average

⁴⁹ Discussed in Chapter 6 “‘Average consumer’ in the CJEU case law”.

⁵⁰ Defined as the amount of information a person must process per unit of time (Wright, 1975).

consumer' dedicates a large amount of time and attention to reading the product information. The consumer may lose the important information among irrelevant data such that behaving rationally and making an informed choice becomes difficult if not impossible.

Second, since consumers do not see or hear everything that surrounds them objectively, consumers see what they expect to see (Incardona and Poncibo, 2007). In addition, how consumers process information is linked to their attitude formation and decision-making. What they expect to see often depends on their beliefs and stereotypes, which make them perceive information in purchasing differently. Thus, it is unreasonable to expect a real consumer to perform an extensive evaluation of information that is on the product label each time when deciding.

7.4. Conclusion

First, findings from this research show that Estonian consumers know basic characteristics of organic production. Organic foods have not proven to be healthier than conventional food products. Nevertheless, 'healthiness' is the main motivation why consumers purchase organic foods products. Second, the 'average consumer' behaviour described by the CJEU is the opposite of the real consumer behaviour found from analysing behavioural economics. Incorporating behavioural science into policymaking would be beneficial and facilitate enabling consumers to make informed choices. Third, the amount of information that is available on the food label overwhelms consumers. Since consumers do not pay attention to everything, it is unreasonable for the law to have a consumer model that performs an extensive evaluation before deciding.

The new EC proposal for Regulation⁵¹ on organic food production and labelling of organic products refers to the Reg. (EU) No 1169/2011 that mentions 'observant' and 'well-informed' consumers. Findings from behavioural economics, consumer studies and analysis of CJEU case law showed that the 'average consumer' defined in food law, does not represent consumer behaviour in decision-making situations. When consumers do not possess the correct knowledge on organic food products, they cannot be empowered by the new regulation to make informed choices. Hence, it is important for policy-makers to incorporate insights from behavioural economics into organic legislation, and into food law to develop a

⁵¹ European Commission (2014) *Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on organic production and labelling of organic products, amending Regulation (EU) No XXX/XXX of the European Parliament and of the Council [Official controls Regulation] and repealing Council Regulation (EC) No 834/2007.*

more realistic consumer test that takes the irrational behaviour of real consumers into account.

8. Possible interventions

Previous chapter identified that the organic logo confuses Estonian consumers. The main confusion is that organic food is thought to be 'healthier' food choice compared to conventional food products. Hence, the organic logo has an unintended effect on consumers.

Detailed consumer research is needed to analyse behaviour towards organic labelling and which factors play role in influencing it since labels are intended for consumers to read, comprehend and make a decision. Thus, applied behavioural science is invaluable for the critical evaluation of existing policy initiatives, in this case organic labelling and also for food information policy. Policy-making should move from assumption-based ('average consumer' notion) to evidence-based. Wrong assumptions can jeopardize the success of public policies (JRC, 2013). This chapter explores the potential policy interventions to help reduce consumer bias towards organic logo.

8.1. Consumer education initiatives

Using behavioural insights in educational initiatives can be useful for helping consumer to overcome behavioural biases and in the end, help to make better informed choices (OECD, 2017).

Policy that aims to promote sustainable food choices can only succeed when consumers have a basic understanding of the organic food production principles. The FIR states that public campaigns play a large role in informed decision-making. Applying communication strategies eliminates the need to make changes in the legislation, while empowering consumers and helping them make better decisions. This in mind, enhancing consumer knowledge by providing correct and credible information (through e.g. TV, newspapers, workshops, websites) should be one of the most important assignments of the Estonian government. Organic food should be advertised by focusing on the main characteristics of organic production – e.g. environmentally friendly production, contains less pesticides than conventional food products, high animal welfare standards.

Furthermore, consumers want to make healthier food choices when buying organic. Therefore, it is important to promote and introduce consumers what is a healthy food choice and what food information to pay attention to make an informed choice. Encouraging consumers to start choosing healthier foods might be easier than trying to convince them to give up unhealthy foods (DG ENVI, 2006).

This initiative is possible and effective way to inform consumers in Estonia about the characteristics of organic food and making healthy food choices. However, lack of resources and organisational commitment might be a challenge for this initiative.

8.2. Negative labelling

Most ethical labelling (including organic logo) is a one-sided positive labelling. This means that ethical alternatives are labelled and the non-ethical products are not. Research into alternative labelling systems suggests that identifying also less ethical products may be more effective in influencing consumer choice towards more ethical product (Van Dam and De Jonge, 2015).

To change consumers' eco-behaviour, breaking their habitual behaviour is needed. Negative labelling creates a situation where more thought is needed. Prospect theory (Kahneman and Tversky, 1979) observes that negative information carries more weight than positive information in decision making. This suggests that by framing a message in a negative way, the loss for the environment is more visible to the consumers. The feeling of loss can be eliminated by choosing more expensive eco-alternative (Prakash, 2002). Negative labelling of the least ethical alternatives is more effective regarding changing consumer behaviour than positive labelling of the most ethical alternatives (Van Dam and De Jonge, 2015; Grankvist, et al., 2004). Negative organic labelling could be more effective motivator regarding choosing an organic food product than positive organic labelling.

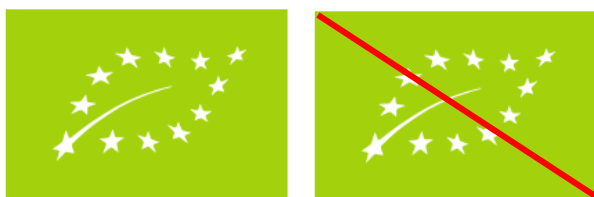


Figure 7. Example of logos for organic product (left) and non-organic product (right)

It can be said that the current voluntary organic labelling in the EU should be accompanied by mandatory negative organic label for non-organic food products. Negative labelling could increase the market share of organic food products and contribute to sustainable development of the EU food sector.

8.3. Simplification of labelling

Chapters 4 and 5 concluded that consumers will not spend a lot of time reading all the information that is on a food label, while they look for healthier food choices when purchasing organic food products. To eliminate the unintended ‘health halo’ effect that the organic logo now gives to the consumers, policy-makers should consider having a simplified labelling with a common EU approach to build confidence and decrease the possibility of consumer confusion. Labels should communicate only the essential information of the product, e.g. benefits of the product, allergy information, nutritional information (Unilever, 2005).

This thesis suggests that food products should carry color-coded scheme front-of-pack labelling in addition to organic logos from chapter 8.2 to enable consumer making informed choices at first glance. World Health Organisation praised France for their ‘Nutri-Score’ system, which uses a nutrient profiling system, based on UK Food Standards Agency model, and divides foods and beverages into five categories depending on nutritional quality per 100 grams (Michalopoulos, 2017).



Figure 8. France's front-of-pack labelling. Retrieved from: <http://www.santepubliquefrance.fr/Sante-publique-France/Nutri-Score>

FIR aims to help consumers to make informed choices. Policies regarding food labelling should include necessary consumer research to decide which information to provide on the label to avoid clutter and confusion. Well-structured consumer research is valuable to ensure that consumers' needs are addressed, but at the same time provide innovative labelling (Unilever, 2005). Clear front-of-pack labelling accompanied by mandatory negative organic logo may help the consumers to grasp the information quicker (van Kleef et. al, 2008) and inform consumers of informed choices regarding nutritional quality and sustainability of a food product:



Figure 9. Examples of how the front of the pack of a food product would look like with color-coded nutritional system and negative organic labelling

8.4. Recommendations

Applying behavioural science to policy making will help to understand and anticipate consumer behaviour, even perhaps nudge them in a certain direction (JRC, 2013). Knowing what affects the behaviour, will help to make policies more effective.

Carrying out public education campaigns (see chapter 8.1) in Estonia would be an initiative that does not need a change in public policy. It should need a public-private partnership to provide education to all. By partnering with private sector, the educational initiative to enhance consumers' knowledge on organic logo could be efficient and effective (Verger and Moschetti, 2017) at the Member State level.

However, initiatives from chapters 8.2 and 8.3 would be most probable to inform consumers at first glance. These labelling alternatives should be created at the EU level to provide the same information to all EU citizens. Nonetheless, these initiatives would take years to become a reality, since collecting data, analysing it and preparing policy recommendations is a time consuming process. There might be opposition from food production companies for

having the new labelling, because they might be afraid that it might affect their sales of certain food products negatively. The suggestion of having a color-coded nutritional scheme in front of the food packaging was rejected in 2011 at the EU level by the Member States as part of the negotiations on the food information to consumer legislation but is gaining now a momentum again after France's 'Nutri-Score' system that was praised by the World Health Organisation. However, applied behavioural science may only provide robust evidence on consumer behaviour, but this data can be used to move towards more efficient organic labelling and food information policies.

9. Conclusive remarks

Fresh, pesticides free, healthier, and less calorific are characteristics that are important to consumers, especially Estonians when buying organic food products. Estonian consumers perceive the organic logo to be a quality indicator, but mostly on a false basis, according to consumer surveys conducted in Estonia (TNS Emor, 2015). The quality features that are associated with organic food products are healthiness/more nutritious, tasty, fresh and produced locally. Throughout the years, this perception has remained the same among consumers. Yet, scientific studies have failed to prove the superiority of organic foods over conventional foods in terms of healthiness or nutritional value (Pearson, Henryks, and Jones, 2011; Hill and Lynchehaun, 2002).

Term 'healthiness' in general is associated with low sugar, low fat, and/or low salt content in a food product. Thus, misperceptions about organic food exist and it is necessary to clear up the confusion to enable the consumers to make informed choices regarding the food they purchase. Consumers should be aware that the organic logo mostly refers to a product that it is produced environmentally friendly way where focus is on respecting natural life cycles, high animal welfare and severe restrictions for the use of chemical pesticides.

Findings from the analysis of the CJEU case law show that the 'average consumer' is expected to process the information that is on the food label, to analyse alternatives and to make informed decisions. The CJEU case law has evolved from focusing how labels can assure the free movement of goods to focusing on how the labels should be designed to inform consumers (Ruiz Cairo, 2015). In the Teekanne ruling, the Court considers the "average consumer" in a less normative way than in earlier rulings (Schebesta and Purnhagen, 2016). The Court explained that packaging may not give an impression that a food product contains an ingredient that it does not, even though it is apparent from list of ingredients. EU law recognises that the wording of a label can mislead consumers.

Findings from behavioural economics and consumer studies show that the actual consumer behaviour conflicts with the benchmark of the 'average consumer'. Consumers act irrationally, are easily confused, and do not analyse all the information given (Dangi and Vaidya, 2014). The main aim of organic legislation is to maintain consumer confidence in organic food. When consumers trust organic food and the organic logo for the wrong reasons, one can ask whether these labels hinder their right to make informed decisions, in Estonia in

this thesis. Consumers can make informed choices only when they thoroughly understand and comprehend the information that the EU organic logo is intended to give.

At the same time, food product labels must bear the information requirements laid down in FIR. A large amount of information on product labels induces 'information overload' (Zboralska, 2011). Furthermore, EU food law assumes that consumers can process all the information that is available on the label before deciding. In the case of organic food products, consumers have already formed a prior perception of the characteristics of organic food products: they are healthier and more nutritious (TNS Emor, 2015).

To facilitate making informed choices in Estonia, the most probable and effective way is to use communication strategies, such as public campaigns. These campaigns could help provide Estonian consumers the correct knowledge on organic food products (e.g. production method that respects natural life cycles, high animal welfare). Furthermore, policies regarding food labelling should consider which information consumers are the most interested in (e.g. organic, high fibre, low fat,) and design labels according to such information. Clear front-of-pack labelling may help the consumers to grasp the information quicker (van Kleef, van Trijp, Paeps, and Fernández-Celemín, 2008) and form an informed choice. Making information clear and simple on the front of the packaging (see chapters 8.2 and 8.3) has the potential to inform the consumer about the quality and characteristics of a food product without the need of a complex label analysis. Applied behavioural science might not solve the issue in its entirety, but it might help to provide robust evidence on consumer behaviour, which should contribute towards more effective policies (JRC, 2013).

Currently, within the legislative framework of the EU, the suggested alternatives could only be applied on voluntary basis as additional information by food companies. These alternatives would have more effect if they would be mandatory throughout the EU as common logos. One of the fundamentals of EU food law is consumer protection. This can only be achieved in Estonia and in the EU when the information about a food product is presented efficiently to the real consumer, who is an opposite of the 'average consumer' notion. In a policy context, policy-makers should rely on evidence not assumptions, which would result in more grounded policies, where the consumer behaviour is anticipated.

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