



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*



GEORG-AUGUST-UNIVERSITÄT
GÖTTINGEN

GlobalFood
www.uni-goettingen.de/globalfood

RTG 1666 GlobalFood

Transformation of Global Agri-Food Systems:
Trends, Driving Forces, and Implications for Developing Countries

Georg-August-University of Göttingen

GlobalFood Discussion Papers

No. 25

Expectation Gaps and Halo-Effects in Organic Food Positioning:
Characteristics of Organic Food from a Consumer's Point of View

Marie von Meyer-Höfer
Sina Nitzko
Achim Spiller

November 2013

Expectation Gaps and Halo-Effects in Organic Food Positioning: Characteristics of Organic Food from a Consumer's Point of View

Marie von Meyer-Höfer ^a, Sina Nitzko, Achim Spiller

Department of Agricultural Economics and Rural Development,
Marketing for Food and Agricultural Products,
Platz der Göttinger Sieben, 5,
37073 Göttingen,
Germany

^a corresponding author: Marie von Meyer-Höfer
E-Mail: marie.von-meyer@agr.uni-goettingen.de

Abstract: Despite the different levels of maturity of organic markets among the member states of the European Union (EU), the European organic food market is continuously growing. In the EU this production method is regulated according to the Council Regulation (EC) 834/2007 (EC 834/07). All products produced accordingly are labelled with the common European organic label. The future success of organic agriculture as one sustainable solution of food production is to a large extent dependent on its market success, thus the positioning of organic food is a crucial topic for food policy and marketing. This paper analyses the data of an online survey done in 2011 with a total of 1,180 consumers from four European countries (Germany, United Kingdom, Spain, and Czech Republic,) representing different stages of the current organic market development across Europe. This paper focusses on which criteria consumers attach to organic food products and what attributes they expect of them. The risk that consumers might expect too much of organic food produced under EC 834/07 is identified. To overcome the observed expectation gap, some political as well as practical implications are proposed.

Keywords: *organic food; positioning; expectation gap; halo-effect*

JEL classifications: *Q 01; Q 13; Q 18; Q 19*

Acknowledgment: *This research was financially supported by the German Research Foundation (DFG).*

1. Introduction

It is widely accepted that more environmentally and socially sustainable food production is needed if future global challenges such as the depletion of natural resources, loss of biodiversity, climate change, and on-going rural depopulation are to be addressed (Abeliotis et al. 2010; Verain et al. 2012). Organic food production systems are seen to be one possible solution to these (Padel and Foster, 2005; Thøgersen, 2009).

According to the objectives and principles for organic production set in the Council Regulation (EC) 834/2007 (EC 834/07), organic production establishes a “sustainable management system” (EC 834/07/II,3) “for farm management and food production that combines best environmental practices, a high level of biodiversity, the preservation of natural resources, the application of high animal welfare standards and a production method in line with the preference of certain consumers for products produced using natural substances and processes” (EC 834/07/II).

The objective of EC 834/07 is twofold. On the one hand it should ensure “fair competition and a proper functioning of the internal market in organic products” (EC 834/07/I,3). This implies the need for simplification, flexibility and allowance of exceptional rules to make it possible to adapt production rules to specific local conditions in the different EU member states (EC 834/07/I,21). On the other hand it aims to contribute to transparency and especially to consumer confidence as well as to the harmonised perception of organic production (EC 834/07/I,5).

Since 2010, all organic food produced or marketed in the EU has to be labelled with the common EU organic label. In addition, there are a number of private labels for organic food, like those set by the organic producer associations that have stricter or more diverse standards than those set in the EC 834/07. Labelling in this case is especially crucial for consumers, due to the fact that organic production is a credence attribute, which cannot be identified either before or after consumption (Akerlof, 1970). Consumers must instead rely on certification, which is communicated to them by a label (Grolleau and Caswell, 2006; Jahn et al. 2005). However, some studies have already pointed out difficulties regarding the labelling of organic food in Europe. Instead of being correctly informed by labelling about the quality of organic food products many consumers seem to use the claim “organic” only as cue without consciously understanding what might be behind this claim (Lobley et al. 2009; Torjusen et al. 2004). Moreover, authors like Aarset et al. (2004), Torjusen et al. (2004) and Lobley et al. (2009) talk about an expectation or reality gap, meaning consumers might perceive the disparity between their expectations and the actual reality of regulations of organic food as a form of fraud (Torjusen et al. 2004). It has not yet been identified where this gap occurs on an EU level, which is the basic motivation for this study.

Nevertheless, consumer demand for sustainably produced foods has increased, contributing to the continuous growth of the organic food market in the EU in recent decades (Willer and Lernoud, 2013). However, the diffusion of organic production and consumption is far from even across the EU, so that the different national markets show different levels of maturity (Thøgersen, 2009). The success of organic agriculture in Europe is to a large extent dependent on its market success. Thus, the positioning of organic products is crucial. Positioning is the link between consumer segments and their expectations, product quality and marketing policy. It can be understood as the result of marketing communication, social communication and personal experiences (Antonides and van Raaij, 1998). The goal is to generate a unique selling proposition

(USP) and to make this advantage clear to consumers (Kotler et al. 2008). That means, in terms of organic food, the unique characteristics should attract the target group's interest in organic consumption while distinguishing it from conventional food products. Only with a coherent positioning it is possible to attract consumers' attention, gain and maintain their confidence and motivation to buy organic food (Simons et al. 2001).

In this context, it is important to know what European consumers understand by and expect from organic food, but so far only a few scientific studies deal with marketing topics of organic food from a European perspective (Janssen and Hamm, 2011; Koss, 2011; Padel and Zander, 2009; Thøgersen, 2009). This paper therefore focuses on the questions: (a) What do consumers in different European countries (Czech Republic, Spain, Germany, and United Kingdom) understand and expect from organic food? (b) Is there an expectation gap?

In the following, an overview of the organic market in the EU and the four analysed EU countries as well as some background information about consumer attitudes towards organic food and their motives for purchasing is given. Moreover it will be shown how consumer expectations towards organic food and the actual EU regulations for organic food production might differ and which aspects suffer most from unrealistic consumer expectations. In order to reduce the complexity of the relevant attributes of organic food (items), we used one exploratory factor analysis for the data of each country. As a result, items that measure the same construct were grouped to factors which in turn form the basis for adequate positioning of the products. After describing and discussing the results, implications for policy actors and representatives of the organic food sector are summarised.

2. The Organic Food Market in the EU

The European organic food market is continuously growing in terms of surface area of organic agricultural land as well as financial turnover (Willer and Lernoud, 2013). The organic movement started in the early 20th century in Germany and Switzerland as part of a social movement ("Lebensreformbewegung"), including the Agriculture Course held by Rudolf Steiner in 1924 that introduced the concept of biodynamic agriculture, and the concept of organic-biological farming of Hans Müller. Also in the UK, the first steps toward the introduction of an organic production system were taken in 1940s by the Soil Association (Howard, 1943; Soil Association, 2012). The idea was to address the growing concerns about conventional farming techniques reliant on increasing levels of mineral and chemical inputs by producing healthy food in accordance with the natural conditions, thus in an environmentally- and animal-friendly way (BÖLW, 2012; Hamm, 1994; Vogt, 2001).

In 1991, the first common European regulation 2092/91 on organic production was introduced to regulate the diverse production methods and use of the term "organic". Today, 10 million hectares of agricultural land are under organic production in the EU, with Spain being the country with the largest share, with 1.5 million hectares (Willer and Lernoud, 2013). However, the individual EU Member States differ considerably in the stage of development of their organic markets. Table 1 shows the current figures for organic food production and consumption in the four analysed countries compared to the EU 27. The four countries analysed in this study were selected so that each represents a different organic market situation in the EU.

Table 1 Organic food market in the 4 analysed EU countries compared to the EU 27

	EU 27	CZ	ES	GE	UK
Organic agricultural land 2011 (ha)	10,637,128	460,498	1,621,898	1,015,626	638,528
Share of total agricultural land 2011 (%)	2.2	10.8	6.5	6.1	3.9
Number of organic producers 2011	291,451	3,904	32,195	22,506	4,650
Total organic sales (Mio €, 2011)	18,200	59,0*	965	6,590	1,882
Share of total sales (% , 2009)	-	0.8	1.0	3.4	2.0
Total organic sales (€ / person, 2011)	-	7.40	20.50	81.00	67.00

Source: Own compilation according to (Soil Association (2010) and Willer and Lernoud (2013).

*Data of 2010

Germany and the United Kingdom (UK) represent traditional, more mature organic markets with comparably high shares of organic food sales (Lobley, 2009, Wier et al. 2008, Willer and Lernoud, 2013). They have a long tradition of organic food production and consumption, and are today among the top EU countries in terms of organic sales (Germany 1st, UK 2nd), which makes them apart from the USA the countries with the highest sales of organic products worldwide (Willer and Lernoud, 2012). Their organic supply chains are well-developed and also characterised by different private organic associations applying additional requirements to the EC 834/07 (e.g., the Soil Association, UK or Demeter/ Bioland / Naturland, DE). In contrast to Germany, where the public organic label is very popular, in the UK no state label exists, but there is a widely known private one (Soil Association) (Koos, 2011; Padel, 2012; Willer and Lernoud, 2012). Nevertheless, even in the well-developed organic food markets of Germany and the UK, the total market share of organic food is still below 3% (BÖLW, 2012; Padel, 2012).

Other countries such as Spain have a clear focus on production. Spain is the country in the EU with the greatest number of hectares under organic production and a large number of organic producers, but over 80 % of Spain's organic produce is exported to other EU countries (Agriculture and Agri-Food Canada, 2012; Colom-Gorgues, 2009; Gil and Soler, 2006; Perez, 2010; Richardson, 2012). The domestic market for organic food in Spain is thus not as developed as in Germany or the UK. Among other reasons, this may be due to the large number of small retailers in Spain and consumer preference for locally produced food, regardless of whether it is certified as organic or conventional (Koos, 2011). Other barriers to the growth of the domestic organic food market in Spain are the relatively high premium prices for organic food in Spain, the relatively low awareness of the potential benefits of organic products and an overall lack of marketing (Gil and Soler, 2006).

Since the political opening up of the eastern European countries to the rest of Europe in the late 1980s, organic agriculture has also become an important issue in the Czech Republic. It is the country among the new Member States with the most rapidly growing organic market (Leibel, 2010; Jansen and Schaer, 2012; Zidek, 2000). This growth is especially due to the large share of organically cultivated land in the total agricultural land (Willer and Lernoud, 2012). Additionally, the Czech Republic is the most advanced market in Eastern EU, aiming not only to further extend its export orientation but also developing a domestic market for organic food products (Jansen and Schaer, 2012).

3. Consumer Expectations of Organic Food and the risk of dissatisfaction

Consumer attitude towards organic food production and consumption in Europe today is on average a positive one (Aertsens et al., 2009; Hughner, et al. 2007; Lockie et al., 2002; Saba and Messina, 2003). Historically, organic food production was based on the willingness of a minority of producers to react against the trend of intensification of agriculture, as well as the desire of some consumers for more natural products (Colom-Gorgues, 2009; Soil Association, 2013). Seen from this perspective, organic products have some public good characteristics, because they are produced with as low an environmental impact as possible, trying to reduce emissions and pollution as well as preventing resource depletion. However, as Hamm and Gronefeld (2004) point out, organic food is more than just a public good; it also produces private benefits for the consumer. Today, the majority of organic food consumers in Europe relate direct health benefits to the specific production methods of organic (egocentric motivation) rather than its indirect benefits for the environment or animals (altruistic motivation) (Johnston, 2008; Wier and Calverley, 2002). There are significant differences concerning the motivations for organic food consumption between the various segments of organic food consumers, and most consumers express more than one motivation (Haas et al., 2010; Padel and Foster, 2005; Padilla Bravo et al., 2013). Overall, the literature of the past 20 years shows four main motivations for organic food consumption: health, taste, environmental friendliness and ethical aspects such as animal welfare (Aertens et al., 2009).

Nonetheless, many of the perceived benefits that consumers associate with organic food (e.g. health, taste) are hard to prove scientifically. Moreover, studies on consumer knowledge show that most consumers do not exactly know how to define organic food or what organic food labels exactly stand for (Janssen and Hamm, 2010). Even in a relatively mature market such as Germany, the majority of consumers do not recognise the common European organic label nor do they know its meaning (Buxel and Schulz, 2010; Sengstschmid et al., 2011; v. Meyer-Höfer and Spiller, 2013). Some studies have thus already mentioned the existence of expectations or reality gaps in the organic food sector. Torjusen et al. (2004) for example find that, there can be “a disparity between the real conditions of production, processing, or distribution on the one hand and consumer expectations on the other” (p. 61). Also Aarset et al. (2004) mention the existence of a “reality gap where unrealistic consumer expectations meet pragmatic regulations” (p. 102). Consumers are unfamiliar with organic standards, but use the “organic” label as key information or cue (Ploeger). Due to the fact that the true nature of organic products cannot be readily observed by consumers they often rely on these so called cues such as e.g. brand name, price or labelling (Akdeniz et al., 2013; Kirimani and Rao, 2000; Rao and Monroe, 1989). Consumers are aware of the central features of organic food such as “natural” or “chemical free” without wondering about the lack of clear definitions of these terms (Kretzschmar and Schmid, 2006; Ploeger). The phenomenon of expectation gaps is widely discussed in the fields of business accounting and auditing. In general three forms of gaps can be distinguished: a) The certification / control does not meet the norms / regulations. b) Reasonable and realistic expectations are not addressed in the norms or regulations. c) The public fails in informing itself adequately about the regulations (Ruhnke et al., 2010). No matter what form of expectation gap might apply to the organic sector; they all include a risk, because consumers might perceive the disparity between their expectations and the actual reality as a form of fraud (Torjusen et al., 2004). Moreover, this might lead to uncertainty or even mistrust in organic products if consumers notice that their expectations are not fully met. It is very important to reduce this uncertainty, because as

Thøgersen (2009) indicates, uncertainty might reduce the likelihood of purchase even among people who hold favourable attitudes and norms towards organic food.

Considering the uneven stages of market development in Europe, it becomes obvious how important an adequate positioning of organic food products is as an essential determinant for its success on the European market. In this case, positioning means the balance between forming an image and maintaining consumer satisfaction (Ries and Trout, 1981). This study therefore focusses on the questions of what consumers understand by and expect of organic food in the four analysed countries, and how organic food can be successfully positioned across Europe.

4. Material and Methods

4.1. Data Collection and Sample

Data was collected using an online-questionnaire, which was programmed with the help of the online survey software "Survey Enterprise Feedback Suite8.1 (EFS)" of Globalpark AG. The participants were recruited by a panel provider according to quota restrictions. The quota contains the characteristics gender (70% women / 30% men); age (representative distribution) and environmental consciousness. Environmental consciousness was measured by asking respondents to state their environmental consciousness on a 100% scale (0% = none to 100% = very high). The quota was set in a way that only respondents with a stated environmental consciousness equal to or above 70% became part of the final sample. The survey was conducted between April and June 2011 in four European countries (Germany, United Kingdom, Spain, and Czech Republic). The main reasons for conducting an online survey were the lower costs and quicker response times compared to other survey methods (Weber and Bradley, 2006).

The questionnaire was originally designed in German, and then professionally translated into each of the national languages. To ensure the quality of the translation native speakers from each of the analysed countries did a back-translation into English, before the questionnaires were pre-tested in each country.

The total sample consists of 1,180 participants. The relevant socio-demographic characteristics of the total sample and the country-specific subsamples are listed in Table 2.

The comparison between the countries shows that the female / male ratio, average age and average income do not differ significantly. The average consumer of the survey was 42 years old, had a household income of 2,001-2,600€ per month and lived with a partner and children. The percentage of participants with university education is above 60% in each country. On average, consumers judged their environmental awareness as 70% (on a scale from 0% = none to 100% = very high). Furthermore, information about the respondents' organic buying behaviour was collected. Most of them buy organic products "sometimes" i.e. most of the respondents are occasional organic shoppers.

Table 2 Socio-demographic characteristics of the total sample and the country-specific subsamples

	Total	CZ	ES	DE	UK
N	1,180	296	291	295	298
Gender (m / f)	395 / 759	88 / 208	89 / 194	132 / 152	86 / 205
Age	42	42	44	37	46
Academic Education	-	69%	86%	64%	90%
Households with children	-	61%	36%	43%	57%
Income (> 2,300 € / month)	22.2%	2.0%	22.0%	33.6%	45.2%
Average environmental awareness	70%	70%	70%	80%	70%
Frequency of organic shopping		46% sometimes	38% sometimes	48% sometimes	38% sometimes

Source: Own data 2013

4.2 Choice of tested items

The main question analysed in this study was the following: “Which criteria would you attach to an organic food product labelled with the EU organic label?” The answer options were on a seven point Likert Scale (“fully agree – agree – somewhat agree – sometimes yes, sometimes no – do not really agree – do not agree – do not agree at all”). 23 items were used to find out what consumers understand and expect from organic food.

Table 3 Group 1 items and their regulation in EC 834/07

Tested items	EC 834/07	Citation
no chemical pesticides	I (13) II (4)	The essential elements of the organic plant production (...) are soil fertility management, choice of species and varieties, multiannual crop rotation, recycling organic materials and cultivation techniques. Additional (...) plant protection products should only be used if (...) compatible with the objectives and principles of organic production (I,13).
no mineral fertilisers	I (12&13) II (4) III (12)	Plants should preferably be fed through the soil eco-system and not through soluble fertilisers added to the soil (I,12). Mineral nitrogen fertilisers shall not be used (III 12e).
no GM technology	I (9)	Genetically modified organisms (GMOs) and products produced from or by GMOs are incompatible with the concept of organic production (...). They should therefore not be used (...) (I,9).
high animal welfare	I (17)	Organic stock farming should respect high animal welfare standards (I,17).
few additives	II (6b)	Restriction of the use of food additives (II,6b).
feed production on the same farm	I (15)	(...) organic production of livestock should in principle provide for a close relationship between such production and the land, (...) the feeding of livestock with organic-farming crop products produced on the holding itself (...) (I,15).
biodiversity protection	I (1) II (3a,ii)	Contributes to a high level of biological diversity (II,3a,ii)
naturalness	I (19) II (6c)	Organic processed products should be produced by the use of processing methods which guarantee that the organic integrity and vital qualities of the product are maintained through all stages of the production chain (I,19). The exclusion of substances and processing methods that might be misleading regarding the true nature of the product (II,6c).
high quality	II (3b)	Organic production shall (...) aim at producing products of high quality (II,3).
environmental-friendly processing	I (1) II (3c)	Organic production (...) combines best environmental practices (...) (I,1). Aim at producing a wide variety of foods and other agricultural products that (...) do not harm the environment, (...) (II,3c).
low water usage	I (1) II (3a,iii)	Organic production (...) combines the preservation of natural resources (I,1). (...) makes responsible use of (...) water, (...) (II,3a,iii).
low energy usage	I (1) II (3a,iii)	(...) makes responsible use of energy (...) (II,3a,iii).
use of renewable energy	I (11)	Organic farming should primarily rely on renewable resources within locally organised agricultural systems (...) (I,11).
little waste	I (11)	Organic farming should (...) minimise wastes and by-products of plant and animal origin should be recycled to return nutrients to the land (I,11).

Source: Own compilation according to EC Regulation 834/07

Among the 23 items there are two different groups. The first group consists of 14 items representing organic production or quality criteria mentioned in EC 834/07, shown in Table 3. However, if a criterion is mentioned in EC 834/07, this does not automatically imply that it is defined in detail. High quality is for example mentioned as explicit objective of organic food production (EC 834/07/II,3), but remains without any further specification about how it should be defined.

The remaining 9 items are food production or quality characteristics that are often associated with organic food, but not regulated by the EC 834/07 (good taste; good appearance; food safety; fair prices; environmentally friendly packaging; climate protection; short transport distance; regional production; artisanal production).

The wording for the items is not always directly cited from the EC 834/07 text. For the sake of comprehensiveness, some organic production principles are grouped together or formulated differently than in the original text of the regulation.

4.3 Measurement

The statistical analyses were performed with SPSS (version 20.0). First, the mean values of the 23 items were ranked in each analysed country. The higher the mean value, the more respondents agree to the fact that the respective item is related to organic food. Second, an explorative factor analysis was performed for each country with the items describing the attributes of organic food. The aim of a factor analysis is to reduce the number of data points and to determine the structure among a set of variables. It allows correlations between a large numbers of variables to be analysed. On the basis of this multivariate technique, sets of interrelated variables, the so called factors, can be defined. They represent dimensions within the data (Hair et al., 2010). Principle component analysis was used and Varimax was chosen as rotation method. This is a method of orthogonal rotation with the aim of maximising the dispersion of loadings within the factors (Field, 2009). As quality criterion, the Kaiser-Meyer-Olkin-Value (KMO) was used as a measure for the suitability of the sample for a factor analysis. The explained variance was also considered as indicator for the relevance of the result of the factor analysis. The Cronbach's Alpha was used as quality criterion for the reliability of the revealed factors.

5. Results

5.1 Mean values

Looking at the mean values of each item for the different countries, it becomes clear to what extent consumers relate the 23 items to organic food. The majority of European consumers associate most of the items representing regulated organic criteria with organic food, such as the non-use of chemical pesticides, mineral fertilisers, genetically modified organisms (GMO) and the use of only few additives in processing. These criteria are among the top ten, when comparing the mean values. Animal welfare also plays an important role for European consumers concerning organic food, but in Spain it only comes 14th of the ranked mean values, while in countries like Germany or the United Kingdom it ranks 5th or 6th. The protection of biodiversity is another criterion that consumers attach to organic food, but with a little less relevance than the above mentioned ones. The mean values for this item rank between position 8 in Spain and 13 in Germany. The only item of group 1 which is not among the top 10 associations with organic food in any of the analysed countries is "feed production on the same farm". Among the analysed

items that are mentioned, but not explicitly defined by the EC 834/07, “naturalness” and “high quality” play the most important role for consumers in Europe.

The results shown in Table 4 suggest two things: First there seems to be an expectation gap between consumers’ understanding and expectations of organic food and the actual common European organic regulations, especially for the aspects of “naturalness”, “high quality”, “food safety” and “good taste”, which are all among the top 10 of mean values. Consumers do associate these items with organic food, although they are only indirectly or even not at all regulated by the EC 834/07. Moreover, the mean values of the items “environmentally friendly processing” and “- packaging” are ranked among the top 10 – 13. Secondly, there are indications of country specific differences in the understanding of and expectations towards organic food that will be further analysed.

Table 4 Mean values of tested items and their ranking

Tested Items	CZ		ES		GE		UK	
	Mean	Rank	Mean	Rank	Mean	Rank	Mean	Rank
no chemical pesticides	6.31	1	5.88	2	4.79	9	5.96	1
no mineral fertilisers	6.15	2	5.58	9	5.5	2	5.89	2
no GM technology	5.75	6	5.7	5	5.59	1	5.36	5
high animal welfare	5.46	9	5.31	14	5.17	5	5.14	6
few additives	5.77	5	5.68	7	5.34	4	5.43	4
feed production on the same farm	5.11	14	4.75	22	4.41	15	4.28	17
biodiversity protection	5.15	12	5.61	8	4.58	13	4.87	11
naturalness	6.04	3	5.99	1	5.46	3	5.58	3
high quality	5.78	4	5.7	6	5.04	7	4.94	9
environmental friendly processing	5.42	10	5.36	13	4.64	12	4.91	10
low water usage	4.46	20	4.84	19	4.3	17	4.3	16
low energy usage	4.48	19	5.14	16	4.19	20	4.14	21
use of renewable energy	4.93	17	5.04	18	4.27	19	4.34	15
little waste	5.15	13	5.22	15	4.46	14	4.67	13
good taste	5.59	7	5.44	10	4.91	8	4.98	8
good appearance	4.34	22	5.72	4	3.59	23	3.95	23
food safety	5.54	8	5.76	3	5.16	6	5.06	7
fair prices	4.35	21	4.42	23	3.83	22	4.16	20
environmentally friendly packaging	5.33	11	5.4	11	4.68	11	4.76	12
climate protection	5.11	15	5.37	12	4.69	10	4.6	14
short transport distance	5.02	16	4.83	20	4.33	16	4.21	19
regional production	4.61	18	4.8	21	4.3	18	4.24	18
artisanal production	4.32	23	5.13	17	4.08	21	4.13	22

Source: Own data 2013

5.2 Factor Analysis

Four country specific factor solutions were used to describe the perceptions of organic food attributes in the different markets. In the following, the results focusing on an overall perspective will be interpreted without going too much into country specific details. Table 5 shows the results of the analysis for each of the four analysed countries.

At first sight we see that Germany and the United Kingdom have only two factors while Spain has three and the Czech Republic four factors. Factor loadings below 0.4 were excluded so that the factor loadings shown in table 5 vary between 0.411 and 0.905. Double loadings were not excluded from the final results.

The Kaiser-Meyer-Olkin-Values, which measure the suitability of the sample for a factor analysis, range from .929 to .955 and can be evaluated as very good. To measure the internal consistency of the identified factors (scales), we used the Cronbach's Alpha. The values range from .723 to .969. They can be judged as good and very good, respectively. Moreover the explained variances of each factor as well as the explained variance for the factor analysis of each country are displayed in table 5.

The items with the highest loadings are found among the group 1 items, but none of the countries has a factor that only comprises all the aspects contained in EC 834/07. Nevertheless, all countries have a factor combining many of the group 1 items. In all countries these factors include "no chemical pesticides", "no mineral fertilisers", "no GMO", "few additives", "naturalness" and "high quality". The group 2 item "food safety" is also part of these factors that can be called "organic" factor (CZ: factor 2; GE: factor 2; ES: factor 1; UK factor 2). In all countries the items concerning resource saving, "environmental friendly processing" and also "feed production on the same farm" have loadings below 0.4. Differences between the four countries organic factors can be observed e.g. when looking at the group 1 items "high animal welfare" or "biodiversity protection", but also when looking at the group 2 items such as "good taste" and "climate protection".

Table 5 Results of the factor analysis

	Czech Republic (KMO = .929; Expl. variance = 67%)				Germany (KMO = .941; Expl. variance = 63%)		Spain (KMO = .934; Expl. variance = 65.7%)			United Kingdom (KMO = .955; Expl. variance = 68.5%)	
	Factor 1 $\alpha=.925$ expl. Var. 23,5%	Factor 2 $\alpha=.884$ expl. Var. 41,8%	Factor 3 $\alpha=.904$ expl. Var. 15,2%	Factor 4 $\alpha=.723$ expl. Var. 09,9%	Factor 1 $\alpha=.954$ expl. Var. 39,0%	Factor 2 $\alpha=.915$ expl. Var. 23,9%	Factor 1 $\alpha=.929$ expl. Var. 24,0%	Factor 2 $\alpha=.936$ expl. Var. 20,8%	Factor 3 $\alpha=.898$ expl. Var. 20,8%	Factor 1 $\alpha=.969$ expl. Var. 44,8%	Factor 2 $\alpha=.896$ expl. Var. 23,7%
no chem. pesticides		.837				.883	.876				.882
no mineral fertilisers		.861				.827	.811				.880
no GM technology		.696				.652	.684				.671
high animal welfare			.695			.611		.481	.460	.567	.593
few additives		.590				.719	.803				.709
feed produced on same farm			.722		.668				.757	.776	
biodiversity protection	.538		.509		.717			.663		.570	
naturalness		.644				.785	.702				.796
high quality		.560	.540		.560	.534	.637			.617	
env. friendly processing	.648				.729			.698		.730	
low water usage	.616				.717				.648	.816	
low energy usage	.815				.770			.598		.905	
use of renew. energy	.764				.797			.646		.891	
little waste	.750				.784			.702		.782	
good taste			.586		.650			.467	.432	.549	.561
good appearance				.785	.650		.609			.768	
food safety		.445	.457			.635	.581	.580		.611	
fair prices				.729	.758				.738	.808	
env. friendly packaging	.735				.679			.748		.776	
climate protection	.589				.660		.518	.521		.758	
short transport distance	.471			.489	.732				.767	.788	
regional production	.534		.561		.794			.405	.719	.856	
artisanal production	.599				.777				.609	.787	

Source: Own data 2013

6. Discussion and Conclusion

The results of this study show how consumer expectations and the actual regulation for organic food production differ, and which aspects suffer most from unrealistic consumer expectations. What consumers understand and expect from organic food in different European countries is a mixture of the criteria that are regulated by EC 834/07, although they might not be explicitly defined (e.g. “naturalness”, “high quality”), and criteria that are not regulated by EC 834/07 (e.g. “good taste”, “food safety”). Among the explicitly regulated criteria of organic food production in Europe, “no chemical pesticides”, “no mineral fertilisers”, “no GMO”, and “few additives” are those that consumers associate most with organic food. This was an expected result, because these items represent the main differences between organic and conventional food products. Moreover, it is known from other sources, such as the Eurobarometer survey on food risks (2010), that pesticide residues are among the top food risk concerns of European consumers (European Commission, 2010). Especially the item “no chemical pesticides” is thus linked to consumer’s health motivation to buy organic food.

While “high animal welfare” is one of the main characteristics of organic food for consumers in Germany and the United Kingdom, it is not part of the “organic” factor in the Czech Republic and Spain. This might be due to the lower awareness of animal welfare issues among Czech and Spanish consumers (European Commission, 2005). Another explanation could be the small volume of organic meat and milk production especially in the Czech Republic (Valeska et al. 2008). Organic meat and milk products are only locally marketed so that organic production criteria and high animal welfare might not be instantly connected by consumers.

What becomes clear is that organic food seems to have a generally very favourable image across Europe and consumers associate many positive aspects with it, but often these are not part of the common regulation EC 834/07 or not explicitly regulated. Here, a gap between consumer expectations and the actual regulation can be observed. This is especially true for the aspects “naturalness”, “high quality”, “food safety”, “good taste” and “environmental friendly packing”, which point at a potential expectation gap among European consumers. One possible mechanism that could be used as an explanation in this case is the Halo-Effect, which is a form of cognitive distortion that is known from social psychology. It belongs to the group of so-called judgment errors (Bortz and Doering, 2003; Rosenzweig, 2008). In this effect, a person creates a consistent image and avoids confusion caused by cognitive dissonance (Kroeber-Riel and Weinberg, 2003). It describes the tendency to evaluate independent properties together and to allow one dominant attribute to shape a general impression (Rosenzweig, 2008).

High expectations on the consumer’s side, however, always bear some risks for the producer side and other actors of the sector, because there is a latent danger of disappointing the consumer. It is true that the EC 834/07 is only the basic regulation for organic food production in the European Union, and that many more comprehensive private regulations exist, but still it is the common basis. Compliance with the regulation is decisive for the labelling as organic. Due to the fact that many consumers are not aware of the multitude of private organic standards and different organic labels, they use the claim “organic” as cue, which makes it crucial that they can trust the European organic regulation. Too high expectations may be a barrier to trust and induce dissatisfaction with organic food when consumers realise that it does not meet their expectations; no matter whether these are realistic and reasonable or not. Especially a crisis which is poorly handled in public relations or the media may be a potential threat to consumers’ confidence in organic produce. Organic production is a credence good, which consumers cannot identify themselves. Whether organic products meet the EC 834/07 requirements is visible to consumers

only in form of labelling. To what extent this label meets the consumers' expectations or not could be a potential topic for a future food scandal, showing to what extent European regulations do not meet consumer needs and lack of transparency. This risk of latent disappointment therefore needs to be addressed by policy actors and actors of the organic food sector, as otherwise it might reduce the likeliness of purchase even among people who hold favourable attitudes and norms towards organic food (Thøgersen, 2009).

To overcome the observed difficulties of the current positioning of organic food in the EU the political actors should stick to what they have written in EC 834/07. In I (3) it is stated that, "The Community legal framework governing the sector of organic production should pursue the objective of ensuring fair competition and a proper functioning of the internal market in organic products, and of maintaining and justifying consumer confidence in products labelled as organic. It should further aim at providing conditions under which this sector can progress in line with production and market developments".

Consumers that have too high expectations towards organic food may be a risk to these objectives. It is therefore important to increase the transparency with regard to the term "organic", to build and stabilise consumer trust in the sector, but also to justify this trust. For this, policy needs to dynamically adapt the organic food regulations and norms to what is the current state of the art, but also to reasonable consumer expectations. In this context, it would be especially relevant to define the attributes like "naturalness" or "high quality" that consumers associate strongly with organic, but which is not clearly defined. For the criteria that consumers associate with organic, but which are not regulated in the European organic regulation, policy needs to communicate effectively that e.g. food safety is not explicitly regulated there, but elsewhere. Moreover it should be made very clear that organic food in general is neither safer or healthier nor tastier than conventionally produced food.

In the past, the organic food sector was often a source of innovation, which it were again if the current too high expectations of consumers towards organic food would be taken as differentiating characteristics, also within the organic food market. In mature markets such as Germany and the United Kingdom, a growing rate of market differentiation in the organic food market can be observed. Products which only meet the EC 834/07 standards serve as basic "mass" market standard, while products certified by additional voluntary organic production schemes target "niche-premium" consumers that demand more than the basic organic criteria. These consumers look for additional quality attributes such as regional production, fairness or exceptionally high animal welfare (Honkanen et al., 2006; Padel and Zander, 2009; Zander and Hamm, 2010).

Concerning the marketing of organic food in Europe, it should be emphasised that although the EC 834/07 is the basis in the EU, country specific differences in the perception of organic food need to be addressed. A clearer positioning of organic food concerning the directly regulated criteria would help to build a basis for an EU wide marketing strategy. The indirectly or incompletely regulated criteria could then serve as an additional possibility for differentiating organic food within and among different EU countries.

References

- Aarset, B., Beckmann, S., Bigne, E., Beveridge, M., Bjorndal, T., Bunting, J. et al., 2004. The European consumers' understanding and perceptions of the "organic" food regime. The case of aquaculture. *Brit. Food J.* 106, 93-105.
- Abeliotis, K., Koniari, C., Sardianou, E., 2010. The profile of the green consumer in Greece. *Internat. J. Consumer Studies.* 34, 153-160.
- Aertsens, J., Verbeke, W., Mondelaers, K., van Huylenbroeck, G., 2009. Personal determinants of organic food consumption: a review. *Brit. Food J.* 111, 1140-1167.
- Akdeniz, B. Calantone, R.J., Voorhees, C.M., 2013. Effectiveness of Marketing Cues on Consumer Perceptions of Quality: The Moderating Roles of Brand Reputation and Third-Party Information. *Psychology & Marketing.* 30, 76–89.
- Akerlof, G. A., 1970. The Market for "Lemons": Quality uncertainty and the market mechanism. *Q. J. Econ.* 84, 488-500
- Antonides, G., van Raaij, W. F., 1998. *Consumer behavior: A European perspective.* New York: John Wiley & Sons.
- BÖLW Bund Ökologische Lebensmittelwirtschaft e. V., 2012. *Zahlen, Daten, Fakten: Die Bio-Branche 2012.* Pinguin Druck, Berlin.
- Bortz, J., Doering, N., 2003. *Forschungsmethoden und Evaluation für Human- und Sozialwissenschaftler.* Springer, Berlin.
- Buxel, H., Schulz, S., 2010. Akzeptanz und Nutzung von Güte- und Qualitätssiegeln auf Lebensmitteln. Ergebnisse einer empirischen Untersuchung. Fachhochschule Münster FB8, Münster.
- Colom-Gorgues, A., 2009. The challenges of organic production and marketing in Europe and Spain. *Innovative marketing to the future with quality and safety food products. J. Int. Food & Agribusiness Marketing.* 21, 166-190.
- Council of the European Union, 2007. Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91. *EN Offic. J. EU. L* 189/1.
- European Commission and European Parliament, 2010. *Special Eurobarometer 354: Food-related risks.* TNS Opinion & Social, Brussels.
- European Commission and European Parliament, 2008. *Special Eurobarometer 295: Attitudes of European citizens towards the environment.* TNS Opinion & Social, Brussels.

- European Commission and European Parliament, 2005. Special Eurobarometer 229: Attitudes of consumers towards the welfare of farmed animals. TNS Opinion & Social, Brussels.
- Field, A., 2009. Discovering statistics using SPSS. Sage, London.
- Gil, J. M., Soler, F., 2006. Knowledge and willingness to pay for organic food in Spain: Evidence from experimental auctions. *Food Econ.* 3, 109-124.
- Grolleau, C., Caswell, J. A., 2006. Interaction between food attributes in markets: The Case of environmental labeling. *J. Agri. Resource Econ.* 31, 471-484.
- Haas, R., Canavari, M., Slee, B., Tong, C., Anurugsa, B., 2010. Looking east looking west: organic and quality food marketing in Asia and Europe. Academic Publishers, Wageningen.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., 2010. Multivariate data analysis: A global perspective. Pearson, New Jersey.
- Hamm, U., 1994. Perspektiven des ökologischen Landbaus aus marktwirtschaftlicher Sicht, in: Mayer, J. et al. (Eds.), *Ökologischer Landbau - Perspektive für die Zukunft*. SÖL-Stiftung, Bad Dürkheim, (pp. 212-234).
- Hamm, U., Gronefeld, F., 2004. The European market for organic food: Revised and updated analysis. *Organic marketing initiatives and rural development*, vol. 5. University of Wales, Aberystwyth.
- Honkanen, P., Verplanken, B., Olsen, S. O., 2006. Ethical values and motives driving organic food choice. *J. Consumer Behaviour.* 5, 420-430.
- Howard, A., 1943. *An agricultural testament*. Oxford University Press, Oxford.
- Hughner, R. S.; Mc Donagh, P., Prothero, A., Clifford J. Shultz II, C. J., Stanton, J., 2007. Who are organic food consumers? A compilation and review of why people purchase organic food. *J. Consumer Behaviour.* 6, 94-110.
- Jahn, G., Schramm, M., Spiller, A., 2005. The reliability of certification: Quality labels as a consumer policy tool. *J. Consumer Policy.* 28, 53-73.
- Jansen, B., Schaer, B., 2012. A glimpse on organic markets in Eastern Europe. Presentation at BioFach 2011 Session "The European Market for Organic Food".
- Janssen, M., Hamm, U., 2011. Consumers perception of different organic certification schemes in five European countries. *Organic Agri.* 1, 31-43.
- Johnston, J., 2008. The citizen-consumer hybrid: ideological tensions and the case of wholefoods market. *Theory & Society.* 37, 229-70.

- Kirman, A., Rao, A. R., 2000. No pain, no gain: A critical review of the literature on signaling unobservable product quality. *J. Marketing*. 64, 66–79.
- Koos, S., 2011. Varieties of environmental labelling, market structures and sustainable consumption across Europe: A comparative analysis of organizational and market supply determinants of environmental-labelled goods. *J. Consumer Policy*. 34, 127-151.
- Kotler, P., Armstrong, G., Wong, V. Saunders, J. A., 2008. *Principles of Marketing*. Pearson Education, New Jersey.
- Kretschmar, U. Schmid, O., 2006. Approaches Used in Organic and Low Input Food Processing –Impact on Food Quality and Safety Results of a delphi survey from an expert consultation in 13 European countries. Research Institute of Organic Agriculture FiBL, Frick.
- Leibel, M., 2010. Organic farming (of) in the Czech Republic. Ministry of Agriculture of the Czech Republic & Czech Technology Platform for Organic Agriculture.
- Lobley, M., Butler, A., Courtney, P., Ilbery, B., Kirwan, J., Maye, D. et al. 2009. Analysis of socio-economic aspects of local and national organic farming markets. Final Report for Defra. CRPR Research Report No 29., Centre for Rural Policy Research, University of Exeter.
- Lockie, S., Lyons, K., Lawrence, G., Mummery, K., 2002. Eating “green”: Motivations behind organic food consumption in Australia. *Sociologia Ruralis*. 42, 23-40.
- Ministry of Agriculture and Agri-Food Canada, 2012. The Spanish consumer behaviour, attitudes and perceptions toward food products. Agriculture and Agri-Food Canada, Ottawa.
- Padel, S., 2012. The UK Market for organic food in 2010/11. Presentation at BioFach 2012 Session: “Global Market Overview”.
- Padel, S. Zander, K., 2009. Organic Plus values and their relevance to consumers: First results from the CORE FCP project. In P. Fredriksson, & K. Ullven (Eds.), *Towards increased sustainability in the food supply chain*. 1st Nordic Organic Conference in Gothenburg, Sweden, May 18 – 20, 2009. Centre for sustainable agriculture (CUL) at Swedish University of Agricultural Sciences (SLU), 104-106.
- Padel, S., Foster, C., 2005. Exploring the gap between attitudes and behaviour: Understanding why consumers buy or do not buy organic food. *Brit. Food J.* 107, 606-625.
- Padilla-Bravo, C., Cordts, A., Schulze, B. Spiller, A., 2013. Assessing determinants of organic food consumption using data from the German National Nutrition Survey II. *Food Quality & Preferences*. 28, 60-70.

- Perez, V. G., 2010. Spain: Domestic Market for Organic Food. URL: [http://www.organic-world.net/news-organic-world.html?&tx_ttnews\[tt_news\]=427&cHash=68bb1e054dbbca750f6747f6965f6f70](http://www.organic-world.net/news-organic-world.html?&tx_ttnews[tt_news]=427&cHash=68bb1e054dbbca750f6747f6965f6f70). Accessed: 06.09.2012.
- Ploeger, A., without date. Organic Food and Consumer Acceptance – Recommendations for Emerging Markets. Department Organic Food Quality and Food Culture, University of Kassel.
- Rao, A. R., Monroe, K. B., 1989. The effect of price, brand name, and store name on buyers' perceptions of product quality: An integrative review. *J. Marketing Research*. 26, 351–357.
- Richardson, P., 2012. Organic Agriculture in Spain. URL: http://www.foodsfromspain.com/icex/cda/controller/pageSGT/0,9459,35868_6865989_6908352_4504673,00.html. Accessed: 10.01.2013.
- Ries, A., Trout, J., 1981. Positioning, The battle for your mind. Warner Books – McGraw-Hill Inc., New York.
- Rosenzweig, P., 2008. Der Halo-Effekt. Gabal, Offenbach.
- Ruhnke, K., Schmiele, K., Schwind, J., 2010. Die Erwartungslücke als permanentes Phänomen der Abschlussprüfung – Definitionsansatz, empirische Untersuchung und Schlussfolgerungen. *Zeitschr. betriebswirtschaftliche Forschung*. 62, 394-421
- Saba, A., Messina, F., 2003. Attitudes towards organic foods and risk/benefit perception associated with pesticides. *Food Quality & Preference*. 14, 637-45.
- Sengstschmid, H., Sprong, N., Schmid, O., Stockebrand, N., Stolz, H., Spiller, A., 2011. EU Ecolabel for food and feed products – feasibility study (ENV.C.1/ETU/2010/0025). Available at http://ec.europa.eu/environment/ecolabel/about_ecolabel/pdf/Ecolabel%20for%20food%20final%20report.pdf.
- Simons, J., Vierboom, C., Haerlen, I., 2001. Einfluss des Images von Bio—Produkten auf den Absatz der Erzeugnisse. *German J. Agri. Econ*. 50, 1-7.
- Soil Association, 2013. Who we are. URL: <http://www.soilassociation.org/aboutus/whoweare>. Accessed: 20.01.2013.
- Soil Association, 2012. Organic market report 2012. Soil Association, Bristol.
- Thøgersen, J., 2009. Consumer decision making with regard to organic food products, in Vaz, P., Nijkamp, J. L., Rastoin (Eds.), *Traditional food production facing sustainability: A European challenge*. Aldershot, Ashgate, pp. 173-192.
- Torjusen, H., Sangstad, L., O'Doherty Jensen, K., Kjærnes, U., 2004. European Consumers' Conceptions of Organic Food: A Review of Available Research. Report no. 4 – 2004.

Archived at <http://orgprints.org/00002490>. National Institute for Consumer Research, Oslo.

Valeska, J., Dytrtová, K., Bauerová, L., Sehnalová, L., Čapounová, K., 2008: Yearbook of Organic Agriculture in Czech Republic. Published by the Ministry of Agriculture of the Czech Republic.

Verain, M. C. D., Bartles, J., Dagevos, H., Sijtsema, S. J., Onwezen, M., Antondies, G., 2012. Segments of sustainable food consumers: a literature review. *Int. J. Consumer Studies*. 36, 123-132.

Vogt, G., 2001. Geschichte des ökologischen Landbaus im deutschsprachigen Raum – Teil I. *Ökologie & Landbau*. 118, 47-49.

v. Meyer-Höfer, M., Spiller, A., 2013. Anforderungen an eine nachhaltige Land- und Ernährungswirtschaft: Die Rolle des Konsumenten. KTBL-Schrift 500
Steuerungsinstrumente für eine nachhaltige Land- und Ernährungswirtschaft - Stand und Perspektiven, KTBL -Tagung vom 10.-11.04.2013 in Neu-Ulm.

Wier, M., Calverley, C., 2002. Market potential for organic foods in Europe. *Brit. Food J.* 104, 45-62.

Wier, M., Jensen, K., Andersen, L., Millock, K., 2008. The character of demand in mature organic food markets: Great Britain and Denmark compared. *Food Policy*. 55, 406-421.

Willer, H., Lernoud, J., 2013. Current statistics on organic agriculture worldwide: Organic area, producers and market, in Willer, H., Lernoud, J., Kilcher, L. (Eds.), *The World of organic agriculture. Statistics and emerging trends 2013*. FiBL-IFOAM Report, Bonn, (pp. 35-108).

Willer, H., Lernoud, J., 2012. Current statistics on organic Agriculture worldwide: organic area, producers and market, in Willer, H., Lernoud, J., Kilcher, L. (Eds.), *The world of organic agriculture. Statistics and emerging trends 2012*. FiBL-IFOAM Report, Bonn, (pp. 33-118).

Zander, K., Hamm, U., 2010. Consumer preferences for additional ethical attributes of organic food. *Food Quality & Preference*. 21, 495-503.

Zidek, T., 2000. Organic farming in the Czech Republic. Stiftung Ökologie & Landbau, Bad Dürkheim.