



CONSUMER PREFERENCES AND WILLINGNESS- TO-PAY FOR ORGANIC CERTIFICATION LOGOS:

RECOMMENDATIONS FOR ACTORS IN THE ORGANIC SECTOR

REPORT OF THE CERTCOST PROJECT (D17)

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This report presents key findings of empirical consumer research on the subject of organic certification.

In seven European countries, consumer perceptions, preferences and willingness-to-pay regarding organic logos representing different certification schemes were analysed.

Based on the empirical results, recommendations are made for different actors in the organic sector.

DISCLAIMER

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List of abbreviations

CH	Switzerland
CZ.....	Czech Republic
DE	Germany
DK	Denmark
IT	Italy
TR.....	Turkey
UK	United Kingdom
WTP.....	Willingness-to-pay

SUMMARY

In many European countries, a variety of different organic certification logos and schemes is found in the market. In the countries of the European Union (EU), the new mandatory EU logo for organic food was introduced in July 2010, so that other organic logos can only be used in addition to the mandatory EU logo. Within the CERTCOST project, consumer perceptions, preferences and willingness-to-pay (WTP) regarding different organic certification logos were investigated. The seven study countries were Czech Republic, Denmark, Germany, Italy, Switzerland, Turkey and United Kingdom. The overall objective was to give recommendations for actors in the organic sector regarding the use and promotion of organic certification logos.

Firstly, an inventory study was conducted in shops with an organic food range in autumn 2008 to get insights into the spectrum of different organic certification logos in the market and the extent of price differences among products with different organic logos. The analysis showed that the importance of different kinds of logos differed considerably between the study countries. Only a few significant price differences between products with and without certain organic logos were found.

Secondly, consumer perceptions, preferences and WTP regarding different organic logos as well as consumer views on a mandatory EU logo were investigated by a combination of qualitative and quantitative methods of consumer research (focus group discussions conducted in spring 2009, choice experiments and structured interviews conducted in early 2010). The results revealed that consumers had a low level of factual knowledge about organic production standards and the organic control system. Nevertheless, consumers clearly preferred *certain* organic logos more than others. Different kinds of organic logos were preferred across the countries. In Denmark and the Czech Republic, consumers were willing to pay a considerably higher price premium for the governmental logo than for the other tested logos. In Germany, a high WTP was recorded for the logo of the farmers' association Demeter and the governmental logo. In Italy, the old EU logo reached the highest WTP. In Switzerland, the logo of the farmers' umbrella organisation Bio Suisse was clearly preferred. In Turkey, consumers were willing to pay the highest price premium for the logo of the certification body Ecocert. In the UK, the WTP was the highest for

the logos of the Soil Association and the certification body 'Organic Farmers & Growers'. In all countries, products without a logo just labelled with the prefix 'organic' were not trusted. The introduction of a mandatory EU logo was generally welcomed by the participants. However, trust in the underlying standards and the control system was not very pronounced except in Italy.

The report briefly outlines the methods and results, while the focus lies on recommendations for different actors in the organic sector with regard to the use and promotion of organic certification logos. To increase consumer trust in the new mandatory EU logo, it is recommended that promotion campaigns should be carried out explaining what the logo indicates. Regarding the investigated governmental logos, it is recommended that their use should be continued, at least in a transition period, since a high level of consumer trust in the logos was recorded. For organic certification logos of private organisations it is recommended that their use should only be continued for logos that offer a clear 'added value' compared to the EU logo.

1 INTRODUCTION

1.1 Background

Consumer trust is a crucial issue in the market for organic food, since consumers are not able to verify whether a product is an organic product, not even after consumption. An instrument to gain consumer trust is third-party certification of the supply-side (Roe and Sheldon 2007), which has a long tradition in the organic sector in Europe. Organic certification logos are used to signal consumers that a product is a certified organic product (Jahn et al. 2005).¹ In many European countries, a variety of different organic certification logos and schemes is found in the market, which are owned by different kinds of organisations:

1. The mandatory EU logo introduced in July 2010 has to be displayed on all prepacked organic products produced in the EU. It was preceded by the former voluntary EU logo.
2. Voluntary governmental logos (e.g. Danish 'Ø' logo, German 'Bio-Siegel') are found in some but not in all European countries.
3. Voluntary logos of private organisations are logos of organic sector and farmers' associations (e.g. Demeter, Bio Suisse, Soil Association), control bodies (e.g. Ecocert) and other private organisations.

Organic certification logos target the final consumer. However, little is known to-date as to how consumers perceive different organic logos and the underlying schemes, and whether consumers prefer products with *certain* organic logos. These questions have implications for organisations owning an organic certification logo as well as for market actors in the organic sector.

¹ A comprehensive overview of the economic concepts surrounding organic certification is presented in another CERTCOST publication by Zorn et al. (2009).

The introduction of a *mandatory* EU logo for organic food represents a novelty in the European market and raises the question whether voluntary organic logos should additionally be displayed on product packages. From the viewpoint of producers, processors and retailers, marketing budgets as well as the space on product packages are limited. Practical considerations might thus question the use of two or more organic logos. The use of other organic logos in addition to the mandatory EU logo seems reasonable if consumers associate an 'added value' with the additional logo, for instance stricter production standards, higher food safety or any other perceived quality aspect. Against this background, organisations owning an organic certification logo need to consider how their logo is perceived by consumers and whether consumers are willing to pay a price premium for products with their logo.

1.2 Objectives

The following main objectives were subject of the CERTCOST consumer research:

1. To provide an overview of the spectrum and importance of different organic logos standing for different certification schemes, and to analyse the extent of price differences among products with different organic logos.
2. To explore consumer awareness, perceptions and attitudes regarding different organic certification logos and the underlying schemes.
3. To elicit consumer preferences and willingness-to-pay for different organic certification logos.
4. To analyse consumer views towards a mandatory EU logo and indication of origin.

The overarching aim was to give recommendations for organisations owning an organic certification logo, market actors and other decision-makers in the organic sector. The seven study countries were Czech Republic (CZ), Denmark (DK), Germany (DE), Italy (IT), Switzerland (CH), Turkey (TR) and United Kingdom (UK). Objective 1 was addressed by an inventory study in 131 food stores. Objectives 2 to 4 were addressed by a combination of qualitative and quantitative methods of consumer research to get a comprehensive picture of the area of enquiry.

1.3 Contributions

The authors gratefully acknowledge the contributions to all stages of the empirical research from the CERTCOST project partners, especially those from Lukas Zagata and Michal Lostak from the Czech University of Life Sciences; Lizzie Melby Jespersen, Giulio Giorgi, Jens Elgaard Madsen and Simon Olling Rebsdorf from the International Centre for Research in Organic Food Systems (ICROFS), Denmark; Simona Naspetti and Raffaele Zanolli from the Polytechnic University of Marche, Italy; Heidrun Moschitz and Matthias Stolze from the Research Institute of Organic Agriculture (FiBL), Switzerland; Bulent Miran, Murat Boyaci, Canan Abay and Ozlem Karahan Uysal from EGE University, Turkey; Susanne Padel, Laurence Smith and Catherine Gerrard from the Organic Research Centre Elm Farm, United Kingdom; Jane Vine from Aberystwyth University, United Kingdom. For further details see Table 9 in the Annex.

2 METHODS

2.1 Inventory study

In the inventory study, data on market prices, organic certification logos and relevant product information was collected in autumn 2008. It was aimed to get insights into

1. the spectrum and the importance of different certification logos and schemes in the seven study countries and
2. the extent of price differences between products labelled with different organic certification logos.

It was assumed that existing price differences in the marketplace might reflect to what extent consumers are willing to pay higher prices for particular organic logos and schemes. Data was collected in 131 food stores with an organic food range by people who visited the food stores (a minimum of 12 shops per country). Two kinds of shops were differentiated: a) regular supermarkets and b) specialised organic food stores. The distribution of the kinds of shops approximately reflected the respective market shares in each country (Table 1). The geographical distribution of the shops reflected the regional market shares in each country.

Table 1: Number of shops per country

Kinds of shops	All countries	CH	CZ	DE	DK	IT	TR	UK
Regular supermarkets	81	6	14	14	11	9	17	10
Specialised organic food stores ¹	49	6	8	6	6	11	7	5
Box scheme	1	--	--	--	--	--	--	1
Total	131	12	22	20	17	20	24	16

¹A shop was considered a specialised organic food store if organic products made up at least 75% of the product range.

Data was collected for ten product categories that covered the most relevant product categories in terms of relatively high organic market shares across the seven study countries (Table 2).

Table 2: Product categories in the inventory study

Product categories	
<ul style="list-style-type: none"> • Apples • Carrots • Eggs • Milk • Natural yogurt 	<ul style="list-style-type: none"> • Olive oil • Potatoes • Raisins • Spaghetti • Wheat flour

For every product item in the ten product categories, all relevant product information was recorded (Table 3).

Table 3: Product information collected for each product item

Product information
<ul style="list-style-type: none"> • Product variant¹ • Fat content (milk and yogurt only) • Price • Package unit/size • Kind of packaging • Country of origin • Brand name • Organic certification logo(s) on the product or price label • Number of organic certification logos • Kind of shop • City/town

¹ E.g. kind of milk: fresh milk, ESL, UHT, other

2.2 Qualitative study




























In the qualitative study, focus group discussions with 218 consumers of organic food were conducted in spring 2009. It was aimed to explore the broad spectrum of consumer views regarding the following research questions:

- Do consumers perceive differences standing behind different organic certification logos? In what way?
- Do consumers prefer certain organic certification schemes over others and what are the added values that consumers associate with the preferred schemes?
- Which issues and concerns matter to consumers regarding a mandatory EU logo for organic food and why?

The participants of the focus groups were shown the most common organic certification logos in the respective country (Table 4). In addition, the labelling with the term 'organic' without a certification logo was included. The selection of the logos was based on the results of the inventory study. The focus groups took place one year before the new mandatory EU logo was introduced. It was therefore not possible to investigate consumer views on the new logo design. Instead, the participants were informed that a new mandatory EU logo and indication of origin would be introduced.

Further details on the recruitment of participants, the description of the sample and the methods of data analysis can be found in Janssen and Hamm (2011).

Table 4: Organic certification logos discussed in the focus groups

Country	Former EU logo	National governmental logo	Logos of farmers' and organic sector organisations	Logos of control bodies
CH	--	--	  	--
CZ			--	--
DE			  	--
DK				--
IT			 	  
TR	--		--	  
UK		--		 

2.3 Quantitative study

The quantitative study with consumer choice experiments and structured interviews was carried out in early 2010 with 2,840 consumers of organic food² (around 400 participants per country).³ The following research questions were addressed:

- What are consumers willing to pay for different organic logos?
- Do consumers prefer certain organic certification logos over others?
- Are consumer preferences for an organic certification logo influenced by consumer awareness of the logo and perceptions and attitudes regarding the underlying certification scheme?
- Are consumer preferences for organic certification logos influenced by consumers' buying behaviour of organic food?
- How do consumers view a mandatory EU logo and indication of origin for organic food?

In the choice experiments, the participants were asked to make buying decisions for apples and eggs.⁴ Real products and price tags were used. The participants could choose among four product alternatives which looked identically but were marked with different labels and prices:

- Three different organic logos were tested in each country (Table 5). The selection of logos was based on the results of the qualitative study and the inventory study.⁵ In addition, one alternative per choice set was just marked with the word 'organic' without a logo (except for Turkey where the governmental logo is mandatory and was therefore shown on each product).
- Four different price levels were tested. The relative price levels were the same in all countries (0.8; 1.0; 1.2; 1.4). The absolute prices used in the experiments were based on the average market price of organic apples/eggs in the

² Two screening questions were used: First, participants had to be responsible for the food purchase in their household; second, they had to buy organic apples and eggs at least once a month. Quota sampling for age and gender was applied.























³ The choice experiments and interviews were conducted at two kinds of shops/locations: 1. conventional supermarkets and/or shopping centres and 2. specialised organic food shops. The shares of choice experiments conducted at each kind of shop approximately reflected the respective market shares. The share of choice experiments conducted at conventional supermarkets were 87% in CH, 50% in CZ, 75% in DE, 100% in DK, 50% in IT, 50% in TR and 75% in UK (the remaining share was conducted at specialised organic food shops).

⁴ These two products were chosen since they fulfil the following criteria. Firstly, it was intended to investigate both a plant and an animal product. Secondly, many consumers regularly buy apples and eggs. Thirdly, these products are available from domestic production in the study countries and they are widely available in organic quality.

⁵ Different kinds of organic certification logos were tested: 1. EU logo, 2. governmental logos, 3. private logos. Please note that the old voluntary EU logo was used in the experiments, since the survey was conducted prior to the introduction of the new mandatory EU logo. In each country, only those logos were included which existed in the market and could be used on domestic products. The only exception is Switzerland, where only two common Swiss organic certification logos were found in the market at the time of writing (Bio Suisse and Demeter). To have a similar experimental design with four product stimuli per choice set in each study country, a fake logo was created referring to the Swiss organic regulation. Due to the absence of a governmental logo in Italy and the UK, a second private logo was included here.

respective survey regions one month before the experiments were conducted (the average market price equalled price level 1.0).

Table 5: Organic logos tested in the choice experiments

Country	Product 1	Product 2	Product 3	Product 4
CH	Fake logo ¹ 	Bio Suisse ² 	Demeter ³ 	Without logo ⁴
CZ	Former EU logo 	Governmental logo 	Demeter 	Without logo ⁴
DE	Former EU logo 	Governmental logo 	Demeter 	Without logo ⁴
DK	Former EU logo 	Governmental logo 	Demeter 	Without logo ⁴
IT	Former EU logo 	CCPB ⁵ 	Demeter 	Without logo ⁴
TR	IMO ⁸ plus governmental logo 	Ecocert ⁸ plus governmental logo 	Orser ⁹ plus governmental logo 	Governmental logo 
UK	Former EU logo 	Soil Association ⁶ 	OF&G ⁷ 	Without logo ⁴

1 Referring to the Swiss governmental organic regulation (see footnote no 5, previous page).

2 Swiss farmers' umbrella organisation

3 International farmers' association.

4 Products just marked with the prefix 'organic', 'Bio', 'Öko', 'biologico', 'øko' respectively in the national language.

5 CCPB=Certificazione e controllo prodotti biologici. Italian control body.

6 Soil Association=British organic sector organisation.

7 OF&G=Organic Farmers & Growers. British control body.

8 Control body which operates in many countries.

9 Turkish control body.

In the sample, the price levels varied systematically across the four logos. The participants were presented with two choice sets for apples and eggs respectively, i.e. in total each participant made four buying decisions. The participants were also free to refrain from buying any of the offered alternatives ("no-buy option").

The subsequent structured interviews contained the following questions:

1. Rating of the labels: The participants were asked to rate the labels regarding awareness, trust, credibility, and the standards and the inspection system behind the labels. Furthermore the participants should evaluate whether the labels stand for domestic origin.

2. Mandatory EU logo:⁶ The participants were informed about the introduction of a new mandatory EU logo and they were asked for their opinion regarding 10 statements on a 7-point Likert-scale. The new logo design was not shown to the participants, since data collection started before the new design was announced.
3. Two questions about the participants' buying behaviour for organic food: Organic budget share and preferred places for purchasing organic food.
4. Socio-demographic characteristics: Gender, age, household size, level of education and net household income.

The data was analysed with discrete choice models to determine consumer preferences and willingness-to-pay for organic logos. For further details on the methods of choice analysis, the recruitment of participants and the description of the sample see Janssen and Hamm (forthcoming a).

⁶ *In the non-EU countries Switzerland and Turkey, this part was not included.*

3 RESULTS

3.1 Spectrum and importance of organic certification logos

The organic certification logos of the inventory could be classified into four main kinds of logos: Former EU logo, national governmental logos, logos of farmers' associations and their umbrella organisations, and logos of certification bodies. The importance of individual kinds of logos differed considerably between the study countries (Table 6). The former voluntary EU logo, for instance, occurred relatively often in Italy and Denmark, whereas it played a minor or negligible role in the other countries.⁷ In those countries with voluntary governmental logos (Denmark, Germany, the Czech Republic), the governmental logo was found on more than 60% of recorded products. The share of organic products without any certification logo ranged from almost one third in the UK to zero in Turkey. Altogether, a very diverse picture was revealed regarding the kinds and frequencies of different organic certification logos.

⁷ *The inventory study was conducted prior to the introduction of the new mandatory EU logo for organic food.*

Table 6: Different kinds of organic certification logos: Frequency of logos recorded on products in the inventory study¹

	All ²	CH	CZ	DE	DK	IT	TR	UK
Former EU logo	18.7	3.3	14.4	3.3	47.7	58.4	--	3.6
National governmental logo	42.8	--	68.5	70.4	61.4	--	99.5	--
Logos of farmers' and organic sector associations	32.5	67.7	12.6	45.5	21.3	22.5	--	57.9
Logos of control bodies	26.8	1.1	1.0	0.9	13.2 ³	62.1	97.0	12.6
Other organic certification logos ⁴	5.1	9.3	9.4	0.0	5.8	9.1	0.5	1.7
No organic certification logo	12.9	22.6	12.1	6.2	8.4	11.8	--	29.0

¹ The share of products with a respective logo was calculated for each of the ten product categories (see Section 2.1); the share presented in this table is the average across the ten product categories with each category weighted equally. Multiple logos on one product were possible.

² Average across the seven countries; each country weighted equally.

³ Logos of foreign certification bodies (the logo of the Danish governmental control authority is grouped under national governmental logo).

⁴ E.g. Foreign governmental logos, logos of other private organisations.

Across all countries, the mean number of logos per product averaged 1.3 with half of the products having one logo (Table 7). Please note that products that were labelled with the word 'organic' but did not carry a certification logo were counted under the category 'zero' regarding the number of logos. One third of products carried two logos and 13% had none. The comparison between the countries shows that the lowest mean number of logos per product (0.8) was found in the UK and in Switzerland. In the UK, two thirds of products carried one logo and almost one third did not have a logo at all. In Switzerland, the great majority of products (72%) carried one logo.

Table 7: Number of organic certification logos per product¹

Number of logos per product	All countries ²	CH	CZ	DE	DK	IT	TR	UK
0	12.9	22.6	12.1	6.2	8.4	11.8	--	29.0
1	50.0	72.2	61.1	67.6	47.1	31.2	3.4	67.2
2	33.5	4.4	16.8	25.8	37.7	51.2	94.9	3.6
3	1.5	0.5	--	0.4	2.2	5.7	1.7	0.3
4	0.7	0.3	--	0.1	4.6	0.1	--	--
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Mean	1.3	0.8	1.1	1.2	1.5	1.5	2.0	0.8

¹ The share of products with a respective number of logos was calculated for each of the ten product categories (see Section 2.1); the share presented in this table is the average across the ten product categories with each category weighted equally.

² Average across the seven countries; each country weighted equally.

The analysis of price differences between products with and without certain organic logos provided only a few significant price differences in each country. The results suggest that there may not be a consistent pattern of particular kinds of certification logos being reflected in higher market prices (for Italy see Naspetti et al. 2009). However, market prices across different shops may be influenced by a number of factors other than organic certification logos, for instance price policies of individual retailers, regional parameters and aspects of product quality.⁸

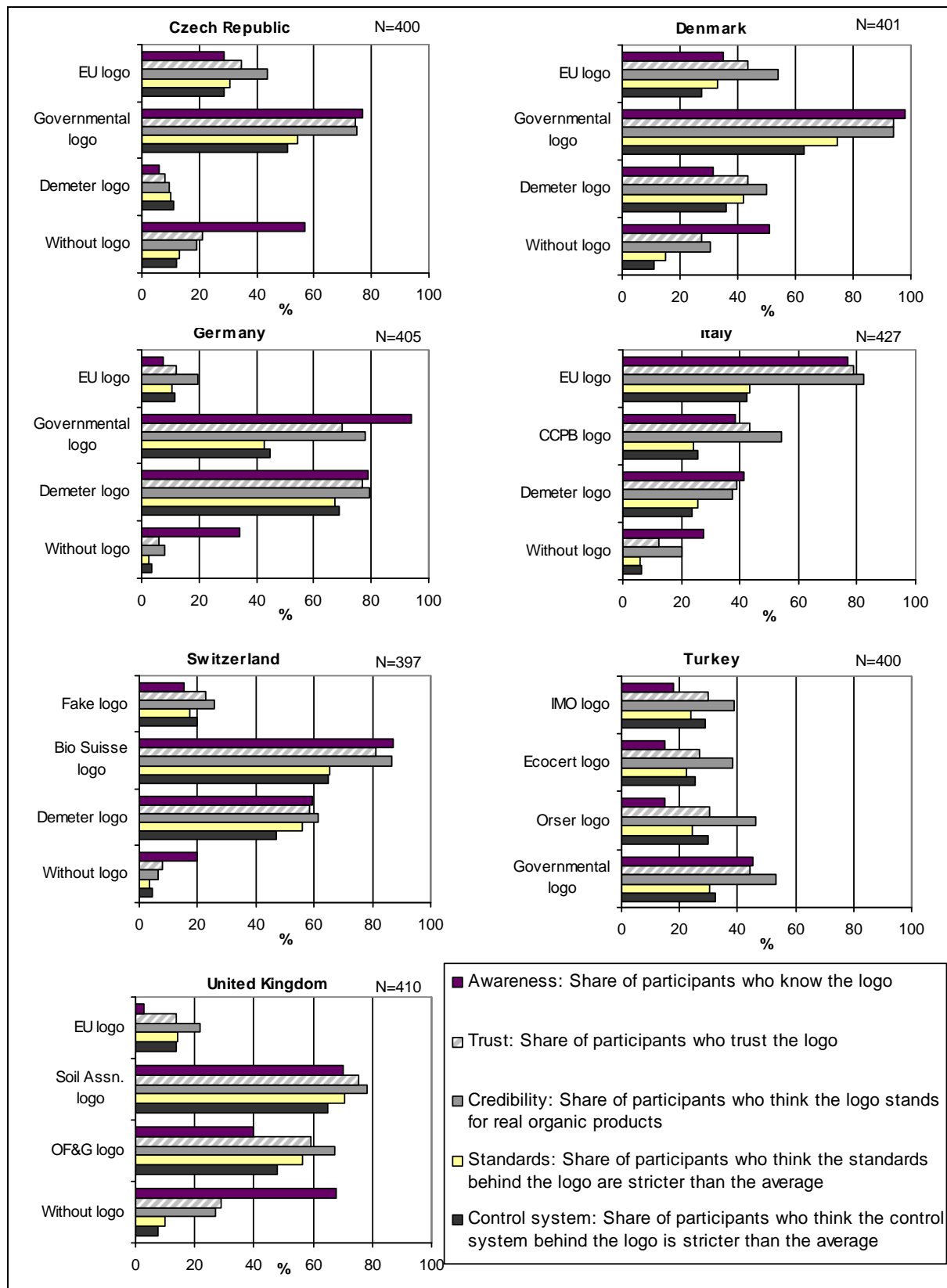
3.2 Consumer awareness, perceptions and attitudes regarding organic certification logos

The results of the CERTCOST project revealed that consumers had a low level of factual knowledge about organic production standards and the organic control system. The countries have in common that the great majority of participants were not aware that the use of the term 'organic' is regulated. Despite the low level of knowledge, consumer attitudes differed across the logos and consumers perceived differences among different organic certification schemes, but mostly in terms of 'stricter' versus 'less strict' production standards and control systems. Figure 1 gives an overview of the results of the quantitative study on consumer awareness, perceptions and attitudes regarding different organic logos. For further details, see Janssen and Hamm (2011, forthcoming a).

In all countries except Italy, a considerable share of participants falsely thought that one or two logos stand for domestic origin. In fact, only one of the tested logos indicates domestic origin, i.e. the Bio Suisse logo. This example demonstrates that consumer perceptions of what stands behind an organic logo are not necessarily based on objective knowledge.

⁸ Further data analyses were carried out in Germany. A significant price premium was recorded for products of the farmers' association Demeter (Schmidt and Janssen 2010).

Figure 1: Consumer awareness, perceptions and attitudes regarding different organic logos¹



¹ See Table 5 for a description and the full name of the logos. 'Without logo' refers to products labelled with the prefix 'organic' without a logo.

3.3 Consumer preferences and willingness-to-pay for organic certification logos

The CERTCOST study provides insights into consumers' willingness-to-pay for different organic certification logos (Section 3.3.1) and factors influencing consumer preferences for organic certification logos (Section 3.3.2).

3.3.1. Willingness-to-pay for organic certification logos

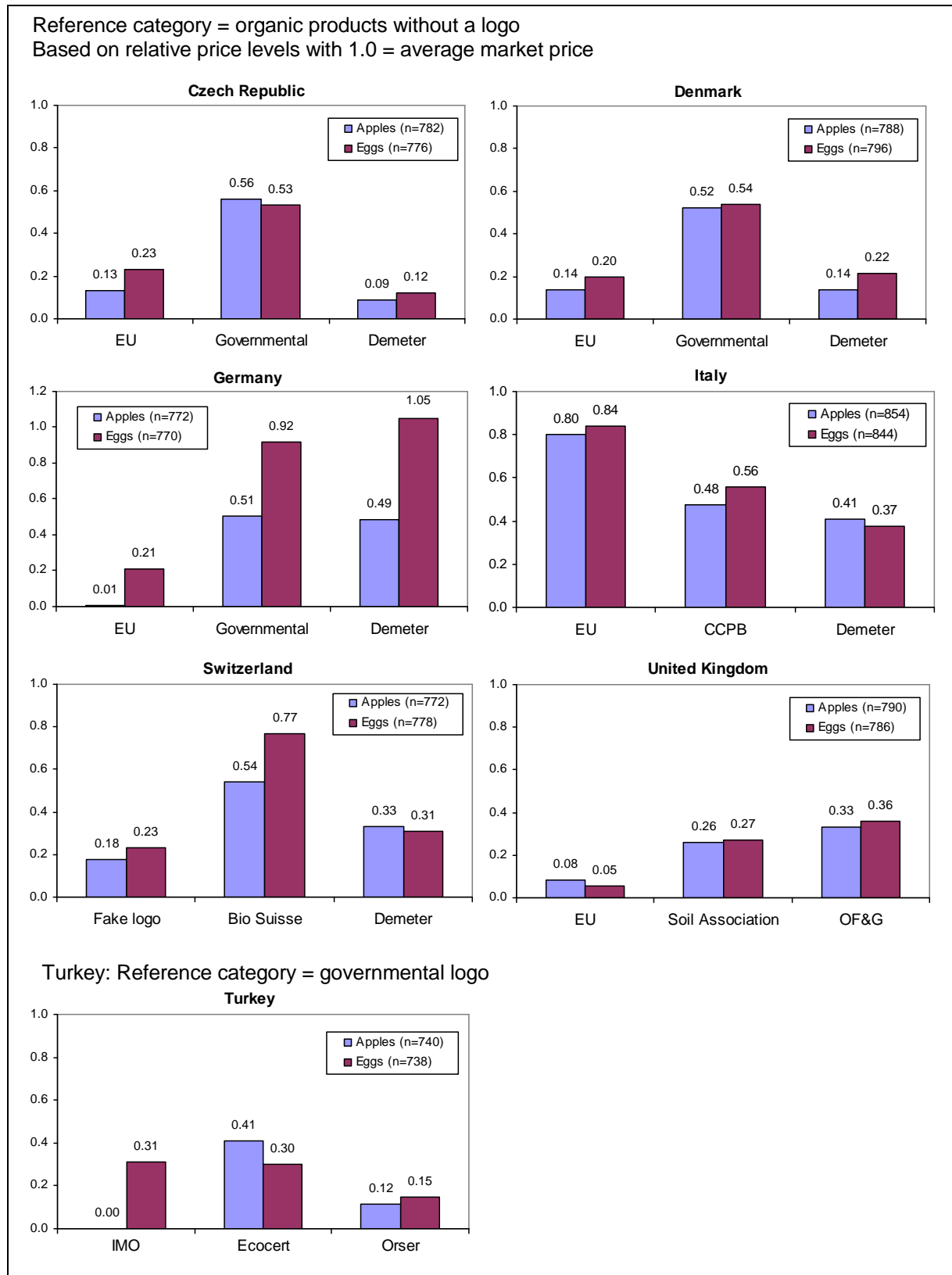
Our results provide evidence that consumers prefer products with an organic certification logo over organic products without a logo (Figure 2). The great majority of consumers did not know that the use of the term 'organic'⁹ is regulated and thus they did not trust products only labelled with this term without a logo. For almost all tested organic logos, consumers were on average willing to pay a price premium compared to a similar organic product without a logo. That even holds true for a fake logo tested in Switzerland. However, the price premium differed considerably between the tested logos. In the Czech Republic, Denmark, Italy and Switzerland, there was *one* logo with a considerably higher willingness-to-pay (WTP) compared to the other tested logos. Those were the Bio Suisse logo, the Czech and Danish governmental logos and the EU logo in Italy. In Germany and the UK, there were *two* logos with an equally high WTP, namely the governmental logo and the logo of the farmers' association Demeter in Germany and the logos of the Soil Association and the certification body 'Organic Farmers & Growers' in the UK. A comparison between the different kinds of logos revealed the following picture:

- Former EU logo: In the Czech Republic, Denmark, Germany and the UK, the WTP for the former EU logo was only slightly higher compared to products without a logo. In contrast, the EU logo reached the highest WTP of all logos tested in Italy where no governmental logo exists.
- Governmental logos: In the Czech Republic and Denmark, the governmental logo featured the highest WTP of all tested logos. In Germany, the WTP for the governmental logo and the Demeter logo were equally high.
- Private logos: In Switzerland and the UK, the highest WTP was observed for private logos. However, both countries do not have a governmental logo and the former EU logo was not common in the UK and not relevant in Switzerland. The Demeter logo featured a high WTP only in Germany, whereas in the Czech Republic, Denmark, Italy and Switzerland, the WTP for the Demeter logo was considerably lower compared to the logos with the highest WTP.

Turkey represents a special case in that the experimental design was slightly different. Here, all products in the experiment were marked with the mandatory governmental logo and three of the products carried an *additional* logo of a certification body. It was found that consumers were willing to pay a price premium for the logo of the certification body Ecocert. For the logo of the certification body IMO, a price premium was only recorded for one of the two tested products.

⁹ This covers also the respective translated terms of 'organic' in the different EU languages, such as 'Bio', 'Öko', 'biologico', 'øko'.

Figure 2: Mean additional willingness-to-pay for organic certification logos¹



¹ The figures show the additional WTP for a product with a respective organic logo compared to organic products without a logo. The additional WTP is shown in percent of the average market price. For example, in Germany the additional WTP for apples with the governmental logo compared to organic apples without a logo amounted to 51% of the average market price. A description and the full name of the logos are presented in Table 5.

A comparison between the results of the WTP analysis and the inventory study shows that the most preferred logos were also among the logos most frequently found on products in the inventory. However, not all organic logos frequently found in the inventory also exhibited a high WTP. In Denmark, the EU logo was the second most common logo in the inventory (displayed on almost 50% of the recorded products), but the WTP for the EU logo was relatively low. In Italy, logos of control bodies were found on more than 60% of products and even more often than the EU logo, but this circumstance was not reflected in consumers' WTP.

3.3.2. Factors influencing willingness-to-pay

Two sets of factors influencing consumers' willingness-to-pay (WTP) for organic certification logos were identified:

1. Consumer awareness, perceptions and attitudes regarding an organic logo: In the choice experiments, the WTP for a certain organic logo was higher the better known the logo was, the more trustworthy and credible a consumer rated the logo, and the stricter a consumer rated the underlying standards and the control system. In Switzerland and Germany, the WTP for a logo was also higher if the consumer thought that the logo indicates a domestic origin. The result from Germany is surprising, since none of the tested logos in Germany indicates a domestic origin.
2. Consumers' buying behaviour for organic food: The findings show that consumer preferences for certain organic logos were related to certain characteristics regarding the buying behaviour for organic food (Table 8). For certain organic logos, foremost the Demeter logo, a higher willingness-to-pay was recorded for frequent buyers of organic food and customers of organic food shops compared to less frequent buyers and non-customers of organic food shops. This result seems plausible since Demeter products can mostly be bought in organic food shops.¹⁰

¹⁰ Please note that specialised organic food shops have very different market shares across the study countries. Whereas they play an important role in the organic market in Italy, they are of low importance in Switzerland and Denmark where the great majority of organic products is sold via conventional supermarkets.

Table 8: Consumers buying behaviour for organic food and WTP for organic logos

Country	Organic logo ¹	<u>Frequent buyers of organic food</u> have a higher/lower WTP compared to less frequent buyers	<u>Customers of organic food shops²</u> have a higher/lower WTP compared to non-customers
CH	Demeter	higher WTP	higher WTP
	Bio Suisse	higher WTP	lower WTP ³
CZ	Governmental	higher WTP	higher WTP
DE	Demeter	higher WTP	higher WTP
	Governmental	lower WTP ⁴	–
DK	Demeter	higher WTP	higher WTP
IT	Demeter	higher WTP	higher WTP
	CCPB	lower WTP	–
TR	IMO	higher WTP	–
	Ecocert	higher WTP ⁴	–
UK	Soil Association	higher WTP ³	–
	OF&G	–	lower WTP ³

¹ See Table 5 for a description and the full name of the logos.

² Also in Denmark and Switzerland where (almost) all choice experiments were conducted at conventional supermarkets, more than 40% of the participants stated to (also) buy at organic food shops.

³ Significant in the apple model but not in the egg model.

⁴ Significant in the egg model but not in the apple model.

– No significant influence.

3.4 Consumer views on a mandatory EU logo for organic food

The concept of a mandatory EU logo and indication of origin for organic food was met with a divided response across the EU countries represented in the CERTCOST project.¹¹ Two significantly distinct countries could be identified: Italy and the UK. In Italy, the introduction of a new mandatory EU logo was basically welcomed without reservation, whereas in the UK, both support and scepticism were present. In Denmark, Germany and the Czech Republic trust in the standards and the inspection system behind the EU logo was higher than in the UK but still not particularly pronounced.

In all countries, it became apparent that the participants generally lacked knowledge about the regulation and control of organic production at EU level. Interestingly, the concerns that were raised were mostly unfounded since they resulted from misconceptions, such as the belief that the organic standards in other European countries were lower than the domestic ones. It became obvious that consumers did not view the EU as a homogenous entity in terms of trust in the integrity of organic products. Therefore the indications of origin 'EU agriculture' and 'non-EU agriculture' were almost unanimously rejected. The results are described in more detail in Janssen and Hamm (forthcoming b).

¹¹ In the qualitative and the quantitative study, the participants were informed that a new mandatory EU logo and indication of origin would be introduced. However, the new logo design could not be shown, since data was collected prior to the introduction of the new EU logo.

4 RECOMMENDATIONS

Based on the consumer research of the CERTCOST project, recommendations are made for different actors in the organic sector:

1. Public and private owners of certification logos for organic food
 - EU Commission with the EU logo
 - Government authorities with own logos
 - Private organisations with own logos
2. Producers, processors and retailers of organic food

The last section contains a critical appreciation of the role of organic certification logos based on the present results.

4.1 Public and private owners of organic certification logos

Our results show that it is of crucial importance for any organic certification scheme to raise consumer awareness of the logo and shape consumer perceptions of the underlying scheme in terms of standards and control. Organisations owning a certification logo should invest in marketing communication and public relations in order to maintain that their logo successfully influences the buying behaviour of consumers.

4.1.1. EU Commission with the EU logo

The mandatory EU logo for organic food was introduced to strengthen the organic sector by making the recognition of organic products easier for consumers across the EU (Regulation (EC) No 834/2007, Regulation (EU) No 271/2010). The results of the CERTCOST project suggest that the extent to which this objective will be reached might differ between the Member States. In countries where the former voluntary EU logo was not very common, consumers might be uncertain as to what the new logo indicates in terms of organic production standards and the underlying control system.

It is of great importance that the logo is understood correctly by consumers. The EU regulation stipulates a minimum size of the logo but it is not regulated where the logo must be placed on product packages (Regulation (EU) No 271/2010). For instance, it is possible to display the logo at the back of a package. It thus remains to be seen how quickly the new logo will gain consumer awareness.

The results of the CERTCOST project provide evidence that there was at least one organic logo in each country that consumers trusted and preferred. In all study countries except for Italy, the former EU logo was not among the most preferred logos. Given that there are already logos in place which enable consumers to recognise organic products, it seems necessary to briefly discuss as to how the mandatory EU logo could contribute to strengthening the organic sector. Above all, it must not be overlooked that *different* logos were preferred across the study countries. This circumstance has far reaching implications for organic producers and processors with export activities to EU Member States. For instance, the preferred logos in Denmark, the Czech Republic and the UK are attached to requirements that exceed those of Regulation (EC) No 834/2007. However, for producers and processors it is very costly to get certified according to several different organic schemes. From the perspective of export-oriented operators in the organic market – which hold a considerable market share – it thus seems desirable to achieve a high level of consumer trust in the EU logo in order to facilitate intra-EU trade. As a result, overall sales with organic products in the EU might increase for the sake of the sector as a whole.

We therefore recommend that consumer trust in the new EU logo should be strengthened by promotion campaigns explaining what the new logo stands for and why it is a benefit, in particular in those countries where the former voluntary EU logo was not very common. The current promotion fund for the new logo should thus be increased. Promotion campaigns should be jointly financed by the EU and national governments. Public financial support for the promotion of the EU logo may have positive synergy effects with the private sector (producers, processors, retailers), as the experience with voluntary national governmental logos for organic food like the Danish 'Ø' logo and the German 'Bio-Siegel' has shown: Public promotion campaigns would lead to increased consumer awareness of the EU logo, which would encourage private sector companies to prominently place the logo on product packages, price tags and advertising material, which in turn would raise consumer awareness and trust in the logo. Public financial support for the promotion of the new EU logo is justified since organic agriculture contributes to public welfare by preserving natural resources and contributing to rural development (Regulation (EC) No 834/2007).

Promotion campaigns on the new EU logo should not *per se* refer to the former voluntary EU logo, given the low recognition and willingness-to-pay for this logo in all study countries except for Italy. It should be communicated that the logo guarantees compliance with uniform EU-wide standards controlled under governmental supervision. Furthermore, country specific characteristics of the organic market should be taken into account. For instance in Germany it should be emphasised that the new EU logo and the German governmental logo Bio-Siegel are equivalent. In Denmark and the Czech Republic, it should be communicated that the new EU logo and the governmental logo are based on the same production standards.

The results of the CERTCOST project provide evidence that consumers clearly prefer selected organic logos over others. Therefore, it was a good decision to withdraw the

initial EU Commission's proposal to prohibit the use of governmental and private organic certification logos alongside the EU logo (Blake 2009).

4.1.2. Government authorities with own logos

Three EU countries with a governmental logo were represented in the CERTCOST project. In Denmark and the Czech Republic, consumers were willing to pay a high price premium for the governmental logo, whereas the willingness-to-pay for the former EU logo and the logo of the farmers' association Demeter was rather low. In Germany, in contrast, a high willingness-to-pay was recorded for the governmental logo as well as for the logo of the farmers' association Demeter.

In the Czech Republic, Denmark and Germany, the production standards behind the governmental logo correspond with the EU standards. While the German Bio-Siegel can be used on request on all products complying with Regulation 834/2007 (Öko-Kennzeichengesetz), the governmental logos in the Czech Republic and Denmark specify some further requirements.¹² Given the high WTP for the governmental logos in Denmark and the Czech Republic, it seems advisable to continue the use of the governmental logos in the foreseeable future. In Germany, consumers who are frequent buyers of organic food preferred the Demeter logo over the governmental logo, while the opposite was true for less frequent buyers. Therefore, it is advisable to display the governmental logo in addition to the mandatory EU logo, at least in a transition period. Assuming that the EU logo will gain consumer trust in the next years, the Bio-Siegel will then be dispensable, since it indicates exactly the same as the EU logo.

Turkey has a mandatory governmental logo which all organic products must carry. Nevertheless, more than half of the organic consumers who participated in the study were not familiar with the logo. It is thus highly recommendable that Turkish government authorities launch communication campaigns for increasing consumer awareness of the logo.

4.1.3. Private organisations with own logos

Recognition and willingness-to-pay (WTP) for logos of private organisations differed considerably between the study countries. In Denmark, Italy and the Czech Republic, the WTP for private logos was rather low compared to the logos with the highest WTP. In Switzerland and the UK, in contrast, private logos reached the highest WTP. Both countries do not have a governmental logo and unlike in Italy, the former voluntary EU logo was not common in the UK. In Germany, the WTP for the Demeter logo was high but on a similar level as the WTP for the governmental logo, even though farmers' associations have a long tradition in Germany.

The introduction of the mandatory EU logo for organic food raises the question regarding the fundamental purpose of private organic logos. It needs to be discussed

¹² *In the Czech Republic, the product must have been controlled by a control body authorised by the Ministry of Agriculture (KEZ, Biokont, AbCert) in order to carry the Czech governmental logo (Act on Organic Farming No 242/2000 Coll.). The Danish governmental logo is a control logo which requires that the latest preparation of the product (packaging and/or labelling) was undertaken by a company in Denmark under the inspection of the Danish governmental control authorities (Bekendtgørelse om økologiske fødevarer m.v. No 1258; Fødevarestyrelsens vejledning om økologiske fødevarer m.v.).*

from the consumer perspective whether it is actually desirable to have additional private organic certification logos in the market. On the one hand, label overflow and consumer confusion is reported in the literature as a barrier to increased purchase of organic products (see e.g. Langer et al. 2008). On the other hand, the CERTCOST results suggest that consumer trust in the mandatory EU logo might not be very pronounced in some countries. Some consumers prefer organic standards that exceed the EU requirements (e.g. Demeter) or organic logos of particular control bodies (e.g. 'Organic Farmers & Growers', Ecocert). Besides, in some EU countries such as the United Kingdom, consumer trust in private entities and regulations is generally higher than in governmental entities, let alone EU regulations (TNS Opinion & Social 2009). In these countries, the organic sector relies on well-known private organic logos. In addition, it needs to be recognised that the organic movement originated in private organisations. Furthermore, any private organisation is free to launch an organic logo (as long as the underlying requirements comply with the EU regulation). It therefore seems advisable to give recommendations for private organisations as to how they could position their organic certification logo in the market. The issue of consumer confusion can be mitigated even in the presence of several logos, however, provided that each logo is clearly targeted at a particular market segment and promoted by key information (Verbeke 2005).

However, assuming that the new EU logo will gain a high level of consumer trust, it is questionable whether many private organic certification logos will still be used for product labelling ten years from now. Marketing theory suggests that producers, processors and retailers might display an organic logo of a private organisation in addition to the mandatory EU logo only if the additional logo is recognised by consumers as a signal for an 'added value', i.e. the private scheme stands out clearly against the EU requirements. For those private organisations who still want their certification logo to be displayed on product packages we therefore recommend that they put effort into raising consumer awareness of their logo and forming perceptions of the scheme behind it. Private organisations that are not successful in identifying an added value need to keep in mind that it is not desirable from the consumer perspective to have a myriad of different organic certification logos in the market regarding which consumers do not perceive any difference.

Regarding potential added values, it needs to be distinguished between private organisations with own standards on the one hand and control bodies on the other hand. The logos of many **control bodies** simply indicate that the product was controlled by the respective body, but otherwise no difference to the EU logo exists. Such a logo is only likely to stay in the market provided that the control body enjoys particular trust among consumers, which requires considerable effort for raising consumer awareness.

Private organisations with own organic standards (organic sector and farmers' associations) potentially have more possibilities to differentiate their scheme from the EU logo. In the CERTCOST project, a number of potential added values were identified that private schemes with own organic standards could incorporate so that – in the eyes of consumers – these schemes differentiate themselves from the mandatory EU logo (see Janssen and Hamm 2011 for further details):

a) Stricter production standards

EU regulation (EC) No 834/2007 only sets *minimum* standards for organic production and processing, which may be exceeded or supplemented by other

organic certification schemes. Our research suggests that some consumers prefer particular organic certification schemes because of perceived stricter production standards. Defining stricter production standards could thus be a promising strategy for private standard owners to differentiate themselves from the mandatory EU logo. However, communication with consumers is extremely important in this context. According to previous studies, consumers know little about organic production methods (Hoogland et al. 2007, Hughner et al. 2007). A differentiation strategy based on stricter production standards must therefore focus on those aspects that are, firstly, important in the eyes of consumers and, secondly, easy to communicate. For example, previous studies showed that European consumers place high importance on animal welfare (Zander and Hamm 2010, Hughner et al. 2007).

b) Inspections by a *domestic* control body

The results from Denmark provide evidence that Danish consumers perceive the domestic (public) control system as more trustworthy and somehow stricter than foreign control bodies. Furthermore, the analysis of consumer attitudes towards a mandatory EU logo showed that consumers did not trust the control system in certain EU countries. These examples suggest that private standard owners could differentiate themselves from the EU scheme by stipulating that the product must have been inspected by a *domestic* certification body.

c) Domestic / regional / local origin

The CERTCOST results regarding the new mandatory indication of origin (EU agriculture, non-EU agriculture, EU/non-EU agriculture) provide evidence that consumers clearly prefer *precise* indications. The EU is not viewed as a homogenous entity. Furthermore, the high WTP for the Bio Suisse logo suggests that an organic logo which also indicates a *domestic* origin can be very successful. Other studies confirm that regional/local origin of food products is increasingly important to consumers (Zander and Hamm 2010, Stolz et al. 2009, Toler et al. 2009, Wirthgen 2005). Implementing criteria regarding the origin of the raw materials could thus be a promising strategy for private organic certification schemes to offer a unique selling proposition to consumers. However, the geographical boundaries for such an indication of origin need to be carefully chosen. In smaller countries, the indication could refer to the country as such, whereas in larger countries, smaller areas like regions or counties might be more appropriate (Zander and Hamm 2010).

The aspects mentioned here emerged from the analysis of consumer perceptions of voluntary organic certification schemes within the CERTCOST project. Further potential differentiation strategies for private standard owners might be found in other research on organic food. Just to mention two examples, a study on additional ethical attributes of organic food showed that organic consumers in Austria, Germany, Switzerland and United Kingdom are particularly interested in 'fair prices for farmers' (Zander and Hamm 2010). Another aspect of food production currently discussed intensively is carbon emission labelling. Translating fair prices or carbon emission standards into a certification scheme is certainly not an easy task but could be a promising niche strategy for selected private standard owners.

For all strategies mentioned here, communication with consumers is of key importance, since previous research showed that consumers have a low level of knowledge about agriculture and food production methods (Hoogland et al. 2007,

Hughner et al. 2007). Moreover, communication measures focussing on differences between a private scheme and other organic schemes are only credible if private organisations stop allowing exemptions from their own requirements for single producers/processors.

4.2 Producers, processors and retailers

According to our findings, organic certification logos play an important role in the buying decision of consumers. The price premium that consumers were willing to pay differed considerably between the tested organic logos. The highest price premiums were recorded for logos that were well-known, trusted and perceived to have strict organic standards and a strict control system. Different kinds of organic logos were preferred across the countries. In Denmark and the Czech Republic, consumers were willing to pay the highest price premium for the governmental logo. In Germany, a high willingness-to-pay (WTP) was recorded for the logo of the farmers' association Demeter and the governmental logo. In Italy, the old EU logo reached the highest WTP. In Switzerland, the logo of the farmers' umbrella organisation Bio Suisse was clearly preferred. In Turkey, consumers were willing to pay the highest price premium for the logo of the certification body Ecocert. In the UK, the WTP was the highest for the logos of the Soil Association and the certification body 'Organic Farmers & Growers'.

The CERTCOST results suggest that it might take some time until the new EU logo will be widely known and trusted in the population in those countries where the former voluntary EU logo was not very common. In these countries, it thus seems advisable to additionally label organic products with a well-known organic logo, at least in a transition period. In some countries, the organic logos preferred by consumers are attached to further requirements in addition to the principles of EU Regulation (EC) 834/2007.¹³ However, the results of the CERTCOST project suggest that the effort of fulfilling additional requirements might be worth for producers and processors, in order to label their products with those logos preferred by consumers.

Our results provide evidence that consumer preferences for certain organic certification logos vary among different consumer segments. A number of logos attracted a higher WTP among frequent buyers of organic food and customers of organic food shops compared to less frequent buyers and non-customers of organic food shops. These findings can be used by organic producers and processors for choosing an organic labelling scheme as well as a distribution channel for their products.

¹³ For instance, the Danish governmental logo is a control logo which requires that the latest preparation of the product (packaging and/or labelling) was undertaken by a company in Denmark under the inspection of the Danish governmental control authorities (*Bekendtgørelse om økologiske fødevarer m.v. No 1258; Fødevarestyrelsens vejledning om økologiske fødevarer m.v.*). In the Czech Republic, the product must have been controlled by a control body authorised by the Ministry of Agriculture (KEZ, Biokont, AbCert) in order to carry the Czech governmental logo (Act on Organic Farming No 242/2000 Coll.). In the UK, the standards of the Soil Association exceed the EU principles in some respects (Soil Association Ltd. 2010). The logos of the inspection bodies OF&G and Ecocert can only be displayed by operators controlled by these inspection bodies. The Demeter logo preferred by frequent buyers in Germany indicates that the anthroposophical standards of Demeter are fulfilled (Demeter e.V. 2011, 2010). Similarly, the farmers' umbrella organisation Bio Suisse has own organic standards exceeding the EU principles (Bio Suisse 2011).

4.3 Critical appreciation of the role of organic certification logos

The study of consumer preferences for organic certification logos within the CERTCOST project highlights the importance of understanding the consumer perspective on the organic food regime. Consumer perceptions of organic standards, certification and control are of subjective nature and in many cases not based on objective knowledge. It needs to be admitted that any organic certification logo which is neither mandatory nor already widely known among consumers will face severe difficulties in trying to attract consumer preferences. In the end, the decision upon the use of voluntary organic certification logos for product labelling lies with private processors and retailers. Processors and retailers, however, are primarily interested in promoting their own **brand** as a unique selling proposition to differentiate their products from other organic products. From the perspective of processors and retailers, organic certification logos only serve as tools for gaining consumer trust but they do not offer a unique selling proposition.

This circumstance will most likely have consequences for the design of product packages and the use of voluntary organic certification logos. Since July 2012, the mandatory EU logo and indication of origin must be displayed. More importantly, however, processors and retailers want to attract attention to their own brand label. Given that space on product packages is limited, particularly on the front side, voluntary organic certification logos therefore run the risk of losing importance – provided that the mandatory EU logo will gain consumer trust. This development will make it easier for processors and retailers to focus their efforts on establishing their own brands as unique selling propositions. Consequently, only those voluntary organic certification logos that consumers perceive as exceptional will maintain a position in the market.

REFERENCES

Act on Organic Farming No 242/2000 Coll. (Czech legislation).

Bekendtgørelse om økologiske fødevarer m.v. No 1258 of 12.12.2008.

Blake F. (2009). General analysis of the new Regulation. In: IFOAM EU Group, The new EU Regulation for organic food and farming – background, assessment, interpretation, p. 18-21.

Bio Suisse (2011). Richtlinien für die Erzeugung, Verarbeitung und den Handel von Knospe-Produkten. http://www.bio-suisse.ch/media/de/pdf2011/Regelwerk/rl_2011_d.pdf (accessed 16.04.2011).

Commission Regulation (EU) No 271/2010 of 24 March 2010 amending Regulation (EC) No 889/2008 laying down detailed rules for the implementation of Council Regulation (EC) No 834/2007, as regards the organic production logo of the European Union. Official Journal of the European Union, L84 (31.03.2010), p. 19-22.

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. Official Journal of the European Union, L189 (20.07.2007), p. 1-122.

Demeter e.V. (2010). Richtlinien für die Zertifizierung: „Demeter“ und „Biodynamisch“, Verarbeitung. 6th edn. <http://www.demeter.de/ebenenangleichung/zielgruppe/schnittmengen/leben-arbeiten/demeter-richtlinien/?MP=13-1491> (accessed 26.04.2011).

Demeter e.V. (2011). Richtlinien für die Zertifizierung: „Demeter“ und „Biodynamisch“, Erzeugung. <http://www.demeter.de/ebenenangleichung/zielgruppe/schnittmengen/leben-arbeiten/demeter-richtlinien/?MP=13-1491> (accessed 26.04.2011).

Fødevarestyrelsens vejledning om økologiske fødevarer m.v. of July 2009.

Hoogland, C.T., Boer, J. de and Boersema, J.J. (2007). Food and sustainability: Do consumers recognize, understand and value on-package information on production standards? *Appetite* 49(1):47-57.

Hughner, R.S., McDonagh, P., Prothero, A., Shultz II, C. J. and Stanton, J. (2007). Who are organic food consumers? A compilation and review of why people purchase organic food. *Journal of Consumer Behaviour* 6(2-3):94-110.

Jahn, G., Schramm, M. and Spiller, A. (2005). The reliability of certification: Quality labels as a consumer policy tool. *Journal of Consumer Policy* 28(1):53-73.

- Janssen, M. and Hamm, U. (2010). Standards und Kennzeichen für Öko-Lebensmittel aus Verbrauchersicht: Empfehlungen für agrar-politische Entscheidungsträger. *Berichte über Landwirtschaft* 88(1):86-102.
- Janssen, M. and Hamm, U. (2011). Consumer perception of different organic certification schemes in five European countries. *Organic Agriculture* 1(1):31-43.
- Janssen, M. and Hamm, U. (forthcoming a). Product labelling in the market for organic food: Consumer preferences and willingness-to-pay for different organic certification logos. Article submitted to *Food Quality and Preference*.
- Janssen, M. and Hamm, U. (forthcoming b). The mandatory EU logo for organic food: Consumer perceptions. Article accepted for publication in *British Food Journal*.
- Langer, A., Eisend, M. and Kuß, A. (2008). The impact of eco-labels on consumers: Less information, more confusion? In: Borghini S., McGrath M.A. and Otnes C.C., *European advances in consumer research*, Vol. 8, Association for Consumer Research, p. 334-335.
- Naspetti, S., Hamm, U., Janssen, M. and Zanolì, R. (2009). Quant ovale il marchio bio? Un'indagine edonimetrica. In: Crescimanno M. and Schifani G. (eds.). *Atti del IV Workshop GRAB-IT Agricoltura Biologica: sistemi produttivi e modelli di commercializzazione e di consumo*, GRAB-IT, Palermo.
- Öko-Kennzeichengesetz: Gesetz zur Einführung und Verwendung eines Kennzeichens für Erzeugnisse des ökologischen Landbaus vom 10. Dezember 2001, neugefasst durch Bekanntmachung vom 20. Januar 2009. In: *BGBl. I*, p.78.
- Roe, B. and Sheldon, I. (2007). Credence good labeling: The efficiency and distributional implications of several policy approaches. *American Journal of Agricultural Economics* 89(4):1020-1033.
- Schmidt, M.-J. and Janssen, M. (2010). Hochwertig muss hochpreisig sein. *Lebendige Erde* 61(1):28-29.
- Soil Association Ltd. (2010). Organic standards. <http://www.sacert.org/Standards/tabid/1084/language/en-GB/Default.aspx> (accessed 26.04.2011).
- Stolz, H., Bodini, A., Stolze, M., Hamm, U. and Richter, T. (2009). Lebensmittelqualität aus der Verbraucherperspektive – eine Synthese qualitativer Studien zur Wahrnehmung und Beurteilung verschiedener Qualitätskriterien bei Öko-Produkten. *Berichte über Landwirtschaft* 87(1):153-182.
- TNS Opinion & Social (2009). Eurobarometer 72 – Public Opinion in the European Union. http://ec.europa.eu/public_opinion/archives/eb/eb72/eb72_first_en.pdf, accessed 31.05.2010.
- Toler, S., Briggeman, B.C., Lusk, J.L. and Adams, D.C. (2009). Fairness, farmers markets, and local production. *American Journal of Agricultural Economics* 91(5):1272-1278.
- Verbeke, W. (2005). Agriculture and the food industry in the information age. *European Review of Agricultural Economics* 32(3):347-368.
- Wirthgen, A. (2005). Consumer, retailer, and producer assessments of product differentiation according to regional origin and process quality. *Agribusiness* 21(2):191-211.
- Zander, K. and Hamm, U. (2010). Consumer preferences for additional ethical attributes of organic food. *Food Quality and Preference* 21(5):495-503.
- Zorn, A., Lippert, C. and Dabbert, S. (2009). Economic concepts of organic certification. Report of the CERTCOST project. http://www.certcost.org/Lib/CERTCOST/Deliverable/D11_D5.pdf (accessed 26.04.2011).

ANNEX

Table 9: Persons responsible for data collection¹ in the study countries

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¹ In the qualitative study, the data was also analysed at national level.

² Participation only in the inventory study.

³ Participation only in the qualitative study.

⁴ Participation only in the quantitative study.