

# Are consumers willing to pay a price premium for specific organic logos?

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## Abstract

*Since July 2010, prepacked organic food produced in the EU must be labelled with the new mandatory EU logo for organic food. However, there is a long tradition of voluntary organic certification logos in most European countries. In this paper we analyse the willingness-to pay (WTP) of European consumers for products with different voluntary organic certification logos to make recommendations for actors in the organic sector. Data was collected by means of choice experiments with 1,997 consumers of organic food in five EU countries, based on which a number of random parameter logit models were estimated. According to our results, there were great differences between the tested logos regarding the price premium that consumers were willing to pay compared to organic products without a logo. One to two logos with a considerable additional WTP could be identified per country. It is recommended to display these logos in addition to the mandatory EU logo, at least in a transition period. The additional WTP for the old voluntary EU logo was close or equal to zero in all study countries except Italy. For the new EU logo, it is therefore recommended to provide public financial support for communication campaigns on the new logo.*

## Introduction

Since July 2010, prepacked organic food produced in the EU must be labelled with the new mandatory EU logo for organic food (Regulation (EU) No 271/2010). It is still allowed to additionally use voluntary organic certification logos (in short 'organic logos') like those which have been on the market for many years in most European countries. With a mandatory EU logo, however, it currently remains unclear whether the use of additional voluntary organic logos is beneficial. From the supply-side perspective, space on product packages as well as marketing budgets are limited. Therefore, it only makes sense to label products with additional voluntary logos if consumers prefer these products over similar products without the additional logo. In the present study we investigated consumers' willingness-to-pay (WTP) for different voluntary organic certification logos in the five EU countries Denmark (DK), Germany (DE), Italy (IT), the United Kingdom (UK) and the Czech Republic (CZ). The objective of the paper is to make recommendations for actors in the organic sector regarding the use and promotion of organic logos.

## Materials and methods

Consumer choice experiments were conducted in February and March 2010 with around 400 participants in each of the five study countries. In the choice experiments,

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<sup>2</sup> As above.

the participants were asked to make buying decisions for apples and eggs. The participants were presented with real products and price tags. The four product alternatives among which the participants could choose looked identically but were marked with different organic labels and prices:

- The most relevant organic logos for each country were chosen so that the tested logos differed across the countries.<sup>3</sup> In all countries, one alternative per choice set was just marked with the word 'organic' without a logo and one alternative carried the old voluntary EU logo. In addition, the following two logos were tested: the respective governmental logo and the Demeter logo in Denmark, Germany and the Czech Republic; the logos of the certification body CCPB and Demeter in Italy; the logos of the Soil Association and the certification body OF&G in the UK.
- Four different price levels were tested. The relative price levels were the same in all countries (1.00; 1.25; 1.50; 1.75). The absolute prices used in the experiments were based on the average market price of organic apples/eggs in the respective survey regions one month before the experiments were conducted (the average market price equalled price level 1.25).

A fractional factorial design with 16 different choice sets was used to systematically vary the price levels across the four product alternatives. The participants were presented with two choice sets each 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"). In the subsequent structured interviews, the participants were asked to rate the tested labels regarding label awareness on a seven-point scale with "1=this label is completely unknown to me" and "7=this label is well-known to me".

The data was analysed with random parameter (RP) logit models (also called mixed logit models) with the Software NLOGIT.<sup>4</sup> Separate models were estimated for apples and eggs with alternative specific constant terms and a generic price coefficient. The additional WTP for specific organic logos was determined by dividing the alternative specific constant terms by the price coefficient (see e.g. Hensher *et al.* 2005). As suggested in the literature (see e.g. Rigby *et al.* 2009, Revelt & Train 1998), the price coefficient was estimated as a fixed parameter. The alternative specific constants were checked for a systematic variation around the mean based on the normal distribution. Please note that the price coefficient was estimated based on relative price levels (and not absolute price levels) to make the WTP measures comparable across the different countries. The WTP measures can therefore not be interpreted in monetary terms but only relative to each other.

## Results

For most of the tested logos, a significant positive additional WTP was observed compared to organic products without a logo (Table 1). However, the mean price premium that consumers were willing to pay differed considerably. Generally it holds true that the better known a label was, the higher was the WTP:

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<sup>3</sup> The selection of the tested logos was based on the results of an inventory study and a study with focus group discussions conducted by the authors of this paper and their partner organisations. In each country, the different kinds of certification logos were included (EU logo, governmental logo if existent, private logo).

<sup>4</sup> Unlike multinomial logit models, RP logit models are able to account for preference heterogeneity (see e.g. Rigby *et al.* 2009, Hensher & Greene 2003).

- Old EU logo: The additional WTP for the old voluntary EU logo was close or equal to zero in all study countries except for Italy, where this logo had the highest additional WTP of all logos tested in Italy. The old EU logo was unknown to most participants in Germany (2.1)<sup>5</sup> and the UK (1.8), slightly better known in the Czech Republic (3.7) and Denmark (4.2) and very well known in Italy (6.0).
- Governmental logos: In Denmark and the Czech Republic, the governmental logo featured the highest WTP of all logos tested. In Germany, the WTP for the governmental logo and the Demeter logo were both equally high.
- Private logos: The Demeter logo featured a high additional WTP only in Germany where it was also very well-known (6.0), whereas in Denmark, Italy and the Czech Republic, Demeter was the logo with the lowest additional WTP and the lowest level of awareness. In the UK, the additional WTP for the logos of the Soil Association and the certification body OF&G was equally high (but on a relatively low level compared to the logos with the highest WTP in other countries).

**Tab. 1: Additional WTP for specific organic logos<sup>1</sup>**

Country	Organic logos	Apples					Eggs				
		N	Mean	SD <sup>2</sup>	Min <sup>3</sup>	Max <sup>4</sup>	N	Mean	SD <sup>2</sup>	Min <sup>3</sup>	Max <sup>4</sup>
CZ	EU logo (old logo)	391	0.17 <sup>a</sup>	0.34	-0.35	0.95	388	0.29 <sup>a</sup>	0.17	0.01	0.72
	Governmental logo	391	0.70 <sup>b</sup>	0.69	-0.51	1.58	388	0.67 <sup>b</sup>	0.48	-0.20	1.34
	Demeter logo	391	0.11 <sup>c</sup>	0.00	0.11	0.11	388	0.15 <sup>c</sup>	0.00	0.15	0.15
DE	EU logo (old logo)	386	0.01 <sup>a,*</sup>	0.00	0.01	0.01	386	0.26 <sup>a</sup>	0.00	0.26	0.26
	Governmental logo	386	0.63 <sup>b</sup>	0.18	0.26	0.97	386	1.15 <sup>b</sup>	0.27	0.65	1.65
	Demeter logo	386	0.61 <sup>b</sup>	0.48	-0.19	1.47	386	1.31 <sup>c</sup>	0.42	0.49	1.98
DK	EU logo (old logo)	394	0.17 <sup>a</sup>	0.05	0.04	0.37	398	0.25 <sup>a</sup>	0.00	0.25	0.25
	Governmental logo	394	0.65 <sup>b</sup>	0.31	-0.03	1.12	398	0.67 <sup>b</sup>	0.25	0.02	1.11
	Demeter logo	394	0.17 <sup>a</sup>	0.21	-0.28	0.89	398	0.27 <sup>a</sup>	0.18	-0.14	0.88
IT	EU logo (old logo)	427	1.00 <sup>a</sup>	0.63	-0.02	1.94	422	1.05 <sup>a</sup>	0.79	-0.33	2.14
	CCPB logo	427	0.60 <sup>b</sup>	0.29	0.08	1.28	422	0.69 <sup>b</sup>	0.45	-0.19	1.62
	Demeter logo	427	0.51 <sup>c</sup>	0.85	-0.57	2.22	422	0.47 <sup>c</sup>	0.64	-0.62	1.91
UK	EU logo (old logo)	395	0.10 <sup>a</sup>	0.00	0.10	0.10	393	0.07 <sup>a,*</sup>	0.00	0.07	0.07
	Soil Assn. logo	395	0.32 <sup>b</sup>	0.42	-0.22	1.17	393	0.34 <sup>b</sup>	0.41	-0.29	1.14
	OF&G logo	395	0.41 <sup>b</sup>	0.25	0.00	0.95	393	0.45 <sup>b</sup>	0.35	-0.22	1.11

<sup>1</sup> Based on relative price levels (1.00; 1.25; 1.50; 1.75). Reference category: Products labelled with the word 'organic' without a logo.

<sup>2</sup> SD=Standard deviation. <sup>3</sup> Min=Minimum. <sup>4</sup> Max=Maximum.

<sup>a,b,c</sup> WTP measures with different letters are significantly different from each other (given the same product and country).

\* Mean WTP not significantly different from zero.

## Discussion and Conclusions

According to our findings, consumers were willing to pay a price premium for some of the tested organic logos, i.e. they clearly preferred these logos over other tested logos and over products without a logo. Therefore, it seems advisable to display the

<sup>5</sup> The values in brackets refer to the mean level of awareness measured on a seven-point scale with "1=this label is completely unknown to me" and "7=this label is well-known to me":

CZ: EU logo (3.7), governmental logo (6.1), Demeter logo (1.7), labelling without a logo (5.0)

DE: EU logo (2.1), governmental logo (6.7), Demeter logo (6.0), labelling without a logo (3.9)

DK: EU logo (4.2), governmental logo (6.9), Demeter logo (3.4), labelling without a logo (4.6)

IT: EU logo (6.0), CCPB logo (4.2), Demeter logo (3.8), labelling without a logo (3.1)

UK: EU logo (1.8), Soil Association logo (5.7), OF&G logo (4.4), labelling without a logo (5.5)

preferred and well-known logos in addition to the mandatory EU logo. This holds particularly true for those logos with additional requirements compared to the EU logo in terms of the underlying production standards and/or the control system (these are the governmental logo in Denmark and the Czech Republic, the Demeter logo in Germany, and the logos of the Soil Association and OF&G in the UK). A relatively high WTP was also recorded for the Bio-Siegel in Germany. This logo indicates exactly the same as the new EU logo (namely compliance with EU Regulation 834/2007), which consumers might not be aware of however. In Germany, the Bio-Siegel should therefore be displayed in addition to the mandatory EU logo in a transition period, until the new EU logo is well-known in the population.

Regarding the new mandatory EU logo, the following recommendations can be made: According to our results, for some of the tested logos the additional WTP was close or equal to zero. It might thus not be sufficient to simply launch a new EU logo without substantial communication campaigns financed by public authorities, as it is foreseen at the time of writing. If the policy goal of strengthening the organic sector is to be achieved consumer awareness of the new logo must be raised. Given the low additional WTP and the low level of awareness of the old voluntary EU logo in all study countries except for Italy, it becomes obvious that communication campaigns on the new EU logo should not *per se* refer to the old logo but should rather take into account country specific characteristics of the organic market (e.g. in Germany it should be emphasised that the new EU logo and the German Bio-Siegel are equivalent in terms of the underlying regulations).

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