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# Organic certification labels from the perspective of consumers in Switzerland

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## Abstract

*Organic labels have been established to communicate the consumer that a certain product has been produced according to defined organic standards. The aim of the research presented in this paper was to investigate i) how Swiss organic consumers perceived different organic labels and ii) if Swiss organic consumers prefer particular organic certification schemes over others. To achieve these objectives, we carried out focus group discussions with organic consumers, and conducted consumer choice experiments that were combined with a subsequent structured questionnaire. We focused on two labels that are well established in the Swiss market – one mostly in specialised organic shops (Demeter label), the other one also found widely in a larger retail shop (Bio Suisse label «Knospe»). Our analysis shows the high level of awareness of the Bio Suisse label among Swiss consumers. Furthermore, the study provides evidence for the importance of trust in labels in the Swiss organic market.*

**Keywords:** Organic Labels, Organic Standards,  
Consumer Choice Experiment, WTP

**JEL classification:** Q13, D12

## 1. Introduction

In the Swiss food market, labels represent an important marketing tool for product differentiation. Food labels may be classified into food ingredient /attribute labels, sensorial labels, geographical origin labels, and sustainability labels. Within the latter label group, organic labels are the most frequently found on food products in Switzerland. Organic labels can be further split into public (e.g. the EU organic label) and private labels. The latter are labels of organic farmers' associations, such as the Bio Suisse label «Knospe» («bud») or the Demeter label «demeter». In Switzerland, the label of the Swiss organic farmer umbrella organisation Bio Suisse was successfully introduced in 1981 (Bio Suisse 2012). Since that time, the Bio Suisse label has become the most commonly used organic label in Switzerland. In contrast, the Demeter label is found mainly on products sold in specialised organic food and health shops, which is also the place to find products labelled with the EU organic label. The latter is found in the organic food shops on imported organic products, such as olive oil and pasta. The purpose behind organic labels is to communicate the consumer that a certain product has been produced according to defined organic standards (Roe and Sheldon 2007; Golan et al. 2001; Jahn et al. 2005). In Switzerland, products sold as organic must comply at least with the Swiss organic regulation (Regulation 910.18), and if labelled with the Bio Suisse label they have to comply with the (private) standards set by the Bio Suisse organisation. The Demeter label, in contrast to other organic labels, serves as label for biodynamic products. According to Demeter (2012), the basis for membership is the Biodynamic agriculture method, originated by Rudolf Steiner in his «Agriculture Course» given in Koberwitz in 1924, and developed further in practice and research.» The database «Organic Rules and Certification» ([www.organicrules.org](http://www.organicrules.org)) identifies the differences between these standards and in relation to the EU organic regulation.

Yet, it remains unclear if and how consumers perceive and value the differences between different organic standards. Previous research that was accomplished in the late 1990ies has shown that Swiss consumers even did not know much about the differences between organic food and food from other production systems, such as integrated production (Belz 1998). Also recent consumer research confirms that organic consumers in Switzerland only have a vague idea

of the differences between organic and non-organic products (Stolz et al. 2009). This phenomenon can be explained by the selective nature of consumers' perception (Kroeber-Riel and Weinberg 2003), which limits the extent to which information about complex issues, such as organic farming or food quality, can be communicated to the consumers (Stolz et al. 2009). In addition, previous research has revealed that consumers are confused by the number of different labels existing in Switzerland (Richter et al. 2004). This forces organic label associations to follow a label differentiation strategy by adding value to their label that goes beyond the basic organic standards (Staub 2008). Producers following these particular standards must adapt their production processes accordingly and bear the costs for certification of these processes. Such an additional effort is only attractive if it pays back on the market. This is only given when the consumers are aware of the label and what it implies for the certified product. So far, no study has addressed the perceptions and preferences of Swiss consumers for different organic labels and whether and why they prefer particular organic certification schemes over others.

Against this background, the aim of the research presented in this paper was to investigate i) how Swiss organic consumers perceived different organic labels and ii) if Swiss organic consumers prefer particular organic certification schemes over others. To achieve these objectives, we carried out focus group discussions with organic consumers, and conducted consumer choice experiments that were combined with a subsequent structured questionnaire. Our research formed part of the European Commission funded research project EU-CertCost (Economic analysis of certification systems for organic food and farming, No. 207727), which had the overall objective to provide recommendations to improve the organic food certification systems in Europe in terms of efficiency, transparency, and cost effectiveness. We thereby focused on two labels that are well established in the Swiss market – the Demeter label, mostly in specialised organic shops, and the Bio Suisse label, also found widely in a larger retail shop.

This paper is structured as follows: the methodology of our research, including a description of the applied methods, the collection of empirical data and the data analysis is presented in section 2. The results are presented in section 3, followed by a discussion of the results and conclusions for marketers of organic food in section 4 and 5, respectively.

## 2. Methods

We used a combination of qualitative and quantitative methods to analyse consumer perceptions and preferences for organic labels in Switzerland. In a first step, three focus group discussions were carried out to explore consumer perceptions. In a second step, consumer preferences and willingness-to-pay (WTP) for different organic labels were investigated by choice experiments. This method was chosen since it is suitable for observing consumers' buying behaviour without a negative (or at least lower) impact of response bias (Hair et al. 2006), which is potentially given in interview surveys.

### 2.1 Focus group discussions

Three focus group discussions were carried out in Basel in May 2009. The sample of participants encompassed a reasonable spread over age and gender, which roughly corresponded with the distribution within the population that is usually in charge of purchasing food in Swiss households. Two group discussions were conducted with occasional organic consumers and one with regular organic consumers.<sup>1</sup> Table 1 shows the composition of the different groups.

*Table 1: Composition of the focus group discussions*

Groups	Total		Occasional consumers 1		Occasional consumers 2		Committed consumers	
	N	%	N	%	N	%	N	%
<b>Women, age 18-44</b>	12	30.0%	6	42.9%	3	21.4%	3	25.0%
<b>Women, age 45-75</b>	12	30.0%	3	21.4%	5	35.7%	4	33.3%
<b>Men, age 18-44</b>	10	25.0%	3	21.4%	4	28.6%	3	25.0%
<b>Men, age 45-75</b>	6	15.0%	2	14.3%	2	14.3%	2	16.7%
<b>Total</b>	<b>40</b>	<b>100.0%</b>	<b>14</b>	<b>100.0%</b>	<b>14</b>	<b>100.0%</b>	<b>12</b>	<b>100.0%</b>

In the focus group discussions the participants were asked about their awareness and perception of organic food produced under different standards and their knowledge of different organic standards. The question on awareness

<sup>1</sup> The consumers' purchase frequency of organic products was assessed by asking how frequently they bought seven categories of organic products, with the answers «almost never», «sometimes», «almost always», scoring 0, 1, and 2, respectively. Consumers reaching 3 to 6 points were regarded as occasional organic consumers, those scoring higher as regular organic consumers.

and perception of different organic labels was first asked without showing any organic label to the group, and a second time (in a more specific way) after presenting them four organic labels found in Switzerland: the Bio Suisse label with and without the extension «Suisse», the Demeter label, and the EU organic label.

Discussions in the groups lasted for 30 to 45 minutes each, and were recorded by video and audio digital devices. They were transcribed and analysed by a content analysis that applied a category system, which had been developed on the basis of preliminary short reports on the main outcomes and arguments raised in the focus groups.

## **2.2 Quantitative study**




### **2.2.1 Design of the consumer choice experiments**

In the consumer choice experiments, two products were tested: organic apples and organic eggs. These two products were chosen because it was intended to cover both a plant and an animal product in this research. Apart from this, apples and eggs are available from domestic production and are widely available in organic quality and finally these products can be sold as non-branded products.

In the choice experiments, consumers were asked to choose between different alternatives of organic apples and eggs. Consumers were shown two choice sets of apples and two choice sets of eggs. Each choice set included four product alternatives. The product alternatives within a choice set had an identical appearance/packaging apart from different organic labels and prices.

Three different organic labels were tested on the products in each choice set (Table 2): the Bio Suisse label with the extension «Suisse» and the Demeter label. Additionally, a fake label was created referring to the Swiss organic regulation. Besides these three labels, the claim «organic» without any label was included in the design. The four product alternatives in each choice set were offered on a table and were labelled with price tags.

*Table 2: Organic labels that were used in the choice experiments*

Label 1	Label 2	Label 3	Option 4
Fake logo 	Bio Suisse logo 	Demeter 	Generic labelling with the prefix 'organic' without logo

All in all, four different price levels were tested in the choice experiment, whereby price level 2 represents the average organic egg and apple price at the time of the survey (Table 3)<sup>2</sup>.

*Table 3: Price levels used in the choice experiments*

Product	Price level	Price level in % of average market price	Price in CHF
<b>Apples<sup>1</sup></b>	1	80	4.65
	2	100	5.80
	3	120	6.95
	4	140	8.10
<b>Eggs<sup>2</sup></b>	1	80	3.95
	2	100	4.95
	3	120	5.95
	4	140	6.95

<sup>1</sup> Price for 1 kg apples; <sup>2</sup> Price for 6 eggs

<sup>2</sup> To choose these price levels, a price inventory study was conducted, in which the current average organic egg and apple prices were identified. This average organic egg and apple price represents price level 2 in Table 3. Price level 1 accounts for 80 % of the average price level, price level 3 120 %, and price level 4 140 % of the average price level.



The consumers were asked to buy one of the products presented from each choice. To make the choice situation more realistic, the consumers could also chose the «no-buy option». Such a no-buy option was included since previous studies showed that forced choice can cause biased outcomes (Dhar and Simonson 2003).<sup>3</sup>

The choice experiments were designed as so-called labelled experiment, in which the three organic labels and the claim «organic» were present in each choice set, while the four price levels varied between the alternatives and choice sets. The experimental design for the systematic variation of the price levels across the alternatives was based on an orthogonal fractional factorial design developed in the software package PASW. The design consisted of 16 different choice sets for apples and eggs respectively. In order to reduce the cognitive burden from decision making, the sample was split into eight blocks. Thus, each consumer was faced with only two of the total 16 choice sets for apples and two for eggs.

### **2.2.2 Structured interview**

The structured face-to-face interview was conducted after the choice experiments. Since the preceding qualitative study suggested that consumer attitudes towards an organic certification label were mainly related to trust and credibility of the label, and the perceptions of the underlying standards and control system, the structured interviews addressed these aspects. Furthermore, in accordance with the literature (Solomon et al. 2006), it was hypothesised that attitudes towards an organic certification label consists of affective (trust, credibility) and cognitive elements (label recognition, perceptions of standards and control), both closely intertwined. Thus, the structured interview contained a multi-item battery for measuring consumer perceptions and attitudes towards each of the tested labels. The items were measured on a seven-point semantic differential scale. Since the pre-test and the preceding focus group study showed that consumers had difficulties evaluating organic labels that they did not know, a «don't know» category was included, as suggested by Aaker et al. (2010).

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<sup>3</sup> Other than in most choice experimental studies, the consumers could choose between real physical products instead of pictures of products shown in a questionnaire in order to create a choice situation closely to a real buying situation and thus to reduce the hypothetical bias. Furthermore, to reduce the hypothetical bias, the participants had to pay for the chosen products (Lusk and Schroeder 2004).



Apart from consumers' attitudes, the interviews addressed the buying frequency of organic food, since it is likely that the extent to which a consumer buys organic food influences his/her preferences for organic certification labels. More frequent buyers of organic food are probably more familiar with organic labels than occasional buyers. Moreover, it was assumed that familiarity with certain organic labels is related to the question in what kind of shop a consumer buys organic food. Therefore, the participants were asked where they buy organic food. Finally, selected socio-demographic characteristics were collected. These were gender, age, household size, level of education and net household income.

### **2.2.3 Data collection of the quantitative study**

Data was collected in February and March 2010. Altogether 395 consumers of organic food took part in our research. The consumer choice experiments and interviews were conducted in the North Western part of Switzerland at two kinds of locations: (1) conventional supermarkets and (2) specialised organic food shops. Regarding location 1, the survey was conducted in COOP shops in a small and a large town, and in a Migros shop in a large town. For location 2, specialised organic food shops in a small town were chosen. The shares of surveys conducted at each kind of shop approximately reflected the market share of that type of shop. The consumers were recruited at the point of purchase. Quota sampling for age and gender was used reflecting the shares of these groups in the total population and the buying behaviour of households. To ensure that the results are relevant for the organic market, only regular organic consumers who buy the tested kinds of products (apples and eggs) in organic quality at least once a month were selected.

### **2.2.4 Quantitative data analysis**

The data was analysed with random parameter logit models (RPL models) (Revelt and Train 1998). RPL models are based on the random utility theory (Lancaster 1966), which is a theory that explains choice behaviour. According to the random utility theory, a consumer will choose a certain (product) alternative out of a range of several (product) alternatives depending on the perceived utility. The alternative with the highest perceived utility is preferred. Herein, utility  $U$  is split into a systematic part  $V_{ni}$ , and a stochastic part  $\varepsilon_{ni}$  (Louviere et al. 2000):

$$U_{ni} = V_{ni} + \varepsilon_{ni} \quad (1)$$

The stochastic part  $\varepsilon_{ni}$ , often referred to as error term, captures behavioural inconsistencies and unobserved sources of utility in choice behaviour, while the systematic part  $V_{ni}$  captures the measurable variables, such as price, labelling and consumer characteristics.  $V_{ni}$  is defined as a linear expression including a unique coefficient for each variable to account for that variable's marginal utility input (Hensher et al. 2005).

In our case, the systematic part of the utility function was assumed to encompass two product attributes, namely the tested organic labels as alternative specific constants (ASC) and the price levels. Other than more basic multinomial logit models, which assume the random error terms to be independently and identically distributed across the alternatives, and which estimate fixed parameters across all respondents, RPL models are more flexible and allow for preference heterogeneity (Hensher and Greene 2003). RPL models provide random parameters, whereas both the mean and the standard deviation are estimated according to a predefined probability distribution. The model shows whether a certain parameter is random or fixed. For random parameters, the estimate for the standard deviation is significant. If the standard deviation is not significant, the parameter indicates no significant difference among decision makers regarding the preference for a certain attribute (Hensher et al. 2005). In our study, we assumed the label coefficients (ASCs) to follow a normal distribution. The price parameter was estimated as a fix parameter to avoid implausible WTP estimates.<sup>4</sup> We tested whether the organic budget share influenced preferences for different organic labels.

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<sup>4</sup> In the apple model, the ASC for the fake logo was finally specified as a fix parameter. In an earlier model estimation, the standard deviation turned out to be not significant. In the literature, it is suggested to re-estimate the model and specify the parameter as fix if this happens (Hensher et al. 2005).

In RPL models, the choice probability in a choice set  $t$  is conditional over the vector of the taste parameters of  $K$  elements (or attributes). Since RPL models account for preference heterogeneity, these elements can be random. Furthermore, the elements  $K$  can be conditional on the individual-specific error components. The conditional probability of selecting a specific alternative  $i$  from a choice set  $J$  in choice  $t$  of a sequence of choices  $T$  by a respondent  $n$  is modelled as:

$$P(int|\beta_n, \varepsilon_n) = \frac{e^{X_{int}\beta_n + 1(\varepsilon_{jn})}}{\sum_{j=1}^J e^{X_{jnt}\beta_n + 1(\varepsilon_{jn})}}, \quad (2)$$

whereas  $X_{int}$  represents a vector of the elements explaining choice and  $\beta_n$  a vector of the parameters to be estimated. Furthermore, the model considers the potential error component  $\varepsilon_{jn}$ . In the model,  $1(\dots)$  is an indicator function for the experimentally designed alternatives involving choice in each choice set, serving as additional error component meant to capture the cognitive effort of evaluating a hypothetical purchase.

It is assumed that sequences of choices  $T$  of the same individual are independent. The joint probability of a sequence of choices ( $it=1, it=2, it=3, \dots, it=T$ ) is:

$$P(\langle i_{t=1}, i_{t=2}, i_{t=3} \rangle n | \beta_n, \varepsilon_n) = \prod_{t=1}^{t=T} \frac{e^{X_{int}\beta_n + 1(\varepsilon_{in})}}{\sum_{j=1}^J e^{X_{jnt}\beta_n + 1(\varepsilon_{jn})}}. \quad (3)$$

The choice probabilities account for stability of preferences across a sequence of choices by consumer  $n$ . They include correlation amongst probabilities of choice by the same consumer. As the random parameters follow a certain distribution, there is no finite solution. Instead, the random parameters are obtained by simulation (Train 2003). The marginal probability of choice is therefore derived from integration of the probability function over the distribution function for the  $K$  random parameters. The RPL model across respondents is estimated with the log-likelihood function that provides the sum of log of the probabilities across respondents:

$$\ln L = \sum_{n=1}^n \ln P(n) = \sum_{n=1}^n \ln[P(n, \beta_n, \varepsilon_n)]. \quad (4)$$

The mean marginal willingness to pay (WTP) was calculated by dividing the label parameter by the price parameter, as suggested by Lusk and Schroeder (2004):

$$WTP_i = \beta_{\text{LABEL}} / \beta_{\text{PRICE}} \quad (5)$$

The marginal WTP provides the additional WTP for apples/eggs with a certain label compared to organic apples/eggs without a certain label.

### 3. Results

In this section, the main outcomes of the focus group discussions are summarised. Subsequently, we show how much consumers were willing to pay for the different organic labels, and then present which attitudes and perceptions regarding the labels influenced their choice.<sup>5</sup>

#### 3.1 Focus group discussion

Before any organic label was shown, the participants in the focus group discussions should explain how they recognised organic products, and where they usually bought them. Several participants mentioned that there were a lot of different labels for different products and different standards or qualities. They argued that sometimes this diversity was overwhelming and made them insecure regarding their choice of label. The importance of the point of sale was stressed by the discussants. The different shops (large retailers, specialised shops) were closely linked with different labels, so that the label itself often seemed not so important. In addition, the Bio Suisse label was mentioned, whereas nobody referred to the Demeter label.

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<sup>5</sup> In the focus group discussion, the Bio Suisse label was used in its two variants, with and without the extension «Suisse» (for products produced in Switzerland). In the choice experiments, we only used the Bio Suisse label with the extension « Suisse».

After the four labels were shown (Bio Suisse label with and without the extension «Suisse», Demeter label, EU label, and only the word «organic»), nearly all participants stated to know the two Bio Suisse labels, although not all mentioned it explicitly. Some only nodded when others made a statement in that direction. The Bio Suisse label, be it with or without the extension «Suisse», is the only organic label that is widely spread across Switzerland, so that it is no wonder that one participant found that Swiss people had probably «internalised» it.

In contrast, several did not know the Demeter label, and only one was familiar with the EU label. Regarding the Demeter label, a few participants mentioned the particular ‘philosophy’ behind the Demeter label

*«...as to Demeter, I am attached to it, I know that there is a philosophy behind that is followed» (CH FG1-O/1)*

However, not for all who mentioned such a philosophy, this was decisive for their preference of Demeter products. By contrast, two participants actively distanced themselves from anthroposophy, while partly at the same time stating a preference for the supposedly high standards in animal welfare by Demeter.

*«I actually do not need the anthroposophic touch of Demeter. That is a philosophical thing.» (CH FG2-F/3)*

Regarding the standards behind the different labels, the discussion highlighted the importance of trust more than detailed knowledge about the standards. This trust concerned both the retailer and the label. Indeed, in-depth knowledge about the particularities of the organic standards was widely missing, yet, there was a general feeling of trust towards the control system behind the standards, in particular when the participants thought that a label referred to a Swiss standard. As one participant put it:

*«Well to me it's important that it simply is organically grown, whereby I do not exactly know the criteria anymore, I don't need to know them, I trust that when I buy organic it is certified by bio.inspecta [one of the Swiss certification bodies] etc., that's enough for me, actually.» (CH-FG2-F/3)*

During the discussion, it seemed that the Bio Suisse label with the extension «Suisse» gained in trust and perception of higher standards in comparison to the Bio Suisse label without the extension. However, both labels are based on the same standards from the organic farmers' umbrella organisation Bio Suisse. The difference lies in the share of ingredients produced in Switzerland, what only one participant mentioned (see next section). The explicit presentation of both labels seemed to let some participants think that only the Bio Suisse label with the extension «Suisse» stood for high Swiss quality which they trusted whereas the Bio Suisse label without the extension «Suisse» was associated with lower production standards, such as EU.

*«(...) if organic, then Bio Suisse and there I just assume that the relative strict standards are kept, and are just not softened by this BIO without Bio Suisse by adding anything from the EU, such as feed additives or whatever (...)» (CH FG3-O/4)*

Only one participant pointed at her perception of higher standards of Demeter regarding animal husbandry, to which she attached a particular importance.

*«Well, with meat, I actually can imagine that Demeter is justified, because, well, I am a little concerned with animal welfare, and this is the only brand that is not torn to pieces.» (CH FG2-F/6)*

In sum, while knowledge about organic standards is limited, the focus group discussions revealed that the Swiss consumers in general trust the labelling and in particular the retailers that sell organic products. There is a high level of awareness of the Bio Suisse label among organic consumers.

### 3.2 Results from the choice experiments and survey

Figure 1 shows the average WTP for organic labels in Switzerland. Table 4 includes the coefficients of the underlying RPL models.

Figure 1

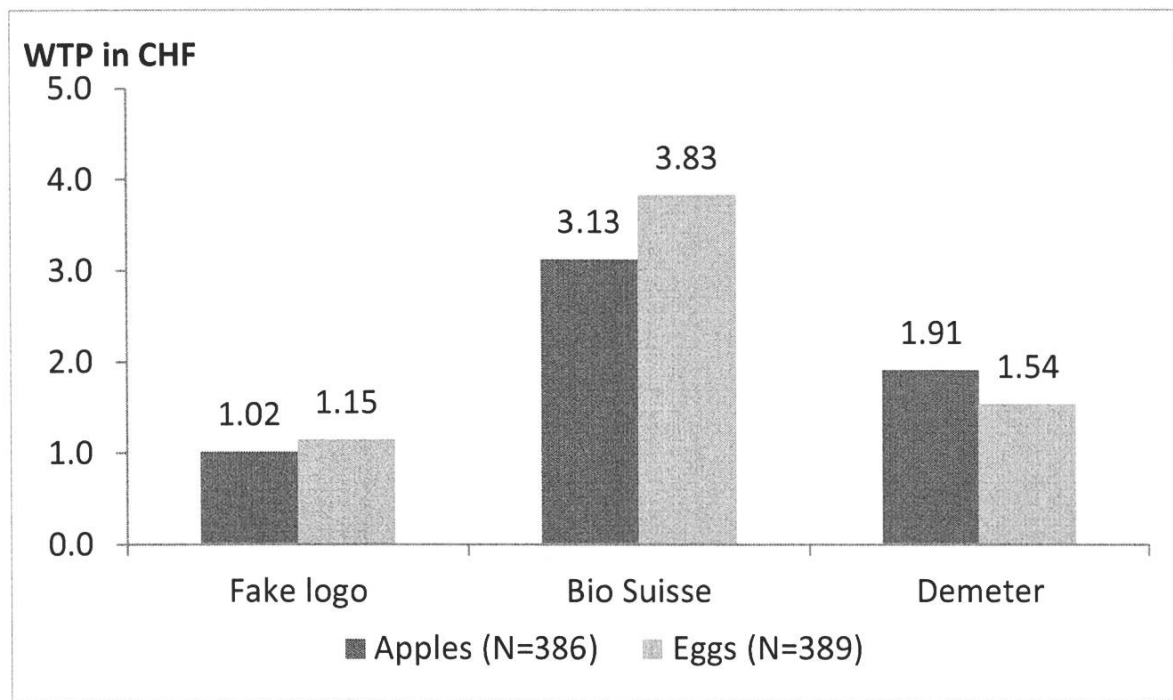




Table 4: Results of the RPL models

	Apple model	Egg model
Parameters	Koefficient <sup>1</sup>	Koefficient <sup>1</sup>
ASC Bio Suisse	1.90*** (Random)	2.64*** (Random)
ASC Demeter	1.16*** (Random)	1.07*** (Random)
ASC Fake logo	0.62*** (Fix)	0.79** (Random)
ASC No-buy	- 7.15*** (Fix)	- 32.75 (Fix)
Price	- 0.61*** (Fix)	- 0.69*** (Fix)
<b>Standard deviation of parameter estimates</b>		
ASC Bio Suisse	1.84***	1.80***
ASC Demeter	2.07***	3.06***
ASC Fake logo	Fix parameter	0.90*
<b>Information about model</b>		
Log Likelihood	- 835.91	- 777.08
McFadden Pseudo R-squared	0.33	0.38
N	772	778

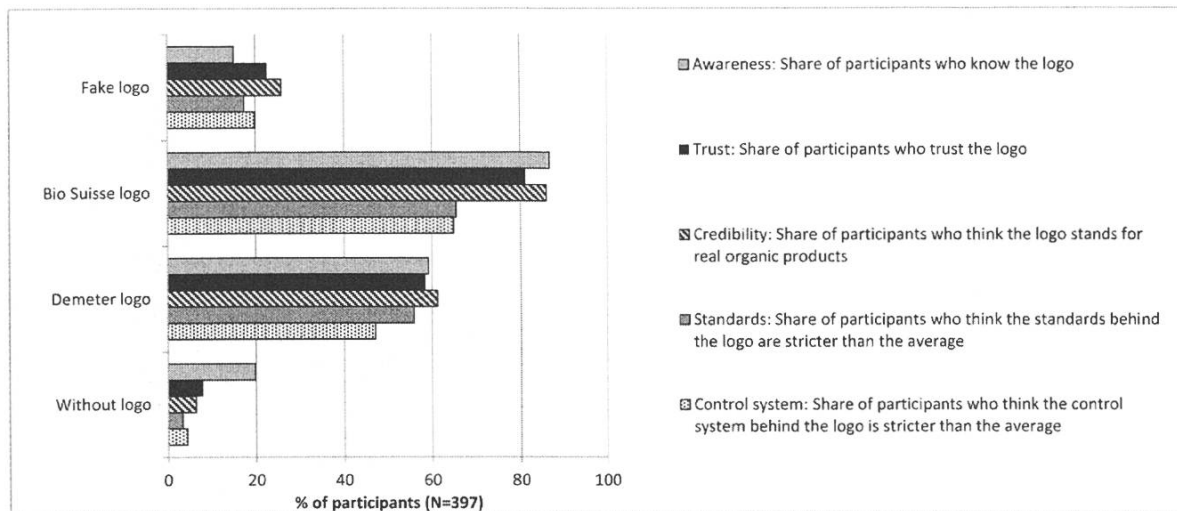
<sup>1</sup> The information in brackets shows how the parameter was specified (see Section 2.2.4).  
Parameter significant at level \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.1$ .

For all labels, we observed a significant positive additional mean WTP. This means that consumers clearly preferred products labelled with organic labels over organic products without a label. This observation is supported by the fact that the consumers were even willing to pay a price premium for products labelled with the fake label, although such a label does not exist in Switzerland. The highest additional mean WTP was clearly achieved for products with the Bio Suisse label, while the mean additional WTP for Demeter labelled products was lower than for Bio Suisse products.<sup>6</sup>

Figure 2 shows the results of the label ratings from the structured interviews that were carried out after the choice experiments.

<sup>6</sup> The fact that the additional WTP for the Bio Suisse logo was higher for eggs than for apples could perhaps be explained by the lower absolute prices for eggs than for apples in the experiments, so that the absolute price difference between the tested price levels was lower for eggs.

Figure 2



The Bio Suisse label ranks highest in consumers' perceptions in all categories. More than 80% of the consumers knew it, trusted it, and believed that it actually stands for organic products, and still more than 60% of the consumers assessed the underlying standards and the control system as strict. This indicates the strong place that this label has in the Swiss market. Regarding label awareness, the Demeter label was ranked second behind the Bio Suisse label, with around 50-60% of consumers stating to know and trust it and believing in strict standards and a strict control system behind the label. A considerable share of consumers (20%) also knew organic products without a label. But the large majority of consumers (92% to 97%, depending on the criteria) did neither find these products trustworthy nor credible, and did not believe that the standards and control system behind were very strict. An interesting observation is the rating of the fake label. Although it does not exist on the Swiss market, about 18% of the consumers stated that they knew this label – only slightly less than products without a label. Yet, in contrast to products without a label, a considerable share of consumers trusted this label (22%), found it credible (26%) and imagined the underlying standards and control system to be strict (17 and 19%). These findings illustrate that the awareness of a label is not sufficient to explain the consumer preferences for organic certification labels; the perceptions and attitudes towards the underlying scheme play an important role. The fake label was not known to many consumers (and could not), but the fact that it was a label referring to the Swiss organic regulation pro-

voked larger trust than for products without a label. This finding corresponds with the so-called unfolding theory in the literature suggesting that consumers infer from the absence of a label that the product does not possess the respective attributes (Golan et al. 2001).

In another RPL Model (Table 5), we analysed how the share of budget spent for organic products influences the WTP.

*Table 5: RPL models with covariate «organic budget share»*

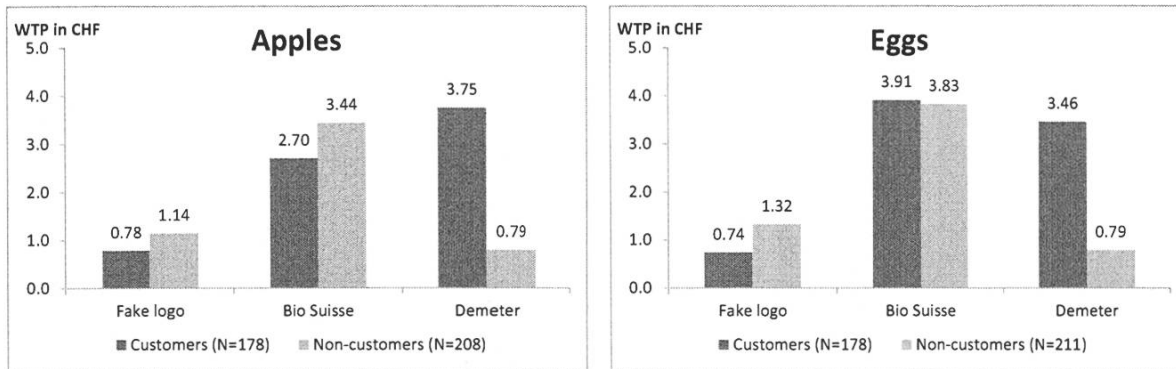
<b>Parameters</b>	<b>Apple model Koefficient<sup>1</sup></b>	<b>Egg model Koefficient<sup>1</sup></b>
ASC Bio Suisse	1.32*** (Random)	1.94*** (Random)
ASC Demeter	- 1.41** (Random)	- 1.88** (Random)
ASC Fake logo	0.61*** (Fix)	0.77** (Random)
ASC No-buy	- 7.20*** (Fix)	- 33.88 (Fix)
Price	- 0.61*** (Fix)	- 0.69*** (Fix)
<b>Standard deviation of parameter estimates</b>		
ASC Bio Suisse	1.89***	1.76***
ASC Demeter	1.48***	2.78***
ASC Fake logo	Fix parameter	0.98*
<b>Interaction terms with covariate 'organic budget share'</b>		
x ASC Bio Suisse	0.12*	0.15*
x ASC Demeter	0.52***	0.58***
<b>Information about model</b>		
Log Likelihood	- 800.64	- 755.53
McFadden Pseudo R-squared	0.36	0.40
N	772	778

<sup>1</sup> The information in brackets shows how the parameter was specified (see Section 2.2.4).

Parameter significant at level \*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.1$ .

Here, a significant positive influence was found between the 'organic budget share' and the WTP for both products labelled with the Bio Suisse label and the Demeter label, while the effect is particularly high for the latter. This can be explained by the fact that products with a Demeter label are not found in Swiss supermarkets, but only in specialised organic shops. Such shops have a more exclusive clientele, and a large share of frequent organic consumers who accordingly spend a higher share of their expenses for food on organic products. This is further illustrated by Figures 3a and 3b that show consumers' WTP differentiated by customers and non-customers of organic food shops.

*Figure 3a and 3b*



For both apples and eggs, the WTP of customers of organic food shops for Demeter labelled products is more than fourfold compared to that of customers who do not shop in such specialised shops. In particular for apples, but to a lesser extent also for eggs, we furthermore observe that the WTP for the Bio Suisse label is lower for customers of organic food shops than for non-customers. Similarly, although at a much lower level, the customers of organic food shops are less willing to pay a price premium for the fake label than the non-customers. We will discuss this clear difference in preferences of labels between customers of organic food shops and those buying organic products in supermarkets further in the following section.

## 4. Discussion and Conclusion

To our knowledge, only little previous empirical findings exist on consumer perceptions and willingness to pay regarding different organic labelling schemes. The presented research sheds light on this mostly unknown issue. The combined results of the three methods show the high level of awareness of the Bio Suisse label among Swiss consumers. This organic label was mentioned frequently in the focus group discussions, received high scores for the different categories of consumers' perceptions, and the choice experiments showed that, overall, organic consumers were willing to pay a clearly higher premium for products carrying the Bio Suisse label in comparison to products labelled with other organic labels.

For the Demeter label we observed a more differentiated situation. While in the focus group discussions only very few consumers seemed to be familiar with it, in the survey almost 60% of the consumers stated to know this label. In Switzerland, the Demeter label is only found in specialised organic food shops. In the quantitative study, the share of consumers that shop in specialised organic food shops was about 45%. For the focus group study, we do not know where the participants buy organic products, but the results suggest that the share of customers of organic food shops was rather low among the participants. Overall, the WTP for the Demeter label was clearly lower than for the Bio Suisse label, but there was a remarkable difference in WTP for consumers buying in specialised organic shops and those only buying in supermarkets. The first group had a much higher WTP for Demeter labelled products, and at the same time a lower WTP for Bio Suisse products, and a very low WTP for the fake label. These observations point to the fact that the highest premiums were paid for those labels that are well-known to consumers, and widely established in the market. Visibility of a label increases consumers' WTP. In the focus group discussions, consumers knowing the Demeter label attached some particular characteristics to it, such as higher standards in animal welfare. The high WTP for the Demeter label in organic food shops could therefore also be explained by the fact that these consumers are more aware of different labels, and reflect more about differences between them. This result confirms the results of a previous study accomplished in Germany (Enneking, 2003), in which it was concluded that consumers who buy Demeter products believe that these are of higher quality compared to products labelled with the Bio-Siegel (organic label of the German consumer protection ministry, based on the standards of the EU organic regulation).

Our study provides evidence for the importance of trust in labels in the Swiss organic market. The result of the focus group discussions carried through to the choice experiments. Overall, consumers were willing to pay a price premium for products labelled with an organic label in comparison to products labelled only with the word «organic». This is even true when the product is labelled with a fake label that does not exist in reality but refers to the Swiss organic regulation. This illustrates that the awareness of a label is not the only decisive factor influencing consumers' choice. The trust and credibility, as well as the perception of the control system behind the label are similarly important. We



also observed a discrepancy between consumer perceptions and objective knowledge about the standards behind the different labels. The standard behind the fake label was the same as the standard behind the generic labelling with only the word «organic», but a clear preference and WTP could be observed for the fake label products. This apparent discrepancy can be explained by the results of the focus group discussions where the participants mentioned explicitly that to them, detailed knowledge about the standards behind the label is not as relevant as general trust in the functioning of the control system.

In this study we focused on organic labels that are based on private and public production standards, but we did not include organic brands in the survey. Yet, in Switzerland many organic products are sold under such brands, e.g. Naturaplan in the retailer COOP, and Migros Bio in the retailer Migros. While Naturaplan products usually also carry the Bio Suisse label, this is not the case for the Migros Bio products. We can not conclude anything regarding consumer preferences for one of these brands. Still, we believe that our study is valuable for understanding the mechanisms of the Swiss organic market, and in particular for further developing marketing strategies. As more and more brands are expected to enter the Swiss market (e.g. in discounters, or organic supermarkets recently starting their activity in Switzerland) it becomes relevant to think of how to differentiate products. From the perspective of processors and retailers, organic certification labels do not offer a unique selling proposition like organic brands do. Nevertheless, such labels can serve as tools for gaining consumer trust if they are well established in the market. Consumer trust and perceptions of organic standards behind the labels are subjective, and in many cases not based on «objective» knowledge of facts. Thus, labelling based on third-party certification does not automatically overcome the dilemma of information asymmetry inherent in credence goods. This is supported by our findings. Consumers' perceptions and attitudes about the underlying standards and control scheme are decisive for their choice at the point of sale.

The study is helpful with regard to forthcoming challenges of opening markets. Recently, new retailers have appeared in the Swiss market, selling (a small share of) organic products, in particular two German discounter chains. These discounters market the organic products under their own brand, which increases the number of different brands for organic products among which consumers can choose. With regard to the little knowledge of consumers about the stan-

dards behind the different organic certification schemes it is relevant to think of what is relevant to communicate to them. Our study has shown that in particular the perceptions of the strictness of standards and the control system are the basis for trust in and acceptance of the label.

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